

Understanding Interorganizational Relationships and Organizational Capacity
in a Youth Baseball Network

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Submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Faculty of Applied Health Sciences, Brock University
St. Catharines, Ontario

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ABSTRACT

Within the Canadian sport system there has been a noted decline in team sport participation among youth athletes. Factors that have contributed to this decline include increased competition amongst organizations, a larger number of sport options and sport specialization. Baseball in particular is a sport that has seen declining participation rates in recent years. Within the sport management literature two key concepts have emerged as key areas of interest for youth sport organizations in their operations; interorganizational relationships and organizational capacity. Interorganizational relationship (IOR) development has been identified as an effective strategy for strengthening the capacity of youth sport organizations (Misener & Doherty, 2013). Organizational capacity has been related to the ability of organizations to draw on a variety of resources to help achieve desired outcomes (Hall et al., 2003), while there is also evidence to support the connection between greater organizational capacity and increased success in achieving these outcomes (Jones et al., 2017). Thus, the purpose of this research study was to examine the relationship between interorganizational relationships and organizational capacity within a youth baseball network in the Niagara Region of Ontario, Canada. Data were collected from representatives of ten youth baseball organizations through a survey instrument via telephone interview format. Data were analyzed using a social network analysis methodology including the use of the UCINET 6.0 software program and NetDraw function that allowed for the calculation of density and centrality measures along with visual representations of the network. QAP Multiple Regression analysis was also conducted and showed that IORs and sector were both found to be statistically significant in their ability to predict organizational capacity ties within this network. Overall, the results of this study allowed for conclusions to be drawn related to network structure, state of organizational capacity, and the relationship between IORs and organizational capacity in this youth baseball network.

ACKNOWLEDGMENTS

I would like to take this opportunity to express my deepest gratitude to all of the people who supported me throughout my graduate school experience. This project would not have been completed without the consistent encouragement, guidance and mentorship of so many individuals that I have been lucky to have in my corner over the past 3 years.

To my supervisor Martha Barnes, thank you for everything that you have done for me throughout my time at Brock University. Both as my professor during my undergraduate degree, and as my supervisor for my pursuit of a master's degree, your contributions to my academic experience are unmatched. While this degree took a little longer to obtain than our original plans I have thoroughly enjoyed working through the process with you and would not have made it to the end without your hard work and dedication to my project, and your consistent encouragement along the way.

To my committee members Lisa Kikulis and Julie Stevens, thank you both for agreeing to be a part of this project. Thank you both for your expertise and knowledge, as well as your active engagement with my project within the last few months to help me get to the finish line. I have greatly appreciated the opportunity to work with you both and hope to get that opportunity again someday.

Finally, to my friends and family, the completion of this project would not have been possible without each and every one of you. Mom, Dad, your continued encouragement and support helped me push through some of the toughest times during this process, I hope you are both proud of this accomplishment. Unfortunately, I don't have space to list every friend who was important to the completion of this project, but each and every one of you played a role in keeping me sane and I thank all of you for your love and support these last 3 years.

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CHAPTER 1: INTRODUCTION

Introduction

For Canadian youth, participation in sport has continued to play a prominent role in the lives of these individuals (Bean & Forneris, 2016). From a young age there is an emphasis from legislators, parents and community members on engaging younger generations in a variety of different forms of physical activity, specifically sport, due to the perceived benefits derived from participation (Bean & Forneris, 2016; Coakley, 2011; Green, 2005). Based on the most recent ParticipACTION Report Card on Physical Activity for Children and Youth just over three quarters of Canadian youth participate in organized physical activities or sports (ParticipACTION, 2020). Even with organized sport and activity remaining relatively high, it has been noted that participation rates in team sports have begun to decrease in recent years (Collins & Barcelona, 2018; Lee et al., 2018). This decline in participation rates among team sports may be attributed to the crowded and competitive youth sport landscape as the competition among sports and activities for the commitment of time and money from Canadian families is at an all-time high (Solutions Research Group, 2014). This competition has been further magnified by sport “specialization” which has led to an increase in youth sport organizations, but has contributed to an overall decrease in participation rates by youth in many sports (Jones et al., 2020). While competition amongst sport organizations can be seen as a contributing factor to the current trends in youth sport, research has also shown that the COVID-19 pandemic may be playing a role in these trends through the amplification of the popularity of both non-organized and non-traditional sport participation (Teare & Taks, 2021).

With the decline of participation in baseball at the youth level over the past twenty years it is important to identify and understand ways for youth baseball organizations to become more successful in a more competitive environment at attracting youth athletes to the sport. There is

currently a lack of research in the literature that has examined organizational capacity in the sport of baseball as a potential solution or as a contributing factor to the decline in baseball participation. While there is evidence to support the role of interorganizational relationship development in furthering organizational capacity in youth sport organizations (Jones et al., 2020), there is little research surrounding how these relationships are being used by youth baseball organizations.

Organizational Capacity

Mackay et al. (2002) discuss the capacity of an organization as an organization's potential to achieve its mission and objectives based on the extent to which it has certain attributes necessary for goal achievement, while Hall et al. (2003) outlines the capacity of an organization as the ability to draw on a variety of resources in order to produce desired outcomes and outputs for the organization. According to Jones et al. (2017) there is evidence to support that organizations that have greater capacity are generally more successful in their operational endeavors compared to those with weaker capacity, establishing a further interest in understanding ways in which organizations can improve their organizational capacity. Some of the resources that are discussed in relation to the capacity of sport organizations include both internal and external dimensions such as capital infrastructure, financial support, strategic planning and volunteers (Jones et al., 2017). These resources are important to the success of an organization as organizations with greater capacity are more likely to plan, implement, and sustain programs that achieve their goals while organizations with weaker capacity are more likely to face challenges in operationalizing their plans (Eisinger, 2002).

Interorganizational Relationships (IORs)

One way for youth sport organizations to look to increase their organizational capacity is through the development of interorganizational relationships (IORs) (Misener & Doherty, 2013). These relationships can exist in both dyadic or in network form, and have typically been characterized using certain elements of longevity, sharing of resources, utility in helping to achieve organizational and collective goals, and degree of intent (relating to planning and strategic choice) (Babiak et al., 2018). These relationships have become much more prevalent in recent years, specifically within the youth sport landscape and have been shown to provide a wide array of benefits to organizations who utilize these relationships (Jones et al., 2020). Misener and Doherty (2013) establish a basis for maintaining and enhancing relationships with other organizations to help improve dimensions of organizational capacity, ultimately improving their ability to provide successful programs and achieve their organizational goals. Within the literature there is overwhelming support for the development of interorganizational relationships between youth sport organizations based on the perceived benefits, yet these organizations often struggle to establish effective relationships due to issues such as limited resources, poor communication, power imbalances, and issues of trust (Hayhurst & Frisby, 2010).

Within the literature surrounding IORs a variety of terms are prevalent in the description of different types of IORs including networks, coalitions, joint ventures, consortia, alliances, collaborations, cooperation and partnerships depending on the discipline or context (Babiak et al., 2018). As was the case within this research study, organizational interactions took place both within and across sectors, and varied in other aspects such as closeness, formalization, and level of integration. With this in mind, and as is supported in previous literature surrounding this topic

(Babiak et al., 2018), the term interorganizational relationship (IOR) is used and understood to represent the varying forms of relationships between the organizations in this research study.

Statement of the Problem

Baseball, a sport that once enjoyed a prominent place in the field of youth sport, is now a sport that is declining in participation rates for a variety of reasons (Solutions Research Group, 2014). Baseball Canada, the National Sport Organization (NSO), promotes benefits for youth such as: the development of physical, social, and mental capabilities through their mission statement and adoption of the Long-Term Athlete Development model (Baseball Canada, 2019). These developmental benefits, coupled with other factors such as the prevalence of baseball facilities in communities across Canada (90% of municipalities have baseball or softball diamonds) (ParticipACTION, 2020) make baseball an ideal sport for accessible and beneficial sport opportunities.

And yet, baseball organizations across the country are concerned because research suggests that baseball has become a less popular option than other team sports - from the sample of 2,371 families regarding 44 sports and physical activities, in recent years, baseball has failed to be named in the top ten for total participation (males or females) or top five for team sport participation (Solutions Research Group, 2014). These statistics help to support the necessity of youth baseball organizations in Canada to better understand ways in which they can combat the recent trends in participation and encourage future participation in baseball. Therefore, the purpose of this study is to examine the relationship between interorganizational relationships and organizational capacity within a youth baseball network in the Niagara Region.

Aims of the Study

This study is focused on the youth baseball network located within the Niagara Region of Ontario, Canada. The aims of this study were to understand:

1. The nature of the relationships among actors within the network.
2. The types of resources attributed to organizational capacity (infrastructure, financial, human, planning, relationship) being shared among actors in the network.
3. The relationship between interorganizational relationships and the organizational capacity of the organizations in the network.

Utilizing the framework provided by Tasselli et al. (2015), this study will look to address these objectives by looking at these relationships at the organizational level (how the different organizations in the network are connected), at the individual level (what role do certain individuals play in the development of linkages), and at a functional level (what resources are being shared between related organizations).

Rationale for the Study

The relevance of this study stems from multiple different perspectives relating to this topic. From an academic perspective, this research is important as the study of relationships in cross-sector networks is currently lacking within the youth sport literature. Outside of the youth sport literature there is also support for this type of study due to the makeup of the organizations within the network in this study. A significant number of the organizations found within this network are non-profits, which Shumate et al. (2018) express that within the cross-sector relationship literature, the non-profit perspective within relationships has become of increased interest due in part to the resource constraints typical of the sector. Hambrick et al. (2018) state that the capacity of sport organizations would benefit from relationship development within a

network, which can improve service delivery to members, increase knowledge, increase access to funding, increase access to vital resources, as well as enhancing the image and influence of the organization (Ziakas & Costa, 2010).

Understanding how youth baseball organizations can work together to create a stronger, more successful environment for athletes to engage in during their developing years should be of utmost importance for individuals within youth baseball, but may also hold implications for other youth sports as well. Specifically, this research looks to provide a greater understanding of the interactions that occur within youth sport networks that are multi-sector in nature, as well as youth sport networks that are experiencing declining participation numbers. These contextual factors present unique challenges within these cross-sector networks as there is significant competition amongst same-sport organizations for attracting athletes, however the types of programs and desired organizational outcomes may vary depending on an organizations sector of operation and organizational mandate. Youth sport networks operating within this cross-sector context have received very little attention in the sport literature. Through the examination of the relationships between youth baseball organizations in the Niagara Region, this research provides information that will be useful in identifying areas of weakness and ways to further the capacity of the individual organizations, as well as strengthen the network in a way that can be beneficial to the attraction and potential growth of youth athlete participation in the sport. Specifically, this research provides context relating to the different sectors represented in the network, the different types of resources that are shared or may be lacking within the network, as well as a visual representation of the relationships amongst the organizations within the network.

Assumptions

This research study is grounded in some key assumptions that help to provide the contextual basis for conducting this study surrounding the interorganizational relationships between youth baseball organizations in the Niagara Region. One of the assumptions that helps to shape this study is that the effectiveness of organizations, regardless of their sector of operation (non-profit, public, for-profit), is dependent on the capacity of the organization (Jones et al., 2017). Another assumption that is crucial to this study is that interorganizational relationships have been identified as being an effective strategy for organizations to build organizational capacity and address challenges (Jones et al., 2018). The third assumption that is relevant to this research study is that a more comprehensive understanding of an overall network is necessary for providing more strategic approaches to interorganizational relationship development and identifying avenues through which youth sport organizations may increase their organizational capacity and achieve their objectives (Jones et al., 2018).

Research Question/Hypothesis

Through the review of previous literature surrounding youth sport organizations, IORs, and organizational capacity in youth baseball, there are some key gaps (i.e. decline of traditional sports, cross-sector networks) in the literature that this study addresses. Using a social network analysis approach, the research question this study looked to answer was: “*How do IORs and organizational capacity influence network structure in a youth baseball network?*” and the results were used to test the following hypothesis regarding the ability of IORs to predict organizational capacity:

H¹: Organizations that indicate a greater number of IORs will indicate a greater amount of resource sharing ties in a youth baseball network.

Definition of Key Terms

The key terms associated with this study are understood using the following definitions:

Interorganizational Relationships: “strategically important, cooperative relationships between a focal organization and one or more other organizations to share or exchange resources with the goal of improved performance” (Parmigiani & Rivera-Santos, 2011, p.1). In previous research on IORs in sport, this term has been used to encompass the many different variations of interactions between organizations that are a result of the many contexts and factors that have been understood to define a given relationship (Babiak et al., 2018).

Organizational Capacity: “The study is guided by a conceptual model of organizational capacity that distinguishes among three types of capacity: financial, human resources, and structural capacity. Structural capacity includes relationship and network capacity; infrastructure and process capacity; and, planning, development and research capacity. Organizational capacity is assumed to be influenced by a variety of external factors, including: environmental constraints and facilitators (e.g., legal and regulatory frameworks, public trust, societal values), access to resources (e.g., financial resources, human resources) and historical factors (e.g., past behaviours, ethical violations, perceived contributions)” (Hall et al., 2003, p.9)

Network(s): “Three or more legally autonomous organizations that work together to achieve not only their own goals but also a collective goal” (Provan & Kenis, 2008, p.231).

CHAPTER 2: LITERATURE REVIEW

Introduction

This research study is focused on understanding the role of interorganizational relationships on the organizational capacity of the youth baseball organizations in the Niagara Region of Ontario. As discussed by Gerke, Babiak, Dickson and Desbordes (2018) sport systems are very complex in their form, structure and purpose depending on where they are located, while also consisting of a variety of actors from different sectors including for-profit, non-profit and public sport organizations as well as governing bodies and unorganized stakeholders. The increase in interorganizational relationship development and the subsequent study of these relationships has become increasingly common in the last twenty years, leading to a large amount of research product and theory development that is beneficial to an overall understanding of relationship and network creation across the public, non-profit and for-profit sectors (Provan & Lemaire, 2012). More specifically, Babiak, Thibault and Wilhelm (2018) found that in relation to sport, IORs have been studied in the areas of sport management, sport marketing, sport policy, sport tourism, and sport sociology, while outside of sport, IORs have also been studied within the areas of management, marketing and policy and public management. By exploring the ways in which the organizations within a youth baseball network interact with one another we can gain a better understanding of how interorganizational relationships relate to the organizational capacity of these organizations. This chapter will provide an exploration of the literature relating to youth sport organizations across the sectors, the concept of organizational capacity and capacity dimensions in sport, as well as provide a greater understanding of the relevance of interorganizational relationships in sport through a theoretical framework and an

exploration of both the benefits of, and barriers inhibiting, the development of IORs between youth sport organizations.

Youth Sport Across Sectors

The work done by Bowers and Ozyurtcu (2018) helps to paint a clearer picture of the emerging concerns relating to youth sport in North America. The authors recognize that a key difference between the American youth sport system and the youth sport system of other developed countries such as Canada is that the American system tends to be regulated by local and regional actors compared to operating within a more centralized system as can be seen in Canada (Bowers & Ozyurtcu, 2018). Even though the youth sport system in Canada is more centralized, an emerging focus on elite-athlete development and early specialization has developed within the Canadian system similar to that of the American system, which has led to increased costs and other detrimental outcomes for young participants (Bowers & Ozyurtcu, 2018; Wiggins, 2013). While this study by Bowers and Ozyurtcu (2018) is focused on youth sport in the United States, the authors were able to provide a takeaway that helps to reinforce the necessity of studying interorganizational relationships between youth sport organizations. Bowers and Ozyurtcu (2018) establish a key consideration for this area as being to understand if an organization is overlooking opportunities to work together in a way that would provide greater benefits than competing within the same network. This consideration looks to establish that at an organizational level working together may be effective in furthering the [youth sport] industry and elevating the success of the other organizations that are looking to accomplish a similar outcome of providing access to beneficial youth sport programming (Bowers & Ozyurtcu, 2018).

In the past, opportunities for youth sport participation in North America were seen to be provided by a variety of organizations operating across the public, for-profit and non-profit sectors, however, in recent years these opportunities have increasingly been provided by non-profit and for-profit entities compared to publicly funded organizations (Coakley, 2010; Jones et al., 2017). More specifically, non-profit organizations have become an integral part of providing youth sport opportunities at a “grassroots” level (Jones et al., 2017; Seippel, 2006), while many privately operated organizations and sport clubs have become an increasingly popular option for the provision of elite sport development opportunities (Wiggins, 2013). These privately owned and operated sports organizations have provided increased opportunity for youth athletes, however, they have also created an increase in exclusive behaviour due to the financial requirement for participation associated with special skills training, expensive equipment and travel costs (Wiggins, 2013). More specifically, the ability to build capacity across multiple dimensions has become an increased focus for many organizations, with interorganizational relationships being shown to be effective in developing these capacities (Jones et al., 2017; Misener & Doherty, 2013).

One of the forms of interorganizational relationships that has become more prevalent in the youth sport landscape in recent years are public-private partnerships. Legg et al. (2018) discuss the use of these partnerships within the US youth sport system and characterize them as the contracting out of services to external providers. In relation to the youth baseball network being focused on within this study, these external providers are represented by local travel teams and community sport clubs that operate as non-profits while looking to provide increased baseball opportunities within our communities. While many of these organizations have access to certain operational capacities like financial support and human resources to deliver these opportunities,

they generally require access to public facilities or spaces that require a working relationship with organizations in other sectors (Legg et al., 2018). When understanding these types of cross-sector interactions it is also important to consider the contextual components of these relationships. Organizations in different sectors will have different goals, operational tendencies and funding streams that can impact how they function and how they work with other organizations (Barnes et al., 2017; Provan et al., 2014). While these cross-sector relationships have continued to be developed within the youth sport landscape, Legg et al. (2018) point out that understanding the role of sport values in both formation and management of these relationships is key to ensuring the effectiveness of the relationships moving forward. These values reflect the difference in how sport organizations view their main objectives, with the recent trend of sport towards elite sport and professionalization of youth sport leading to potential conflicts amongst partnering sport organizations (Legg et al., 2018). This study will help to further explore this area of research through the examination of the interorganizational relationships in a cross-sector youth baseball network.

Organizational Capacity in Sport

To better understand the concept of organizational capacity, it is important to understand how this concept has developed over time. Stevens (2018) establishes that the United Nations have utilized capacity building initiatives in their work at an international level for over 50 years, with the concept of organizational capacity gaining traction in the international development context in the early 1990s (Schacter, 2000; Stevens, 2018). While organizational capacity had received the vast majority of its focus through the international development lens, leaders of North American non-profits began to adopt these capacity principles into their operations in the early 2000s as a way to combat economic challenges (Morrison, 2011). As non-profits began to

understand organizational capacity and began to implement more capacity building initiatives, there became a greater research focus placed on understanding this concept within other contexts. Within the context of non-profit organizational operation there were frameworks developed to better understand organizational capacity including those developed by McKinsey and Company (2001) and Hall et al. (2003). More recently, organizational capacity research has expanded and this concept has been examined in a variety of sport contexts including sport for development (Clutterbuck & Doherty, 2019; Hambrick et al., 2018), sports clubs (Swierzy et al., 2018) and community sport (Doherty & Cuskelly, 2020; Misener & Doherty, 2009).

This study looks to further the research on organizational capacity in the youth sport context as is consistent with previous work in this area of research (Jones et al., 2017). Doherty and Cuskelly (2020) have noted that within the literature there is agreement that organizational capacity is multidimensional in nature, and centers around an organization's reliance on a range of elements or resources being utilized together to impact performance or achieve outcomes. This understanding of capacity is similarly present in previous definitions such as Svensson and Hambrick's (2016) definition of organizational capacity being the extent to which an organization is able to produce change and achieve its mandate, or Misener and Doherty's (2013) conceptualization being that capacity is an organization's ability to utilize both internal and external resources for the purpose of goal achievement. In this context, external resources are typically manifested as capital infrastructure and financial support, with internal resources typically encompassing strategic planning and human resources (Jones et al., 2017; Misener & Doherty, 2009). Similarly, capacity has been understood to include both tangible and intangible components, with structural, financial, and technological resources described as tangible, while

cultural components are described as intangible. Through this lens human resources can be understood as being a combination of both tangible and intangible elements (Marunchak, 2006).

With these conceptualizations in mind, capacity must be viewed as multidimensional in nature such that the overall capacity of an organization is dependent on multiple, more specific capacities, which can require unique operational strategies as organizations with similar objectives may achieve these objectives by drawing on different capacities (Hall et al., 2003). More specifically related to youth sports organizations, capacity is understood as the organization's ability to serve the needs and interests of their members including the provision of opportunities to participate in a sport, opportunities for competition, or opportunities for social behaviour amongst players (Nagel, 2008). It is important to understand and identify ways to improve the organizational capacity of youth sport organizations as "organizations with strong capacities are more likely to plan, implement and sustain programs to achieve intended goals, while organizations with limited capacities are more likely to encounter difficulties operationalizing their plans" (Eisinger, 2002; Jones et al., 2017, p. 148). Millar and Doherty (2018) also shared this sentiment related to capacity building as they found that community sport organizations that were able to utilize existing capacities found more success in building capacity than organizations that were not.

Within the literature relating to organizational capacity in sport, an important concept that must be discussed is the concept of 'capacity building'. Millar and Doherty (2018) state that capacity building is an organizational approach to tackling challenges through the development of perceived weaknesses within the organization. Clutterbuck and Doherty (2019) utilized the work done by Hall et al. (2003) to further establish the capacities that are relevant within organizational research as human resource capacity, financial capacity, relationship and network

capacity, infrastructure capacity, and planning and development capacity. In an attempt to understand the role of each of these capacities in the operation and success at an organizational level, Doherty et al. (2014), amongst others, have agreed that while each of these capacities is relevant, there is a contextual component to capacity building wherein it is important to determine which elements of a given capacity can be viewed as more integral to the success of a given organization before the building of these capacities can begin. Further to this, organizations must assess both their external and internal environments to properly identify capacity dimensions that require further development or enhancement (Backer, 2001; Marunchak, 2006). In the work by Provan and Lemaire (2012), the authors established that one of the areas relating to interorganizational relationships and network effectiveness that required further exploration is to consider the impact of broader network-environment relations on the capacity of network organizations to function effectively while battling competing or conflicting demands. Overall, Millar and Doherty (2021) note that most capacity building studies have focused on discrete aspects of the process (identification of particular capacity needs, organizational readiness for capacity building, impact/outcomes of capacity building efforts) and suggest that these aspects should be considered stages that interact as part of a larger capacity building process.

Relating specifically to the nature of cross-sector partnerships, Marlier et al. (2015) conducted a study on community sport programs in which they were able to identify key elements of capacity building that are prominent at the organizational level, the partnership level, and the individual level of the relationships between the organizations involved. These different levels are prevalent within the framework established by Tasselli et al. (2015), and help to further the connection between IORs and capacity development. At the organizational level the

authors found mutuality and policy support to be critical to the building of organizational capacity. Mutuality was relevant in the establishment of the relationship between capacity and IORs as it refers to an organizational perception that they need to work with another organization, which leads to a greater willingness to share human, financial and infrastructural resources between them (Marlier et al., 2015). Policy support was deemed important to the building of capacity at the organizational level as the ability of an organization to establish the importance of their continued operation to policy makers provides greater opportunities for obtaining funding as well as increasing their ability to establish sustainability and legitimacy in the eyes of current or potential partners (Marlier et al., 2015). An important component of these critical aspects of capacity building is the acquisition, understanding, and leveraging of knowledge at the organizational level. The creation of shared understanding at an organizational level helps to initiate growth of procedures, structures, processes and strategies to support organizational strength and consistency, especially during strategic plan implementation and turnover of individuals within the organization (Rioux, 2007).

At the partnership level, building organizational capacity was seen to stem from activity diversity, partner complementarity, and length of collaboration. When an organization demonstrated diversity relating to the activities or programs they provide, there was an increase in perceived value as different potential partners could identify specific areas of interest compared to other organizations, leading to an increase in potential opportunities for collaboration. The length of existence of the relationship between organizations was also a key element as the authors found that the longer organizations were able to work together, the stronger the relationship became which helped to increase the legitimacy of these organizations as being potential partners for other organizations within the network (Marlier et al., 2015).

Finally, within these cross-sector partnerships there is opportunity for capacity building to take place at an individual level, which involves the sharing of skills, knowledge and expertise amongst individuals who are operating within these organizations. For this element of capacity building to take place a great deal of trust must be present between the organizations and the individuals themselves to be willing to engage in the sharing of these resources (Marlier et al., 2015). This idea can be better understood as the absorptive capacity of an organization, which relates to the knowledge building and transference of the individuals operating within an organization (Rioux, 2007; Tsai, 2001). This absorptive capacity is influenced both by the position of a given individual within an organization (more central positions allow greater access to information and resources necessary for knowledge development) as well as the learning capability of the individual to be able to gather, maintain, and transfer information within the organization (Rioux, 2007). Hanlon et al. (2019) express that if individuals in an organization are not motivated or resistant to engaging in the capacity building process, the process can be derailed. This concept helps to further stress the importance of the individuals within an organization in the strengthening of organizational capacity.

Different Types of Organizational Capacity (Resources)

In this area of study one of the key frameworks related to capacity was introduced by Hall et al. (2003) which established human resource capacity, financial capacity, relationship and network capacity, infrastructural capacity, and planning and development capacity. As noted by Stevens (2018) this framework looks not only at organization-specific elements, but also at the external factors that affect the capacity of an organizational including environment, access to resources, historical factors, and organizational outcomes of capacity building such as service provision, populations served, outputs, policy influence and advocacy. The framework

developed by Hall et al. (2003) has been understood by several researchers (Doherty & Cuskelly, 2020; Millar & Doherty, 2016) to successfully capture the common capacity dimensions found within the organizational capacity literature, and has been established as being foundational to the study of organizational capacity, specifically in the community sport context, and has received consistent support for their dimensions as being key to understanding the components of effectiveness for sport organizations. For example, in their qualitative study surrounding the organizational capacity of domestic sport for development organizations, Clutterbuck and Doherty (2019) further explored these dimensions and looked to establish elements of each that could be deemed relevant in organizational capacity research within the scope of youth sport organizations. The ability for an organization to understand their strengths and weaknesses within these areas of organizational capacity is imperative to their success as these capacities have been seen to have an ability to influence each other both positively and negatively (Svensson & Hambrick, 2016).

Human resource capacity can be seen to be a primary focus of researchers within the organizational capacity literature, with an emphasis being placed on understanding volunteerism and managerial structures in sport organizations (Millar & Doherty, 2016). Conceptually, human resource capacity refers to the competencies, knowledge, attitudes and behaviours, coupled with how they are used within an organization (Doherty & Cuskelly, 2020). Some other critical elements of this capacity have been identified as being active and engaged volunteers, sufficient staff, training and support, and shared vision (Clutterbuck & Doherty, 2019). One of the key aspects of human resource management that is increasingly relevant within the realm of youth sport organizations is the aspect of volunteerism. This is consistent with the framework from Hall et al. (2003) which looks at number of volunteers and hours they

contribute as a strong indicator of human resource capacity (Doherty & Cuskelly, 2020). As stated by Swierzy et al. (2018) volunteers are necessary for the functioning of many different sport systems across the world, especially those that operate within the non-profit sector as they help these organizations to operate in a cost-effective manner. Understanding the role of volunteerism in relation to human resource capacity is important as the number of volunteers have been decreasing which has made recruiting and retaining volunteers difficult in many countries including Canada (Swierzy et al., 2018).

While many organizations rely on the assistance of volunteers to achieve their organizational goals, it is important to understand the factors relating to both volunteers and paid staff that are necessary in strengthening human resource capacities. While the study by Clutterbuck and Doherty (2019) is focused on sport for development organizations, many of their findings are salient across areas of sport research such as this study. For example, the authors found that as was consistent with previous research in this area, the passion for the sport and for helping others is key for both paid staff and volunteers within the operation of sport organizations (Clutterbuck & Doherty, 2019; Svensson et al., 2017). While passion can prove useful in the identification of potential staff or volunteers who will be committed to serving the organization, it has also been noted that finding individuals with the appropriate knowledge and skills to succeed and coupling them with the appropriate training and support is critical in obtaining desired outcomes of the organization (Clutterbuck & Doherty, 2019). Finally, it should be understood that it is important to ensure that there is a shared understanding of the organizational vision across all involved individuals (paid staff and volunteers) to ensure that all parties are working together to achieve desired outcomes (Clutterbuck & Doherty, 2019).

The financial capacity of an organization has been broadly defined in the literature as being comprised of an organization's revenues and expenses, as well as assets and liabilities (Doherty & Cuskelly, 2020; Hall et al., 2003). Clutterbuck and Doherty (2019) outlined some additional elements of this capacity as being successful fundraising, successful obtaining of grants, fiscal responsibility and sustainable funding practices. The work by Svensson et al. (2018) support these critical elements as they concluded that funding is seen as a catalyst for organizations (non-profits in particular) to participate in capacity-building practices. Within the organizational capacity literature there is an emphasis on the role that grant funding can play in the building of capacity (Svensson et al., 2018). For example, organizations who receive grant funding are seen to be more likely to develop their financial capacity. One of the reasons for this likely increase in capacity due to grant funding is based on other indicators of organizational strength. For example, Teare and Taks (2021) note that Canadian sport organizations typically require a certain amount of registration numbers to be eligible for certain types of funding or access to certain resources.

Conversely, this likely increase in capacity has also been directly related to the direct benefits provided by obtaining these grants that contribute to increased capacity through a provision of resources that were previously unavailable to the organization (Svensson et al., 2018). However, it is important to note that there have been organizational challenges associated with the obtaining of grant funding including the funding being limited to specific uses that do not address organizational needs, as well as mission drift if the organization alters its operations to fit specific requirements to qualify for a grant, thus the ability to apply for and manage grant funding can be seen to be as important as actually obtaining the funding itself (Clutterbuck & Doherty, 2019; Hall et al., 2003). In the research by Svensson et al. (2018) the authors also

found that organizations that received government funding provided access to additional resources and expertise that helped to increase the capacity of the organization, specifically by helping to invest in capacity areas of weakness such as the human resource capacity of an organization.

From the literature it is important to note that as the youth-sport landscape has become more competitive with an increasing number of organizations competing for external funding sources such as grants and government assistance, there has been a noticeable shift in how these organizations operate towards more business-like practices. This shift could be due to the pressure associated with an increased necessity to be fiscally responsible and ensure that organizational spending is appropriate and necessary for survival and goal achievement in organizations that are unable to rely on membership or participation fees (Clutterbuck & Doherty, 2019). For an organization to reap the long-term capacity benefits of external funding there is a reliance on funding stability over time as well as financial management capabilities within the organization that has driven organizations to lean more on earned revenue models that has been associated with greater levels of human resource and financial capacity (Svensson et al., 2018). This is consistent with previous capacity research that has looked at both revenue generation (from varying sources) and expenses as key indicators of financial capacity (Doherty & Cuskelly, 2020).

With regards to the relationship and network capacity of an organization, it is important to understand that this capacity refers to the ability to develop and utilize relationships with key external stakeholders (Doherty & Cuskelly, 2020; Hall et al., 2003). More specific elements that have been identified within this capacity, are having engaged partners, sustaining partnerships, social capital, and allotment of time for the management of partnerships (Clutterbuck & Doherty,

2019). Increasing the network capacity of organizations has been shown to have a variety of benefits to their operations including the ability to share large production costs that could not be financed individually, creating common interest in shared resources, as well as the potential for greater trust and reciprocity as these relationships continue to produce positive results over time (Jones et al., 2017). Further developing the relationship and network capacity of an organization has also been shown to have strategic and social advantages including; increased visibility, legitimacy and social capital development (Hayhurst & Frisby, 2010; Misener & Doherty, 2012). For an organization to access the benefits of strengthening network capacity, the organization must consider how these critical elements can impact their operation. Both the development and maintenance of successful relationships rely on active engagement of the organizations involved to ensure the long-term success and viability of the programs or operations that they help to support (Clutterbuck & Doherty, 2019). Both the provision of clear expectations regarding the partnership, and the establishment of shared values and mission within the partnership, are important for ensuring active engagement in these relationships (Clutterbuck & Doherty, 2019; Svensson et al., 2017). A final consideration that should be made in relation to the development of relationship and network capacities is that this process can be challenging for some organizations due to the time commitment required to develop these capacities. The time required to look for and initiate connections with other organizations can require human or financial resources outside of what is available to an organization (Clutterbuck & Doherty, 2019), which further emphasizes the importance of creating sustainable partnerships to alleviate some of this pressure over time compared to constantly searching for new connections (Svensson et al., 2017). While in previous literature, specifically literature focused on community sport organizations, relationships with external stakeholders have generally been

deemed a strength of these organizations (Doherty & Cuskelly, 2020), this may not be the case for organizations operating in other sectors or contexts.

Finally, at a more functional level, the capacity dimensions of infrastructure capacity and planning and development capacity have been explored. In regard to the infrastructure of an organization Hall et al. (2003) broadly outlines this capacity dimension as the aspects relating to internal structure and daily operations of an organization. This includes elements of information technology, effective communication and facility access that can be seen as critical to the understanding of an organizations operations (Clutterbuck & Doherty, 2019). In the modern landscape of youth sport there are some technical infrastructural aspects that can be deemed important including having access to appropriate information technology systems (such as databases to store information) (Svensson et al., 2017) as well as both internal and external communication systems in place for the purpose of keeping staff, volunteers, and participants informed with operational and organizational information (Svensson & Hambrick, 2016). In direct relation to program delivery, many organizations across sport contexts find one of their biggest challenges is obtaining access to appropriate facilities due to lack of space or the cost associated with building, leasing, or renting (Wicker & Breuer, 2011). Many youth sport organizations compete over fixed resources like facilities and equipment which can dramatically increase the operating costs of the organizations hindering their ability to build capacity. However, in the work on cross-sector partnerships conducted by Casey et al. (2009), the authors were able to conclude that the development of interorganizational relationships provided sport organizations an avenue to access infrastructure that was previously difficult to obtain autonomously including equipment, facilities and transportation (Jones et al., 2018). For youth sport organizations to help increase their infrastructure capacity it is important for them to work

together to acquire these types of resources at a network level, in comparison to competing over them, as these relationships help to reduce competition that hinders both organizations as well as helping to stabilize their environment and increase control over resource providers (Jones et al., 2017).

Planning and development capacity can be understood broadly as the development and deployment of strategic and program plans by an organizations (Doherty & Cuskelly, 2020; Hall et al., 2003). Some more specific considerations related to this dimension of capacity are strategic planning capability (vision and long-term direction), creativity, collaborative planning techniques, risk management, and the capability to implement plans (Clutterbuck & Doherty, 2019; Doherty & Cuskelly, 2020). While strategic planning is understood as being important in helping organizations identify their main objectives and outlining steps that can and will be taken to achieve them, some organizations utilize strategic planning methods more effectively than others, and it has been found in a variety of sport contexts that some organizations find this process difficult (Svensson & Hambrick, 2016). Another element of planning and development capacity is the concept of collaborative planning that allows a variety of stakeholders (board members, volunteers, partners, participants, etc.) to provide their opinions and expertise that can be useful in addressing organizational issues or helping to further the understanding of how effective the organization is in their ability to provide effective programming (Clutterbuck & Doherty, 2019). The concept of understanding the risks for an organization that can hinder their ability to operate and succeed in a long-term capacity is important to acknowledge and understanding the role that strategic and collaborative planning initiatives can have in mitigating these risks helps to further the relevance of planning and development capacity to the success of sport organizations (Clutterbuck & Doherty, 2019). While many organizations tend to engage in

the strategic planning process, understanding how to properly implement the plans that are developed has been noted as being a challenge for sport organizations, thus reducing the planning and development capacity of the organization (Doherty & Cuskelly, 2020; Misener & Doherty, 2009).

Interorganizational Relationships

Interorganizational relationships have been studied and examined through a variety of lenses and in a variety of different contexts including management, marketing, policy, tourism and sociology (Babiak et al., 2018). Murphy et al. (2015) note that many studies of interorganizational relationships look to understand the motivations and dynamics of relationship development. Thus, a key consideration is to understand the motivating factors that are integral within the process of deciding to develop these relationships within a given network. Oliver's (1990) analytical framework provides motivational factors of importance that are key in the development of IORs, specifically amongst cross-sector sport organizations. The factors of asymmetry (the desire to exercise power over another organization), reciprocity (the pursuit of collaborative advantage), necessity (to meet legal or regulatory requirements), legitimacy (an organizations appearance in response to external pressures), efficiency (to improve the internal input/output ratio) and stability (to seek predictability and dependability of resources) are all identified as being key motivators for different organizations to foster interorganizational relationships within a given network, with different motivations influencing the nature and makeup of the relationships themselves (Oliver, 1990; Gerke et al., 2018).

Another motivating factor that has been established as a necessity for the development of IORs is the concept of trust, with trust playing a key role in the early development of relationships that can help to establish a trajectory for furthering the relationship over time

(Barnes et al., 2017). Trust can be viewed as an important factor within organizational research as trust plays a role in the development of relationships with other organizations through the consideration of the reliability, honesty, attitudes and past behaviours of potential partners (Barnes et al., 2017).

Another perspective that should be considered when looking to understand the nature of interorganizational relationships is to examine the concept of collaboration, or the essence of the interaction itself between organizations. The collaborative interactions between organizations has been a key area of interest across research disciplines, and has generally been centered on understanding the motivations for collaboration and/or the value creation aspect of the interaction (Shumate et al., 2018). The work by Gajda (2004) helps to establish a perspective of interorganizational relationships that is centered on the concept of collaboration. Specifically, this author discussed the composition of interorganizational collaboration as being dependent on five key principles.

The first principle is that ‘collaboration is imperative’ which means collaboration is necessary to create productive dialogue between organizations that can result in the sharing of resources that each organization may have trouble obtaining on their own (Gajda, 2004). Within the literature on interorganizational relationships and networks, Klein and Periera (2016) state that organizations need to work together with other organizations to address a lack of resources that are required for the organization to achieve its objectives and function successfully. This principle is further supported by the research done by Barnes et al. (2017) who found that interorganizational relationships were vital for providing access to information, equipment, facilities and social capital from organizations operating in the same sector or in other sectors within a network.

The second principle is ‘collaboration is known by many names’ which relates to the complexity of these relationships as different relationships take different forms depending on the actors involved and the nature of the relationship leading to a variety of relationship identifiers including joint ventures, networks, partnerships, alliances and associations to name a few (Babiak et al., 2018; Gajda, 2004).

The third principle of collaboration is identified as ‘collaboration is a journey not a destination’ relating to the nature of collaborative relationships operating through stages of cooperation, coordination, collaboration, and coadunation that further the intricacy of developing and maintaining connections with other organizations (Gajda, 2004). This principle is further explored in the research on interorganizational relationships done by Sotiriadou et al. (2017) where they establish three interrelated stages of growth for IORs; formation (relating to the motivating factors of entering a relationship), management (relating to the factors and challenges of maintaining a relationship) and evaluation (relating to the outcomes and effectiveness of a relationship).

The fourth principle of collaboration established by Gajda (2004) is ‘the personal is as important as the procedural’ which refers to the importance of investment by individuals on both sides of the collaboration to create commonality in goals and objectives relating to the relationship. This idea is reinforced by the findings of Barnes et al. (2017) who found that when organizations indicated high levels of trust with other organizations, regardless of their sector or operation, they were more likely to collaborate with one another. Facilitators can also be seen to play a role in the development of effective collaborative activities at an individual level. According to Chandler (2019) individual facilitators are important in developing group processes for collaboration by helping to ensure safe spaces for discussion where the input of

potential collaborators is equally considered, as well as helping in the identification of strengths and weaknesses and assisting in the establishment of goals for collaborative action.

The fifth and final principle established is ‘collaboration develops in stages’ which includes discussions of viability, establishment of roles and strategies, building of rapport and implementation of strategies, and evaluation of effectiveness and future opportunities for collaboration (Gajda, 2004). This principle is once again reinforced by the study by Sotiriadou et al. (2017) focused on the different stages of growth of IORs. These principles outlined in the work by Gajda (2004) utilized previous studies surrounding interorganizational relationships and collaboration to provide a perspective that conceptualizes the key aspects of these relationships that help to further the importance of studying their relevance to the successful operation of youth sport organizations, as will be the case in this research study.

When looking to further understand relationship development within these perspectives it is also important to consider some of the factors that can lead to the insufficient management of these relationships. Frisby et al. (2004) found that certain managerial structures and processes could be seen to hinder the effective management of relationships with other organizations. From a structural standpoint, the lack of planning and policy guidelines, unclear roles and reporting channels and insufficient human resources were all shown to contribute to the insufficient management of relationships with other organizations. From a process standpoint, the factors that were seen to contribute to insufficient relationship management were insufficient training, insufficient dedication of time to partnerships, difficulties overcoming conflicting values, lack of communication, poor coordination, insufficient supervision, lack of evaluation and lack of strategic planning relating to retaining or terminating relationships (Frisby et al., 2004).

Barriers to IOR Development

While Frisby et al. (2004) outlined some key factors that can be seen to impact the viability or performance of interorganizational relationships through mismanagement due to managerial structures and processes, it is also important to consider some of the key barriers that have been shown to prevent the development of interorganizational relationships. As was noted in the work by Alexander et al. (2008) there has been research conducted that shows one of the barriers that prevents interorganizational relationship development is poor communication leading to continued competition amongst one another for facilities and resources, despite having the knowledge that these relationships can be mutually beneficial. This idea is supported by the work done by Hall et al. (2003) as they mention organizations being frustrated with collaborative endeavours due to time consumption, the requirement of extensive human resource skills and difficulty of sustainability. The authors also looked at a key managerial barrier termed collaborative inertia where the potential outcomes of the relationship do not become visible as quickly as expected (Thibault et al., 2004). The authors explore a variety of factors that could contribute to collaborative inertia including difficult negotiations due to organizational or personal differences relating to goals, difficulty communicating due to [professional] language or [organizational] culture barriers, as well as differing approaches to operational procedures between organizations (Thibault et al., 2004). The authors also identified perceived imbalances of power, difficulty establishing trust, managing accountability of each organization, as well as attempting to maintain autonomy as creating challenging and overwhelming conditions for the maintenance of IORs (Thibault et al., 2004).

In their study of organizational trust Barnes et al. (2017) establish that at an organizational level, actors that are centralized within a given network can play a role in

coordinating linkages between organizations that they are connected with. Through the promotion of collaboration and interaction between network members, centralized actors can help to facilitate the development of trust that can lead to collaborative practices between organizations as well as helping to balance the power and influence within a network that can enhance the overall stability within the network (Barnes et al., 2017). Within the literature surrounding the development of relationships between youth sport organizations Jones et al. (2017) expressed that many of these organizations struggle to establish effective relationships, and some of the constraints of these relationships include limited resources, poor communication, power imbalances, and lack of trust between organizations.

Peachey Cohen et al. (2018) further the relevance of these challenges as they discussed barriers preventing the development of these relationships stemming from lack of trust, philosophy and value alignment, decision making, relationship building, resource acquisition, and power balance. Most importantly, however, is that many of these mentioned barriers are unanticipated leading to a lack of preparedness in addressing them when they arise, thus increasing the challenge of overcoming these barriers. In a recent study by Hambrick et al. (2018), an unanticipated barrier that can impact the development of relationships is the departure of key staff or upper level management that can alter the nature of previously formed relationships while also causing turbulence in the operation of the organization as the role is filled. The same can be said about facilitators at the organizational and individual levels who may be seen as playing an important role in helping to maintain relationships and ensure quality collaboration (Chandler, 2019). A lack of understanding of what comprises IORs has also been identified as a barrier as even organizations that understand the necessity of these relationships tend to focus on one-time exchanges of resources due to an underestimation of the amount of

work necessary to create and maintain with other organizations for the purpose of long-term cooperation (Barnes et al., 2017).

Further, certain forms of relationships have been seen to be more difficult to develop, specifically, multiple and diverse cross-sector partnerships have been identified as being difficult for organizations to manage due to the complexity of the environment created by contrasting organizational objectives and operation styles (Babiak & Thibault, 2009). Specifically, Legg et al. (2018) discuss the difficulty of organizations in different sectors being able to work together due to a potential loss of control, loss of authority, or lack of accountability. A good example of this would be that leaders in sports organizations operating in the public or non-profit sectors have been noted to be more reluctant to develop relationships with private sector organizations due to a fear of privatization or a shift in focus toward profit generation (Alexander et al., 2008).

Benefits of IOR's in Sport

Throughout the literature focused on the operation of youth sport organizations researchers have agreed that the development of interorganizational relationships provide beneficial outcomes and can be deemed important to the success of these organizations in an increasingly competitive landscape, however, in many cases organizations are still unable or unwilling to foster these relationships which can be seen to be hindering their organizational performance. In the literature surrounding youth sport organizations these relationships have been shown to help organizations across all sectors (public, non-profit, and for-profit) share resources that helped to reduce operating costs and create more efficient service provision, including human resources, financial resources and infrastructural resources (Jones et al., 2018). While Misener and Doherty (2013) established that much of the research on interorganizational

relationships have concluded with established benefits related to development of specific capacity dimensions, there has also been research in this area that supports the role of interorganizational relationships in achieving social and strategic objectives such as the increasing of visibility and legitimacy, building of social capital and promotion of leadership within communities (Hayhurst & Frisby, 2010; Misener & Doherty, 2012; Vail, 2007). Further to this idea, the study done by these authors pushed the idea that understanding the benefits of IORs should involve exploring the ways in which these relationships help an organization to obtain their mission or objectives (Misener & Doherty, 2013).

IOR Theoretical Framework

For the purpose of this study the theoretical framework that will be used to shape this research study stems from the work by Tasselli et al. (2015) that focuses on the individual, organizational, and functional perspectives of a network. With the focus of this study being on understanding the interactions among organizations in a youth sport network, adopting a social network analysis methodology has been deemed appropriate to gather data that will be analyzed to draw conclusions relating to each of these perspectives. This theoretical framework will help to provide an appropriate lens for properly understanding the implications of this network study. From the individual perspective, participants will provide information relating to the formality and context of their relationships with other organizations within the network. From the organizational perspective identifying relationships and their context will allow for network measures to be gathered and network visualization to be developed to help establish the position of a given organization within the whole network. Finally, from the functional perspective, gathering data relating to specific capacity dimensions will allow for an understanding of the

utility of previously established relationships, and may provide implications for further relationship development.

In the work by Tasselli et al. (2015), the authors look to provide a theoretical framework for understanding the nature of interorganizational relationships within a network by looking at three key perspectives; The people make the network, The network makes the people, and People and networks coevolve. These perspectives can be better understood as a way to conceptualize the relationships between organizations in the network at the individual level (The people make the network), the organizational level (The network makes the people) and at a functional level (People and networks coevolve). Misener and Doherty (2013) provide some examples of potential benefits for organizations that look to develop relationships within their networks including cost savings, increased quality of service, program growth, organizational learning, increased revenue generation, greater public accountability, and a strengthened sense of community. This framework is utilized within this study to help better understand the factors that must be considered when understanding the nature of the whole network, as well as the nature of the relationships found within the network (See Table 1).

Table 1

Tasselli et al. (2015) IOR Theoretical Framework

The people make the network	The network makes the people	People and networks coevolve
Individual Perspective	Organizational Perspective	Functional perspective
Looks at the involvement of the individuals in the development of relationships with individuals in other organizations in a network	Relates to more structural components of a network, specifically focusing on the positioning of an organization in their network surroundings	Relates to the ability of actors in a network to influence change through relationship development and organizational positioning
This perspective is based on a variety of personal characteristics and cognitions of the individuals in a network	This perspective is based on the outcomes associated with certain positioning in a larger network (location, number of ties, strength of ties)	This perspective is based on the ability of individuals to recognize the strengths and weaknesses of an organization, and identify opportunities for growth

Conclusion

Through a review of the literature surrounding interorganizational relationships and capacity building there are some points of interest that help to further the relevance and importance of this study to research relating to youth sports organizations. Many experts with focuses on organizational study, non-profit organizations, organizational capacity and youth sport have identified the importance of organizations to search out opportunities for collaboration with other organizations operating within their network (Jones et al., 2017; Misener & Doherty, 2013). These relationships are understood in the literature as being effective tools for addressing organizational shortcomings or problems by providing increased access to resources and knowledge that can help further the goals and operating ability of these organizations. The information that has been explored in this literature review helps to further the importance of analyzing how organizations are able to further their capacity dimensions through the fostering and development of interorganizational relationships. While the concepts of interorganizational relationships and organizational capacity are distinct, the literature also helps to show their interdependence. There is no requirement for organizations to utilize IORs, however, the literature in these areas helps to show that IORs are effective in their ability to help address weaker areas of capacity and establishing ability of these concepts to work together to further our knowledge of organizational operation and effectiveness.

By utilizing the work done by Tasselli et al. (2015) to frame this study, this research will help to address further gaps relating to the study of IORs outlined by Babiak et al. (2018) by examining both the network perspective in sport (understanding the interactions between all organizations in the network compared to one organization) and the individual or partner perspective (understanding the role that individuals play in the development and maintenance of

IORs). This study will look to address the gap in the literature by exploring the ways in which cross sector youth sport organizations in the Niagara Region are able to effectively develop relationships for the purpose of further developing the organizational capacities necessary for addressing challenges and providing successful programming.

CHAPTER 3: METHODOLOGY

Introduction

This research study was conducted utilizing a social network analysis (SNA) methodology which can be understood as a broad strategy for investigating social structures (Otte & Rousseau, 2002), which in this study were related to the social structures of the youth baseball organizational network in the Niagara Region. Tichy et al. (1979) established that social network analysis studies can provide insight into specific sets of network properties that are of interest within this study including transactional content (resources that are exchanged), nature of the links (a description of the nature of the relationships) and structural characteristics (describing the structure of the whole network). Today, the social network analysis methodology has its roots firmly planted in graph theory, which allows for a visual representation of actors [organizations] and their relationships between one another based on their position within the graph and the depicted connections between them within a given network (Scott, 2010). Within this type of study surrounding the network perspective, considerations must also be made regarding ontological, epistemological and methodological premises. These premises encompass how the network perspective allows people to view the social world through relational properties between actors in a network, how this perspective lets people understand the social world using the relational components of a phenomena, and how the analysis of these networks provides people with the tools to measure and analyze relational properties of these phenomena (Quatman & Chelladurai, 2008).

According to Prochnow et al. (2020), many researchers have utilized a social network analysis methodology to study topics related to youth and their engagement with a variety of physical activities and related health behaviours including bullying, drug use, physical activity

levels and sedentary behaviour. While in the field of organizational management, SNA has played an important role in research studies looking to understand the complexities of relationships and patterns between and within organizations, resulting in hundreds of thousands of academic references to social network analysis in management research databases (Monaghan et al., 2017). As stated by Williams and Shepherd (2017), modern application of network analysis methods has allowed researchers to more effectively answer questions relating to organizational founding, change, performance and growth, while providing a greater understanding of the outcomes provided at an individual and organizational level.

As is the case within this study, social network analysis is useful in addressing complex issues involving multiple actors within a network, and is further recognized as an effective approach to evaluating and understanding the effectiveness of the network as whole based on its structure and the nature of the relationships between organizations (Barnes et al., 2017; Turrini et al., 2009). Using a social network analysis methodology the research question was: How do IORs and organizational capacity influence network structure in a youth baseball network? and the hypothesis was:

H¹: Organizations that indicate a greater number of IORs will indicate a greater amount of resource sharing ties in the youth baseball network.

By utilizing a quantitative methodology like a social network analysis, this study was able to identify and explore the multiple interactions between organizations that create the structure of the network as a whole to determine who the actors were and the nature of the relationships (Provan & Milward, 2001), while also being able to identify how resources [human, financial, infrastructure, relationship, planning] were shared across the network

contributing to the capacity and capacity building aspects of these organizations (Jones et al., 2018).

Sample Size / Response Rate

The data utilized within this study were collected from the total population of baseball organizations located within the Niagara Region of Ontario, Canada that play a role in the provision of youth baseball opportunities. This region consists of multiple municipalities including Fort Erie, Grimsby, Lincoln, Niagara Falls, Niagara-on-the-Lake, Pelham, Port Colborne, St. Catharines, Thorold, Wainfleet, Welland and West Lincoln. For the purpose of this study the whole population of youth baseball organizations were identified within this geographical area based on specific characteristics that classified them as suitable for the study (Brus & Knotters, 2013). Total population sampling was deemed appropriate for use in this study as the exclusion of any of the organizations within this region based on the outlined selection criteria would lead to an incomplete understanding of the structure and interaction within the whole youth baseball network (Etikan et al., 2016).

The population size of organizations asked to participate in this study was fifteen baseball organizations, with representation of organizations from the private (n=2), public (n=1) and non-profit (n=12) sectors. The relatively small population size further contributed to the appropriateness of a total population sampling technique (Etikan et al., 2016). The organizations selected for participation in this study were located through online search engines and either directly offered baseball programming for youth athletes under the age of 18 years, or offered baseball programming for other demographics but were identified as having supported youth baseball programming in the Niagara Region. It is important to note that this study was conducted on the basis of voluntary participation indicating that the data collection tool was

distributed to an organization if they provided their consent to participate in the study. Finally, to ensure that the organizational information relating to interorganizational relationships and dimensions of capacity that was obtained through the data collection process was accurate, the organizational representatives contacted were in an appropriate position at a management or administrative level of each organization to ensure that the participant had the appropriate access to the information required to provide informed responses to the survey questions (Jones et al., 2017).

Through this process data were collected from 10 of the 15 baseball organizations that were contacted to participate in this study, resulting in a 67% response rate. This response rate is consistent with other studies that have utilized a social network analysis methodology (Weare et al., 2007) and allowed for the estimation of network characteristics of interest in this study including density and centralization. Respondents for the ten organizations were predominantly (80%) volunteers and held varying administrative type roles, primarily in non-profit settings (presented in Table 2). Five organizations in the network did not agree to participate in this study – these organizations represented non-profit organizations (n=3), a public sector organization (n=1), and a private sector organization (n=1), confirming the cross-sector nature of the network.

Table 2

Descriptive Characteristics of Participating Organizations

Organization	Position of Representative	Type of Job
Nonprofit 1	President	Volunteer
Nonprofit 2	Commissioner	Volunteer
Nonprofit 3	President	Volunteer
Nonprofit 4	President	Volunteer
Nonprofit 5	President	Volunteer
Nonprofit 6	Registrar	Paid Staff
Nonprofit 7	President	Volunteer
Nonprofit 8	President	Volunteer
Nonprofit 9	President	Volunteer
Private 1	Owner/President	Paid Staff

Survey Development

The survey that was used for the purpose of collecting data within this study was derived from data collection tools that have been utilized by other researchers within this field of study (See Appendix A). Part 1 of this survey was derived from the questionnaire developed by Provan et al. (2005) that provided participants with a roster of organizations within the network of study and asked participants to identify the formality (formal vs. informal) of their relationship with each of the fifteen listed organizations that were identified as being part of the Niagara Region youth baseball network. In this section respondents were also provided the opportunity to identify any further organizations that were not included in the initial roster and provide information regarding the formality of their relationship with these organizations that helped ensure an accurate depiction of the whole network.

Part 2 of this survey was used to gather data related to the specific capacity dimensions of human resource capacity, financial capacity, infrastructural capacity, relationship and network capacity and planning and development capacity (Hall et al., 2003). This portion of the survey was adapted from the work by Jones et al. (2017) with each of the respondents being asked to identify organizations within the network that they shared or received resources with relating to each organizational capacity dimension. Within the survey each capacity dimension was accompanied by a description and examples of resources to assist participants in providing accurate resource classification based on the survey instrument utilized in the study by Jones et al. (2017). For each capacity dimension a table was provided for the respondent to provide the name of the organization that they had a connection with in regards to a given capacity dimension, and also allowed for the relationship to be described by providing responses to questions relating to the identification of specific resources that are shared or received, the

direction of the relationship, the frequency of the interaction, as well as the importance of the interaction to the operation of the organization. The first question related to the direction of the relationship (tie) was measured on a 3-point scale (send, receive, send and receive). The second question related to the frequency of the relationship was measured on a 6-point scale (less than once a year, annually, bi-annually, monthly, weekly, daily). The third question related to the perceived importance of the relationship to the operation of the organization was measured on a 5-point scale (very unimportant, unimportant, moderately important, important, very important). Each of these scales were based on the survey instrument previously used by Jones et al. (2017) and can be found in Appendix B.

Survey Reliability and Validity

To ensure the reliability of the data, as outlined by Monaghan et al. (2017), some key considerations were necessary for this study. The first consideration related to reliability was ensuring informant competence. Informant competence refers to the knowledge and expertise of a respondent that is providing responses within a research study and can have a negative impact on the reliability of the data collected if a respondent has insufficient knowledge or access to information necessary to provide appropriate responses to the survey questions (Jones et al., 2017; Monaghan et al., 2017). To help ensure that the respondent was appropriate for this study it was confirmed that they held a managerial, administrative, or executive position within one of the youth baseball organizations in the Niagara Region before being asked to participate in the study. Each of the organizational representatives that completed the survey held the highest administrative position within their organization including eight presidents, one commissioner, and one registrar. Of the ten representatives, eight of these positions were classified as volunteer positions compared to just two paid positions.

The first consideration made to help ensure validity in this study was the provision of a roster of all potential actors within the specific network to each respondent, while also providing additional space to identify any other actors that were not included in the initial roster (Monaghan et al., 2017). Also, to help ensure the validity of the data collected using this survey instrument the construct validity of the survey and the dissemination of the research context was addressed (Monaghan et al., 2017). Monaghan et al. (2017) expressed that to help ensure the validity of the data collected in network analysis studies it was important to consider the construct validity of the data collection instrument. This refers to the assumption that an instrument accurately measures the concepts that it is designed to measure, as well as making sure that the questions being asked are aligned with the nature of the network, the interactions that are being explored, and that they are providing data relevant to the overarching purpose of the study (Monaghan et al., 2017). To ensure the construct validity of the survey instrument before the data collection process began, a pilot study was conducted in which the survey was provided to the Director of Operations for the Tri-City Giants baseball organization, which is a youth-serving baseball organization located in Kitchener, Ontario. This organization was outside of the population of focus within this study, thus the participation of this individual did not have an impact on the data collection process. This pilot study helped to ensure that the questions asked within the survey were understandable and appropriate in their ability to provide sufficient data that was collected using this survey instrument. Following the completion of the pilot study a review of the data and potential comments of the participant helped to confirm that further adjustments were not required for the survey instrument prior to beginning data collection.

To ensure that the likelihood of recall error and selection bias are reduced during the data collection process Borgatti et al. (2013) recommended the use of a roster of organizations

identified within the network relevant to this study. Thus each respondent was provided with the roster of the fifteen organizations identified within this study, while also being provided the opportunity to name any other organizations the individual felt was relevant within the network that may not have been identified initially by the researcher. To gather network data relating to the nature of the connections or relationships between the identified organizations, initial questions were developed to establish the connections amongst the organizations within the network. Then, to gather data relating to the organizational capacity dimensions of human resource capacity, financial capacity, network capacity, infrastructure capacity, and strategic planning capacity adapted from the work by Hall et al. (2003) questions were asked to help define the relationships between organizations in relation to these dimensions. As was consistent with the work done by Jones et al. (2017) the respondents were provided examples of resources related to each dimension and then asked to identify the organizations that either provided the associated resources to them, or received the associated resources from them to determine the nature of the relationship in relation to a given capacity dimension. The nature of these relationships were defined using the indicators of direction, frequency, and importance with scores on separate scales for each indicator being provided by the respondents.

Data Collection

For the purpose of data collection, contact information for each of the identified organizations was required. Each organization was contacted via the contact information provided on the website of the organization, and through this correspondence the researcher asked to be put in contact with an individual in a management or administration level position to ensure the ability of the respondent to have access to the appropriate information required for this study. Once a contact within a target organization was identified, the individual was

provided with a formal request to participate in the research study, via e-mail, which outlined the rationale, purpose and scope of the study to provide sufficient context necessary for the participant to understand their role within the study and how the information they provided would be used (Monaghan et al., 2017). Once the individual provided their consent to participate, a telephone meeting was scheduled for completion of the survey, at which time the participant was required to sign an informed consent form (See Appendix B), and return it via email, prior to being provided with the survey instrument (See Appendix A). The survey was conducted using a phone meeting format allowing the researcher to be present to help reduce confusion with any questions within the survey and allowed for the provision of clarification when required. In some cases a meeting time was unable to be established, and the participant completed the survey without assistance. The data collected through this process was quantitative in nature. A quantitative research method allowed for the collection and analysis of numerical and statistical information (Creswell, 2013) that was appropriate in this study as the questionnaire provided statistical information relating to network composition and capacity dimensions that were further evaluated using UCINET 6.0 software during the data analysis process.

Ethical Considerations

Borgatti and Molina (2003) expressed that with the increase in the number of network studies, the need for understanding and addressing the ethical issues related to network studies has become more apparent. Network studies require different ethical considerations than other research studies as the nature of these studies prevents the ability for the respondents and their responses to remain anonymous due to the requirement of the respondent to identify other actors or individuals within a given network (Borgatti & Molina, 2003). To help address this concern,

it was important for the researcher to provide a clear disclaimer to participants that the information they provided could be visible to other respondents from the network being studied (Borgatti & Molina, 2003). Within this study this concern was addressed by first providing each organization with the appropriate information relating to the nature of the study, the types of questions that were asked to gain organizational insight, and a roster of the other organizations asked to participate. At this time, the organizational representative was asked to provide their consent to participate before engaging in the data collection process.

Respondents were also provided the option to withdraw and have their data removed from the study at any time before the data collection process was completed. Due to a lack of sensitivity regarding the nature of the information required for the purpose of this study, the risk of providing information detrimental to the operation of the organization was considered minimal and allowed for respondents to answer questions honestly and to the best of their ability based on their position within a given organization. Finally, all participating organizations within this study will be provided with the results of the data analysis and given access to the final copy of this research study to ensure the data they have provided has been used appropriately, and they were assured that the data collected within this study would be used only by the researcher for this particular study and would not be provided for use by other parties or researchers.

Data Analysis

For the purpose of this study, the measurement design that was employed was general network inference which looked to provide a detailed reconstruction of the whole network (Butts, 2008), in this case being the youth baseball network in the Niagara Region. Given only ten of the fifteen organizations of the Niagara Region youth baseball network participated in this

study, a partial as opposed to whole network analysis was conducted. The partial network analysis was based on the information gathered from the ten responding organizations and serves as an appropriate alternative for a network study of this kind (Jones et al., 2018). For the analysis of the collected data, Scott (2010) established that the UCINET 6.0 software program was effective as it provided sufficient network data analysis, and the use of this program has been reinforced by its adoption in a multitude of network studies (Barnes et al., 2017; Chan & Liebowitz, 2006; Hambrick et al., 2018). More specifically, this software program offered intuitive and efficient performance of network data analyses relating to network structure and positional measures that allowed for the testing of the hypothesis for this study (Scott, 2010).

In relation to network visualization techniques, UCINET 6.0 was also valuable as it contains a subprogram, NetDraw, that allowed for appropriate visual representation of the overall network structure as well as the connections between the youth baseball organizations within this study (Dobbels et al., 2016). The use of UCINET 6.0 software in this study allowed for statistical analysis of the network data (network density, network centralization) collected through the survey responses from organizational representatives, while also allowing for the statistical analysis of the capacity measures data. Network density is a network measure that was calculated to represent the level of connectedness of a whole network (Otte & Rousseau, 2002), while network centralization reflected the overall cohesion of the network around particular focal points or actors (Scott, 2017). These measures were relevant to this study as they allowed for conclusions to be drawn in relation to overall connectedness of the organizations within the youth baseball network, as well as determining which organizations had developed the most relationships within the network.

To perform the appropriate statistical analysis of the survey data collected in this study, the data needed to be inputted into fourteen unique research matrices that allowed for the application of mathematical and computer tools to summarize and find patterns within the data (Hanneman & Riddle, 2005). The first matrix (global IORs) quantified the responses provided in the survey (Part 1) where respondents were asked to identify the existence of a relationship between their organization and other Niagara Region youth baseball organizations. A roster format was used to solicit responses. Within this matrix if an organization identified a relationship with another organization (either formal or informal) a value of 1 was assigned to that relationship, while the absence of an identified relationship was assigned a value of 0.

Twelve additional matrices were created to quantify the relationships between the organizations and the organizational capacity dimensions (human, financial, infrastructure and planning and development). Each are described here. For each of the individual capacity dimensions (human, financial, infrastructure, and planning and development), three unique matrices were created. The first set of matrices represented the direction of the relationship related to a given capacity dimension. A value of 1 was assigned to a singular direction relationship (send or receive), a value of 2 assigned to a reciprocal relationship, and a value of 0 was assigned when no relationship was indicated.

The second set of matrices represented the frequency of a relationship, and the importance of a relationship. A value of 1 – 4 (corresponding to the scale in the survey) was assigned when a relationship was identified, and a value of 0 assigned when a relationship was not identified.

All these matrices were inputted into the UCINET 6.0 software to produce the appropriate statistical outputs for the purpose of establishing connections and drawing

conclusions from the data. While these matrices were used to provide a statistical representation of the data, the NetDraw function found within the UCINET 6.0 software helped to convert these matrices into visual representations of the data, or sociograms. A sociogram is a type of graph typically found in network analysis that consists of nodes (representing actors) and lines between them representing a tie or relationship (Hanneman & Riddle, 2005). Sociograms were created for each of the matrices and provided a visual understanding of the organizations (represented as nodes) and their relationships with other organizations (represented by connecting lines) within the youth baseball network.

Social Network Analysis

The development of matrices was required for UCINET 6.0 software to be utilized (Hanneman & Riddle, 2005). Fourteen matrices were developed: one global interorganizational relationship matrix, one global organizational capacity matrix, and twelve micro-level capacity dimension matrices. Each of the micro-level capacity dimensions of human resources, financial resources, infrastructure resources, and planning resources were represented by three unique matrices based on direction, frequency and importance values gathered through data collection. Direction was measured on a scale from 1 to 3, frequency was measured on a scale from 1 to 6, and importance was measured on a scale from 1 to 5. To make the interpretation of the network data easier, each of these matrices were dichotomized transforming the weighted values into binary values using a universal threshold of 0, meaning any value in the matrices greater than 0 was reduced to 1 which represented the presence of a tie (Neal, 2013; Scott, 2017). In this context, dichotomization was understood as a technique for data-smoothing as collected data with different incremental levels of tie strength simplified to reflect a more general existence of ties in each of the capacity dimensions networks (Borgatti & Quintane, 2018).

To analyze organizational capacity based on the data collected in this research study, the organizational capacity dimensions needed to be quantified in global terms for it to be compared with the global IOR network. This was important to understand if the presence of IORs was able to be a significant predictor of capacity centered relationships in the network. The global organizational capacity matrix was developed by giving each organization a value based on the number of capacity dimension areas they indicated receiving a resource in. Using ‘resources received’ as the indicator in this global capacity matrix is consistent with similar studies done in this area of focus as Jones et al. (2018) noted that studies that focus on organizational partnerships and capacity (through dyads, broader networks) are typically guided by exchange or transaction theories, specifically mentioning resource dependency theory. Resource dependency theory suggested that organizations used partnerships to acquire resources helping to support the use of ‘resources received’ as a way to quantify capacity in this study (Guo & Acar, 2005; Jones et al., 2018). This matrix was developed such that the maximum capacity value an organization could have is 4 (if they received resources in each of the four capacity dimension areas) and 0 if they did not report receiving resources in any of these areas. As this matrix contained weighted values, while the global IOR network matrix was binary, the global capacity matrix was dichotomized to allow for regression analysis to be conducted.

In order to test the hypothesis in this study a Multiple Regression Quadratic Assignment Procedure (MR-QAP) was conducted through UCINET 6.0. QAP multiple regression involved the regression of a dependent variable matrix on two (or more) independent variable matrices to predict scores on the independent variables based on the scores of the dependent variables (Whitbred, 2011). The global capacity matrix was regressed on the matrices of global interorganizational relationships and sector to determine if organizations that reported a greater

number of interorganizational ties would be more likely to report ties related to organizational capacity, and if an organizations sector of operation would be more likely to predict organizational capacity ties. This procedure re-ordered the rows and corresponding columns of the global capacity, global interorganizational relationships and sector matrices to produce new variables with the same constraints and independence as the real variables (Hanneman & Riddle, 2005). An output of R-square and regression coefficients allowed for the estimation of standard errors under the hypothesis of no association (Hanneman & Riddle, 2005).

Conclusion

With the purpose of this research study being to understand the relationship between IORs and organizational capacity in a youth baseball network, a descriptive social network analysis methodology was identified as being effective for answering the research question and testing the hypothesis outlined in this study. This study focused upon examining the whole network of youth baseball organizations in the Niagara Region for the purpose of drawing conclusions related to the relationships between these organizations, and the impact that these relationships had on the capacities of one another. To address the research question outlined within this study, network and capacity dimension data were collected using a survey data collection tool, while the data was analyzed utilizing the UCINET 6.0 software program that allowed for visual representation of the network through sociograms, and statistical outputs relating to human, financial, infrastructure, network and planning capacity dimensions that allowed for conclusions to be drawn relating to the proposed hypothesis.

CHAPTER 4: DATA ANALYSIS

Introduction

This research study looked to understand the relationship between interorganizational relationships (IORs) and organizational capacity in a cross-sector youth baseball network. Social network analysis was recognized as an effective approach for evaluating and understanding the effectiveness of the network as a whole based on its structure and the nature of the relationships between organizations (Turrini et al., 2009). The SNA measures of density and centralization were calculated to address the first research question of “How do IORs and organizational capacity influence network structure in a youth baseball network?”. The results relating to the structure of the network were presented through sociograms, developed through the NetDraw function that provided a visual representation of the network structures and IORs within the network. Finally, the results of the QAP regression analysis were presented to allow for a conclusion to be made regarding the hypothesis of H^1 : *Organizations that indicate a greater number of IORs will indicate a greater amount of resource sharing ties in the youth baseball network.*

Organizational Capacity

The ten organizations that participated in this study were asked to identify specific resources that were shared amongst other organizations and stakeholders. The different resources that were identified by the respondents in relation to each organizational capacity dimension (human, financial, infrastructural, planning) are presented in Table 3, accompanied by the number and percentage of completed surveys they were identified in.

Table 3

Types of Resources

Capacity Dimension	Resource	Frequency	%
Financial Resources	• Sponsorship Money	4	40
	• External Funding		
	• Team Registration Fees	3	30
	• Tournament Fees	2	20
	• Facility Rental Fees		
	• Membership Fees		
	• Performance Bonds	1	10
	• Marketing Fees		
	• Clinic Fees		
	• Insurance Fees		
	• Umpire Fees		
	• Donations		
Human Resources	• Coaching Clinics/Certifications	5	50
	• Umpires	4	40
	• Umpire Clinics/Certifications		
	• Players	3	30
	• Skill Development Clinics		
	• Teams	2	20
	• Coaches	1	10
Infrastructure Resources	• Leadership Roles		
	• Playing Fields	7	70
	• Facility Rentals	5	50
	• Insurance		
	• Constitution/Rules/Guidelines	4	40
	• Equipment/Uniforms	2	20
Planning Resources	• Scheduling	1	10
	• Playing Procedure/Guidelines	6	60
	• General Planning	5	50
	• Strategic Planning		
	• Program Development	2	20
	• Meetings	1	10

Financial capacity referred to an organization's revenues and expenses (Hall et al., 2003) and based on the survey results the most commonly identified resources were external funding and sponsorship money (40%). Human resource capacity referred to the competencies, knowledge, attitudes and behaviours of individuals, coupled with how they are used within an organization (Hall et al., 2003). The training and certification of coaches (50%) and umpires (40%) were the most commonly identified human resources, while access to umpires was also commonly identified (40%). Doherty and Cuskelly (2020) defined infrastructure capacity as being related to internal structure and daily organizational operations, which was reflected in the common identification of playing fields (70%) and facility rentals (50%) as shared resources. This showed a particular reliance on relationships to gain access to spaces necessary for competition and training opportunities in the sport. Insurance was also shown to be a commonly identified resource in this area (50%). Planning capacity was understood as the development and deployment of strategic and program plans by an organization (Hall et al., 2003), and in this area respondents most frequently identified playing procedure/guideline development (60%), strategic planning (50%), and general planning (50%) as shared resources.

Once a respondent identified a resource that was being shared related to a dimension of capacity, Part 2 of the survey asked the respondent to further describe the relationship by answering three questions related to the direction, frequency and importance of each relationship. First, the findings suggested that financial resources were sent most often between organizations, while both human and infrastructure resources were received most often, and planning resources were reciprocated most often within the network (See Table 4). Relating to the frequency of the relationships based on a typical calendar year of operation, the findings suggested that financial, human and planning resources were shared most often on a yearly basis, while infrastructure

resources were shared most often on a weekly basis (See Table 5). Finally, the findings of this study suggested that all four areas of capacity had an average importance response between four and five with a standard deviation below one (See Table 6). This showed that the ties were consistently classified as being important or very important to the operation of the organizations within the network with very little variability. The mean values that were gathered in this study represented the level of perceived importance of these resource sharing relationships to the operation of the organizations based on the information provided by each respondent.

Table 4

Summary of Tie Direction Responses

Capacity Dimension	Mode
Financial Resources	1
Human Resources	2
Infrastructure Resources	2
Planning Resources	3

Table 5

Summary of Tie Frequency Responses

Capacity Dimension	Mode
Financial Resources	2
Human Resources	2
Infrastructure Resources	5
Planning Resources	2

Table 6

Summary of Tie Importance Responses

Capacity Dimension	Mean	Standard Deviation
Financial Resources	4.6	0.82
Human Resources	4.48	0.68
Infrastructure Resources	4.49	0.87
Planning Resources	4.75	0.55

SNA Metrics

Within this study there were six matrices analyzed (global IORs, global capacity, financial resources, human resources, infrastructure resources, planning resources). For each matrix the number of ties was reported and both density and centralization were calculated (See Table 6). The number of ties reflected the number of unique relationships that were identified in each network, with 28 being the least number of ties (human resource capacity network) and 90 being the most (global IOR network). Of the 90 total ties in the global IOR network, 38% of ties were described as formal, 41% of ties described as informal, while the other 21% of ties were classified as being both formal and informal. Overall, there were less ties reported in the capacity dimension networks than in the global networks, with 61 ties being the greatest number of ties related to a specific capacity dimension network (planning resources).

Network density was calculated to represent the level of connectedness of the whole network, and more specifically was the proportion of all possible ties that are present in the network (Hanneman & Riddle, 2005). The density value represented the percentage of total possible ties that were present within the network, with a value of 1.0 representing that 100% of all possible ties are present, while a value of 0 represented that none of the possible ties were present in the network. The network with the greatest density value was the global IOR network with just under 43% of all possible ties being present. The other global network (global capacity) was less dense than the global IOR network with a density value of 0.319, meaning that 31.9% of all possible ties were present. The density of each capacity dimension matrix was relatively low, especially amongst the financial, human, and infrastructure resource networks with values ranging from 0.076 to 0.132. The density of the planning resources network was slightly greater than that of the other capacity dimension networks with a value of 0.199.

“Average degree” density referred to the number of ties each node (organization) had in a network, meaning that the organizations in the networks in this study had as few as one tie up to as many as six ties (on average) (Borgatti et al., 2013). As is consistent with the number of ties and density values, the global IOR network produced the largest ‘average degree’ density value of 6. The global capacity network also had a relatively large ‘average degree’ value that indicated roughly 4-5 ties amongst actors in the network (Scott, 2017). For the capacity dimension networks the ‘average degree’ density value showed that organizations in these networks only reported between 1-4 ties (Scott, 2017).

Network centralization reflected the overall cohesion of the network around particular focal points (actors), and helped to better understand overall structure (Scott, 2017). Centralization values ranged from 0 to 1.0 with greater values indicating the presence of a node(s) that had a greater number of ties than other nodes within the network (McCulloh et al., 2013). Based on the values in Table 7, the global IOR and global capacity networks were the least centralized networks with values of 0.484 and 0.440 respectively. These values expressed that there were multiple actors sharing multiple ties within these networks. The capacity dimension networks were shown to be more centralized with values ranging from 0.491 to 0.676. Specifically, the human resource and infrastructure resource networks appeared to have more primary actors with a larger number of ties than most other organizations in the network (Scott, 2017). Conversely, the planning and financial resource networks appeared to have a greater distribution of ties among multiple key actors (Scott, 2017).

Table 7

SNA Metrics Analysis Output

Matrix	Density	# of Ties	Avg. Degree	Centralization
Global IORs	0.429	90	6	0.484
Global Capacity	0.319	67	4.467	0.440
Financial Resources	0.076	29	1.450	0.491
Human Resources	0.092	28	1.556	0.676
Infrastructure Resources	0.132	45	2.368	0.559
Planning Resources	0.199	61	3.389	0.500

Sociograms

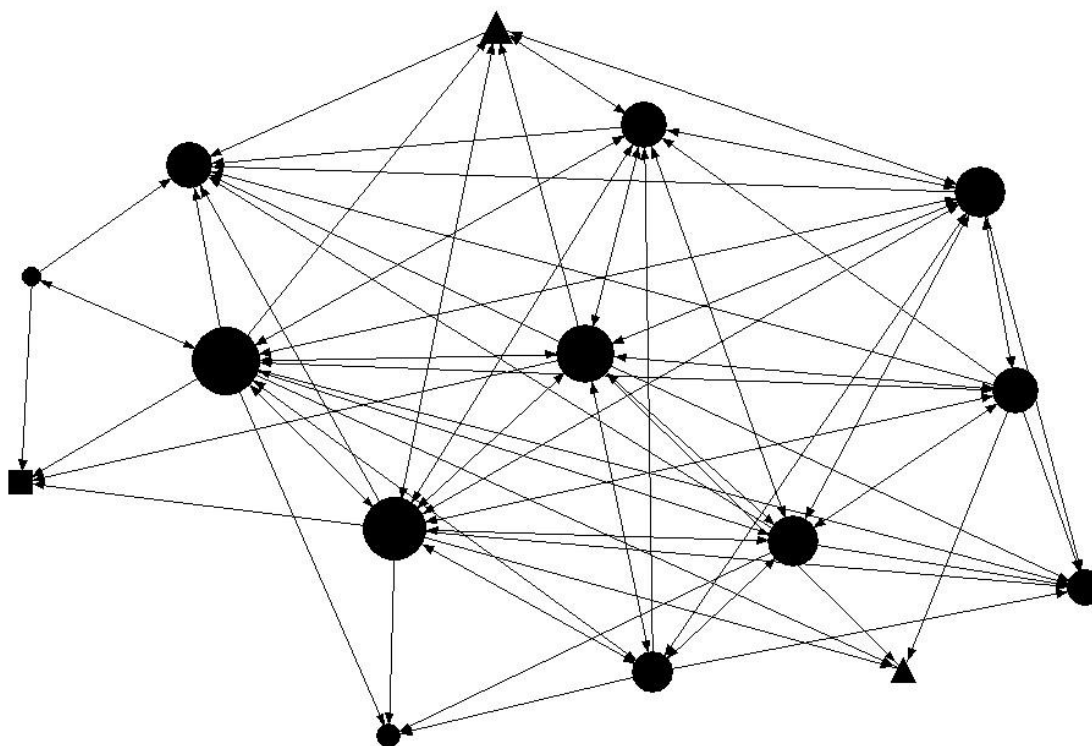
For each of the six matrices a sociogram was generated using the NetDraw function within the UCINET 6.0 software. These sociograms provide a visual representation of the relationships within the networks. In these sociograms the organizations are represented as nodes (i.e. square boxes) and their relationships (ties) with other organizations were represented by connecting lines. The arrow heads on the ends of each of the connecting lines were used to represent which organization identified the relationship helping to show if a relationship was indicated by one or both of the organizations involved in the relationship. In each sociogram the size of the nodes reflected the degree centrality or number of direct ties the organization has in the network, while the colours represented the sector of the organization.

Global Interorganizational Relationship (IOR) Network

The global IOR network matrix was used to represent an overall view of the interorganizational relationships among youth baseball providers. As shown in Figure 1, this network appeared to have four or five actors that can be considered central to the network and share a multitude of ties which further depicts a lower level of centralization. It is also interesting to note that even the more peripheral actors shared multiple ties within the network and can help provide a visualization that reflects the greater density and 'average degree' density values shown in Table 6.

Figure 1

Global IORs among Youth Baseball Organizations in the Niagara Region



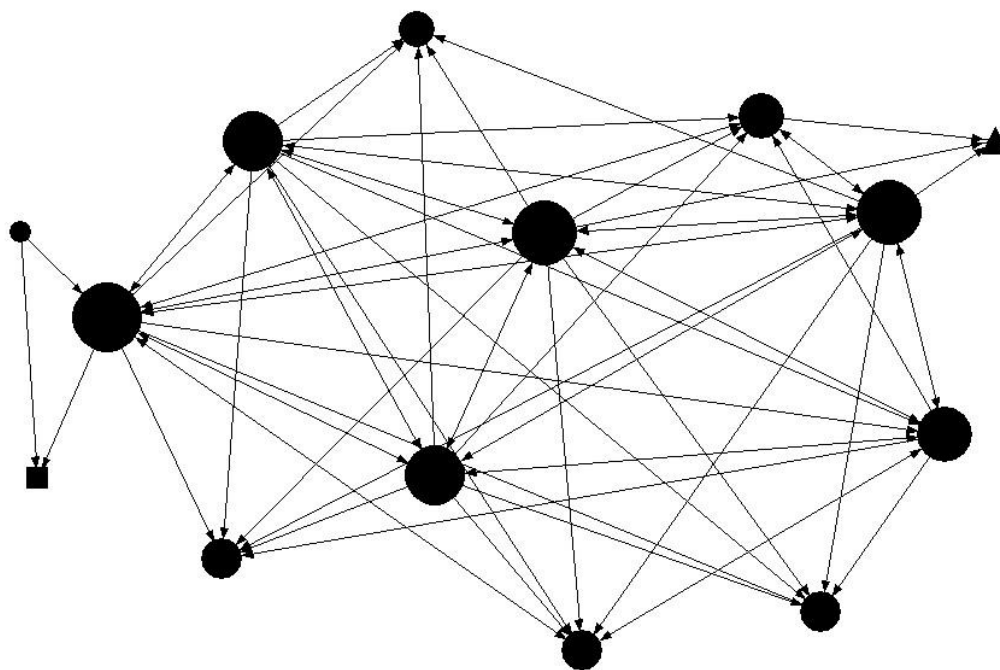
Legend	
Shape	Sector
Circle	Nonprofit
Triangle	Private
Square	Public

Global Organizational Capacity

Figure 2 represented the global organizational capacity network, which appeared to be most similar to the global IOR network, both through the SNA metrics of density, ‘average degree density’ and centralization, as well as overall network structure. This network showed less ties with 67 compared to 90 ties being present, however, the sociogram illustrated similar structural features including very few peripheral actors and the sharing of many ties amongst multiple non-profit actors within the network.

Figure 2

Global Organizational Capacity Among Youth Baseball Organizations in the Niagara Region

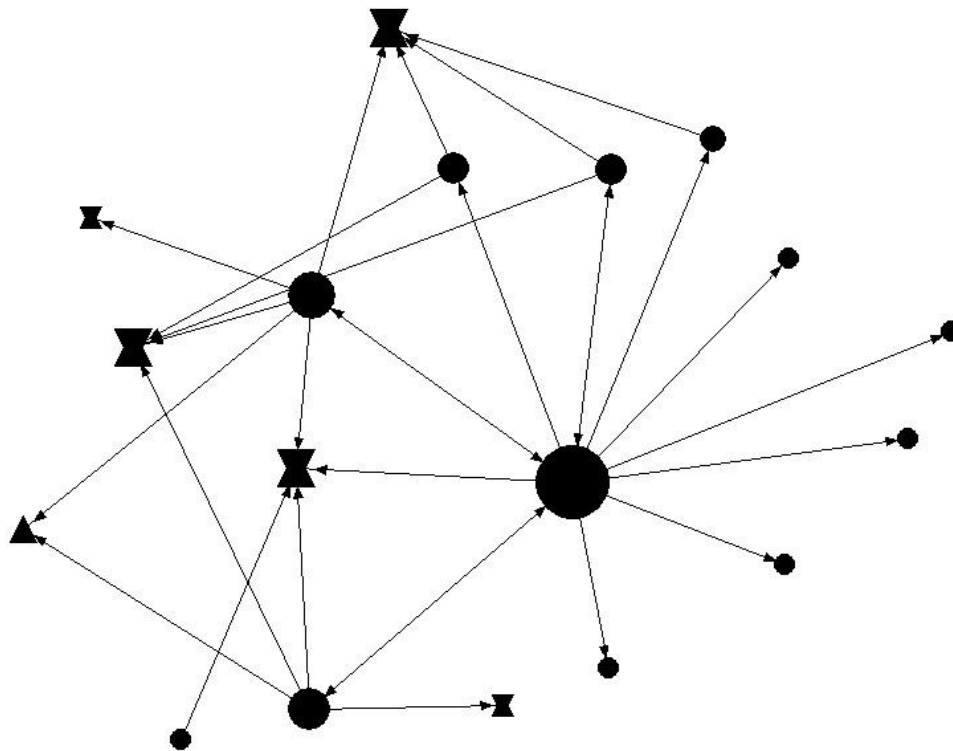


Legend	
Shape	Sector
Circle	Nonprofit
Triangle	Private
Square	Public

Micro-Level Capacity Dimension Networks

Figure 3 provided a visual representation of the financial resource capacity dimension network. This sociogram depicted a network with a low level of cohesion as many of the actors in this network share only a single tie with one other actor in the network. This level of cohesion is reflected through the small number of ties present (29), as well as the low density (0.079) and 'average degree' density (1.45) values from Table 6. A low level of centralization is also depicted through the presence of many peripheral actors with single ties. There appeared to be a main non-profit actor that acted as the singular tie of many of the other non-profit actors within this network.

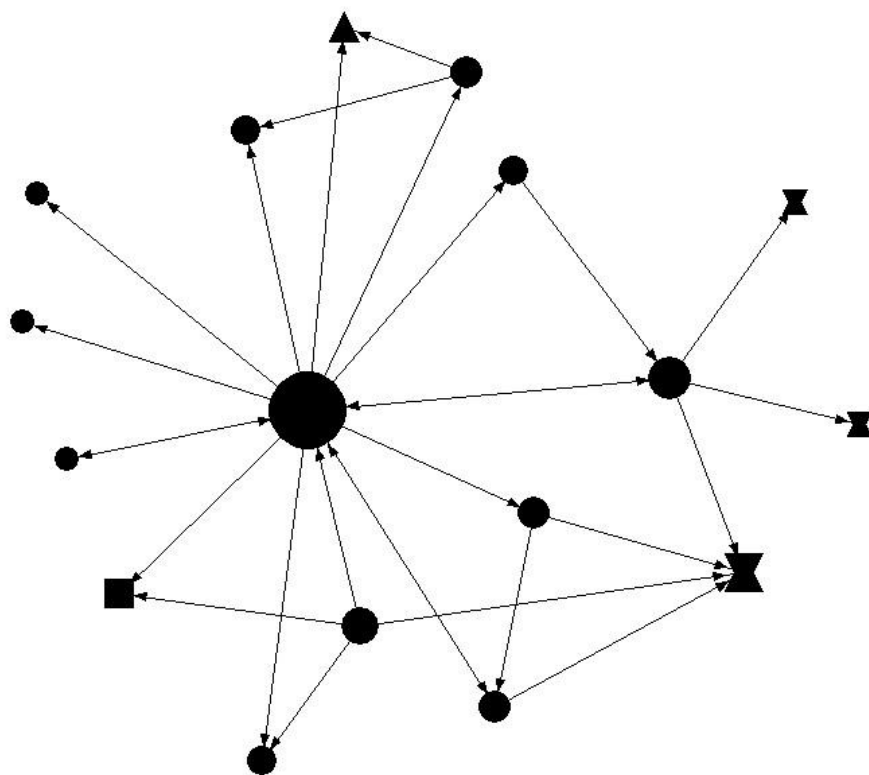
Figure 3

Financial Resource Sharing Among Youth Baseball Organizations in the Niagara Region

Legend	
Shape	Sector
Circle	Nonprofit
Triangle	Private
Hourglass	External Stakeholder

Figure 4 provided a visual representation of the human resources capacity dimension network that appeared to be very similar in structure to the financial resource capacity network. The structure of these networks shared common features including the presence of a non-profit actor acting as a main tie for other non-profits in the network. These micro-level networks also appeared to have a very similar number of ties, as well as density and 'average degree' density values. The key difference shown by this sociogram is that this network is much more centralized around one main actor with most of the ties present in the network passing through this actor, which is reflected in Table 6 as this network produced the greatest centralization value of 0.676.

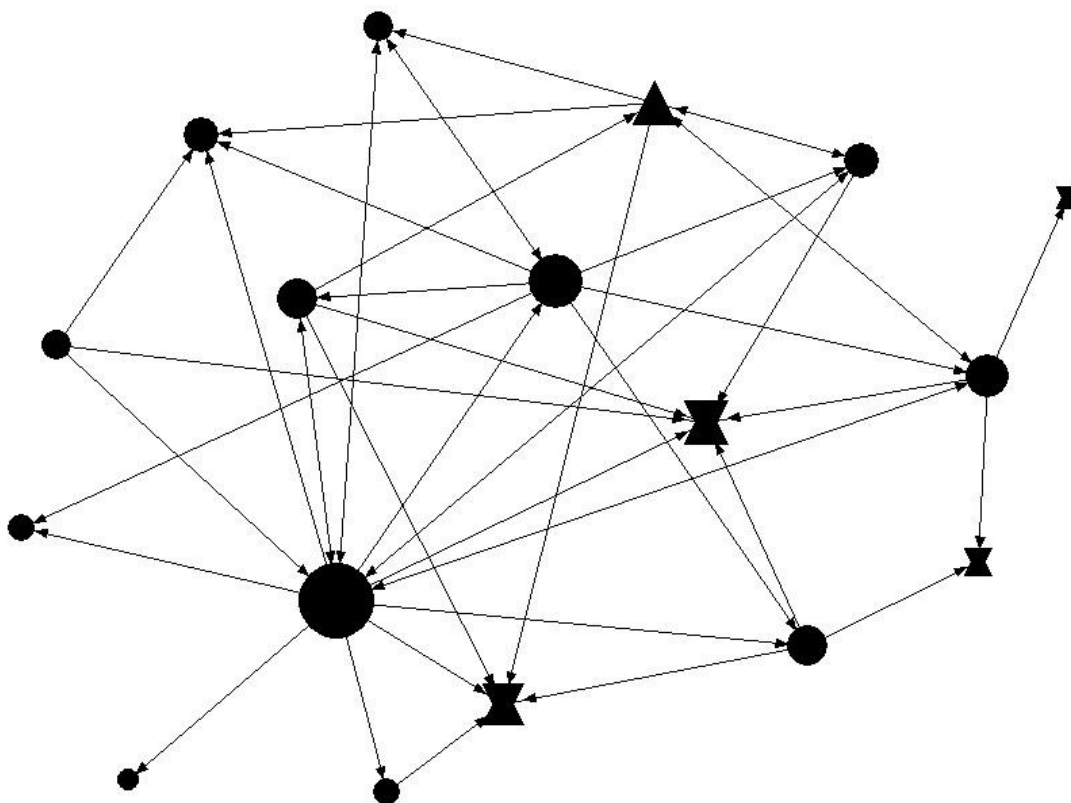
Figure 4

Human Resource Sharing Among Youth Baseball Organizations in the Niagara Region

Legend	
Shape	Sector
Circle	Nonprofit
Triangle	Private
Square	Public
Hourglass	External Stakeholder

Figure 5 represented the infrastructure resources network and showed a greater amount of sharing taking place within this network consistent with the values in Table 6 that expressed more ties, and a greater density and 'average degree' density values than in the previous two capacity dimension networks. Not only did this sociogram show a greater number of ties, but it also showed that these ties were centralized around three or four key actors within the network. While there appear to be a few peripheral actors in this actor, most actors, regardless of sector, appear to be connected to one of the three or four main actors.

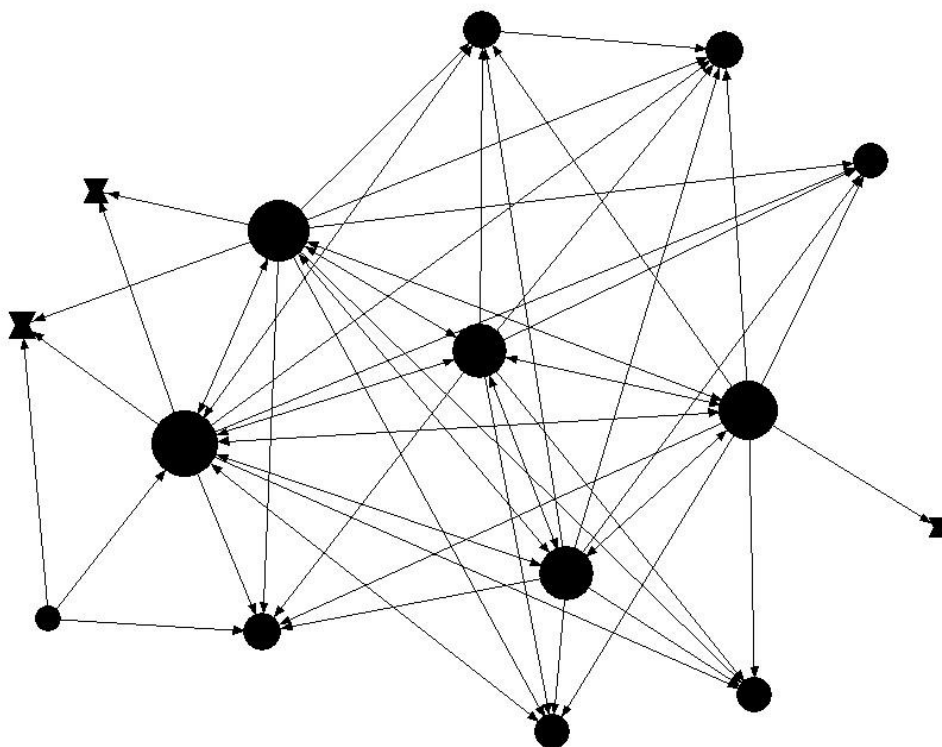
Figure 5

Infrastructure Resource Sharing Among Youth Baseball Organizations in the Niagara Region

Legend	
Shape	Sector
Circle	Nonprofit
Triangle	Private
Hourglass	External Stakeholder

Figure 6 represented the planning resources network and can be seen to be the densest network of all the capacity dimension networks previously discussed. This sociogram displays the greatest number of ties (61) and reflects the largest density (0.199) and ‘average degree’ density values (3.389) as seen in Table 6. This network consisted primarily of non-profit actors, and the few actors operating in other sectors are seen to be peripheral within this network. This network was also less centralized than the other capacity dimension networks and this is shown through the extensive sharing of ties between eleven of the fifteen actors in the network.

Figure 6

Planning Resource Sharing Among Youth Baseball Organizations in the Niagara Region

Legend	
Shape	Sector
Circle	Nonprofit
Hourglass	External Stakeholder

QAP Multiple Regression

The positive coefficient for interorganizational relationship ties ($\beta = 0.445$; $p < 0.001$) indicated that the organizations with a greater number of IORs were more likely to report organizational capacity ties (Hanneman & Riddle, 2005). This result is statistically significant based on the p-value of 0.0005 and allowed for the conclusion to be drawn that these results support the hypothesis that IORs are significant in their ability to predict organizational capacity in a youth baseball network. Sector was also a significant predictor of organizational capacity ties in the model ($\beta=0.270$; $p < 0.001$). While the results show that IORs and sector were statistically significant predictors of organizational capacity ties, the results suggest that other factors may also predict these ties. This suggestion is supported by the model R-square (0.34) which indicated that the strength of interorganizational relationship ties, and sector of the organizations, reduced the uncertainty in predicting an organizational capacity tie by 34% (Hanneman & Riddle, 2005).

Table 7

Predictors of Organizational Capacity Relationships (Standardized Coefficients)

Variable	β	SE
Intercept	0.000	0.000
IORs	0.445*	0.226
Sector	0.270*	0.213
Observations	140	
R^2	0.34*	
<i>p-value</i>	0.000	

*p < 0.001

Summary of Findings

In this study, social network analysis was used to analyze the data collected from a youth baseball network in the Niagara Region. The findings showed the network was made up primarily of non-profit organizations that are managed mostly by volunteers. A total of 90 of a possible 210 (43%) interorganizational relationships were identified. Of these 90 IORs, 38% were classified as formal, 41% as informal, and 22% as both. The presence of 90 relationships within this network showed that there is a significant amount of collaborative activity and sharing practices that exist amongst these organizations. These relationships were further defined by the types of resources being shared related to the four dimensions of organizational capacity (financial, human, infrastructure and planning) and the direction, frequency, and importance of the relationships.

Independent matrices for the global network, global organizational capacity, and the four capacity dimensions (financial, human, infrastructure, planning and development) were developed and analyzed to produce SNA measures of density and network centralization. The individual capacity dimension matrices showed lower levels of density and greater centralization, while the global interorganizational relationship and global organizational capacity matrices showed greater levels of density values but less centralization amongst actors. Visual representations of these findings were presented through sociograms of each network, and helped to address the research question of “How do IORs influence network structure in a youth baseball network”. Finally, through QAP regression it was determined that both interorganizational relationships and sector of operation were able to predict roughly 34% of the organizational capacity ties found within the network.

CHAPTER 5: DISCUSSION

Introduction

This quantitative study looked to understand the relationship between IORs and organizational capacity in a youth baseball network in the Niagara Region. Hall et al.'s (2003) framework was utilized to conceptualize the different dimensions of organizational capacity, while data were collected through a survey instrument adapted from the works of Provan et al. (2005) and Jones et al. (2018). To provide a better understanding of the relationships within this network, social network analysis was utilized, and a QAP Multiple Regression analysis was conducted. Through these methods the research question answered was "*How do IORs and organizational capacity influence network structure in a youth baseball network?*" and the hypothesis that was tested was H^1 : *Organizations that indicate a greater number of IORs will indicate a greater amount of resource sharing ties in the youth baseball network.* This chapter discusses the findings of this research study and provides practical implications as well as areas of future research relating to organizational capacity and IORs in a youth sport context.

Discussion

Research Question

The first research question that this study looked to answer was related to understanding how interorganizational relationships influenced the structure of the youth baseball network. To answer this question, social network analysis was used to analyze the survey data and provide network measures that allowed for conclusions to be made about the structure of the network. As discussed in Chapter 4, the global IOR matrix provided both a statistical and visual representation of the broader relationships between the fifteen organizations within the youth baseball network, and analysis allowed for conclusions to be drawn regarding how this network was structured. The organizational demographics found in the network (non-profits, n=12;

private, n=2; public, n=1) were consistent with the work by Jones et al. (2017) in which they discuss the integral role that non-profits are seen to play in the provision of current youth sport opportunities. Within the rationale for this study it was expressed that the study of IORs within cross-sector youth sport networks was lacking, and that the perspective of non-profits was of specific interest due to resource constraints within this sector (Shumate et al., 2018).

There were a total of 90 interorganizational relationships (ties) showing that there was a fairly significant amount of collaborative activity or sharing present among these organizations. For comparison, the study by Jones et al. (2020) found that in a similar sized network (n=24) of non-profit youth sport organizations there were only 14 ties (2%) between the organizations, with a vast majority of the IORs involving organizations external to the network. The existence of ties with additional stakeholders is consistent with the findings of the study by Jones et al. (2020) who studied sport-governing bodies, private businesses, city/municipal bodies, and charitable organizations. However, the level of sharing between youth sport organizations in this network (40%) is much greater than the result of 2% found in the study by Jones et al. (2020). This showed that this network of youth baseball organizations in the Niagara region has found ways to utilize relationships with similar organizations, or even competitors within their environment, for the purpose of enhancing their organizational capabilities.

The non-profits were also most engaged with each other in the network as 86% of the ties were between non-profits, with the remaining 14% of the ties being between non-profits and either private or public organizations. What is most interesting about the structure of this network based on tie distribution is that none of the organizations operating in the private or public sector indicated a relationship with one another. Rather, these organizations were connected solely through their ties with one or more non-profit organizations in the network.

This result was consistent with the findings of the study by Barnes et al. (2017) in which they noted a lack of homophily amongst interorganizational ties showing that IORs in a similar sport network were not restricted to organizations operating in the same sector. Based on size, structural features and composition it was clear that the interorganizational relationships present within the network did influence the overall structure, with the predominance of non-profits contributing largely to the pattern of tie distribution in the network.

While the number of interorganizational relationships provided insight into the size of the network, the network measures of density and centralization further established structural features of the network. The value of 0.429 showed that there was a moderate level of density found within the network, and this result was consistent with the density values presented in the study by Harris et al. (2008) focused on eight networks of similar size. Based on this density value the network appeared to be relatively well connected, which was further supported by an average of 6 ties between each organization and other organizations in the network.

The centralization of the network was also important as this value provided an indication of the presence of organizations in the network that could be seen as central to the flow and distribution of the relatively large number of relationships found in the network. Centralization can be understood as a key consideration for understanding network structure as it speaks to the distribution of ties in a network, and this distribution has been linked to network efficiency and participation in previous studies (Harris et al., 2008; Valente et al., 2007). The centralization value of 0.484 for this network meant that a large number of ties ran through multiple organizations that would be considered central to the network, and this conclusion was further supported in Figure 1 (pg. 62) as there appeared to be three to five organizations acting as focal points for a large number of ties.

Finally, there are conclusions to be made about the structure of the network based on the resource sharing characteristics of the relationships. Relating to the sharing of specific resources comprising the capacity dimensions of human, financial, infrastructural and planning resources, the results were interesting when compared to previous studies of IORs. The results of this research study showed that this network reported the least number of ties involving human (n=28) and financial (n=29) resources, while there were a much larger number of infrastructure (n=45) and planning (n=61) ties present. In their study done on a slightly larger sport organization network, Jones et al. (2018) found that while human resource ties were also shared the least, financial resource ties in that network of study comprised 65% of all resource sharing ties present compared to only 18% based on the findings of this study, showing that the organizations in this network shared financial resources much less than in other similar sport networks. The other key difference between the findings of this study compared to previous studies was the number of ties related to the sharing of planning resources. While the study by Jones et al. (2017) similarly found that planning resources produced the greatest number of ties and made up a very similar percentage of total resource sharing ties within their network, the overall number of planning resource ties was much greater in this study (61 compared to 11) in a much smaller network (15 organizations compared to 32). This comparison helps to show the significant amount of sharing involving planning resources found within this network.

Hypothesis

The hypothesis tested in this study was H^1 : *Organizations that indicate a greater number of IORs will indicate a greater amount of resource sharing ties in the youth baseball network.* Jones et al. (2018) discussed the usefulness of IORs in the sharing of capacity resources between organizations, specifically mentioning the sharing of human, financial and infrastructural

resources. Within this study individual matrices were developed to reflect the sharing of specific resources through these relationships related to the four dimensions of capacity (human, financial, infrastructure, planning), and through the analysis of these matrices conclusions were drawn regarding the usefulness of IORs in the prediction of organizational capacity in this network.

First, this study furthered the importance of volunteers within the youth sport context (Doherty & Cuskelly, 2020) as 80% of the respondents representing the organizations in this study were identified as volunteers compared to paid staff. However, the matrix reflecting the human resource capacity dimension contained the lowest number of ties (n=28) between organizations meaning that resources in this area were shared the least compared to resources in other areas. Interestingly, Hall et al. (2003) expressed that many organizations (and non-profits in particular) have historically perceived human resource capacity to be a strength which the results of this study do not necessarily convey. However, they also note that these same organizations have also noted the difficulty of recruitment and retention of volunteers that could lead to organizations being reluctant to share resources in this area due to a fear of losing human resources that they had worked hard to attain, which could explain the lack of human resource sharing in this study.

Financial resource capacity also produced a relatively low number of ties (n=29) between organizations. This result may be the result of recent trends in the youth-sport landscape with increased competition over resources among youth sport organizations leading to fewer opportunities for external funding relationships (grants, government funding) and a greater reliance on business-like operations (earned revenue models) which was reflected in the types of resources that were presented in Table 2 (Clutterbuck & Doherty, 2019). This result could also

reflect a lack of engagement of for-profit organizations within the network as Jones et al. (2018) found that in a slightly larger network the vast majority of financial resources that were received by non-profit sport organizations were from for-profit organizations.

Related to infrastructure resources, the results showed a greater amount of sharing in this area based on number of ties (n=45) compared to human and financial resources. Many of these ties were based on the sharing of physical infrastructure including playing fields and training facilities, which was consistent with previous organizational capacity literature in which collaboration between organizations has been understood to be effective in the sharing of physical infrastructure including facilities (Misener & Doherty, 2009). This sentiment is also shared in the literature focused on cross-sector partnerships as IORs have been established as an effective method for accessing this type of physical infrastructure (Casey et al., 2009). In a network comprised largely of non-profit organizations sharing in this area is both common and necessary due to very little facility ownership and infrastructure development capabilities found in this sector.

Finally, the greatest number of resource sharing ties (n=61) were related to planning and development capacity, and the data also showed that on average, each organization shared between three and four relationships with other organizations in this area. This reflects the sentiment of Doherty and Cuskelly (2020) that many organizations tend to engage in strategic planning processes internally due to its perceived importance to organizational operation and development, even though many sport organizations find the process difficult. To combat this perceived difficulty Misener and Doherty (2009) found that organizations could look to utilize relationships with other organizations to help improve their planning capacity, which the findings of this research study support.

From the four individual capacity dimension matrices, a singular global matrix was developed for the purpose of drawing a more general conclusion regarding organizational capacity in the network. Using ‘resources received’ as the indicator, the maximum capacity value an organization could have in the global matrix was 4 (if they received resources in each of the four capacity dimension areas) and 0 if they did not report receiving resources in any of the areas. From the results of the QAP multiple regression analysis, it was determined that both IORs and sector were significant in their ability to predict organizational capacity in this network supporting the hypothesis of this study. Specifically, organizations were 34% more likely to report organizational capacity ties if they reported IORs, furthering the importance of IORs in developing organizational capacity in youth sport organizations. However, with only 34% of organizational capacity ties able to be explained by the presence of IORs and sector of operation, it is likely that other factors may also influence the presence of organizational capacity ties in the network.

In their work with sport for development organizations, Svensson et al. (2018) established organizational size and organizational life stage as factors other than IORs that could influence the capacity of an organization. These factors were not a focus of this study and could potentially explain the variance found within the QAP regression model. Jones et al. (2020) also found that an important consideration regarding IORs and their role in developing organizational capacity is the internal resource profile of the individual organizations. The difference in internal resource profiles can have an impact on both the motivations for IOR development and the ability to manage IORs which both could play a role in organizational capacity tie development. While the results of this research study showed that organizations within this network that reported a greater number of IORs were more likely to report resource sharing relationships

related to human, financial, infrastructural and planning capacity, it is important to note that the multidimensional nature of organizational capacity allows for a variety of potential internal and external factors to influence the capacity of a given organization.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

Theoretical Contributions

One of the key takeaways from the work of Babiak et al. (2018) that provided an exploration of the current landscape of IOR research in the sport management sector was that much of the research in this area had focused on the organizational level of analysis. The authors expressed that it would be beneficial for future studies in this area to examine IORs in sport at a network level. The results of the QAP regression analysis in this study suggest that organizations that reported a greater number of IORs were more likely to report resource sharing ties in the network. While this finding helps to further establish the relationship between IORs and organizational capacity in the youth sport context, it also provides a key consideration for future studies of this nature - not all the IORs identified through Part 1 of the survey were identified when they were asked to classify their relationships relating to specific capacity dimensions in Part 2. This finding is important as it reminds us that not all IORs are developed for the purpose of resource sharing. Rather, IORs may be developed because they contribute to a network's structure and/or function in other ways. Thus, the current study helped to contribute to the literature in this area by providing results that allowed for conclusions to be drawn regarding how a whole network of youth baseball organizations were interacting with one another and the nature of the relationships that were present within the network.

Furthering the contribution of this research study to the sport management literature, the results of this study help to advance the utility of social network analysis studies in the investigation of sport organizations and their operations. This study was able to provide insight into the overall structure of the youth baseball network, as well as the positioning of each organization within the network, through the calculation of network measures of network density

and centralization. The results of this study emphasized the ability of density and centralization statistics to provide a comprehensive understanding of the structure and interactions within a youth sport network, and demonstrate the potential of social network analysis for future sport management studies involving other sport contexts. More specifically, while density relates to the overall level of connectivity between actors in a network and centralization speaks to the presence or absence of central actors in a network, there are a wide range of other network measures that can be calculated using social network analysis to explore the structures and interactions between sport organizations. Sociograms were also seen to be an effective method for network visualization and should be understood as a useful data presentation tool within future sport management research studies.

Another theoretical contribution made by this study relates to the multi-sector nature of the network of study. As discussed by Jones et al. (2018) research into understanding the influence of network structure on functionality of relationships in sport has focused primarily on non-profit sport organizations. Consistent with their work, this research study looked to include actors from other sectors that were engaged within the network which helped to contribute to a further understanding of how youth sport organizations interact within the larger community. While the majority of organizations asked to participate in the study were non-profits (n=12) compared to public (n=1) and private (n=2) sector organizations, the presence of cross-sector relationships were more prevalent when the organizations were asked to identify relationships related to the specific dimensions of capacity. The financial resource sociogram showed that two external stakeholders and the public sector organization shared multiple ties with non-profits within the network, while the infrastructure resource sociogram showed that organizations in both the public and private sectors are key actors regarding the sharing of infrastructure resources. Both

the human resource and planning resource sociograms showed less cross-sector ties relating to these capacity dimension areas, however, both public sector organizations found in the network were still shown to have at least two ties in these areas. The presence of these relationships helped to expand the utility of Hall et al.'s (2003) framework in conceptualizing organizational capacity within a context broader than non-profits exclusively.

The final theoretical contribution that was made by this research study was the contribution made to understanding context related factors in regards to organizational capacity. Doherty and Cuskelly (2020) found that when they collected data from hundreds of community sport organizations across twenty different sports the sport-specific context was important to both the necessity and availability of certain resources to youth sport organizations. While this research study focused on the sport of baseball, the results were able to provide a similar insight into the resources that were deemed important to successful organizational operation within the youth baseball context. The results of this study help to further support the potential benefits of examining the multidimensional nature of organizational capacity within context-specific sport settings to allow for further comparison between different sport contexts (Doherty & Cuskelly, 2020). The findings of this study also help to further the current focus on organizational capacity by non-profits. Millar and Doherty (2021) emphasize the current importance being placed on capacity building by non-profit sport organizations, with the success of any capacity building endeavors being dependent on a willingness to engage in the process. The results of this study showed that the non-profit organizations in this network are utilizing IORs for the purpose of sharing resources related to the different dimensions of organizational capacity. More specifically, these organizations have been willing to develop relationships both within and across sectors in an attempt to further their organizational capacities. The study of this cross-

sector youth sport context is important to the furthering of organizational capacity studies in this area.

Practical Implications

One of the main assumptions outlined for this study was that a more comprehensive understanding of overall network structure is necessary for providing more strategic approaches to interorganizational relationship development and identifying avenues through which youth sport organizations may increase their organizational capacity and achieve their objectives (Jones et al., 2018). Through social network analysis this study was able to show that while a relatively large number of relationships are present within this network, the opportunity to foster more relationships exists as only 43% of all possible ties were shown to be present in this network. The sociograms provided in this research study offer key opportunities for the leaders of these youth baseball organizations to grow their IORs within this network. The ability to understand how each organization currently fits within the network based on their current connections to other organizations is important to the strategic operation of each organization. The survey instrument used in this research study (See Appendix B) is a good example of a technique that allows organizations to think critically about the current state of their relationships. Similar practices or exercises, such as compiling a list of any organizations that provide similar programs or support similar programs within a shared geographic area, and then defining any present relationships between these organizations, is a good way to establish potential IORs. By identifying opportunities for relationship development with previously unconnected actors, the potential is there for both accessing resources that cannot be accessed individually or through existing IORs while also increasing the possibility of reaching further organizations through actors who are better connected. Both direct and indirect relationships with other organizations

have been shown to realize greater efficiency and reduced operating costs through the sharing and exchange of key resources (Guo & Acar, 2005; Jones et al., 2018).

Relating specifically to capacity building, Backer (2001) discussed the importance of being able to identify the capacity dimensions of an organization that required further development. The findings of this study showed that both human and financial resources were being shared relatively sparingly in the network, with less than 10% of the possible ties in both areas being identified. This lack of sharing provides two main questions for the leaders of the organizations, with the first being ‘what is the current state of the capacity of our organization in these areas?’ and the second being ‘are there opportunities, either through our current IORs or potential IORs, to share resources that would strengthen our organization in these areas of capacity?’. While human and financial resource capacity were the areas with the lowest number of ties, the process of evaluating organizational capacity in each of these areas is important, and the information provided through this study should be understood as a valuable tool for this process. While each of the capacity areas focused on in this study were discussed individually, Misener and Doherty (2009) stress the importance of examining these areas in combination as strengths or weaknesses in a particular area can impact other areas of an organization’s capacity. Millar and Doherty (2016) stress that capacity areas of weakness should be a focus of any organization looking to further build their capacity. By utilizing the network-focused framework of Tasselli et al. (2015) for evaluating the relationships in this network, the results of this study build understanding about how the presence of IORs in a network contribute to both the structure of the network, and the development of organizational capacity within the network (Jones et al., 2017).

While the findings of this research study provided a basis for these practical implications to be suggested, it is important to revisit the context within which these organizations are operating. As previously mentioned, youth participation in team sports in Canada has declined in recent years, and sports like baseball have felt this impact to a greater degree than most. This decline has further contributed to a competitive atmosphere among youth baseball providers as well as furthering a lack of resources available to these organizations. Both of these factors could help to explain the relative lack of resource sharing related to the different dimensions of organizational capacity in this study. These organizations should understand that both the development of their organization's capacity, and the further development of IORs within the network, will help to provide greater access to resources that could help to strengthen the network as a whole and allow for enhanced program delivery necessary to combat declining participation rates in the sport.

One avenue that organizations within this network, and others like it, could look to pursue would be to establish a summit or general meeting type of event that would allow sport leaders and representatives from external stakeholders the opportunity to discuss the current youth baseball landscape. An event of this nature would be a way to allow discussion to take place relating to the current state of baseball programming within youth baseball networks, as well as allowing for the potential creation or strengthening of relationships between stakeholders that are interested in supporting the development of the sport. The presentation of data gathered through research studies such as this one can be a useful tool within this setting to help provide an assessment of current areas of strength and weakness that would help to provide a starting point for discussion to take place surrounding both short term program objectives, as well as longer term strategic planning for the sport and the organizations involved in providing youth with

baseball opportunities. The potential benefits of relationship creation and development within this type of youth sport network helps to reinforce the significance of an opportunity to bring leaders in the sport network, and their communities, together in this type of organized setting.

Limitations

One limitation to this study involves the generalizability of this data within broader sport contexts. This limitation involves the setting of the study as well as the specificity of the sport being studied. In terms of the setting, this study took place in the Niagara Region of Ontario, Canada and the respondents represented organizations operating within this region. As mentioned by Bowers and Ozyurtcu (2018), the centralized Canadian sport system is understood to operate differently than other sport systems like the American system which relies more on local or regional actors. This may reduce the generalizability of the results to sport networks in other countries or other geographic locations that provide sport through a different system of operation. The focus on baseball within which this study took place may also reduce the generalizability of these results to other sport contexts as organizations offering different sports (basketball, hockey, individual sports) may require different considerations regarding how they operate compared to the organizations in this study. While IORs and organizational capacity in general can be understood to be important to youth sport organizations, the sport context may emphasize the necessity of certain resources compared to others and lead to different motivations for IOR development that may not be present in all youth sport contexts (Doherty & Cuskelly, 2020).

Another limitation to this research study was the restricted access to potential respondents due to the COVID-19 pandemic. During the time period in which data collection for this study took place many of the youth baseball organizations in this network were unable to operate due

to public health restrictions. The inability to operate as usual, and the decision of some organizations in the network to halt operations entirely during this time period, made contacting potential respondents increasingly difficult and this was reflected in the response rate. The response rate of 67% was consistent with similar studies in this area (Jones et al., 2020), however, this study looked to provide whole network data which typically requires a response rate above 80% to ensure that the most important features of a network can be captured (Brass & Borgatti, 2020). While the response rate of 67% is sufficient in its ability to provide the data necessary for analysis and conclusions to be drawn, the inability to include the perspectives of all the actors within the network can be seen to limit the overall accuracy of whole network structure and features within this study.

Future Research

The first opportunity for future research would be to conduct a similar study within other youth-sport contexts for the purpose of comparing the types of resources that are shared through IORs, as well as for the purpose of comparing overall network structure and size within other sport contexts. Jones et al. (2020) note that the study of smaller sport clusters provide key insights into environmental influences related to IORs and this idea should be further explored in other youth sport settings. This study was also conducted as a cross-sectional study meaning that the data collected reflected only the landscape of the network at a specific point in time. As mentioned by Barnes, Cousens and Maclean (2017), this is a common limitation of network studies in this area and future research should look to implement a more longitudinal design to better understand the progression or changes in network composition, and organization interaction, over a period of time. Another opportunity for future research can be found in the scale of the study.

The network of focus in this study was relatively small so by conducting this study at a Provincial or National level more conclusions and comparisons could be drawn between the findings of this study and the findings potentially found in larger sport networks. At a Provincial level research should be done to understand the relationships that exist amongst youth baseball organizations across the Province which would provide a much greater sample size for comparison. While at a National level, the opportunity to better understand how the PSOs work together and who the external stakeholders are that contribute to the provision of baseball opportunities across the country. Finally, future research studies could look to employ a mixed-methods or qualitative methodology compared to the quantitative methodology applied in this study. While a quantitative methodology provided insight into network measurements and structure, as well as the ability to quantify and describe existing relationships, a qualitative approach would allow for better insight into motivating factors and better insight into relationship development and maintenance. For example, in this research study it was found that the greatest number of IORs were related to planning capacity, and specifically strategic planning. While strategic planning is common amongst non-profit organizations, this is typically an internal compared to an external process (Clutterbuck & Doherty, 2020). Thus, understanding the motivating factors behind the development of these planning capacity relationships could provide valuable insight into how these relationships have been developed and maintained, and could be useful in the development of relationships between these organizations in other capacity areas.

Conclusion

From this research study there were three main takeaways related to interorganizational relationships and organizational capacity in this youth baseball network. First, the data gathered through this research study allowed for conclusions to be drawn regarding whole network structure. Based on the number of IOR ties there was a large amount of collaborative activity taking place, especially considering the relatively small size of the network (n=15). Network measures of density and centralization showed that there were very few peripheral organizations in the network and many organizations had already developed multiple relationships with organizations in the network. These measures also showed that the network is not dominated by one or two key organizations, but rather the relationships that are present involved multiple organizations throughout the network. The amount of sharing in a network of this size could speak to the importance of both geography and sport context in the motivation for youth sport organizations to develop relationships, even if the organizations could be seen to be competitors within the network.

This study also provided insight into the state of organizational capacity in the network based on the capacity dimensions outlined by Hall et al.'s (2003) framework. Within this network the sharing of capacity resources varied with financial and human resources being shared relatively sparingly amongst organizations, while a greater number of IORs were based on the sharing of infrastructure and planning capacity resources. Within each dimension of capacity there were a variety of external actors that were involved in the provision of necessary resources that were required for the successful operation of the organizations in this network. While conclusions were able to be drawn regarding the capacity of these organizations based on the sharing or receiving of resources with other organizations, these results do not include

information relating to the state of an organization's capacity based on the resources at the disposal of the organization independent of their relationships with other organizations.

Understanding what types of resources were or were not being shared within the network is important to understanding the areas of organizational capacity that are important to youth baseball operations, and speaks to how relationships in this network were being used, as well as their potential use for strengthening capacity in other areas.

Finally, this research study helped to further the view shared by many researchers in the sport management field that the development and maintenance of IORs should be understood as an important component of organizational operations in sport. Through QAP multiple regression analysis the hypothesis was confirmed that IORs were significant predictors of organizational capacity in this network, meaning that those who reported IORs were 34% more likely to report organizational capacity ties. The large amount of unexplained variance in this result certainly provides a basis for future research opportunities in this area to determine how other variables such as organizational size and life stage influence organizational capacity in youth sport networks. However, the findings of this study still allowed for the conclusion that IORs should be understood as an effective method for developing the capacity of youth sport organizations through their ability to create resource sharing relationships with other organizations.

Appendix A: Survey Instrument

Hello participant,

Thank you for taking the time to participate in this research study. The purpose of this research study is to gather data from organizations in the Niagara Region that have been identified as being involved with the delivery of youth baseball programs or have been identified as having directly supported youth baseball programming in this area. Specifically, this research study is focused on understanding the role of interorganizational relationships within a youth sport network and the potential impact of these relationships on the capacity of organizations within the network. The collection of this data will be used to answer research questions about the youth baseball network in the Niagara Region including identifying which organizations play a role in the network, what the structure of the network is, which organizations have formal relationships within the network, and what is the nature of these relationships relating to dimensions of organizational capacity.

As a participant in this study you will be required to provide information relating to your own organization as well as the identification of the names of other organizations within the network. The questions included in this survey will not be related to any sensitive topics and the information you provide will only be used in this study and will not be shared with any other parties at any time. The data will be secured by the researcher at all times and if you become uncomfortable with any of the questions being asked you have the right to remove yourself from this study at any point before the data collection process has been completed.

A Research Study to Investigate the Youth Baseball Network in the Niagara Region

Jackson Willis, M.A. Candidate

Dept of Recreation & Leisure Studies, Brock University

Your name:

Your organization: _____

Email: _

Volunteer Yes No

Paid Staff Yes No

Sector of Operation (Non-profit, public, private):

1. Listed in the following chart are organizations in the Niagara Region that we believe are involved in the delivery of youth baseball programming or have helped to support youth baseball programs in the past. From this list, we would like to know the which organizations you have a relationship with. Please also indicate if this relationship is formal (ie. Contractual agreements, formalized partnerships, etc.) or informal (ie. Friendly agreements, etc.)

YOUTH BASEBALL ORGANIZATIONS	FORMAL	INFORMAL	BOTH
Baseball Canada			
Ontario Baseball Association			
Greater Niagara Baseball Association			
Niagara District Baseball Association			
Bullet Proof Baseball			
St. Catharines Minor Baseball			
Welland Minor Baseball Association			
West Niagara Minor Baseball			
Thorold Legion Minor Baseball			
Elite Baseball League of Ontario			
Welland Jackfish (IBL)			
Grimsby Amateur Ball Association			
Beamsville Minor Baseball			
Pelham Minor Baseball			
Brock University Baseball			
Niagara Region High School Baseball			
Greater Fort Erie Minor Baseball			
Port Colborne Minor Baseball			
In the following boxes list any additional organizations that you have a relationship with:			

2. To gain information regarding how human, financial, infrastructural, relationship and planning resources are shared between organizations within the network, the following questions will require you to provide information relating to the nature of your organization's relationship with other organizations. Specifically, we are looking to gain insight into the direction, frequency, and importance of these relationships. In the following tables you will be asked to identify organizations that your organization has exchanged resources with relating to each of the five capacity dimensions. For each organization you identify you will be asked to indicate the direction of the relationship, the frequency of the relationship and the importance of the relationship using the following measures:

Direction	Frequency	Importance
1. Send	1. Less than once a year	1. Very Unimportant
2. Receive	2. Annually	2. Unimportant
3. Send and Receive	3. Bi-annually	3. Moderately Important
	4. Monthly	4. Important
	5. Weekly	5. Very Important
	6. Daily	

Appendix B: Consent Form

Informed Consent Form

Date: May 4, 2020

Project Title: Understanding Interorganizational Relationships and Organizational Capacity in a Youth Baseball Network: A Social Network Analysis

Principal Investigator (PI): **Jackson Willis, M.A. Candidate**
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INVITATION

You are invited to participate in a study that involves research. The purpose of this study is to understand the role that interorganizational relationships play in the youth sport landscape. More specifically, this study looks to examine the relationship between interorganizational relationships and the organizational capacity of these organizations.

WHAT'S INVOLVED

As a participant, you will be asked to complete a survey that pertains to the relationships between your organization and other organizations listed in the roster found in Section A of the survey. As a participant you will be asked to identify which of these organizations you have a relationship with, and what the nature of the relationship is (formal/informal/both). In Section B, you will be asked to further characterize these relationships in relation to five dimensions of organizational capacity by outlining the types of resources that are shared. Participation will take approximately 30 minutes of your time.

POTENTIAL BENEFITS AND RISKS

Possible benefits of participation include gaining a better understanding of the role that interorganizational relationships play in the effective operation of a youth sports organization, as well as gaining a better understanding of strengths and weaknesses related to the capacity of the organization. There is minimal perceived risk associated with participating in this study due to measures in place to ensure confidentiality and anonymity, however, complete anonymity is not possible.

CONFIDENTIALITY

All information you provide is considered confidential; your name will not be included or, in any other way, associated with the data collected in the study. Furthermore, to protect the trust between organizations within this network, pseudonyms will be used to protect the names of the organizations and prevent other participants from being able to identify which organizations have relationships within the network.

Data collected during this study will be stored in a locked filing cabinet in the office of the principal investigator. Data will be kept until the completion of the research project tentatively scheduled for August 31, 2020, after which time all surveys collected during the data collection process will be shredded to protect the confidentiality of the participant.

Access to this data will be restricted to Jackson Willis (the Principal Investigator) and Dr. Martha Barnes (the Research Supervisor).

VOLUNTARY PARTICIPATION

Participation in this study is voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. Further, you may decide to withdraw from this study at any time up until the completion of the data analysis process. At this time a tentative deadline for withdrawal from this study is July 1, 2020, and you will be notified of any changes to this date moving forward.

PUBLICATION OF RESULTS

The results of this study will be included in the Master of Arts Research Thesis of Jackson Willis. Results of this study may be also published in professional journals and presented at conferences. Following the completion of the research study each participant will be provided with a summary of the results of the study. At which time feedback can be made available by contacting Jackson Willis (jw13se@brocku.ca).

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact Jackson Willis or Dr. Martha Barnes using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University, File Number: 19-260-BARNES. If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, reb@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.

CONSENT FORM

I agree to participate in this study described above. I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

Name: _____

Signature: _____ Date: _____

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