The Influence of Demographics on Perceived Sport Event Impacts: 2017 Canadian Women's Curling Championship

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Abstract

This study examines the perceived event impacts of attendees at the 2017 Scotties Tournament of Hearts (a national women's curling event), that was held in St. Catharines, Ontario. Drawing on the recommendations of previous literature, the study investigates the perceived event impacts on attendees of a national sport event – the 2017 Canadian Women's Curling Championships – by multiple socio-demographic characteristics. Multiple theoretical lenses are applied to understand the perceptions of the respondents. Utilizing a previously developed social impact scale model (Kim, Mun Jun, Walker, & Drane, 2015), a survey was completed by event attendees. In total, a sample size of 239 was used to conduct the study. Following reliability and validity tests on the model, MANOVA tests were completed to explore statistically significant impact factors and the influence that age, income levels, education levels, sport affinity, and residency (local and non-local) had on perceived event impacts. Results indicate that age and sport affinity (demographic variables) have a statistically significant influence on the overall perceived event impact.

The study examines the influence of socio-demographic characteristics on perceived impacts at a non-mega sport event. Further, the research provides insight into an approach for conducting sport event impact research in that researchers need to further explore how event characteristics themselves (e.g., total participants, scale or geographic location) can influence perceived impact. Thus, the study suggests that a 'one-size-fits-all' approach to event impact research is not realistic. As a result, future research will need to explore the influence of socio-demographic factors and the way in which event characteristics can impact the exchange process that occurs, informing their perceived impact.

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Chapter One: Introduction

1.1 Overview of Event Impact Analysis

Many analyses have been conducted to fully comprehend the benefit of sport events. A significant number of these studies focus on Major-Games or mega-events such as the Olympics, FIFA (Federation Internationale de Football Association) World Cup or professional sports (Ahlert, 2006; Baade & Matheson, 2004; Blake & Thomas, 2013; Maennig & Zimbalist, 2012; Porter & Fletcher, 2008; Tien, Lo & Lin, 2011; Li, Wassmer, Ong & Propheter, 2016). These types of events are often high-profile and as such, receive significant exposure through various media outlets with (generally) a common goal of improving the perceived public image of the host city (McManus, 1999).

Mega-events often require significant subsidies from public funding sources for expenses such as operations, infrastructure, bid fees and other costs which can total in the billions as seen in the last decade of Olympic events, such as the London 2012 Summer Olympic Games (Jennings, 2012), Sochi 2014 Olympic Winter Games (Muller, 2014), and Rio 2016 Olympic Summer Games (Baade & Matheson, 2016). There is on-going debate within the literature regarding whether sport events generate positive or negative impacts for host cities. As Crompton and Howard (2013) note, many of the studies emphasize only the benefits of the event without considering specific costs that are incurred as a direct result of hosting. These costs can include financial costs; as evidenced by the billions of dollars in cost overrun by Olympic and World Cup hosts, (Berlin, 2018), as well as job loss and nation-wide economic crises; for example, the loss of 70,000 jobs post-Olympics in Athens (Reason Foundation, 2016). Outside of financial costs, host cities can experience other negative effects of major sporting events such as increased crime, negative environmental impacts or amplified tensions among local residents

and their government (Andereck, Valentine, Knopf & Vogt, 2005; Ap and Crompton, 1998; McCool & Martin, 1994). As such, researchers have focused their attention to studying a diverse range of impact factors.

Within the literature, it is generally agreed that sporting events have cultural, economic, environmental, political and tourism impacts on host communities (Gratton, Shibli, & Coleman, 2005). As a result of the resources required to stage major sport events however, many studies have predominantly focused solely on the economic impacts in order to aid organizers and politicians in justifying their support of such initiatives (Crompton, Lee & Shuster, 2001; Gursoy & Kendall, 2006). These studies are quantitative in nature, and typically use an input-output analysis, drawing on primary data such as visitor expenditures (Diedering & Kwiatkowski, 2015; Walpole & Goodwin, 2000). Other event impact measures have emerged over the past decade as academics have explored additional ways to report on the impacts that sport events have on communities. This has included carbon dioxide (CO^2) emissions, carbon footprints, energy consumption, and the use of fossil fuels to name a few examples (Ponsford, 2011; Ponsford & Williams, 2010). Expanding the ways in which sport events can be evaluated from an environmental perspective has been beneficial to the industry, however, due to varying types of analyses, event stakeholders are left with a non-standardized means of evaluation. This can result in a misrepresentation of data by focusing on specific sets of tests or tools that will assist in justifying the type of investment that is required to stage events (Matheson, 2002). Consequently, researchers have started to give more attention to social impacts as an evaluation tool. These types of measures can assist in understanding the attitudes and opinions of residents and thus, are receiving more attention as a means to justify staging and funding events (Richards, 2013).

Academics and other sport event stakeholders have explored positive and negative sport event impacts through multiple lenses (e.g., pre- and post-event) in order to better understand and quantify the impacts of sport event hosting. These impacts, within sport and tourism literature, have often been used interchangeably with the term "legacy" (Kaplanidou et al., 2013). Legacy has been defined as "planned and unplanned, positive and negative, intangible and tangible structures created through a sport event that remain after the event" (Gratton & Preuss, 2008, p. 1924). These types of impacts can be measured across varying event participants (e.g., volunteers, competitors and spectators) and therefore, can provide a means to draw conclusions about various stakeholder groups in a sport event hosting context (Taks, Chalip & Green, 2015).

Initially, many of the benefits that were studied focused on socio-cultural impacts such as the perceived image of the host city, a sense of community pride and an increase in human capital to name a few (Getz, 2008; Kim & Walker, 2012; Taks, et al., 2015). These types of impacts are generally perceived as 'positive' impacts; and as such, further research has been conducted drawing on tourism literature to define what negative impacts can be measured within a sport event context (Oshimi, Harada & Fukuhara, 2016). Some examples of negative impacts include excessive government spending, transportation issues such as traffic congestion or parking, price increases, resident displacement, increasing crime rates, prostitution, and conflicts between residents and non-residents (Balduck, Maes, & Buelens, 2011; Deccio & Baloglu, 2002; Fredline, 2004; Kim, Gursoy & Lee, 2006; Ohman, Jones & Wilkes, 2006; Waitt, 2003). While research and scale development for sport event impact measures has progressed (e.g., Delamere, 2001; Delamere et al., 2001; Fredline & Faulkner, 2001; Gursoy & Kendall, 2006; Kim & Petrick, 2005; Ritchie et al., 2009), calls for further research investigating varying event

typologies/size (e.g., mega-events versus medium to small events), specific event stakeholder groups and measurement scale validity have been suggested (Kim et al., 2015; Taks, 2013).

1.2 Theoretical Frameworks

With a shifting trend to evaluate the perceptions of stakeholder groups (e.g., host city residents, volunteers, event organizers and event attendees) (Kaplanidou, Kerwin & Karadakis, 2013; Kim et al, 2015; Kim & Walker, 2012), stakeholder management and social exchange theory provide a means to better understand the perceived impact of sport events. Stakeholder management theory has focused primarily on organizational effectiveness and governance practice within a sport management context (Byers, Parent & Slack, 2012) and as a result has not been explored at great lengths in a sport event setting. Stakeholder management refers to the groups or individuals who are or can be affected by the achievements of an organization's objectives (Freeman, 1984). In an event management context, stakeholders can include (for example) media, fans, coaches, athletes, sponsors, government and organizational members (i.e., clubs, or affiliated members) (Ferkins & Shilbury, 2015).

Some examples of research related to sport event hosting, which incorporated stakeholder management theory, include the marketing of host city event bids and the bidding for professional sport league franchise licenses (Heffernan & O'Brien, 2010; Xing et al., 2010). Subsequently, Kaplanidou et al. (2013) investigated the perceptions of 'success' of two small scale events and the differences between two stakeholder groups, event organizers (in this case destination marketing organizations) and event attendees. Fairley et al. (2011) attempted to evaluate the Formula One Australian Grand Prix utilizing a 'triple bottom line' approach through a stakeholder lens, however, were not able to define a net benefit to the community given the

complexities in prioritizing the expectations and perceived outcomes among a multitude of stakeholder groups.

A second theoretical perspective that is relevant to sport event impact research is social exchange theory (SET). SET explains the reactions and perceptions of residents toward tourism stimuli, testing for social, cultural, economic and environmental impact variables which may support tourism development (Gursoy & Rutherford, 2004). Existing studies have focused on the concepts of improved social capital, increased psychic income and changes in the quality of life measures pre-, during and post-event (Gibson, et al, 2014; Kaplanidou, 2012; Karadakis & Kaplanidou, 2012). Socio-demographic factors have been examined through this lens, but have often been explored in isolation, such as focusing on resident versus non-resident perceptions (Karadakis & Kaplanidou, 2012) or subgroupings such as age, gender and race, but only in relation to gains in social capital rather than an overall social exchange generated by a sport event in a community (Gibson et al., 2014). While SET is predominantly used as the theoretical underpinning for studies related to social impacts (Kim & Walker, 2012, Waitt, 2003), it is important to understand other theoretical concepts when considering the perceived impacts events may have on a community.

Two additional theories associated with perceived event impacts include social representation theory (Moscovici, 1981), and the expectancy value model (Eagly & Chaiken, 1993). Social representation theory is complementary to SET and suggests that the initial perceptions of an event or phenomenon which an individual may form is influenced by their social interactions, direct knowledge or other sources of information, for example, the media (Kim, Gursoy & Lee, 2006). Expectancy value theory on the other hand, suggests that individual experiences will lead to the acquisition of different beliefs about actions, events and objects

(Fishbein & Ajzen, 1975). According to this theory, an individual will associate her/his attitude towards the action, event or object based on certain attributes or outcomes (Zhang, Feng, Wee, Thumboo & Li, 2008). As a result, s/he will seek to maximize positive outcomes while avoiding negative ones (Eccles & Wigfield, 2002). While these theories are similar in nature to social exchange theory, there are subtle differences with respect to how perceptions are formed about a specific event or object, and thus in turn have a collective impact on the behaviour, decisions and ultimately, perceptions of individuals and/or social groups.

1.3 Measurement Tool and Scale Development

Recognizing that early measures for perceived social impacts focused on positive outcomes only (Kim et al., 2015), there has been a growing body of work in developing tools to measure both the positive and negative outcomes derived from hosting sport events (e.g., Collins, Flynn, Munday & Roberts, 2007; Gursoy & Kendall, 2006; Kim & Petrick, 2005; Kim et al., 2006; Ritchie et al., 2009). Building off of this body of knowledge, Kim et al. (2015), attempted to validate a reliable scale for measuring the positive and negative perceived impacts of the Formula One Korean Grand Prix. The authors critique former scale development models as previous iterations of scale measurement only used exploratory factor analyses (EFA) and have failed to meet a minimum sample size of 200 (Kline, 2005). As a result, the authors followed the recommendations of Byon & Zhang (2010) by utilizing a confirmatory factor analysis (CFA) to develop the new tool. In the study, the authors focus on resident attitudes towards the event and after running EFA and CFA tests, present a six factor, 23 item scale for measuring the positive and negative perceived impacts of the Formula One event in the Mokpo-si, Yeongam-gun, Muan-gun and Haenam-gun areas of South Korea (Kim et al., 2015). While the scale in Kim et al.'s (2015) model proved to be statistically valid, the authors cite some

limitations including the differences in social exchange across socio-demographic groups and that the results of the study may not be generalized across populations (Kim et al., 2015). As a result, future research of the scale and its factors is required.

1.4 Influences on Perceived Event Impacts

As research on impact scale development has progressed, it is important to note that many studies on the matter have focused on mega events such as the FIFA World Cup and Olympic Games (specifically, 2002 Winter Olympics and 2012 Summer Olympics) or Formula One Grand Prix (Collins et al., 2007; Gursoy & Kendall, 2006; Kim et al., 2006; Kim et al., 2015; Kim & Petrick, 2005; Ritchie et al., 2009). A growing body of literature suggests that while mega-sport events are an important asset for communities, exploring other sized events is equally, if not more important (Taks, 2013). Non-mega sport events (NMSEs) provide greater ability for local residents to participate in and watch the event; this, combined with the ease for local governments to host NMSEs, provides an event hosting model that has a greater tendency to foster sustainability (Oshimi, et al., 2016).

From a practical perspective, understanding the perceptions of sport event hosting is important as staging sport events (including NMSEs) can require public investments such as human or financial capital. Residents (both local and non-local) play an important role in this process: if residents welcome a particular event, politicians are more willing to allocate resources to it (Preuss & Solberg, 2006). In addition, it is important to note that event destinations have recognized the importance that sport events can play in their community development strategies because of the intangible benefits that are felt in comparison to other festivals and events (Misener & Mason, 2009). Sport events have a greater ability to build social and symbolic

capital as they tend to enhance national pride, euphoria and unity (Babiak & Wolfe, 2006; Hall, 2004; Heere, Walker, Gibson, Thapa, Geldenhuys, & Coetzee, 2013; Hiller, 2004).

Thus, it is imperative that consideration to host any sport event includes the potential impact the event may have on the quality of life of residents (Fredline, 2005). If residents' views are neglected, negative impacts may be felt by the host community; for example, unwillingness to work at the event, lack of enthusiasm to promote the event, hostility or rudeness towards event attendees, or even complete withdrawal of support for the organizations/agencies which promote the event (Crompton & Ap, 1994). An example of withdrawal occurred when in 2018, Calgarians voted not to host the 2026 Winter Olympics, due in large part to a lack of trust and cynicism around the Olympics in general (Potkins, 2018). Ritchie et al., (2009) argue that the insights provided by tracking perceptions do not just assist in event hosting policy but assist communities to better understand the reasons behind support or opposition to events and ways to improve outcomes for stakeholders in the host community and/or country. It is important to recognize however, that other factors can influence the perceptions of residents and non-residents; as such, understanding socio-demographic differences is important in assisting a host community to develop strategies for leveraging positive impacts.

There is also a large body of knowledge detailing the influence of demographics within sport consumer behavior literature. Within tourism literature, there are examples of socio-demographic characteristics which have been investigated to evaluate perceptions of an event (Kim, Scott & Crompton, 1997; Ritchie, Mosedale & King, 2012; Sato et al., 2014). The ways in which socio-demographic factors have been explored in a perceived impact context include resident vs. non-resident (Balduck & Buelens, 2011; Gibson et al., 2014; Karadakis & Kaplanidou, 2012), gender (Kim & Petrick, 2005; Ma, Ma, Wu, & Rotherham, 2013) and age (Abdolmaleki, Mirzazadeh, &

Ghahfarokhhi, 2018; Ritchie, Shipway & Cleeve, 2009) to name a few. While many of these studies have investigated socio-demographic influences, the literature has tended to focus on only positive or negative impact factors, or one stakeholder group (e.g., residents) in isolation.

Hence, the purpose of this study is to investigate the perceived event impacts among attendees of a national sport event – the 2017 Canadian Women's Curling Championships - by socio-demographic characteristics. Specifically, the study examines the perceived impacts of event attendees (spectators). It is the intent of this study to contribute new research to a growing body of literature by exploring the influence that multiple socio-demographic factors have on the perceived impacts of a non-mega sport event. The perceptions among socio-demographic groupings are compared for differences through multi-dimensional examinations (by comparing more than one factor on perceived impacts) and thus, contribute to new knowledge and practical implications. The research questions that are explored are as follows:

RQ1: Do perceptions of event impact differ among socio-demographic groups (age, gender, income and education)?

RQ2: Do perceptions of event impact differ between sport affinity groups?

RQ3: Do perceptions of event impact differ between residents and non-residents?

Chapter 2 examines a review of literature related to perceived and non-perceived event impact measures, relevant theoretical frameworks and a background on consumer behaviour research in sport and tourism that help to inform the results of this study. In the chapters that follow, the methodology (Chapter 3) for the study is presented along with the results from the data analysis (Chapter 4). Finally, a discussion on future research and limitations is presented (Chapter 5).

Chapter Two: Review of Literature

2.1 Introduction

This chapter examines the history of event impact analyses within a sport setting and provides a background on perceived event impacts by drawing on both sport and tourism-based examples. A summary of relevant theoretical frameworks is presented and provides important insights that inform the results of this study. Finally, the chapter examines various socio-demographic factors and their influence on the perceived impacts that individuals form from experiencing event phenomena.

Throughout this chapter, a number of frameworks related to event impact evaluation are discussed. Given that researchers have investigated these measures by following varying procedures, context is required to understand the different terminology that exists within the literature. Event impact measures have been evaluated objectively (e.g., through quantitative studies exploring economic impact measures or environmental studies measuring carbon dioxide emissions) and subjectively (e.g., people's opinions or perceptions about an event phenomena). Currently, there is no standard set of definitions when it comes to event impact research.

Within previous literature, a variety of terminology is evident. For example, some researchers may refer to event impacts as extrinsic or intrinsic (e.g., Faulkner & Tideswell, 1997), macro or micro (e.g., Kim & Walker, 2012) or tangible and intangible (e.g., Kim & Petrick, 2005; Prayag, Hosnay, Nunkoo, & Alders, 2013). In the context of this study, the term 'objective' is used when referring to any measurements associated with evaluation tools that follow an input-output model for example, economic impact assessments). Conversely, the term 'subjective' is used when referring to any sport event evaluation frameworks associated with opinions, perceptions, or attitudes; for example, resident perceptions of the impacts of the

Olympic Games. The intent of this terminology overview is to provide clarity and set context for this study in relation to previous literature that has explored sport event impacts.

2.2 Event Impact Analysis

The hosting of sport events directly impacts the quality of life for individuals within a host community as they can create a variety of short- or long-term, positive or negative impacts. These impacts lead to event-related outcomes, and if sustained, these outcomes have been called 'legacies' (Taks, et al., 2015). Impacts can sometimes be a result of strategic planning, however, it is suggested that event outcomes are often unplanned and happen haphazardly, although they are hoped for (Taks et al., 2015). Strategic planning for event outcomes (also known as leveraging) differs from legacy planning as it focuses attention to the way in which a host community may achieve desired economic, social and/or environmental outcomes through its overall service mix (Chalip, 2014). Leveraging is an important concept, as, from a practical perspective, it can aid practitioners in developing more effective event hosting strategies. With a trend to focus on event leveraging as a means to further justify community investments in sport, it is important to understand the way in which sport events have commonly been evaluated. Over time, academics and practitioners alike have developed three main impact measures for events. These include economic, environmental and social impact measures. While each type of evaluation has merit, the most commonly referenced measure is the economic impacts of sport events.

2.2.1 Economic Impact of Sport Events

Economic Impact Analysis (EIA) has been the most common means to measure economic impacts of sport events (Crompton, et al., 2001; Gursoy & Kendall, 2006). Some of the commonly identified benefits of sport event hosting include an influx of visitors, spending on

transportation, and infrastructure construction costs (which result in employment influxes); as such, the contribution of economic growth has been a dominant factor to rationalize investment in sport events, while other impacts are considered minor (Hiller, 1998). However, economic impact studies can often overestimate the net benefits that cities receive in hosting sport events due to potential data manipulation as well as inconsistencies in the modeling of these impact analyses (e.g., Baade & Matheson, 2001; Matheson, 2009; Porter & Fletcher; 2008). Much of the studies that support these calculations have focused primarily on mega-events such as the Olympic Games or FIFA World Cup. Recently, discussion has emerged with a shift to evaluating the impact of smaller events (e.g., Coates & Depken, 2011; Taks, Késenne, Chalip, Green & Martyn, 2011; Veltri, Miller, & Harris, 2009) as while these events may generate limited economic activity, it is believed that their net benefits may be more positive for a host community (Matheson, 2006).

There are many challenges in utilizing EIAs as a form of event evaluation. The most common debate among academics in this respect relates to economic multipliers that are used to calculate impact. A standard multiplier effect for sport events does not exist and can be interchanged depending on the geographic location of the event or the individual(s) conducting a study (Humphreys, 1994; Matheson, 2009; Siegfried & Zimbalist, 2002). Moreover, an event may result in influxes on the local economy, and therefore, there is no reason to believe that a multiplier which may be standard for that geographic location, would be the same (Porter & Fletcher, 2008). A major source of error in economic impact is the inclusion of casuals (visitors to a city for a reason other than attending the sport event), residents, and time switchers (those who were traveling anyways but have changed their destination to the sport event) (Crompton, 2000). By including these groups, results can be biased because of substitution (Diedering &

Kwiatkowski, 2015). Substitution effects occur when spectators or residents spend their money at an event instead of at other activities or businesses within the local community (Matheson, 2002). While there has been on-going debate within the academic community for many years regarding the integrity of economic impact studies and their use, there is consensus that it is possible for a host community to receive economic benefits because of hosting. However, these benefits may not be equally distributed as there are many factors that can influence the short or long-term effects such as investments in infrastructure, the size of the community and the type of attendees or participants that the event attracts.

2.2.2 Environmental Impact of Sport Events

Environmental sustainability is widespread amongst sport event organizations, but how these programs are introduced, maintained or measured for effectiveness is extremely varied (Hall, 2010). Some organizations promote themselves as "green" (suggesting they are environmentally conscious) but make no effort towards this initiative (greenwashing), while others commit to minimize their event's ecological footprint, employing advanced technologies and increasing public awareness about environmental sustainability (Ponsford, 2011). Chernushenko's (1994) *Greening Our Games* is widely considered the first comprehensive attempt to make the environmental ethics comprehendible to event organizers. Since then, much of the current research has focused heavily on "principles, policy, goals and metrics, but decidedly light on any substantive engagement concerning 'where the rubber hits the road'" (Ponsford, 2011, p. 185). Further, Mallen, Stevens, Adams & McRoberts, (2010) highlight six examples of sport event organizers who have made previous efforts towards measuring and reducing their overall environmental impact. However, a "lack of consistency and coordination across the sport event environmental sustainability activities make it difficult to build momentum

towards standardized environmental sustainability practices" (Mallen et al., 2010 p. 102). This lack of standardization creates greater complexities in reporting on environmental impacts across a multitude of factors.

Environmental issues during an event generally involve resource use, waste management, air quality, energy use and greenhouse gas emissions associated with the operation of and travel to events. Effective environmental programs can be responses to these identified impacts, but may also emphasize local, place-specific concerns known to be important to host communities and stakeholders, which could include residents, participants and event attendees (Ponsford & Williams, 2010). As such, managing the expectations and prioritizing measurements among these stakeholder groups can further the difficulty in creating consistent measures. Many governments and other agencies in recent years have explicitly recognized the need to consider environmental activities based on key international agreements, resulting in a new trend and opportunities for event impact research (Collins et al., 2009). In 2018, 17 international sport organizations launched the Sports for Climate Action Framework, in conjunction with United Nations Climate Change in an effort to meet the goals of the Paris Agreement (United Nations Climate Change, 2018). With growing concerns around environmental protections, land uses and sustainability within the sport event industry, an exploration of additional environmental impact measures is warranted to provide further insights into the way that various event stakeholders can perceive sport event impacts on their community(s).

2.2.3 Social Impact

Economic and environmental impacts can be difficult to use in measuring event impacts given that individuals can manipulate the data and the point of view of various stakeholder groups can vary substantially. Further, this manipulation can cause issues when interpreting and

reporting on the impacts that a sport event has on a community. Consequently, researchers have turned their attention to social impact measures given their ability to draw on the individuality of stakeholder groups (e.g., host city residents). However, social impacts of events can be difficult to measure objectively as many of them are difficult to quantify, and often differ with each member of the community as the impact, whether positive or negative, is generally examined through the perception of individual residents (Fredline, Jago, & Deery, 2003; Kim et al., 2015). Previous studies have explored more objective ways of measuring social impacts, for example, exploring crime rates, resident displacement or social conflicts (Balduck et al., 2011; Collins et al., 2007; Kim et al., 2006).

Two types of social impact studies have been conducted to date. "Extrinsic" studies examine the community in areas such as tourism development, the tourist/resident ratio and cultural distances between visitors and the host region (Faulkner & Tideswell, 1997). Examples include stage of event development, type of event, type of visitor and frequency of visits (Kim & Walker, 2012). This approach investigates overall community impacts and attempts to find how sport events affect residents (Kim & Walker, 2012). "Intrinsic" studies measure event impacts through perceptions of various event stakeholders, but also include the differences among each sub-group of the community (i.e. demographic differences) (Faulkner & Tideswell, 1997). Examples of intrinsic variables to compare event stakeholders' perceptions include proximity, involvement, contact, socio-political value and community attachment (Kim & Walker, 2012). In both the case of extrinsic and intrinsic studies, the focus has been to compare similarities and differences in event impacts among a population. The main difference being that intrinsic studies recognize the individual differences of the people being studied.

In many cases, the social impact is connected to the impact of tourism on quality of life

(Faulkner & Tideswell, 1997; Fredline et al., 2003; Kim, Uysal & Sirgy, 2013; Modica & Uysal, 2017; Tovar & Lockwood, 2008). Social impact studies of sporting events, although limited, indicate that there may be a variety of positive as well as negative impacts on the quality of life for residents of an event host city, and as such, it is important to understand the need for balanced research between tangible and intangible impacts (Kim & Petrick, 2005; Kim & Walker, 2012; Prayag, Hosnay, Nunkoo, & Alders, 2013). These factors are important due to the potential that social impacts may have a more substantial influence on a host community (Gibson, 2007). Social impacts have been analyzed in a variety of diverse contexts, however, have commonly been assessed by either positive or negative impacts only (Kim et al., 2015). Exploring one or the other creates significant challenges when trying to approach event impact assessment more holistically.

Compounding the complexity of evaluating social impact, some have argued that psychological impacts should be examined separately from other social impact factors (Crompton, 2004; Gibson, 1998). Conversely, other academics have demonstrated that social impacts and socio-psychological attitudes are interrelated and hard to separate completely (Delamere, 2001; Fredline et al., 2003; Kim & Petrick, 2005). These types of challenges have continued to perplex researchers as they attempt to develop tools that measure the impacts of sport event hosting.

2.3 Exploring Perceived Event Impacts

Staging sport events can require public investments such as human or financial capital. Residents can play an important role in this process: if residents welcome a particular event, politicians are more willing to allocate resources to the event (Preuss & Solberg, 2006). Thus, it is important that consideration to host any sport tourism event considers the potential impact the

event may have on the quality of life of residents (Fredline, 2005). When residents' views are neglected, negative impacts can be felt by the host community. For example, residents and other organizations may completely withdraw their support for the event (Crompton & Ap, 1994). In a mega-event context, these negative impacts can be influenced by the development of new sport infrastructure which quickly becomes a 'white elephant' (Miller, 2014) due to the large investments required from taxpayers. An example of these underutilized infrastructure projects includes the World Cup soccer stadiums built in South Africa and Brazil, where local governments are subsidizing substantial losses on their stadiums (Associated Press, 2018). Further compounding these negative perceptions are non-sport infrastructure investments such as transportation (e.g., airports, railways, or subway systems) which are often underutilized post-event (Bovy, 2010; Kassens-Noor, 2012). Therefore, understanding event impacts and resident perceptions can enable action that could ensure positive impacts outweigh the negative (Delamere, 2001).

2.3.1 Stakeholders in Event Impact Analyses

The importance of analyzing resident perceptions towards sporting events is often acknowledged as residents are one of the most important stakeholders to host events given that their support is critical to win a bid and stage the event (Oshimi et. al., 2016). Further, Ritchie et al., (2009) argue that the insights from resident perceptions do not just assist in event hosting policy but assist communities to better understand the reasons behind support or opposition to events and ways to improve outcomes for stakeholders in the host community and/or country. Similarly, these understandings may also aid policy makers in ensuring continued long-term support for event hosting in the community (Ohmann et al., 2006). Due to this important role that residents play in the sport event hosting continuum, a majority of studies in this area have

focused solely on resident perceptions from the host community; creating a gap in analysis of non-residents and other stakeholder groups.

While the perceptions of residents in a host community play an integral role in evaluating the impacts of sport events, non-residents serve as an important stakeholder group to monitor. At sport tourism events, a significant number of spectators or participants can be non-residents, and as such, the viability and sustainability of the event is dependent on their participation in either capacity. Previous studies have highlighted that perceived impacts can vary based on socio-demographic differences as well as varying priorities; e.g., social welfare causes of local residents compared to national pride for non-residents (Fairley et al., 2011; Heere, et al., 2013).

From a practical perspective, it is important to understand the varying perceptions, most specifically, when considering spectator-based events. Furthermore, understanding the socio-demographic characteristics and ways in which impact perceptions may be altered can be increasingly important as it has been previously argued that visitors to a community can influence change in the behaviour of local socio-demographic sub-groups, referred to in tourism literature as the 'demonstration effect' (Fisher, 2004). Consequently, stakeholders such as government officials and event promoters, for example, should be conscious of the ways in which perceptions of their event can be influenced for residents and non-residents of their community as it could have an impact on attendance, repeat visitation and interactions among residents/non-residents.

2.3.2 Evolution of Perceived Event Impact Models

Resident attitudes towards sport event hosting has been studied on multiple occasions within the literature, and this section will be tracing the evolution of perceived impact models in a sport setting. Many early studies focused on high-profile events such as the 1988 Olympic

Winter Games and the America's Cup (Ritchie & Aiken, 1985; Ritchie & Lyons, 1987; Soutar & Michael, 1993). While the studies conducted by Ritchie and Aiken (1985) and Ritchie and Lyons (1987) focused on attitudes towards hosting, Soutar and Michael (1993) explored pre- and post-event perceptions of residents. In all three studies, no measurement tool for event impacts was developed or proposed. Delamere et al., (2001) explored a range of non-economic benefits and costs associated with hosting community festivals and therefore presented initial conceptual guidance for assessing social impacts in an event hosting context (Kim et al., 2015). Delamere (2001) expanded on his previous research by conducting a scale development study to measure resident attitudes of specific impacts rather than utilizing concepts for measuring perceived social impacts. The results of the study produced two factors: social benefits and social costs (Delamere, 2001). This was the first scale to measure residents' perceived impacts of event hosting in both positive and negative constructs (Kim et al., 2015).

Recognizing the challenge in assessing social impact measures, researchers in the early 2000's undertook attempts to develop impact scales that would measure both positive and negative perceived impacts through a more standardized approach. Kim and Petrick (2005) explored the perceived social impacts of residents towards hosting the 2002 FIFA World Cup Korea and Japan. Similarly, Kim et al., (2006) explored the tourism impact of the same event and created a tourism impact scale to explore sociocultural and economic factors. In both studies the total pool of items differed in relation to the measurement of resident perceptions with 31 positive and 26 negative items being analyzed, respectively. Research in developing a scale for perceived impacts has continued to progress. Gursoy and Kendall (2006) developed and validated a model which measured the perceived impacts of residents from hosting the 2002 Winter Olympic Games. The researchers were able to explain how both direct and indirect

impacts influenced perceptions within three constructs (community concern, community attachment, ecocentric attitude) (Gursoy & Kendall, 2006). Ritchie et al. (2009) were able to develop a perceived impact model based on 33 impact statements which were derived from previous conceptual studies. It is clear that there is a degree of variability among studies in how to use conceptual frameworks in generating scale items. Furthermore, the exploration of 'other' perceived impacts such as noise pollution, increased crime and security, and sanitization costs was presented in later studies around resident perceptions of sport event hosting (Collins et al, 2007).

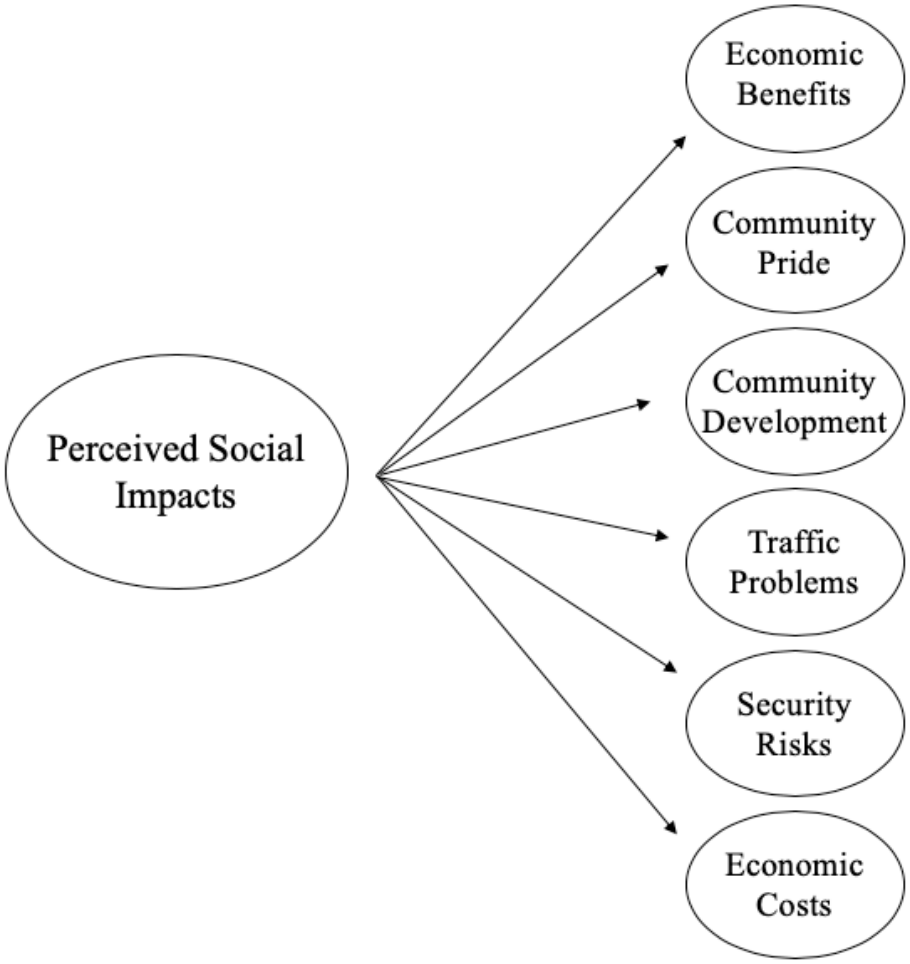
2.3.3 Scale and Measurement Tool Development

Following this body of work, Kim et al. (2015) undertook a study to develop a statistically reliable tool for measuring a number of social impact measures. In this study, they included various positive and negative social impact statements that ranged from increased community pride and image enhancement of the host city to economic costs, increased pollution and increased terrorism and security risks to name a few (Kim et al., 2015). The authors suggested that their proposed model (the Scale for Perceived Social Impact) was an attempt at evaluating an event through a triple-bottom-line (economic, environmental and social) lens (Kim et al., 2015). The researchers critiqued previous scale development items in the sport event and tourism industry suggesting that previous scale iterations were not statistically sound as they were developed through exploratory factor analyses (EFAs) and did not meet recommended criteria such as sample size where n = 200 or more (Kline, 2005). Furthermore, the authors suggest that when developing a new measurement tool, utilizing a confirmatory factor analysis (CFA) is more appropriate, especially when there is existing empirical evidence and conceptual frameworks in the literature to support it (Byon & Zhang, 2010).

Kim et al. (2015), sought to understand the perceived impacts that the Formula One Grand Prix had on residents in South Korea. The event had been taking place in the area since 2010, and local government and authorities spent $275 million to build the facility – the Korean International Circuit – which could accommodate up to 130,000 spectators (Kim et al., 2015). The facility site had long been a contentious issue with local residents as it was placed more than 200 miles away from Seoul, the capital of South Korea (Kim et al., 2015). In developing their scale for impact measurement, the researchers utilized previous literature and conceptual frameworks for item generation. Initially, their model consisted of 11 constructs in total, six positive and five negative. In total, the researchers were able to collect 1,567 usable surveys from local residents at various, high traffic spots (e.g., busy streets, shopping malls, and public parks), in the host community (Kim et al., 2015). From a demographic perspective, respondents were relatively evenly split when it came to gender (54% male) and had a mean age of 30.25 years (Kim et al., 2015). After running multiple EFAs and CFAs to purify the scale, the researchers ultimately concluded that the model presented in Figure 1 was statistically valid as it had acceptable indices of fit (Kim et al., 2015).

Kim et al. (2015) note within their limitations that future research will need to explore the use of a similar tool at various events as the validity of the items they generated from their data may not be applicable across different event contexts. Specifically, Kim et al. (2015) state “the use of an event to assess perceived social impacts derived from hosting sport tourism events would not be appropriate to be generalized to other contexts and populations…Therefore, the results herein may not be generalized to other events and populations. For future research, its would be valuable to assess a variety of contexts (i.e., mega-sport tourism events, community sport tourism events, etc.)” (p.30). They note that in this particular study the perceived negative

Figure 1: Retained Six-Factor Model for Perceived Event Impacts (Kim et al., 2015)



impacts may have been skewed due to an existing negative perception of the event given its hard to reach location and the significant amount of money that had been invested by government authorities (Kim et al., 2015).

Finally, the researchers note that in the future, the model should be validated by exploring its relationship to other constructs such as behavioural intentions, social capital and psychic income (Kim et al., 2015). These recommendations are warranted as similar studies have suggested future research in this light should include the exploration of multi-dimensional analyses of socio-demographic groupings on event impact as well as their gains in relation to an overall social exchange as opposed to a gain in specific social capital factors (Gibson et al., 2014; Karadakis & Kaplanidou, 2012). Therefore, a 'one size fits all' approach may not be appropriate to explore perceived event impacts as a result of the individual socio-demographic differences of populations in different geographic regions. Further, the context of an event (e.g., substantial government subsidies) may influence the exchange process. Hence, this study attempts to identify what demographic characteristics can influence perceived event impacts in the context of a non-mega sport event. The next two sections will address these theoretical concepts, demographic and behavioural influences.

2.4 Theoretical Frameworks for Perceived Event Impact

Studies on event impacts follow several theoretical streams (Fredline, 2005). Two models have been used related to perceived impact studies within the literature: an extrinsic model and intrinsic model (Oshimi et al., 2016). Extrinsic models generally present the macro perspective about a research object and assumes a level of homogeneity in the resident population, therefore, considering the community to be a single entity (Faulkner & Tideswell, 1997). The intrinsic model, however, assumes that people are heterogenous. As research has progressed, perceived

impacts have switched to the exploration of inherent heterogeneity within geographically defined communities (Fredline, 2005). There are multiple theories associated with the intrinsic model, such as social exchange theory (Emerson, 1976), the social representation theory (Moscovici, 1981), and the expectancy value model (Eagly & Chaiken, 1993). Social exchange theory is the most commonly applied theory on social impacts of events (Kim & Walker, 2012; Waitt, 2003).

Social impacts have however not been clearly defined by researchers (Oshimi et al., 2016). Hall (1992, p. 67) defined social impacts as "the manner in which tourism and travel effect changes in the collective and individual value systems, behaviour patterns, community structures, lifestyle and quality of life". Thus, these impacts are associated with "intangible effect/benefits" (Kim & Petrick, 2005; Inoue & Havard, 2014; Waitt, 2003) and can be used to understand the perceptions of individuals toward sporting events (Balduck et al., 2011; Ma et al., 2013). Studies investigating these impacts have often adopted a broader definition of social impacts to include economic, social and environmental constructs (Fredline, 2005). This is likely due to the fact that the items within these constructs typically deal with perceptions (e.g., community connectedness) and how they can change over time (e.g., Gibson et al., 2014). In order to understand how these perceptions can be formed within these constructs, it is therefore important to understand the various theoretical concepts that provide insight into how various socio-demographic and stakeholder groups can influence these perceived outcomes.

2.4.1 Social Exchange Theory

The most commonly discussed theoretical framework as it relates to social event impacts is the Social Exchange Theory (SET) (Kaplanidou et al., 2013). This theory explains the reactions and perceptions of residents toward tourism stimuli, testing for social, cultural, economic and environmental impact variables which may support tourism development (Gursoy & Rutherford,

2004). Karadakis et al., (2013) suggest that perceived changes in quality of life among event attendees may be a part of the social exchange process to help motivate residents to support sport event hosting. However, SET is dynamic because, over time, residents may re-evaluate the exchange process and adjust their feelings accordingly (Waitt, 2003). Further studies have focused on the changes in quality of life measures as well as social impact perceptions pre-, during, and post-event (Gibson et al, 2014; Kaplanidou, 2012; Karadakis & Kaplanidou, 2012). Such studies have utilized social impact measures to investigate residents' longitudinal perceptions of the event as it relates specifically to legacies (e.g., perceived community image, financial impacts and facility usage) of major games such as the Olympics or FIFA World Cup.

For example, Knott, Swart and Visser (2015) designed a study to assess the social impacts on the 2010 FIFA World Cup - hosted in Cape Town, South Africa - by examining the pre-event expectations and post-event perceptions of host city residents. The results of pre-event expectations suggested that Cape Town residents were pessimistic about the socio-cultural impacts of the event as only 11% of respondents agreed that they did not believe there would be a negative social impact (Knott et al., 2015). Despite the media outlets sparking excitement for the tournament and a feeling of national pride for their country, residents still believed that they would have to endure many of the negative impacts it would bring, and following the event, 52% of residents perceived there to be no lasting negative social impacts (Knott et al., 2015). Sadly, this suggests that a minority of residents believed that the positive impacts outweighed the negatives (Knott et al., 2015). Given that socio-demographic factors such as ethnicity, age, residency and gender can have varying impacts on individual perceptions (Gibson et al., 2014), it is important to understand the influence that these factors may have on the social exchange process.

Karadakis and Kaplanidou (2012) investigated the impact of perceived legacies on resident and non-residents of a host city of the Olympics. Their study revealed that both resident and non-residents valued environmental legacies as the most important factor of desired quality of life outcomes at all stages of the event (pre, during and post). Further, residents of the host city valued economic legacies as the second highest factor on quality of life while non-residents scored socio-cultural legacies as the second highest factor on quality of life post-event (Karadakis & Kaplanidou, 2012). This study in particular further supports recommendations of continued research among various stakeholder groups within the sport event realm. Another example of socio-demographic groupings being investigated was conducted by Gibson et al. (2014), whereby they investigated the differences in psychic income and social capital (to be discussed further) by gender, age and race. The results of the study demonstrated an increase in the 'feel good factor' from pre- to post-event (Gibson et al., 2014). These characteristics can provide further insight when investigating other sub-groups of socio-demographic differences on the overall exchange process. Given that socio-demographic characteristics can influence perceived event impacts, it is therefore important to understand the way in which various stakeholders can have their perceptions influenced as all stakeholders in the sport event hosting continuum are typically not a homogenous group.

2.4.2 Social Representation Theory

Social representation theory (SRT) is complementary to SET and describes the sharing of values and attitudes toward a phenomenon within a community (Moscovici, 1981). SRT suggests individuals will form initial perceptions of an event or phenomenon which are influenced by their social interactions, direct experience, knowledge or other sources of information, for example, the media (Kim, Gursoy & Lee, 2006). As such, individuals then form initial

perceptions prior to an event which are influenced by internal factors (e.g., knowledge) and external factors (e.g., media) (Oshimi et al., 2016). Both SRT and SET are based on intrinsic motivators, however, they do differ slightly. SET mainly focuses on individual responses or perceptions based on a cost-benefit analysis, whereas, SRT examines peoples' perceptions which are influenced by internal and external factors as reference points (Oshimi et al., 2016). For the purpose of this study, SRT will provide valuable insights as multiple socio-demographic groups and their differences in perceived sport event impact will be explored. SRT may provide insights or justification for these differences based on factors such as age (for example, media consumption may vary and therefore have an effect on perceptions – an external factor) or sport affinity (based on their participation in the sport – an internal factor).

2.4.3 Expectancy Value Theory

Expectancy Value Theory (EVT) suggests that individual experiences lead to the acquisition of different beliefs about actions, events and objects (Fishbein & Ajzen, 1975). These beliefs may be formed from direct experiences, indirectly accepting information from others, or may be self-generated through influence processes from knowledge stored in memory (Doll & Ajzen, 2008). According to EVT, the belief associates the attitude with certain attributes or outcomes (Zhang, Feng, Wee, Thumboo & Li, 2008). Kempen et al. (2016) provide an example of this through a consumer behaviour lens examining goat milk. Using EVT, Kempen et al. (2016) suggest that a consumer may believe goat milk (the object) must be smelly (by associating it with the smell of a goat). This suggests the consumer has already evaluated or associated positive or negative values with the milk and therefore, acquired an attitude toward the object (Kempen et al., 2016). This set of beliefs, and ultimately attitude, would then

predispose this person to consume or oppose consumption of the product (Littlejohn & Foss, 2011).

Further, EVT suggests that consumers will not engage in a task (e.g., consuming a sporting event), when it is expected to be undesirable or does not meet their expected value (Kempen et al., 2016). This raises the possibility that consumers holding different beliefs may have the same attitude, which suggests that a negative value on one of the attributes of the product does not necessarily equate to a negative overall attitude (Hewstone, 2010). Using a sport event example, a consumer may not like the price of the event ticket, but may have a positive attitude towards the event due to the positive social interactions that come with it. Thus, EVT purports that people seek to maximize positive outcomes while avoiding negative ones (Eccles & Wigfield, 2002).

Understanding EVT in this context is important as it may shape the perceptions of event attendees. A hypothetical scenario within the context of this study could be an individual who believes the ticket prices are high and has never attended a curling event previously. This individual may be intimidated by large crowds and been informed by friends or family that many people consume alcohol at the event. Using EVT this person may have developed a negative overall attitude towards the event. Conversely, someone who has attended the event previously may believe the ticket prices are low in comparison to other markets and knows from experience that generally, curling fans are quite friendly and enthusiastic towards the sport. Utilizing EVT in this scenario, it would be reasonable to expect that the curling fan who has an affinity to the sport (from attending previous events) would likely have a more positive perception of the event impact than that of someone who has no affinity (has not attended past events). Each of these theories provide various ways to understand the way in which perceptions of event impact can be

influenced. It is important however, to understand how consumer behaviour across various socio-demographic characteristics can contribute to the overall exchange process. These areas will be discussed in the next section.

2.5 Stakeholder Behaviour and Socio-Demographic Influences

2.5.1 Psychic Income

While a majority of the scholarly work on the socio-psychological impacts of hosting mega sport events has been conducted during the past decade, these event-related impacts have been discussed for almost four decades and have identified both positive and negative social and psychological impacts from hosting major events. As research has progressed, these changes in attitudes or belief have come to be categorized as changes in psychic income (Burgan & Mules, 1992). Psychic income (in an event context) is defined as "…the emotional and psychological benefit residents perceive they receive, even though they…are not involved in organizing them [the event]." (Crompton, 2004, p. 181). In sport contexts, psychic income has been used to describe the heightened socio-psychological outcomes of event hosting and have in fact discussed ways to attach monetary value to intangible benefits (Burgan & Mules, 1992; Crompton, 2004; Wicker, Prinz & von Hanau, 2012). Examples of these benefits have included an enhanced sense of community pride, opportunities to develop new skills, or access to/increased understanding of new cultures to name a few.

Sport economists have applied the consumer/buyer surplus concept to determine psychic income and measure a host cities' psychological benefits by using the contingent valuation method (CVM) (Kim & Walker, 2012). Contingent valuation method places a dollar value on public goods and services traded outside the marketplace (Walker & Mondello, 2007). The CVM is a survey-based tool to measure a consumer's willingness to pay for environmental features

(Johnson & Whitehead, 2001). This willingness to pay for an event, however, does not provide a holistic measure of an individual's psychic income (Johnson, Mondello & Whitehead, 2006; Johnson & Whitehead, 2001) as it only considers a single attribute of the event (i.e. the ticket price). A holistic measure of the individual's psychic income could include, for example, the entertainment value, interaction with other fans, and interaction with various social groups to name a few. Gibson et al. (2014) highlight that psychic income cannot be bought, and therefore, instead of evaluating the monetary value of psychic income, researchers are better served to focus on the 'feel good factor' for long-term community benefits.

Crompton's (2004) conceptualization of psychic income study focused more heavily on external benefits (e.g., community image) than internal benefits (i.e., residents' perceptions of sport teams). As such, Kim and Walker (2012) designed a study focused on the emotional and psychological benefits that residents perceived they received at a mega sport event (the Super Bowl). This tool has been incorporated into other social impact analysis studies, including a more recent study by Kim et al. (2015) which validates a psycho-social impact model for event impact assessment, as previously discussed. Understanding how psychic income can be influenced (e.g., by demographic factors) is therefore an important consideration for sport event hosts. As cities and event organizers attempt to develop strategic plans, understanding how this variable is impacted will be critical to assist them in achieving their desired outcomes.

2.5.2 Influence of Demographics

Demographic characteristics of residents such as gender, age, profession, income levels and education levels are typically examined as factors that may influence event perceptions (Mao & Huang, 2016). In general, academics have had mixed reviews in how demographic characteristics can influence resident perceptions of events. For example, Harvey, Hunt and

Harris (1995) claim that there are no statistical differences between men and women when exploring tourism development. Conversely, Mason and Cheyne (2000) found that females are more opposed to tourism development due to the potential negative impacts such as crime, traffic and noise. Thus, proving consistent links among demographic variables and perceived event impacts has been challenging (Mao & Huang, 2016; Sinclair-Maragh, 2017; Zhou & Ap, 2009).

To date, this research within a sport event context is limited. While the body of knowledge is still growing, many studies have focused primarily on the pre- and post-event perceptions of residents only or explored the perceptions of residents versus non-local event attendees (Gibson, et al., 2014; Kaplanidou, 2012; Karadakis & Kaplanidou, 2012, Knott et al., 2015). Wait (2003), however, proposed that impact perceptions of sporting events are likely to differ across socio-demographic profiles as each segment of a population has varying social exchange relationships with other stakeholders. As a result, exploring multiple socio-demographic groupings and their influence on the perceived impacts of one stakeholder group could provide valuable contributions for future sport event impact research and sport event practitioners.

Due to the social exchanges that are occurring, sport fandom literature can provide valuable insights into the potential influences that could be experienced by sport-tourism travelers and event attendees due to their critical role in the sport fan and spectator experience (Koch & Wann, 2016). Understanding the differences in how these socio-demographic characteristics can influence perceived impacts is critical, as it provides valuable insights as to how attitudes and perceptions towards a sport event phenomenon can be shaped. Age has been shown to be an important factor for motivation for sport attendance. For example, older fans tend to believe athletes should be role models, are upset by athlete materialism and generally believe

that how a sport is played (i.e., the process) can be just as important as the overall outcome (Aiken, Campbell, & Sukhdial, 2010; Sukhdial, Aiken & Kahle, 2002). Comparatively, other research demonstrates that younger fans are more likely to be disappointed by poor team outcomes (Rainey, Larsen & Yost, 2009). Parment (2013) also concludes that perceived image within social groups is an important factor in spectator attendance and fandom. While older adults (baby boomers) tend to care less about what others think of them, younger adults (Generation Y, otherwise known as Millennials), place significant value in their perceptions amongst social circles (Parment, 2013).

In addition to age, gender has been identified as an important predictor of spectator affinity. For example, female fans often report higher levels of family motivation while men report higher levels of eustress (positive stress) and typically report higher levels of fandom (Koch & Wann, 2016). Age and gender can play a significant role in determining perceptions of sport event impact among various sub-groups and as a result, can alter the exchange process for each. Given the exploration of these factors in past studies, they will be examined to understand their influence on perceived event impacts in this study.

From a theoretical context, perceptions can also be influenced as a result of social identification theory (SIT). SIT is a framework that analyzes aspects related to intergroup relations, collective psychology (i.e., group processes), and how individuals deal with identity issues (Hogg, Terry & White, 1995; Turner & Reynolds, 2004). As summarized by Andrijiw and Hyatt (2009), these identities can be subdivided into personal and social identities through a process called self-categorization. Brewer and Chen (2007), further elaborate noting that social groups do not need to be relational in nature and can in fact be comprised of individuals who rely merely on shared symbols and cognitive representations of the group. SIT literature offers a

variety of motivational explanations for an individual's creation and maintenance of an identity (Andrijiw & Hyatt, 2009).

One of the most common of these concepts is the self-esteem hypothesis (Hogg, 2003). Through the process of self-categorization, individuals can structure a social reality by considering themselves and others as members of in, or out, groups (Stets & Burke, 2000). Essentially, the self-esteem hypothesis suggests that positive ingroup differentiation derives increased self-esteem because they judge or treat the ingroup more favourably than the outgroup (Brown, 2000). According to Hogg (2000), these group identities can allow individuals to reduce uncertainty in their social environment, while categorization of oneself and others allows individuals to predict behavior, plan actions and understand one's relative position within society (Andrijiw & Hyatt, 2009). SIT therefore, becomes an important underlying theoretical concept related to event impact perceptions as varying socio-demographic groups may perceive event impacts in ways that are more relevant to their social group rather than their demographic background which would typically predict consumer behavior and motivators. Specifically, SIT may provide insights into any differences (or lack thereof) when exploring education and income variables. Through a SIT lens, low-income or less educated individuals may try to mirror the attitudes of more affluent individuals to create social bonds with them, using the sport event or curling as the 'symbol' that they unite around.

In a study conducted by Sato et al. (2014), socio-demographic characteristics were investigated among attendees at multiple triathlons to better understand how both sport and tourism aspects can influence behaviours in a sport tourism context. Three notable behavioural factors were explored and included behavioural involvement, purpose for event participation and past event participation (Sato et al., 2014). Behavioural involvement refers to a greater

experience and frequency of participation with a recreational activity (Kim et al., 1997). For participants who travel with a dual-purpose (i.e. the event and tourism), it is suggested that they are more likely to engage in diverse tourism activities and spend more money than participants who come to the destination solely for the sport event (Ritchie et al., 2002). Past visitation to a city can also influence spending patterns by combining lower spending factors (e.g., savings on food and beverage) and higher spending factors (e.g., seeking a higher quality hotel stay) (Alegre & Cladera, 2010).

2.5.3 Sport Affinity

As it relates to marketing, the term "affinity" has typically been used to describe an "individual's level of cohesiveness, social bonding, identification, and conformity with the norms and standards of a particular reference group" (Macchiette & Roy, 1993, p. 55). In a sport context, affinity has often been used interchangeably with the concept of fandom. Furthering the concept of sport fandom, Jones (2000) proposes a model of serious leisure identification in a social exchange context. Serious leisure has typically been categorized by six distinct qualities: perseverance, the following of a 'career' path, significant personal effort, benefits to the individual, the identification of participants with the activity, and the unique ethos that exists within the activity (Stebbins, 1992). Jones (2000) notes that the development of a social identity as a serious leisure participant relies on the process of categorization. This refers to the individual being able to recognize themselves as a group member, for example as a sport fan or amateur athlete (Jones, 2000). Once an individual takes on a social identity as a serious leisure participant, it becomes a key component of their self-concept (consisting of a set of beliefs, that a person holds about themselves) (Leary, 1995). People strive to maintain positive self-concept, and therefore, will seek to maintain a social identity (Jones, 2000). Jones' model of serious

leisure identification provides a greater understanding for how an individual may have a greater affinity to a sport based on their participation in it, or their self-concept within a more social setting.

Mao and Huang (2016) further the notion that perceptions of event impact can be categorized with an identification to the theme of an event. It is suggested that residents who have a deeper identification with the theme are more likely to derive social benefits from attending and meeting other enthusiasts (Mao & Huang, 2016). In a study by Fredline and Faulkner (2001), it was revealed that residents who identified themselves as having an interest in motor racing as a spectator sport, or an interest in other aspects of the event had more positive perceptions of the impact than those who claimed to have no interest. It is likely that the residents who identified with the event would derive more social utility from the event. Previously noted literature suggests that this identification can come through a variety of factors such as participation in the sport, media consumption, and attendance at previous events. Therefore, it is expected that identification (or affinity) to the sport of curling will be related to a different perception of event impact than those who have limited affinity.

2.5.4 Local vs. Non-Local Residents

Previous studies highlighted by Knott et al. (2015), Gibson et al. (2014), and Karadakis and Kaplanidou, (2012) provide insights as to the commonalities and differences of perceived event impacts of major events and how local and non-local residents rate economic, environmental and social impacts. Building off of this, it is important to understand the concept of community attachment as it relates to perceived event impacts. Community attachment refers to an individual's rootedness in, and sense of belonging, to a community (Lee, 2013). In tourism research, there have been inconsistent findings on the relationship between community

attachment and event impacts. For example, Harrill (2004) found a negative relationship between community attachment and event impacts. He proposed that the tourism industry had the potential to negatively impact the quality of life and therefore, the more attached residents were to the community, the more negative their feelings may be towards tourism (Harrill, 2004). In contrast, McGehee and Andereck, (2004) and Latkova and Vogt (2012) found the opposite relationship, while Nunkoo and Ramkissoon (2010) found no relationship between community attachment and residents' perceived impact of tourism. Mao and Huang (2016) suggest that residents may perceive sporting events differently than tourism in a broader context. This is in large part due to the fact that sports are often viewed as a more positive and effective way to transform a community (Sherry, Schulenkorf & Chalip, 2015). Given the many benefits that are often expected as a result of hosting sporting events, it is likely that more attached residents experience greater positive impact. In the case of the 2017 Canadian Women's Curling Championship (CWCC), a significant number of locals were required to stage the event; of whom, many are expected to have a higher affinity to curling.

2.6 About the CWCC

The Canadian Women's Curling Championship (CWCC), also known to Canadians as the Scottie's Tournament of Hearts, is an annual event that provides the fourteen member associations of Curling Canada to field a team (Curling Canada, 2019). The event started in 1961 and the winning team goes on to represent the country at the World Curling Championships (Curling Canada, 2019). The event is hosted in a different city each year, provides $6-$12M in economic impact and is supported by up to 400 volunteers (Curling Canada, 2019). TSN (The Sports Network), a national sport television network, provides annual coverage for the entire event, and typically over three million viewers watch the championship final (Curling Canada,

2019). Table 1 shows the last four Canadian cities to host and their reported attendance numbers.

In this chapter, a summary of relevant literature and theoretical concepts and frameworks is discussed. The evolution and development of scale measurement models for perceived event impact analyses are presented along with the influence that various socio-demographic characteristics can have on perceived event impacts. Social exchange theory, social representation theory and expectancy value theory were discussed. These theories present ways in which event stakeholders can form, shape, and change their attitudes and perceptions towards an event phenomenon. The next chapter discusses the methodology used to conduct the study.

Table 1: CWCC Host Cities and Attendance Figures

Year	Host City/Province	Reported Attendance Figures
2019	Sydney, Nova Scotia	46,796
2018	Penticton, British Columbia	55,138
2017	St. Catharines, Ontario	56,804
2016	Grand Prairie, Alberta	36,854

Note: Data for this table from Brazeau (2019), McCormick (2018), CBC Sports (2017), Canadian Press, (2016).

Chapter Three: Method

3.1 Introduction

The objective of this chapter is to describe the methodology used to collect and interpret data for this study. It will briefly discuss the sampling criteria, survey design, procedures, ethical considerations and data analysis. For this study, a survey tool was implemented at the 2017 CWCC which took place at the Meridian Centre in St. Catharines, Ontario from February 18-26, 2017. Data collection occurred on-site over an eight-day period. The researcher received assistance from three graduate students in an effort to be able to collect an appropriate number of survey responses. It is important to note that the researcher had to enter into a research agreement with Curling Canada to have access to the participants. As such, some data collected from the survey instrument were not analyzed in this study; however, was provided to Curling Canada for internal analysis. In total 278 surveys were collected from spectators of the event. After cleaning data and deleting incomplete responses, a total of 239 surveys were utilized (n=239). Following the recommendations of previous literature, an EFA and CFA were conducted to ensure that model fit was achieved. MANOVA procedures were conducted to analyze the research questions and provide an understanding of the influence of socio-demographic characteristics on perceived event impact.

3.2 Participants

Participants were any spectator (a local resident or non-resident) who was the age of majority (18 years of age) and who had purchased a ticket(s) to attend the event. In order to calculate sample size, previous studies investigating perceived social impacts were reviewed. Various studies on perceived impacts of mega sport events ranged in sample sizes from 102 respondents to 519 (Djeri, Bozic, Stamenkovic, & Nagy, 2017; Kaplanidou, 2012; Karadakis and

Kaplanidou, 2012; Ribiero et al, 2017; Ritchie et al, 2010). Kline (2005) suggests that when exploring scale development, a minimum number of 200 surveys should be collected, and this would be consistent with the methods implemented in this study. The researcher used a modified version of the SPSI model developed by Kim et al., (2015), which followed a similar methodology in their scale development, collecting a total of 784 responses. Neuman (2003) suggests that a sampling ratio of 10 percent is needed. Recognizing that it would only be possible to collect a sample of attendees from each day of the event, a target sample size of 300 respondents was set. Average daily attendance was approximately 2,500 (D. Lamoreaux, personal communication March 5, 2017) representing a response rate above 10% and a higher number of participants than some studies for perceived event impacts on mega sport events.

3.3 Instrumentation

This study sought to compare attendee perceptions of positive and negative impacts of the 2017 CWCC across various socio-demographic factors. As such, the survey tool was designed to capture basic demographic information. These factors included age, gender, ethnicity, household income, education, occupation and area of residence. These factors were based on the recommendations of previous studies (Kim et al., 2015; Waitt, 2003), as well as the requests of Curling Canada as a result of the research agreement with the researcher. Due to the impact that demographics and affinity can have on visitor spending, the survey also included questions pertaining to participation rates in curling, if attendees had attended the event previously and their primary purpose of travel. As suggested by Sato et al. (2014), and as evidenced in the previous chapter, these types of socio-demographic characteristics allow for greater comparison and further insight with respect to the anticipated differences among sub-groups.

In order to understand perceived event impact, a previously utilized psycho-social impact model was used to gather the perceptions of various attendees at the event. Following the research of Kim et al. (2015) a survey utilizing a ten-factor model for event impact was delivered to understand the perceived impacts of event attendees. Kim et al.'s model originally included 11 factors with 57 items (see Figure 2) in total, however, for this study, the "Infrastructure and Urban Development" factor was removed from the survey as there was no new infrastructure created for the event that was researched. As such, the researcher initiated the study with a model consisting of 10 factors and 41 items (see Figure 3). Kim et al.'s model was based upon previous works for scale development on social impacts and resident attitudes (Delamere, 2001; Delamere et al., 2001; Gursoy & Kendall, 2006; Kim & Petrick, 2006; Richie et al., 2009) and measured perceived psycho-social impacts in two dimensional structures: positive and negative social impacts (Kim et al., 2015).

The researcher created a survey following the items generated in the Kim et al. (2015) SPSI tool. Following the procedures of Kim et al. (2015) and recommendations of previous research (Babbie, 1992), a panel of experts reviewed the survey to critique the format, wording, and item content. Panel experts have been recommended to enhance the clarity and relatability of questions to participants (Kim & Petrick, 2006; Kim et al, 2015; Kincaid, Jones, Gonzalez, Payne & DeVellis, 2012) and are recommended when developing an instrument for measurement (DeVellis, 2012). The panel experts included two university professors with experience in sport tourism and events, two research specialists from separate marketing firms and a leadership coach with 30 years of experience in survey design and implementation. Based on the feedback of the panel (see Appendix A), the survey tool was modified, enhancing clarity and face validity. Changes that were implemented were focused on using standardized responses

Figure 2: Proposed Scale of Perceived Social Impact Model (Kim et al., 2015)

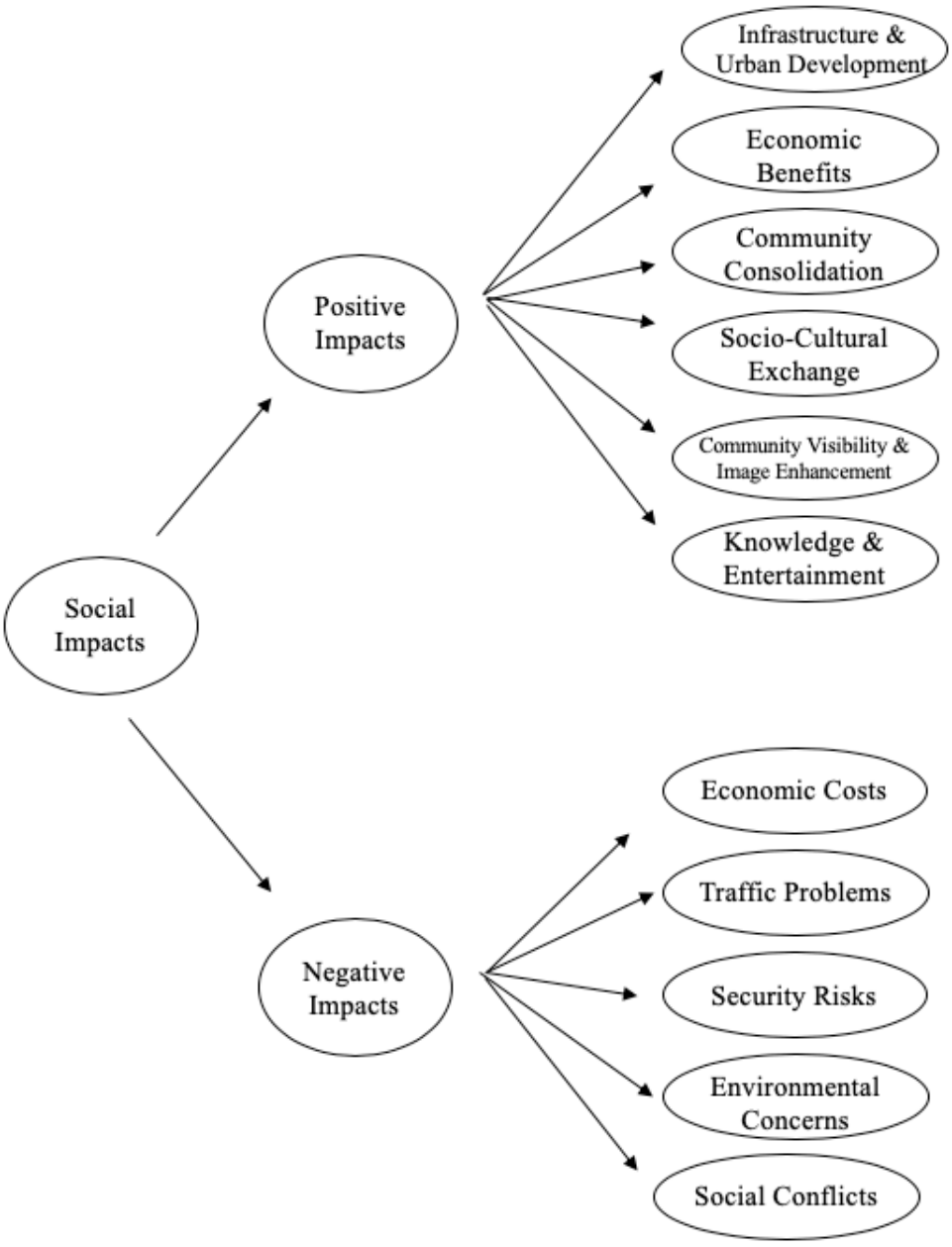
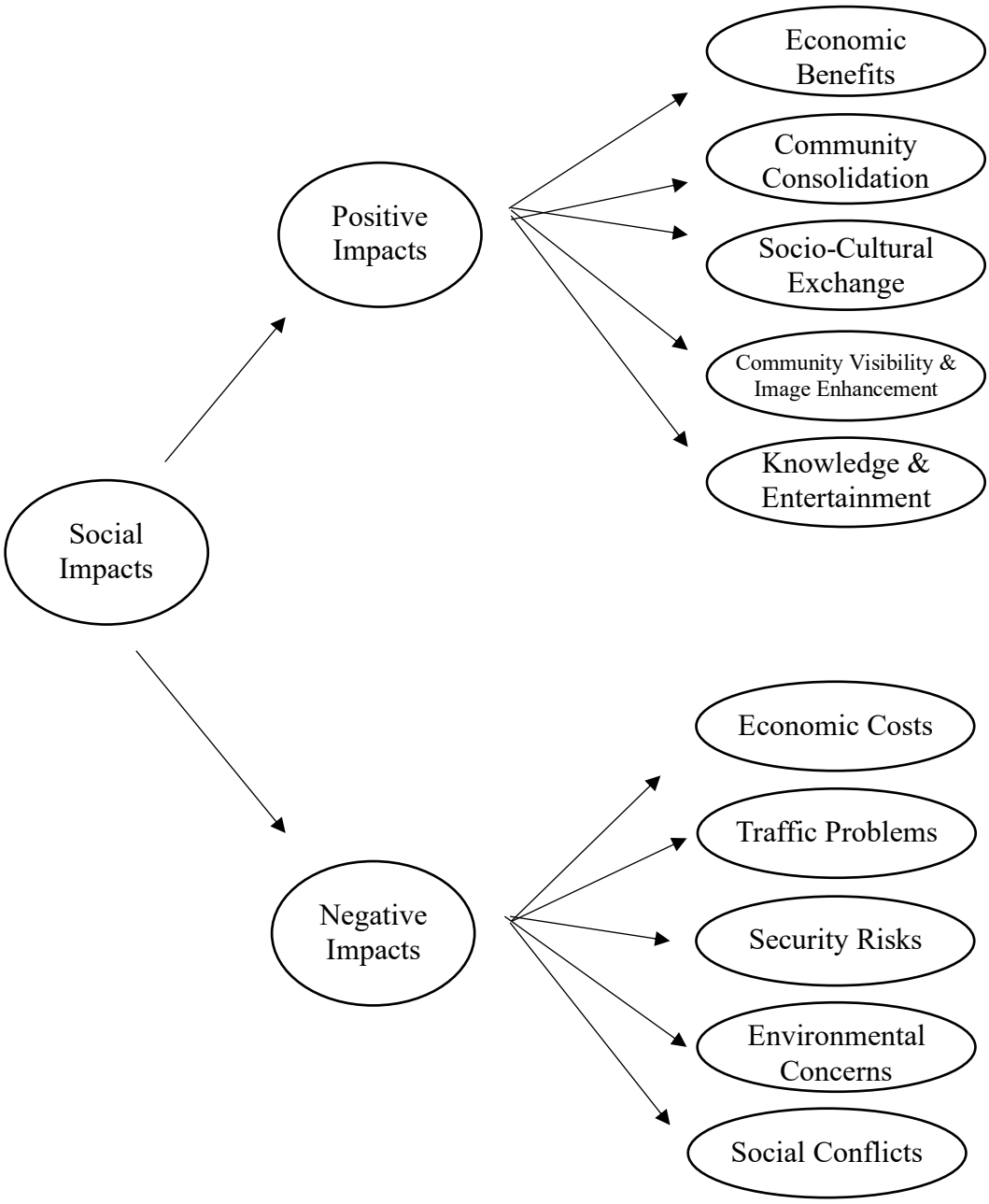


Figure 3: Proposed Scale of Perceived Impact Model – 2017 CWCC



for demographic categories where possible and providing dropdown or ranged options for open ended questions to assist with the data analysis or to streamline the responses in an online format. As a result of the feedback, one item (cyber-attack) under security risks was dropped due to a lack of relevance for the location of the study being conducted.

As a result of the panel's feedback, for demographic-related questions, responses were used based on the demographic rankings created by Statistics Canada for the following categories: gender, ethnicity, education, household income and occupation. Age was determined by providing an opportunity for the respondent to select the exact year s/he were born and ranged from 1920-1998. Area of residence was defined by the standards set out for visitors by the Ontario Ministry for Tourism, Culture and Sport (2017), which is the provincial government for the location where the event was held; meaning that non-residents were defined as anyone who traveled more than 40 kilometres or more away from her/his home[1].

The perceived impact scale followed the same format as Kim et al.'s (2015) Scale of Perceived Social Impacts (SPSI) by utilizing a replicated seven-point Likert Scale with the following values being attributed to a response:

1. Completely disagree
2. Agree very little
3. Somewhat disagree
4. Neutral
5. Somewhat agree
6. Agree a great deal
7. Completely agree

A seven-point Likert Scale was used as it can increase reliability of the instrument, enhance the simplicity of items and avoid confusion caused by the semantics of different statements (Ary, Jacobs, Rajavieh & Sorensen, 2005; Babbie, 1992; Tomas, Nelson & Silverman, 2005). In

[1] At the time this research was conducted, the Ministry of Tourism Culture and Sport (Ontario) used 40km travelled as an indicator to define a tourist.

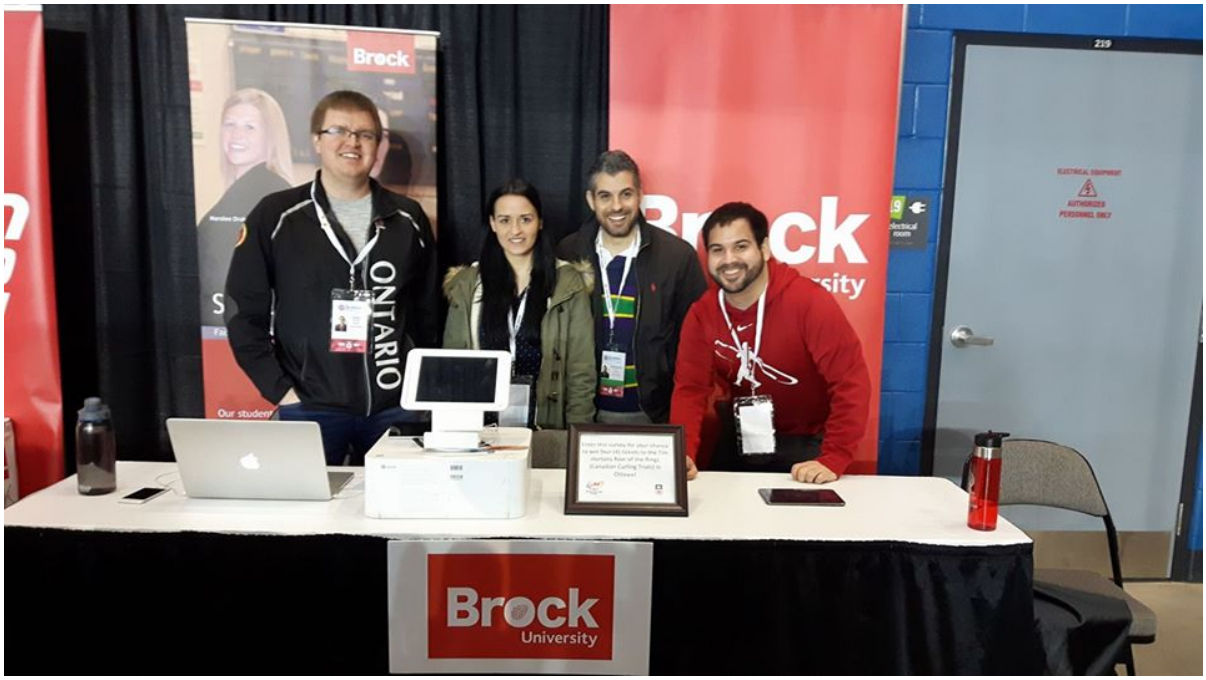
addition, similar studies for scale development on perceived impacts have adopted the seven-point Likert scale (e.g., Kim & Walker, 2012; Oshimi et al., 2016). The questions for each of the various factors were re-grouped from positive and negative perceived impacts found in the SPSI (Kim et al., 2015) into three specific impact categories (economic, social and environmental) in order to avoid potential respondent bias towards items that focused upon positive perceived event impact and items that focused upon negative perceived event impact. The seven-point Likert Scale (from Kim et al., 2015) was not altered in order to allow for consistency in the application of the model when performing exploratory and confirmatory factor analyses.

The final survey tool was structured to collect demographic data first (e.g., age, gender, income, occupation, ethnicity). Second, sport participation levels and history of attendance was collected. Third, curling consumption mediums were collected to aid Curling Canada in understanding where people were getting information from on the sport (e.g., television, newspaper, social media). Lastly, the perceived impact questions were posed to respondents.

3.4 Procedures

Ethics approval from Brock University's Research Ethics Board was obtained as a first step (see Appendix B) on February 13, 2017. In order to collect responses, the researcher was able to set up a booth within the concourse of the Meridian Centre to allow for optimal access to event attendees. The booth space provided was a result of the research agreement between Curling Canada and the researcher. Signage and an iPad station were set up at the booth to attract potential respondents, as shown in Figure 4. Participants were not directly approached and were free to speak with the researcher prior to participating in the study. Surveys (Appendix C) were provided to respondents via an iPad and utilizing the Survey Monkey mobile application. The researcher utilized a self-report format, and when required, guided the respondent through the

Figure 4: Research Booth at the 2017 CWCC



survey by entering the results on their behalf. The approach to participants included a semi-structured script read aloud by the researcher in-person at the event (see Appendix D). Participants were given the option to decline participation or complete the survey in person after reading and agreeing to an informed consent form (see Appendix E).

In total, three iPads were used to collect responses over an eight-day timeline (February 19-26, 2017). The majority of the days included two sessions of curling, and therefore, the researcher was on-site collecting responses between 2-8PM. All respondents were asked to complete the survey individually and were not representative of the other individuals that they may have been attending with. A total of three graduate students provided assistance to the researcher in order to optimize the amount of responses collected. Prior to distributing the surveys, the researcher reviewed the survey instrument, informed consent form, as well as experiences and recommendations from past in-person surveys to prepare the research assistants. The research assistants had various shifts throughout the eight-day period, however there was always a minimum of three people (including the researcher) on-site to collect responses. The researcher was on-site at all times to answer any questions that the research assistants could not.

3.5 Ethical Considerations

No participant responses provided personal identifiers (name, gender, age) that could be linked to their participation in the survey. Participants did, however, have the option to provide their e-mail address to learn more about the results of the study, or to be entered into a draw to win a package of tickets to a future Curling Canada event for participating. Any e-mail addresses provided were stored separately from the raw data collected. In this way, participants were protected as their responses were anonymous. There was no foreseeable harm to participants for completing the survey.

3.6 Data Analysis

Data from the study were downloaded and explored for responses that could not be utilized. In total, an initial sample size of 278 (n=278) was available to the researcher. In total 39 responses were eliminated from the initial sample and the justification for their removal follows. Eighteen respondents (n=18) were removed as they did not proceed past the consent process. Nine (n=9) respondents were removed as they chose not to complete the study. Five (n=5) respondents filled out the majority of the survey, however had only partially answered perceived impact questions. These five respondents were removed following exclusion criteria for incomplete sections of online surveys used by Hellings, Schrooten, Klazinga, and Vieugels (2005) and Chen and Li (2010). After removing the 39 unusable responses, a total of 239 (n=239) surveys were considered appropriate for inclusion in the study and analysis. The cleaned data file was then imported into SPSS software. A coding key was developed for each variable and group that was downloaded into SPSS (Appendix F). Descriptive statistics were analyzed by running frequency tests on each demographic factor and by analyzing the mean scores for each impact item.

An Exploratory Factor Analysis was conducted given the nature of this study (exploring perceived impacts of an NMSE event) in comparison to the SPSI developed by Kim et al (2015). Previous studies have suggested running an EFA when emerging scales are being developed, or explored in a different setting or research (Balduck et al., 2011; Delamere, 2001; Liu, 2016; Mao & Huang, 2016). Therefore, it was appropriate to explore the factor structure before conducting a Confirmatory Factor Analysis (CFA). The event impact items were analyzed using an EFA with principal axis factoring (PAF) with varimax rotation. The EFA provided the required information regarding the number of factors based on combining or eliminating factors or items in order to

retain a more valid factor structure. The specific factors and items that were eliminated or combined are discussed in Chapter 4.

Bartlett's Test of Sphericity (BTS) value and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value were evaluated as was conducted in the previous study by Kim et al. (2015). Kaiser criteria were examined to identify any factor that had an eigenvalue greater than or equal to one (Kim et al, 2015; Meyers, Gamst & Guarino, 2005). Factor loadings had to be at least equal to or greater than .40 to be retained (Kim et al., 2015). Per the suggestions of previous research (Kim et al., 2015; Little, Lindenberfer & Nesselroade, 1999; Raubenheimer, 2004; Velicer & Fava, 1998), the study only retained factors with at least three items. Finally, any double-loaded items were deleted as per the direction of Kim et al. (2015).

Following the steps outlined by Tabachnick and Fidell (2001) regarding scale assessment, a CFA was conducted using the factor structure from the EFA. Specifically, five steps were followed:

1. Model Specification
2. Identification
3. Model estimation
4. Testing model fit
5. Model re-specification

A variety of model of fit indices were assessed using the recommendations of Hair, Black, Babin, Anderson and Tatham (2006) and Jaccard and Wan (1996). These tests included the chi-square statistic, the root mean square error of approximation (RMSEA), and the comparative fit index (CFI). In addition, the incremental fit index (IFI) was calculated as a measure for model fit. Both CFI and IFI were included as they are relatively independent of the sample size (Bollen, 1986; Fan, Thompson & Wang, 1999). Following the EFA, a six-factor model was produced that met acceptable reliability and validity standards.

Following the confirmed factor structure and regrouping of items, sub-groups of demographic data were compared against individual sub-scales using MANOVA procedures. Each impact factor and its corresponding items were entered in the MANOVA as a dependent variable to understand the significance and corresponding impact it has on each independent variable that is being assessed (e.g., age). The next chapter will discuss the results of this analysis.

Chapter Four: Results

4.1 Introduction

This chapter summarizes the descriptive results of the socio-demographic and perceived event impact questions. Further, it demonstrates the results of the EFA and CFA analyses conducted to generate an acceptable model to be used in analyzing the significance of effect that socio-demographic groupings had on perceived event impacts. Specifically, perceptions of the sport event were assessed by exploring the effect of age, income, education, sport affinity and residency (local versus non-local) on perceived event impacts.

4.2 Descriptive Statistics of Demographic Factors

Respondents (n = 239) were 60 percent female and 40 percent male. 95 percent of respondents identified as Caucasian. Two age group categories were created based on the responses; 45 percent were 54 years of age or less while 55 percent were 55 years of age or older. Ten percent of respondents reported “low” household income ($34,999 and less), 43 percent reported “medium” ($35,000 to $99,999) and 35 percent reported “high” ($100,000 and above). Eleven percent of respondents elected not to disclose their income. 77 percent had graduated from a post-secondary diploma program. Twenty five percent of respondents were retired followed by those who held occupations in education, law, social, community and government services (17 percent), health (13 percent), and business, finance and administration (12 percent). 74 percent of respondents were either current or past curlers, and 72 percent had attended previous curling events. Local respondents made up 42 percent of the sample size, while 58 percent were non-local. A full summary of descriptive statistics is presented in Appendix G. The mean and standard deviation scores for the 10-factor model are presented in Table 2. Overall, “Knowledge & Entertainment” was the most positive experienced factor (M =

Table 2: Descriptive Statistics of 10-Factor Scale of Perceived Social Impact Model

Variable		M	SD
Positive Impact Questions			
Economic Benefits			
1	Increased economic activity for local business (EB1)	6.06	1.410
2	Increased employment opportunities (EB2)	4.85	1.707
3	Increased community development investments (EB3)	4.91	1.788
4	Accelerated community growth (EB4)	4.38	1.783
Community Consolidation			
5	Enhanced the community pride of residents (CC1)	5.72	1.189
6	Reinforced community spirit (CC2)	5.72	1.213
7	Enhanced the sense of being a part of the community (CC3)	5.59	1.250
Socio-Cultural Exchange			
8	Increased number of cultural events (SCE1)	5.00	1.781
9	Increased the understanding of the other cultures and societies of visitors (SCE2)	4.60	1.809
10	Provided an incentive for the preservation of local culture (SCE3)	4.62	1.757
11	Provided residents opportunity to meet new people (SCE4)	5.65	1.575
12	Increased interest in international sport events (SEC5)	5.61	1.573
Community Visibility & Image Enhancement			
13	Increased Global Image (CVIE1)	5.19	1.592
14	Increased National Image (CVIE2)	5.64	1.521
15	Enhanced media visibility (CVIE3)	5.69	1.589
16	Improved image of St. Catharines (CVIE4)	5.78	1.511
17	Enhanced international recognition of host community (CVIE5)	5.36	1.620
18	Increased community identity in the country (CVIE6)	5.47	1.753
Knowledge & Entertainment Opportunity			
19	Increased opportunity of enjoying curling events (KEO1)	5.81	1.873
20	Increased volunteering opportunity (KEO2)	6.12	1.201
21	Provided learning opportunity of a new sport (KEO3)	5.95	1.193
22	Provided a high-quality entertainment opportunity (KEO4)	6.07	1.296
23	Generated excitement to the host community (KEO5)	6.02	1.282
Negative Social Impacts			
Economic Costs			
24	Excessive spending by government to support operational costs of the event (EC1)	3.79	1.890
25	Increased product prices (e.g. Hotels, meals, etc.) (EC2)	4.11	1.937
Traffic Problems			
26	Resulted in traffic congestion (TP1)	3.75	1.832
27	Increased hardship for finding parking (TP2)	4.79	1.831
28	Increased problems for using public transportation (TP3)	3.20	2.058
29	Increased road closures/disruption (TP4)	3.14	1.863
Security Risks			
30	Increased crime (SR1)	2.30	1.686

31	Increased risks of terrorism (e.g. bomb threat, etc.) (SR2)	1.99	1.569
32	Increased disturbance from visitors (e.g. hooligans, disorder, and vandalism) (SR3)	2.38	1.606
33	Increased psychological anxieties due to security risks/concerns (SR4)	2.24	1.598
Environmental Concerns			
34	Increased the amount of litter and waste (ENC1)	4.01	1.902
35	Increased air pollution (ENC2)	3.34	1.732
36	Increased noise levels (ENC3)	3.28	1.759
37	Caused environmental damage to local community (ENC4)	2.61	1.499
Social Conflicts			
38	Local residents were not a primary consideration for the event (SC1)	2.76	1.763
39	Disrupted the lives of local residents (SC2)	2.56	1.681
40	Caused issues between visitors and local residents (SC3)	2.25	1.641
41	Increased social conflicts between supporters and non-supporters of the event (SC4)	2.21	1.664

5.99; SD = 1.37). Conversely, “Economic Costs” were the highest rated negative impact factor (M = 3.95; SD = 1.92). The highest positive impact item was “Increased volunteering opportunity” (M = 6.12; SD = 1.20), followed by “Provided high-quality entertainment opportunity” (M = 6.07; SD = 1.30) and “Increased economic activity for local business” (M = 6.06; SD = 1.41). The highest ranked negative impact item was “Increased hardship for finding parking” (M = 4.79; SD = 1.83), followed by “Increased product prices” (M =4.11; SD = 1.94) and “Increased the amount of litter and waste” (M = 4.01; SD = 1.90). Overall, 100 percent of the positive impact items were above 3.5, while only five out of 18 negative impact items were above 3.5, indicating that attendees at the 2017 CWCC believed the event to have a net positive impact on the St. Catharines area.

While this study focused on exploring perceived impact measures through a positive and negative lens, the items were grouped on the survey instrument through a TBL lens (economic, environmental and social). Exploring the mean scores of these groupings may present insights for future studies (see Chapter 5 for discussion on future research) that consider assessing perceived event impacts through the TBL approach. When examining positive perceived impact scores, social impacts were the highest rated (M = 5.56; SD = 0.97) across all 19 items. Interestingly, social impacts were the lowest ranked negative impact measure, (M = 2.71; SD = 1.32) for all seven items.

Perceived economic impacts were the second highest rated positive impact measure, (M = 5.05; SD = 1.36) across four items. The economic impact grouping of items also demonstrated that respondents may have had negative perceptions about the economic impacts as the overall mean score for negative economic items in this category was M = 3.95; SD = 1.54. A mean score higher than 3.5 would suggest a negative view. Finally, environmental perceived impacts had an

overall mean score of M = 3.40; SD = 1.42 across eight items, suggesting that respondents had an understanding of the potential negative impacts that a sport event can create on the environment. It is important to also note that the mean scores for each of the TBL areas were based on the responses of attendees prior to conducting an EFA or CFA, and therefore cannot be used to draw any conclusions regarding TBL in relation to the SPSI.

4.3 Exploratory Factor Analysis

An EFA was used to purify the factor structures and reduce data for the positive and negative dimensions. For both dimensions, the KMO measure of sampling adequacy was 0.765 (above the cut-off of .05 (Kaiser, 1974)) and the BTS was observed with x^2=1361.561 df=66 and *p*=0.000, indicating it was appropriate to conduct a factor analysis with the sample (Alsalmi, Alsalmi, Alosaimi, Alattar, and Algethami, 2018). As a result of PAF with varimax rotation, six factors with a total of 21 items were identified, explaining 70 percent of the variance (see Table 3). The results reveal the factor loadings were problematic; as a result, items and components were reviewed for theoretical relevance.

Two factors were discarded due to double loading. Per the suggestions of Little et al., (1999), Raubenheimer, (2004), and Velicer and Fava, (1998), any factor with less than three items was discarded. As a result, “Economic Costs” [5] and “Traffic” [6] were eliminated. Expectancy value theory and social representation theory provide an explanation for why these factors did not load in this context. Both theories suggest that individuals will try to maximize their experiences by avoiding negative outcomes and utilizing information drawn from areas such as ones’ lived experiences, the media and/or friends and family. (Kempen et al., 2016; Oshimi et al., 2016). In the context of the CWCC, limited investments were made by event stakeholders, and as a result, limited information was available about the true costs of the event.

Table 3: Factor Loadings Preliminary Model

Rotated Component Matrix						
	Factors					
Items	1	2	3	4	5	6
Increased Economic Activity for Local Business			0.683			
Increased Employment Opportunities			0.816			
Increased Community Development Investments			0.752			
Excessive Spending by Government or Other Agencies to Support					0.750	
Increased Product Prices e.g. Hotels, Meals, etc.					0.679	
Resulted in Traffic Congestion					0.406	0.665
Increased Risks of Terrorism e.g. Bomb Threat etc.		0.867				
Increased Disturbance From Visitors e.g. Hooligans Disorder and Vandalism		0.882				
Increased Psychological Anxieties due to Security Risks Concerns		0.889				
Local Residents Were not a Primary Consideration for the Event		0.697				
Increased Hardship for Finding Parking						0.759
Increased Road Closures/Disruption		0.685				
Reinforced Community Spirit	0.832					
Provided an Incentive for the Preservation of Local Culture	0.685				0.418	
Enhanced the Sense of Being a Part of the Community	0.839					
Enhanced Media Visibility				0.836		
Improved Image of St. Catharines				0.815		
Enhanced International Recognition of Host Community	0.626					
Enhanced the Community Pride of Residents	0.809					
Increased Interest in International Sport Events				0.580		
Increased the Understanding of Other Cultures and Societies	0.718					

Conversely, in Kim et al., 2015, the Grand Prix they analyzed cost taxpayers many millions of dollars. Further, the event posed many traffic issues given the main venue was over two hours away from an urban hub and not easily accessible (Kim et al., 2015). In the context of the 2017 CWCC, existing public transportation and parking was available to attendees. Consequently, the respondents in this study did not have the same reference points or lived experiences as in the case of the Grand Prix, which explains why the two factors were removed. These issues are discussed further in Chapter 5.

Therefore, a four-factor model with 12 items was retained (presented in Table 4). Factor 1 was labelled "Security Risks" and experienced factor loadings ranging from 0.90 to 0.92. Three items in this factor were retained; these relate to disruptions from visitors to the event, increased anxieties due to security concerns, and potential terrorist threats. Factor 2 was labelled "Community Pride" and had factor loadings ranging from 0.66 to 0.84. Three items in this factor were retained related to community spirit, preservation of local culture and the sense of being a part of the community. Factor 3 was labelled "Economic Benefits" and experienced factor loadings ranging from 0.65 to 0.85. Three items in this factor were retained; spending in the community as a result of the event, increased employment opportunities, and new investments in the host-city. Factor 4 was labelled "Community Development" with factor loadings ranging from 0.61 to 0.85. Three items in this factor were retained; these related to media visibility, image improvement and increased interest in international sporting events.

4.4 Confirmatory Factor Analysis

The four-factor model consisting of positive and negative factors with 12 total items was subjected to the CFA. Goodness of fit indices demonstrated a strong model fit. The RMSEA indicated an acceptable fit for the model (RMSEA = 0.05 (Hu & Bentler, 1999; Loehlin, 2004)).

Table 4: Adjusted Perceived Impact Model

Rotated Component Matrix				
	Factors			
Items	1	2	3	4
Increased economic activity for local business			0.653	
Increased employment opportunities			0.853	
Increased community development investments			0.829	
Increased risks of terrorism e.g. bomb threat etc.	0.907			
Increased disturbance from visitors e.g. hooligans disorder and vandalism	0.920			
Increased psychological anxieties due to security risks concerns	0.920			
Reinforced community spirit		0.842		
Provided an incentive for the preservation of local culture		0.663		
Enhanced the sense of being a part of the community		0.837		
Enhanced media visibility				0.854
Improved image of St. Catharines				0.818
Increased interest in international sport events				0.611

Similarly, the IFI and CFI values were acceptable at a value of 0.99 each, based on Hu and Bentler's (1995) .95 fit criterion. Table 5 presents a summary of model fit indices.

Reliability tests for each of the impact factors was then assessed using Cronbach's alpha coefficient values (Table 6). Based on the goodness-of-fit statistics, there is enough support to conclude that the model fits the data well. Each impact factor's Cronbach alpha value was above the .70 recommended threshold (Hair et al., 2006). "Security" (Factor 1) had the highest coefficient value (α = .92) and "Community Pride (Factor 2) had the second highest coefficient (α = .77). "Economic Benefits" (Factor 3) was demonstrated to be reliable with a coefficient value of α = .75. Finally, "Community Development" had a coefficient value of α = .71.

The proposed SPSI Model for an NMSE can be found in Figure 5. Descriptive statistics for the final perceived event impact scale can be found in Table 7. When evaluating the mean scores across each factor, the "Community Development" factor has the highest average mean score at 5.69 suggesting that respondents believed some of the most beneficial elements of the 2017 CWCC were related to image enhancement and interest in future sporting events. The second highest average mean score was in the "Community Development" factor (M = 5.69; SD = 1.24). "Economic Benefits" was the lowest ranked positive impact factor (M = 5.27; SD = 1.34). The highest ranked item was EB1- "Increased economic activity for local business" (M = 6.06; SD = 1.41), and was contained within the "Economic Benefits" factor. This demonstrates a recognition across all respondents that there was a positive view on this particular item. Finally, SR1 - "Increased risks of terrorism" (M = 1.99; SD = 1.57) had the lowest mean score for all items suggesting that terrorism threats were not a major concern for event attendees.

4.5 Influence of Socio-demographic Characteristics

After identifying a reliable event impact model, a number of socio-demographic

Table 5: Model Fit Indices

Model	x^2	*df*	RMSEA	IFI	CFI
4-Factor, 12 items	42.949	24	.056	.99	.99

Table 6: Final Model Reliability Co-Efficient Values

Factors		α
Security (Factor 1)		.92
	Increased risks of terrorism (e.g. bomb threat, etc.)	
	Increased disturbance from visitors (e.g. hooligans, disorder, and vandalism)	
	Increased psychological anxieties due to security risks/concerns	
Community Pride (Factor 2)		.77
	Reinforced community spirit	
	Provided an incentive for the preservation of local culture	
	Enhanced the sense of being a part of the community	
Economic Benefits (Factor 3)		.75
	Increased economic activity	
	Increased employment opportunities	
	Increased community development investments	
Community Development (Factor 4)		.71
	Increased interest in international events	
	Enhanced media visibility	
	Improved image of St. Catharines	

Figure 5: Proposed NMSE Scale for Perceived Social Impact Model

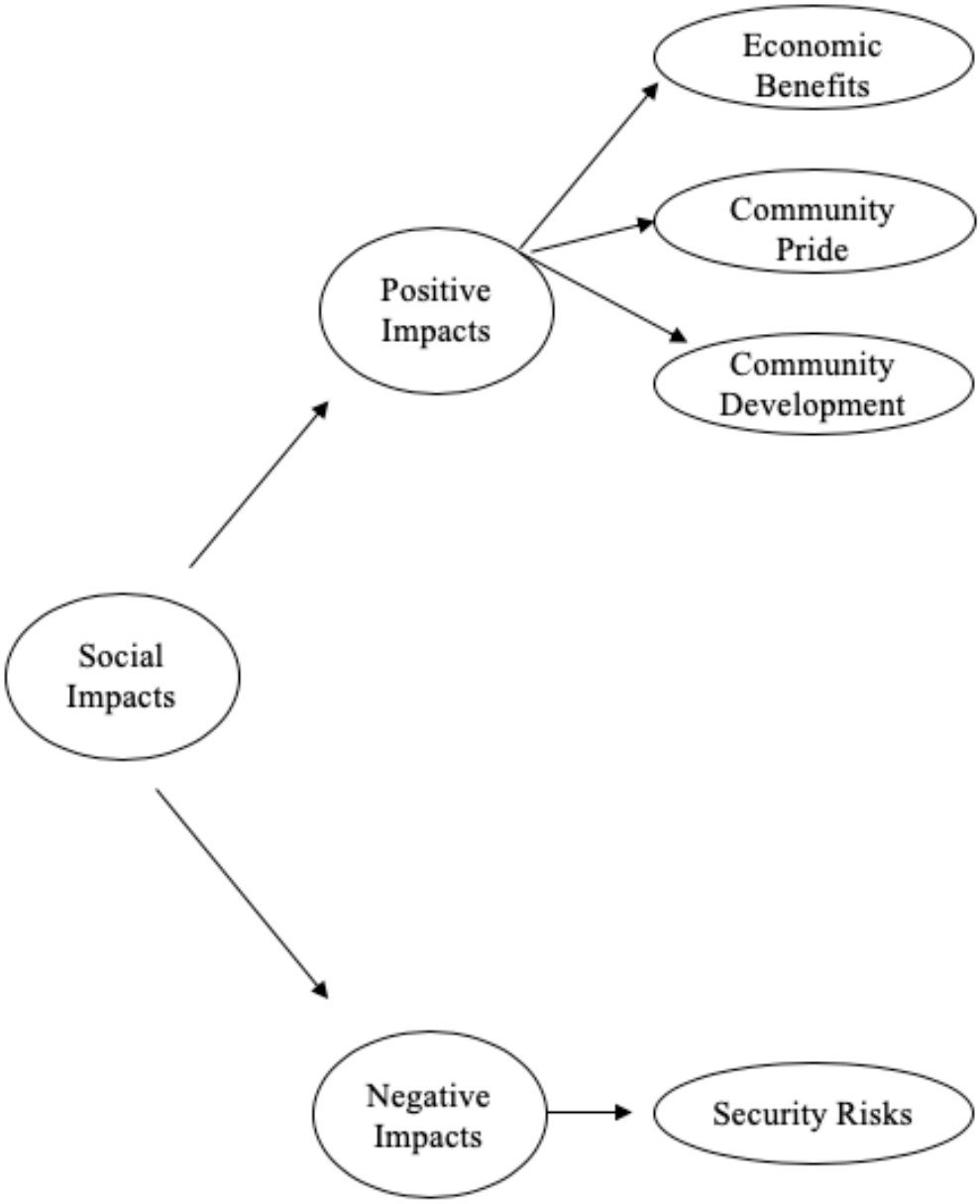


Table 7: Descriptive Statistics of Validated Perceived Event Impact Model

Factors and Items		M	SD
Positive Impact Questions			
Economic Benefits		5.27	1.34
1	Increased economic activity for local business (EB1)	6.06	1.410
2	Increased employment opportunities (EB2)	4.85	1.707
3	Accelerated community growth (EB3)	4.38	1.783
Community Pride		5.30	1.18
4	Reinforced community spirit (CP1)	5.72	1.213
5	Provided an incentive for the preservation of local culture (CP2)	4.62	1.757
6	Enhanced the sense of being a part of the community (CP3)	5.59	1.250
Community Development		5.69	1.24
7	Increased interest in international sport events (CD7)	5.61	1.573
8	Enhanced media visibility (CD8)	5.69	1.589
9	Improved image of St. Catharines (CD9)	5.78	1.511
Negative Impacts			
Security Risks		2.20	1.47
10	Increased risks of terrorism (e.g. bomb threat, etc.) (SR1)	1.99	1.569
11	Increased disturbance from visitors (e.g. hooligans, disorder, and vandalism) (SR2)	2.38	1.606
12	Increased psychological anxieties due to security risks/concerns (SR3)	2.24	1.598

characteristics were assessed using MANOVA tests to understand the influence they have on perceived sport event impacts. The following socio-demographics were examined for their influence on perceived event impacts: age, income, education, sport affinity, and residency. Typically, p values of .05 or less are used to report a statistically significant difference, and therefore demonstrate an effect (e.g., Kim & Petrick, 2005; Oshimi et al., 2016). However, due to the sample size and exploratory nature of this study p values of .10 or less were reported. Academics have argued that when an exploratory study being conducted, p values of .10 or less can still demonstrate an effect in small samples given that larger sample sizes have greater statistical power (e.g., Cochran & Mays, 2007; Golobok et al., 2003; Schumm, 2010).

4.5.1 Age

In order to examine the influence of age upon perceived sport event impact, the following hypothesis was tested: perceptions of event impact will be more positive for older respondents. The results of the MANOVA using age as the independent variable demonstrated that economic benefits were statistically significant based on age category ($F(1, 237) = 3.69$); $p < 0.1$) (Appendix H). Respondents were grouped into two age categories – 54 years and younger (U54) and 55 years and older (55+). Perceived positive impacts had a higher value among older respondents while perceived negative impacts had a lower value among older respondents. The descriptive statistics can be seen in Table 8. Overall, older respondents had more positive perceptions towards the "Economic Benefits" and "Community Development" factors, with mean scores of $M = 5.43$; $SD = 1.30$ and $M = 5.77$; $SD = 1.21$, respectively. "Community Pride" and "Security" factors were relatively equal among the two age groups. Respondents 55 years of age and over scored "Community Development" the highest ($M = 5.77$; $SD = 1.21$).

Table 8: Descriptive Statistics Age MANOVA

Factor	Age Group	Mean	SD	N
Economic Benefits	U54	5.1003	1.36705	113
	55+	5.4312	1.29962	126
	Total	5.2748	1.33938	239
Security	U54	2.2861	1.49461	113
	55+	2.1270	1.45318	126
	Total	2.2022	1.47196	239
Community Pride	U54	5.2065	1.29966	113
	55+	5.3968	1.06142	126
	Total	5.3068	1.18138	239
Community Development	U54	5.6018	1.27153	113
	55+	5.7725	1.21080	126
	Total	5.6918	1.24021	239

4.5.2 Income

Income levels were grouped into three sub-categories to allow for statistical analysis. The income groups were collapsed into low ($34,999 and less), medium ($35,000-$99,999) and high-income ($100,000 +) categories based on the definitions set out by Statistics Canada. Some respondents did not disclose their income and were coded "N/A". To examine the influence of income on perceived event impacts, the following hypothesis was tested: perceptions of event impact will be more positive among respondents with higher incomes. No significant differences were found when conducting a MANOVA ($p > 0.1$) (Appendix I). While mean scores among respondents indicated that those with medium to high incomes perceived more economic benefits and less concern with security risks than those with lower income levels, there was no evidence to support a higher perceived impact among respondents with higher incomes. The descriptive statistics and significance levels can be found in Table 9. Among those who reported their income, "Community Development" was the most positive impact factor for medium income earners ($M = 5.72$; $SD = 1.20$) while "Security Risks" were of the least concern for high income earners ($M = 2.0$; $SD = 1.24$).

4.5.3 Education

Due to a discrepancy in the total responses for each education category, education levels were collapsed into two sub-groups; post-secondary degree achieved (Post-Sec) and no post-secondary degree achieved (No Post) following methods of similar studies (e.g., Djeri, et al., 2017; Mao & Huang, 2016; Richards & Wilson, 2004). In order to examine the influence of education on perceived sport event impacts, this hypothesis was tested: perceptions of event impact will be more positive among respondents with higher levels of education. There was no conclusive evidence demonstrating a higher perceived impact among those with higher education

Table 9: Descriptive Statistics Income Level MANOVA

Factor	Income Level	M	SD	N
Economic Benefits	N/A	5.3827	1.47255	27
	Low	4.9733	1.93391	25
	Medium	5.3366	1.26241	103
	High	5.2540	1.17836	84
	Total	5.2748	1.33938	239
Security	N/A	2.3827	1.80148	27
	Low	2.3333	1.40765	25
	Medium	2.2913	1.56395	103
	High	1.9960	1.24453	84
	Total	2.2022	1.47196	239
Community Pride	N/A	5.7037	0.88835	27
	Low	5.3067	1.36734	25
	Medium	5.2330	1.08850	103
	High	5.2698	1.30335	84
	Total	5.3068	1.18138	239
Community Development	N/A	5.9012	1.44060	27
	Low	5.6800	1.32455	25
	Medium	5.7217	1.19649	103
	High	5.5913	1.21167	84
	Total	5.6918	1.24021	239

levels (p >0.1) (Appendix J). Mean scores were consistent across the two sub-groups for security risks suggesting that those who were less educated may have perceived the security concerns to be slightly greater (M = 2.44; SD = 1.68) than individuals who had higher levels of education (M = 2.12; SD = 1.40). Descriptive statistics and significance levels can be seen in Table 10.

4.5.4 Sport Affinity

Sport affinity was a grouping variable which included curling participation and past attendance at events. In order to examine the influence of sport affinity on perceived sport event impacts, the following hypothesis was tested: perceptions of event impact will be more positive among respondents who have higher sport affinity classifications. When comparing the groups for statistically significant differences, "Community Development" was the only statistically significant factor (F (1, 235) = 3.31); p >0.1) (Appendix K), demonstrating that event impacts were perceived to be higher among those with higher sport affinity scores. The mean scores for each item across sport affinity classifications can be viewed in Table 11. Among respondents who had not attended previous curling events or participated in curling, the highest mean score among the three positive impact factors was "Community Development" (M = 5.95; SD = 1.10). However, for respondents who have not attended curling events, but participated in curling, the lowest mean score across positive impact factors was "Economic Benefits" (M = 4.95; SD = 1.79). Finally, the one negative impact factor, "Security Risks" (M = 2.60; SD = 1.57) was the highest ranked negative impact factor among respondents who have not attended previous curling events but do participate in the sport.

4.5.5 Residency

In order to examine the influence of residency on perceived sport event impacts, the following hypothesis was tested: perceptions of event impact will be more positive among local

Table 10: Descriptive Statistics Education MANOVA

Factor	Education Group	M	SD	N
Economic Benefits	Post-Sec	5.2914	1.25408	183
	No Post	5.2202	1.59833	56
	Total	5.2748	1.33938	239
Security	Post-Sec	2.1275	1.39929	183
	No Post	2.4464	1.67848	56
	Total	2.2022	1.47196	239
Community Pride	Post-Sec	5.2987	1.12009	183
	No Post	5.3333	1.37363	56
	Total	5.3068	1.18138	239
Community Development	Post-Sec	5.6521	1.24075	183
	No Post	5.8214	1.24066	56
	Total	5.6918	1.24021	239

Table 11: Descriptive Statistics Sport Affinity MANOVA

Factor	Event Attendance	Participation	M	SD	N
Economic Benefits	Attended Curling Events	Participate in Curling	5.3709	1.20649	151
		Do not participate in curling	5.3333	1.28236	26
		Total	5.3653	1.21423	177
	Have not attended curling events	Participate in Curling	4.9524	1.79284	21
		Do not participate in curling	5.0488	1.56091	41
		Total	5.0161	1.62900	62
	Total	Participate in Curling	5.3198	1.29293	172
		Do not participate in curling	5.1592	1.45570	67
		Total	5.2748	1.33938	239
Security	Attended Curling Events	Participate in Curling	2.1788	1.42245	151
		Do not participate in curling	2.1026	1.52540	26
		Total	2.1676	1.43378	177
	Have not attended curling events	Participate in Curling	2.6032	1.57275	21
		Do not participate in curling	2.1463	1.58649	41
		Total	2.3011	1.58397	62
	Total	Participate in Curling	2.2306	1.44347	172
		Do not participate in curling	2.1294	1.55153	67
		Total	2.2022	1.47196	239
Community Pride	Attended Curling Events	Participate in Curling	5.1987	1.21300	151
		Do not participate in curling	5.5769	1.06064	26
		Total	5.2542	1.19659	177
	Have not attended curling events	Participate in Curling	5.4921	1.21846	21
		Do not participate in curling	5.4390	1.10161	41
		Total	5.4570	1.13278	62
	Total	Participate in Curling	5.2345	1.21392	172
		Do not participate in curling	5.4925	1.07990	67
		Total	5.3068	1.18138	239
Community Development	Attended Curling Events	Participate in Curling	5.6998	1.23514	151
		Do not participate in curling	5.4359	1.46900	26
		Total	5.6610	1.27102	177
	Have not attended curling events	Participate in Curling	5.4444	1.21259	21
		Do not participate in curling	5.9512	1.09687	41
		Total	5.7796	1.15303	62
	Total	Participate in Curling	5.6686	1.23175	172
		Do not participate in curling	5.7512	1.26909	67
		Total	5.6918	1.24021	239

residents than non-residents. There were no statistically significant differences between groups on event impact factors ($p > 0.1$) (Appendix L). Descriptive statistics can be found in Table 12. "Community Pride" and "Community Development" were the highest rated positive impact factors among residents ($M = 5.34$; $SD = 1.12$ and $M = 5.78$; $SD = 1.12$, respectively). In relation to non-residents, one positive impact factor, "Economic Benefits" and the negative impact factor, "Security Risks" were highest ($M = 5.31$; $SD = 1.34$ and $M = 2.27$; $SD = 1.50$, respectively).

As a result of the data analysis, a scale that met reliability and model-fit standards was presented. While two scale factors were dropped in comparison to the original SPSI presented by Kim et al. (2015), there are potential explanations for these changes based on the sample size and the difference in the scale and size of the CWCC which will be discussed in Chapter 5. H1 and H4 were supported demonstrating that age and sport affinity can influence the perceived impacts of a sport event. While H2 (income), H3 (education) and H5 (residency) were not supported, there are theoretical justifications along with potential issues with the data that may explain the results of the study and have implications for future research on evaluating the perceived impacts of NMSEs.

Table 12: Descriptive Statistics Place of Residence MANOVA

Factor	Area of Residence	M	SD	N
Economic Benefits	Local	5.2267	1.34663	100
	Non-local	5.3094	1.33794	139
	Total	5.2748	1.33938	239
Security	Local	2.1100	1.42926	100
	Non-local	2.2686	1.50355	139
	Total	2.2022	1.47196	239
Community Pride	Local	5.3367	1.11966	100
	Non-local	5.2854	1.22741	139
	Total	5.3068	1.18138	239
Community Development	Local	5.7767	1.11721	100
	Non-local	5.6307	1.32223	139
	Total	5.6918	1.24021	239

Chapter 5: Discussion, Implications and Conclusion

5.1 Introduction

The hosting of sport events can deliver a number of impacts to a community. Most commonly, event organizers and government agencies have focused primarily on economic benefits as a means of assessment rather than evaluating both positive and negative event impacts across a broader range of economic, social, and environmental areas. While there is a growing base of research around social impact measures from events, these types of impacts can be difficult to quantify, thus producing inconsistent results (Kim & Walker, 2012; Kim et al., 2006, Kim et al., 2015). In addition, limited research has been conducted to assess the effect that multiple socio-demographic characteristics could have on perceived event impacts and past research has called for an exploration of their influence on the perception of various stakeholder groups (e.g., Sato et al., 2014, Kim et al., 1997, Ritchie et al., 2012, Karadakis & Kaplanidou, 2012, Gibson et al., 2014). While academics have attempted to develop measurement scales to evaluate the perceived impacts of sport events, it is evident that the context, for example, event scale or socio-demographics characteristics of attendees, is an important consideration in determining which scale to apply.

This study therefore sought to understand the influence that multiple socio-demographic characteristics can have on perceived impacts at a spectator-based sport event by analyzing event attendees. Utilizing an existing scale for perceived event impact assessment (Kim et al., 2015), the researcher was able to demonstrate individual socio-demographic factors can influence event perceptions. Further, this study provides valuable insight for the future of event impact research as it relates to the evaluation of non-mega sport events. This chapter will discuss the results of

the study, its academic and practical contribution to sport event literature as well as future research suggestions and limitations.

5.2 Influence of Socio-Demographic Factors on Perceived Event Impacts

5.2.1 Age

The results of this study demonstrate that older adults (55 years and over) perceived the impact of the 2017 CWCC to be greater than adults who were 54 years and younger. Most notably, a statistically significant difference in the economic benefit factor was observed. These results can be explained by multiple theoretical frameworks. First, social exchange theory would suggest that the older adults attended the event as they believed an overall positive exchange would be experienced. This positive exchange can be explained by an increase in psychic income, which is derived from the opportunity to interact with new people, share experiences with their families/friends and pure enjoyment of the sport based on the rules of the game (Aiken, et al., 2010; Sukhdial, Aiken & Kahle, 2002). These findings are consistent with previous studies which demonstrate that event attendance is influenced by event and festival motivators such as socialization, family togetherness, enhanced social status and escape from daily life (Chang, 2006; Lee, 2000; Park, Resinger & Kang, 2008; Schneider & Backman, 1996; Uysal & Li, 2008).

Secondly, SRT and EVT provide insights into the higher perceived impact of older adults. Those who are 55+ would have more lived experiences (e.g., attendance at more events), and consequently, a greater number of reference points with which to evaluate the event's impact. Sport affinity among this particular age group may be high, as 35% of Canadian curlers are over the age of 55 (Curling Canada, 2014), which would influence the exchange process as a result of their personal experiences with the sport or similar events. Approximately 80% of

respondents confirmed that they traveled in groups of two or more to attend the 2017 CWCC, and 73% of respondents reported that they had attended previous curling events; confirming that many attendees were attending for desired positive outcomes (e.g., socialization, entertainment value).

These collective experiences of traveling together and attending past events would shape their opinions and perspectives on the potential economic impact of an event. Having a greater understanding of the costs and number of attendees at other events may influence a more positive perception towards economic activity. Respondents who have attended past events may have more knowledge or exposure to media sources that discuss investments made in the event, and similarly have been able to see the direct impacts of an influx of visitors (e.g., busy restaurants) in other host cities.

Furthermore, Hallman, Breuer and Kuhnreich (2013) found that happiness (a quality of life indicator) was higher from hosting a sport event among older individuals. The results of this study confirm these findings as attendees who were 55 or older reported higher positive impact scores. Gibson et al. (2014) found that perceived impacts varied among residents by gender and race, and not by age. Notably, Gibson et al. (2014) investigated perceived impacts of the FIFA World Cup and over 82% of their respondents identified their race as ‘Black’. Therefore, additional consideration may need to be given to include ethnicity as a socio-demographic factor that is evaluated for its influence on perceived impacts. The respondents of this study were predominantly Caucasian. Further investigation of these socio-demographic characteristics is warranted as it may support the notion that perceived sport event impacts cannot be generalized across populations and geographic locations (Kim et al., 2015).

5.2.2 Sport Affinity

Sport affinity was found to have statistical significance with respect to the Community Development factor, indicating that attendees with high sport affinity scores perceived the event to be more positive. Social representation theory can be used to explain these results as many of the respondents (74%) had lived experiences; having participated in, or currently participating in the sport of curling, while 72% had attended past curling events. Consequently, respondents conceivably had pre-existing opinions and attitudes about the CWCC, drawing on their lived experiences, social interactions within the sport and perhaps other sources of information such as the media. These results are consistent with previous studies. Past research has demonstrated that small scale events have the ability to provide a greater increase in psychic income as these types of events provide more ample opportunities for residents (whether local or non-local) to be involved in some way (Gibson, 1998; Walo, Bull & Breen, 1996). Their involvement can come from more affordable ticket prices (in comparison to larger events), opportunities to volunteer or be involved in the planning process and the opportunity to meet new people, for example. Pranic, Petric and Cetinic (2012) were able to demonstrate that higher positive perceived impacts were influenced by those who had a higher following of handball in their study supporting the outcomes of this study by demonstrating that those with some level of affinity to the sport are more likely to form positive perceptions of the impact of the event.

5.2.3 Income

Income was not found to have an influence on the perceived impacts of the 2017 CCWC. This result is not consistent with previous studies that have explored how this variable may influence perceptions on event impacts. Vetitnev and Bobina (2017) and Garbacz, Ribeiro and Mourao (2017) found that residents with higher income levels have more positive perceptions

about the impacts of events. There are some potential explanations for the findings of this study. First, over 25 percent of respondents in the study were retired. Retirement could represent a decrease in annual income; however, the respondent's views and attitudes may be similar to those of higher income brackets based on their previous occupation(s) and lived experiences. Second, approximately 67 percent of respondents reported an income of $50,000 or more, and 12 percent of respondents chose not to disclose their income. Therefore, there was a limited distribution of respondents across income levels, which could also offer an explanation for the results of this study.

5.2.4 Education

Similar to the income variable, education levels were disproportionate across the sample in this study. 77 percent of respondents had attained a post-secondary education in comparison to others who had less formal education. Therefore, a small variation existed within the sample. Although the results demonstrate a more positive overall perception of the event for those with higher education scores, no statistical significance was found. The results of this study do align with previous research which has showed that as education levels increase, attitudes become more favourable to tourism stimuli (Garbacz et al., 2017; McCool & Martin, 1994)). Teye, Sonmez & Sirakaya (2002) claim that this result is due to the fact that individuals with higher levels of education are more conscious of the potential benefits that may come from hosting events. However, in the context of this event, and perhaps other NMSEs, education may not be a socio-demographic characteristic that influences perceived event impacts. Further exploration in varying event contexts will be required as the lack of variation in education among respondents likely negatively impacted the ability to draw any conclusions on the influence of this specific socio-demographic characteristic.

5.2.5 Residency

The results of this study show that local residents and non-local residents have similar perceptions when evaluating the impact of the 2017 CCWC. There is limited research that examines local resident and non-local resident perceived sport event impacts as many studies have examined local residents only (e.g., Jeong & Faulkner, 1996; Vetitnev & Bobina, 2015). One exception is Karadakis and Kaplanidou (2012) who found that perceptions of the legacies of the 2010 Vancouver Olympic Games differed between local residents and non-local residents, however; it is important to note that they studied a mega-sport event. Hence, the contrast between their findings and this study could be due to the difference between a mega-event and an NMSE in relation to event scale, media attention and the levels of required government support (Oshimi et al., 2016). NMSE hosts receive substantially less media attention than their mega-event host counterparts, and typically require a fraction of the mega-event resources to execute their event. Consequently, if there are limited financial investments in the event by government organizations, local residents and non-local residents may not even be aware of sport event hosting costs. Thus, this lack of knowledge and limited media attention may explain why residency was not found to be a socio-demographic variable that influences the perceptions of respondents in this study.

The NMSE context of this study may also provide insights as to why local residents and non-local residents had similar perceptions. In the case of the sample for this study, all respondents resided in Canada, with six percent traveling from other provinces and territories, 54 percent traveling from within Ontario (greater than 80 kilometres traveled), and 40 percent traveling from within 80 kilometres. Conceivably, these individuals would have access to similar media outlets and thus, used similar external sources as a reference point which influenced their

perceptions about the 2017 CWCC (Ritchie, 2010; Ritchie, Sanders & Mules, 2007). Mega-events typically encounter global tourists, thus increasing the variation of socio-demographic characteristics which could influence perceived event impacts (Gibson et al., 2014). The variation in geographic locations may ultimately result in varying types and levels of media coverage. In comparison, this study's respondents came from a similar geographic region and therefore had a limited variation in the types of media that could have influenced their perceptions about the 2017 CWCC.

Finally, while no statistical difference was found between local-residents and non-local residents, the results may be explained by exploring expectancy value theory (EVT) and psychic income. EVT suggests that consumers will not participate in an activity unless they perceive value or a net benefit (Kempen et al., 2016). Consequently, respondents may have been motivated to attend the event simply due to entertainment value, or perhaps interaction with other fans or their own social groups. Beyond the value of the ticket itself, respondents may have been trying to achieve the 'feel good factor' by participating in social interactions (Gibson et al., 2014). Therefore, the respondents' motivation for attending the event may have been similar, regardless of their place of residence.

Having discussed possible explanations for the results of this study, some generalized discussion is warranted. Overall, socio-demographic characteristics such as income and ethnicity (for example) may have more to do with the influence of event-related perceptions. Table 13 provides a comparison of the demographic characteristics of residents in the St. Catharines/Niagara area, the 'Canadian Curler' and respondents in this study. There are some similarities between the demographic characteristics of this study's respondents and the Canadian Curler as defined by Potwarka, Wilson & Barrick (2014). Specifically, a Canadian

Table 13: Comparison of Socio-Demographic Profiles among Niagara Residents, Canadian Curlers and Study Respondents

	St. Catharines-Niagara		Profile of the Canadian Curler		Study Respondents	
Gender	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*
	52%	48%	36%	64%	60%	40%
Age	*U54*	*55+*	*U54*	*55+*	*U54*	*55+*
	60%	40%	65%	35%	45%	55%
Ethnicity	91% = Not a visible minority		87% = White		95% = Caucasian	
Education (post-secondary or higher)	60%		32%		77%	
Income	17% = $50,000-$74,999 6% = $75,000-$99,999 4.3% = $100,000-$149,999		21% = $50,000-$74,999 17% = $75,000-$99,999 32% = $100,000+		16% = $50,000-$74,999 16% = $75,000-$99,999 19% = $100,000-$149,999	
Employment (retired)	N/A		15%		25%	

Note. Data for Niagara residents from Statistics Canada (2019), for Canadian Curlers from Potwarka et al, (2014).

Curler and this study's respondents have similarities with respect to their ethnicity, income and employment status. It is important to note that Potwarka et al.'s (2014) profile of a Canadian Curler does not include education categories for any degrees earned higher than a bachelor's degree, or any individuals who may not have any formal education; hence the difference in education levels presented. Future research analyzing local and non-local residents may need to consider these distinct demographic differences with a host-city's population, but also how social identification theory could influence the results when the host-city residents could be considered to be of a lower socio-economic status.

Andrijiw and Hyatt (2009) define social identification theory as a "conceptual framework concerned with an analysis of aspects related to collective psychology (i.e., group processes); intergroup relations; and, how individuals deal with identity issues (p.158). In a sport context, social identity theory suggests that individuals may rely on shared symbols or cognitive representations of a group in order to evaluate where they may be participating in a specific in, or out-group regardless of any interpersonal knowledge or interaction within the group setting (Brewer & Chen, 2007). SIT therefore, may provide some rationale for the results of this study. Respondents in this study had a high level of affinity to the sport of curling with over 70 percent of respondents having played or attended past events. For respondents who had lower levels of affinity, income or education, they could have been attending the event in an attempt to associate themselves with a particular in-group (high-income earners, or curling fans in general).

Additionally, individuals who reported high levels of sport affinity may have been demonstrating their self-identification as a serious leisure participant. As Jones (2000) suggests, this identification could allow them to perceive themselves as a group member (in this case a group or community of curling fans). Once an individual assumes this identity, it becomes a key

component of the set of beliefs that a person a person holds about themselves (Leary, 1995). Individuals will therefore strive to maintain a positive self-concept and keep their social identity. Further, SIT suggests that members of in-groups can change their attitudes and beliefs to be representative of the broader group. Consequently, those who have high levels of affinity to a sport, may attempt to maintain their rootedness in, and sense of belonging to a community (Lee, 2013), by changing their attitudes and beliefs. This is important to note as future research may need to account for the level of fandom or affinity to the specific event stimuli to avoid potential response bias. Future direction using the SPSI and exploring perceived event impacts is discussed next.

5.3 Future Research Suggestions

5.3.1 Use of the Scale of Perceived Social Impacts

The modified Scale of Perceived Social Impacts (SPSI) model presented in this study provides a conceptual framework for understanding perceived sport event impacts in both a positive and negative light. While the model was statistically reliable and valid, it is important to note that it was only assessed for validity and reliability based on a single-sport event. This study experienced a reduction in two impact factors (environmental concerns and economic costs) in comparison to the SPSI presented by Kim et al., (2015). The differences in event characteristics of an NMSE compared to a mega-event provide a rationale for these changes.

Mega-events often attract thousands or millions of visitors, disrupt the environment as a result of infrastructure investments or littering and create significant traffic congestion, and cost hundreds of millions, if not billions of dollars (e.g., Andereck et al., 2005; Kim et al., 2006; Kim et al., 2015). In this study, the 2017 CCWC required a modest government subsidy of $130,000 (St. Catharines Standard, 2017), and had many (if not all) of the infrastructure resources required

to host (e.g., parking, public transit). Given that NMSEs require less resources than their mega-event counterparts (Gibson, Kaplanidou & Kang, 2012), participants in this study had less direct knowledge from which to shape their attitudes or beliefs towards economic costs or environmental concerns. As noted in Chapter 4, these two impact factors were dropped completely for the model when exploring the 2017 CWCC.

SRT can provide insight as to why this modification was experienced (Kim et al., 2006). SRT posits that internal and external influences (e.g., media attention, attendance at similar sized events or direct knowledge) would have influenced a respondent's perceived impact of the event (Oshimi et al., 2016). With limited lived experience (e.g., no exposure to substantial environmental concerns from new infrastructure) and less media attention (e.g., limited reporting on the public investments made) than that of mega-events, respondents in this study may not have been in a position to form attitudes or perceptions on these impact factors, or perhaps did not truly consider them to be a negative in the case of an NMSE. Consequently, the model presented in this study may be better suited to assessing the perceived impacts of non-mega sport events compared to the original developed by Kim et al. (2015) that assessed a mega-sport event. Further, as noted by Kim et al. (2015), continued refinement of the model may be required as the model should not be considered to be a 'one size fits all' approach to event impact assessment. When considering future research, this will be incredibly important as the long-term benefits of NSMEs is practically unknown (Taks, 2013). Furthermore, for event stakeholders who are concerned with 'leveraging' their event (Chalip, 2014, Taks et al., 2015), understanding perceived impacts will be important for gaining support for hosting events, but also ensuring a long-lasting positive impact that is felt by the community.

Building off of Kim et al.'s (2015) attempt to utilize a triple-bottom-line (TBL) approach to examining perceived event impacts, the researcher in this study grouped survey questions into categories related to economic, environmental and social impacts rather than positive and negative items to avoid response bias. Economic, social and environmental factors have been used interchangeably in social impact studies and therefore, can create confusion as others explore more quantifiable means for their evaluation (e.g., Mallen et al., 2010; Matheson, 2009; Oshimi et al., 2016; Preuss, 2007). Kim et al. (2015) claim they presented results through a TBL lens, however, also identify the items in their tools to be a means to measure social impacts. As researchers modify the SPSI or explore perceived impact through a TBL lens, it will be important for them to ensure they are clearly defining how their approach advances research through a TBL lens. Consequently, scale development or refinement may be required in order to allow the SPSI to more accurately assess the impacts of events through a TBL lens as suggested in previous event-related impact studies (Hede, 2008; Suggett & Goodsir, 2002). While it is clear that further research is required with respect to NMSEs, it is evident that this study provided positive contributions to academics and practitioners as NMSE research continues to advance.

5.3.2 Future Research Recommendations

While this study advanced the knowledge of perceived impacts from NMSEs and the influence that multiple socio-demographic characteristics can have on perceptions, there is considerable opportunity to expand the ways in which we evaluate and understand the importance of NMSEs. This section will highlight suggestions for future researchers to consider when exploring the perceived impacts of NMSEs and potential considerations when refining the SPSI.

First, researchers should consider a longitudinal approach to event impact assessments. This can take multiple forms. One option is to follow similar methods of previous studies which have examined perceived impacts of mega-events at varying points in time; pre, during and post-event (e.g., Kim & Petrick, 2005; Kim et al, 2006; Werner, Dickson & Hyde, 2015). Social exchange theory suggests that an exchange (e.g., quality of life or psychic income) will be re-evaluated at various points of the exchange (Gibson et al., 2014; Kim & Petrick, 2005; Waitt, 2003). By conducting pre-and post-event analyses, researchers may be able to ascertain more accurate representations of perceived event impacts. These types of studies, however, often require significant human resources to execute. This likely offers an explanation as to why these types of studies typically focus on a singular stakeholder group (e.g., local residents). A second option would be to explore the perceived impacts of a singular community on their event portfolio. By tracking the perceptions of residents in a community, stakeholders in the event continuum can be better positioned to improve event outcomes at the community level, contributing to the concept of leveraging (Chalip, 2014; Ritchie, 2004).

Alternatively, future researchers may want to explore the impacts of the same event in various communities. Using the CCWC as an example, researchers may want to explore the perceived event impacts as it tours to different cities across Canada to advance the research around the influence of socio-demographic variables on perceived event impacts. This type of approach may also allow researchers and practitioners alike to understand which sport events have a more homogenous following when it comes to their fans or spectators. If their spectators have similar attitudes and beliefs towards event stimuli, they may be in a position to re-evaluate how they deploy marketing programs and the types of sponsor activations (for example) they

deploy at their events to create more meaningful connections and foster positive event experiences.

Further, given that public policy makers are concerned with justifying their actions and investments, the results of this study can provide insights on how to inform decision-making in the future. Practitioners and researchers alike may need to ensure they are able to understand the levels of affinity to a sport, or perhaps even other cultural events and activities. Having this understanding may provide insights that enable policy makers to better respond to community issues and develop policies that determine event roles and objectives; ultimately strengthening the human and social capital produced across their event portfolio (Ziakas & Costa, 2011). Future research however may require further consideration to the socio-demographics of the geographic location being investigated.

Second, future studies could explore the influence of geography on the use of the SPSI. Kim et al. (2015) note that the SPSI is not an appropriate means to generalize findings across populations. Consequently, further analysis will be required when analyzing NMSEs to determine the impact that the location of an event can have on perceived event impacts. For example, Taks (2013) highlights that the ability to create sustainable event outcomes can become lost in larger cities due to the looser social networks that exist in larger cities. Konstantaki and Wickens (2010) also suggest that the heterogeneity of a larger urban centre may provide explanations for differences in attitudes towards sport events. Perhaps in a larger city with greater ethnic diversity, the same levels of sport affinity, and therefore, perceived positive impacts, would not apply. Future research of this nature should be designed with these types of considerations in mind. By analyzing multiple socio-demographic variables to understand their

influence on perceived event impacts, researchers will be in a better position to understand how these factors can change attitudes and perceptions based on the size or diversity of a specific city.

Third, understanding the importance that socio-demographic factors can have on perceived event impacts, future investigation into the perceived impacts of multiple stakeholder groups is warranted. While this study focused specifically on event attendees (both local residents and non-local residents), researchers may want to explore the perceived impacts of other stakeholder groups. Previous research on perceived event impacts has focused predominantly on local resident perceptions (e.g., Gibson, et al., 2014; Kim & Petrick, 2005; Kim & Walker, 2012). As such, exploring the perceptions of local governments, local businesses, sponsors or tourism agencies is warranted. These groups are touted as high priority stakeholders within event literature as they are often the organizations that fund events and have to answer to local residents and taxpayers (Fairley et al., 2011). Understanding the perceived impacts of local governments or other agencies through a SET or SRT lens may prove to better aid event organizers in developing effective sales and evaluation strategies to satisfy the needs of various stakeholder groups. From a practical perspective, this could allow event organizers to be more successful with funding applications and form better relationships with their government or tourism partners, which would further aid in strategic leveraging and achieving the desired outcomes of each stakeholder group.

Fourth, continued validation of the SPSI or other scales for measurement is required. While this study demonstrated a reliable model for the data, reliability issues will need to be assessed if it is implemented on other events and populations and coincides with the recommendations of Kim et al. (2015) where they state “future studies should be conducted for revision of conceptual frameworks and factor development in order to provide a more clear and

constant structure of psychometric construct of social impact" (p. 30). Future researchers may want to review the items developed in studies that have analyzed social capital or psychic income given that some of the constructs (e.g., community pride) have similar meaning to potential respondents. This may help academics move towards more standardized methods of evaluating the influence of socio-demographic factors and the applicability of a model(s) in various events or populations.

Finally, future studies should continue to explore the influence of multiple socio-demographic characteristics among event attendees or other stakeholder groups. Previous research suggests that income can have an influence on perceived impacts and attitudes towards tourism stimuli (Garbacz et al., 2017; Haralambopoulos & Pizam, 1996; Lee, Lee, Kang, Lee & Jeon, 2012; Vetitnev & Bobina, 2017). If future research explores the perceived impact of curling events in Canada, researchers should be cognizant of the potential impacts that age and occupation may have when analyzing the influence that income can have on their perceptions. This study demonstrated that a large portion of respondents may be retired. Furthermore, Curling Canada (2019) reports that over 35 percent of curlers in Canada are over the age of 50; which may influence future results related to the analysis of perceived impacts at curling events.

5.3 Contribution of this Study

This study sought to explore the influence of multiple socio-demographic characteristics on perceived event impacts at the 2017 Canadian Women's Curling Championship. While each of the hypotheses was not supported, the study does advance research within the field as it demonstrated that individual socio-demographic characteristics can have an impact in shaping the beliefs and attitudes towards a sport event. Currently, little is known about NSMEs and their impact on a community (Taks, 2013) as the literature has predominantly focused on mega-sport

events such as the Olympics or Football World Cup (e.g., Getz, 2012; Hayes & Karamichas, 2012). Interestingly, the mean scores reported across impact items varied substantially between this study and that of Kim et al. (2015); from which the SPSI was modified. Kim et al.'s (2015) results showed mean scores for negative impact items ranging from 3.36 to 4.50 and positive impact items ranging from 3.96 to 4.79. This study experienced negative impact statement mean scores ranging from 1.99 to 2.24 and positive statements ranging from 4.38 to 6.06. In order for a respondent to have perceived a negative impact a score of 3.5 or higher would have been required.

These results would suggest that non-mega sport events (NMSEs) could in fact have a greater net perceived benefit – or in this study's case, no negative perceived impacts – and would support the claims of previous literature (e.g., Coates & Depken, 2011; Taks, et al., 2011; Veltri, et al., 2009) demonstrating how NMSEs can be better overall investments for host communities. As has been evidenced by this study, socio-demographic characteristics can influence perceived sport event impacts. Therefore, continued research will be required when exploring perceived impacts in a growing field of NMSE event evaluation. Furthermore, additional research will be required to further understand the influence that multiple socio-demographic variables can have on the perceptions of various stakeholder groups.

Past researchers that have attempted to create social impact scales have identified a need for further exploration of the influence of multiple socio-demographic factors on perceived impacts (e.g., Gibson et al., 2014; Kim & Walker, 2012; Waitt, 2003). Past scale development models have been heavily critiqued due to their one-dimensional analysis. For example, some scales explore only positive or negative impacts rather than exploring the net impacts (both positive and negative). Some studies have also sought only to explore the perceptions of local

residents rather than considering the implications of non-locals who are still an important stakeholder group given their willingness to travel to communities and attend events. Further, critiques of the reliability and validity of the perceived impact scales, and a tendency to focus on mega sport events such as the Olympics or FIFA World Cup (Kim & Walker, 2012; Kim et al., 2015) have been raised. Consequently, this study has contributed new knowledge to the exploration of perceived sport event impacts by investigating multiple socio-demographic factors and their influence on the perceived impact of a non-mega sport event. These insights can provide direction for future research and practical use of the model presented in this study.

For practitioners, the study provides valuable insights into the importance of understanding the perceived impacts of various stakeholder groups involved with an NMSE. By understanding the different ways in which socio-demographic characteristics can influence perceptions, practitioners will be better equipped to develop marketing and event hosting strategies that align with the beliefs and attitudes of their community. In turn, this alignment can lead to 'buy in' from residents, which is important as their support is often required in order to secure public subsidies (Ohmann et al., 2006).

Further, event marketers, politicians, destination managers and other stakeholders will be better equipped to leverage the strategic outcomes of their events. Leveraging in this case refers to the ability of the stakeholders to 'take action' to create or achieve desired outcomes in the community (e.g., Chalip 2004; 2006). NMSEs provide opportunities for greater connectedness and tighter social networks at a local level, for example (Taks et al., 2015). In order to achieve these desired outcomes, physical, human, and financial resources are required (Chalip, Green, Taks, & Misener, 2016). The smaller scale of NMSEs can therefore influence the relationships formed by various stakeholders in the community and ultimately create sustainable partnerships

that support coordination efforts (Taks, 2013). Consequently, understanding the influence of socio-demographic factors on perceptions around events can ultimately influence a higher quality of life for residents of the host city/country.

5.4 Limitations

This study modified the SPSI presented by Kim et al., (2015) in an effort to advance perceived event impact measurement as it relates to NMSEs. While the proposed SPSI model for an NMSE met reliability and validity standards some limitations of the study should be noted. First, the sample size utilized in the analysis could have been higher. While the methodology of similar exploratory studies in the past were used, a larger sample size may have provided for a more comprehensive analysis of socio-demographic characteristics as well as advancing the use of an event impact scale. It also could have provided for greater distribution across various sub-groups that were analyzed. Due to limitations in time, human and financial resources, the researcher was only able to capture a sample representative of one percent of the 35,000 unique people who purchased tickets to the event. It should be noted however, that previous scale development models have been suggested to require a minimum of 200 survey respondents (Kline, 2005), which this study achieved.

Second, the procedure for the EFA and CFA could be critiqued. There are generally three schools of thought in the literature on how to complete an EFA/CFA in relation to the adaptation of an existing scale. Academics argue that in an adaptation study, researchers may (1) proceed directly to a CFA based on the scale's reliability from a previous EFA; (2) randomly split the sample in two and conduct an EFA and CFA on each data sub-set or; (3) collect two unique samples where one is used for the EFA and the other is used for the CFA (Orcan, 2018). Based on the critique of previous perceived impact scales only utilizing EFA procedures for scale

development, it was imperative that a CFA was conducted to test the validity of the structure obtained after the EFA (Worthington & Whittaker, 2006). If the sample had been split in two to conduct the EFA and CFA, the factor structures presented would not have met previous recommendations for sample size to provide good levels of fit (Comrey & Lee, 1992). For this study, data were collected over an eight-day period at the 2017 CWCC and only resulted in 239 responses. Future researchers may need to be cognizant of the challenges in obtaining an adequate sample size when collecting data at an NMSE and the impact this challenge may have on their ability to follow specific statistical procedures.

Third, the study focused on a single sport event that took place in one location. Therefore, the results of this study cannot be generalized and applied to other events or geographies. Due to the fact that perceived impacts will differ by socio-demographic factors (Waitt, 2003), future studies will need to take this into consideration based on their geographic orientation. Future recommendations to address this have been presented and discussed previously as suggestions for future research.

Fourth, while the item development stage in this study included a pilot to ensure readability of questions, an item-to-total correlation was not calculated due to time constraints and event access limitations set by the event rights holder. Typically, when developing a scale for measurement, items in the instrument are purified by using Cronbach's alpha (Deccio & Baloglu, 2002; Malhotra, 1999). It should be noted however, that the items used for measurement in this study were based upon a statistically reliable scale developed by Kim et al. (2015). However, the Kim et al. (2015) items were slightly modified for readability based the pilot, and therefore, these changes to the scale items could be considered a limitation.

When comparing this study to the SPSI which it was based off of, it is important to highlight that response error may be present. With less resources afforded to NMSEs (Gibson et al., 2012) attendees at the 2017 CWCC were likely less informed about the event from external sources such as the media, and thus, less capable of forming opinions on the event (Ritchie, 2010; Ritchie et al., 2007), especially if they had never attended a curling event previously. Therefore, the majority of respondents would have relied on internal factors such as past attendance at events, the opinions of friends or their lived experience (Oshimi et al., 2016) to form their opinions, and may not have provided an accurate assessment of their perceived impact of the event. Thus, this limitation supports the need to implement pre-, during, and post-event analyses where possible to gather the most accurate data possible.

This study followed previous data collection methods by collecting responses on-site at the event (e.g., Gursoy & Kendall, 2006; Waitt, 2003). Although this method was chosen given financial and time constraints, it should be noted that the findings of this study may have been influenced by the effects of event-related euphoria (Gibson et al., 2014). This would suggest that individuals who were at the event may have more positive perceptions because they have not had time to evaluate the exchange process or value to them personally. In addition, there was a high number of respondents who had a high affinity to the sport of curling. Previous research demonstrates that an affinity to the sport will likely result in higher perceptions of the event (Pranic et al., 2012). Only 25 percent of respondents had never attended a curling event or participated in curling. High levels of affinity combined with similar socio-demographic characteristics (as presented in Table 5.1) may have created bias within the study. While the group of respondents was fairly homogenous in nature, this presents opportunities for future research to explore the same event and attendees across various geographic settings.

Furthermore, exploration into the perceptions of individuals with limited to no affinity is merited.

Finally, the survey instrument used in this study allowed respondents to self-report their perceived impacts. This meant that respondents in the study may have had different interpretations of what the questions meant to them individually, which could have resulted in misunderstanding, and thus problems with the data. However, similar studies exploring perceptions have demonstrated that self-report measures are the most appropriate data collection method for personally experienced phenomena (Crampton & Wagner 1994; Schalm & Kelloway 2001; Veitch & Cooper-Thomas, 2009) and provide justification for the methods followed in this study. If additional time or resources are available to future researchers in this area, they may want to consider alternative methods of data collection that limit the ability of misinterpretation of questions (e.g., a survey conducted and recorded by the researcher).

5.5 Conclusion

This study sought to investigate the influence of multiple socio-demographic characteristics on perceived impacts of a non-mega sport event. Much of the research within event impact literature has focused on mega-events such as the Olympics, FIFA or other international events with major attendance and/or media visibility (Alm, Solberg, Storm, & Jakobsen, 2014; Maennig & Zimbalist, 2012; Matheson, 2004; Porter & Fletcher, 2008). For communities who wish to stage sport events or those who have invested in an event portfolio strategy (Ziakas & Costa, 2011), measuring the impact of events beyond a simple economic model is becoming increasingly important. However, given the results of this study, it is important to recognize that characteristics of NMSEs (e.g., less media attention, lower attendance, less investment) can influence the way in which people perceive this type of event.

Competition to host events is high and resources are scarce (Jennings, 2012; Muller, 2014), thus, it is important for communities to understand the events that are the best strategic fit for them. Understanding perceived impacts will ensure event stakeholders can develop and align strategies that leverage individual events for long-term community benefit. Further, the collective effort among event stakeholders will also support the development of marketing and tourism strategies that fit the desired stimuli of visitors to their community (Getz, 2008; Ziakas & Costa, 2011).

The revised SPSI model presented is indicative of the influence that event characteristics can have on perceived sport event impacts. This study has addressed a gap within the literature by exploring the influence that multiple socio-demographic characteristics can have on perceived impact. This study attempted to apply a scale developed for a mega-sport event on an NMSE. Non-mega events often do not require the same type of resources to be staged, and as such, can arguably demonstrate a greater impact (Oshimi et al., 2016; Preuss & Solberg, 2006; Taks, 2013) given their focus on the use of local resources (financial and human).

Therefore, future research to validate models for NMSEs may be required. The complexity of analyzing perceived impacts may require further adaptations of the SPSI given that geographic location, city size and other socio-demographic variables may have in influencing the results. However, this study has advanced research and knowledge of the way in which NMSEs can be evaluated given that there is little evidence or research in support of the impacts of NMSEs (Oshimi et al., 2016; Taks, 2013). Furthermore, the study may provide some insights for future researchers who wish to explore the differences in characteristics between mega-sport events and NMSEs; which will ultimately aid practitioners in creating more effective strategies to gain support for the bidding and hosting of sport events in their host country or city.

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Appendix A: Summary Panel Expert Feedback

- Ensure you identify an option for gender such as “other”
- Use a drop down menu for age rather than an open field to collect responses. An open field will create nightmares for you in your analysis. Where possible, follow this for all other responses that are open ended
- Would recommend utilizing standardized ethnicity categories that others in Canada would be accustomed to. For e.g. Stats Canada or other major research firms
- Consider sending those who answer they are a current curler to a frequency question. This may help you determine their affinity even further as a part of your study
- I understand the goal of the survey and perceived impacts, but it is a long survey to go through. If you require all of this information, then recognize your sample size may be limited
- Based on my experience with curling events the survey shouldn’t be too long and many attendees will be willing to engage
- Improved economic conditions is similar with many of the economic benefits. Would suggest employment might be a more beneficial thing to measure
- Attracted interests of terrorists for future events: given the scale of this event and its demographics this should not be a major concern
- Increased risk of cyber attack – not sure how this would apply given there is minimal attention being drawn to the event or desire for Curling Canada records to be accessed

Appendix B: Research Ethics Board Approval

Brock University
Research Ethics Office
Tel: 905-688-5550 ext. 3035
Email: reb@brocku.ca

Social Science Research Ethics Board

Certificate of Ethics Clearance for Human Participant Research

DATE: 2/13/2017

PRINCIPAL INVESTIGATOR: STEVENS, Julie - Sport Management

FILE: 16-187 - STEVENS

TYPE: Masters Thesis/Project STUDENT: Chris Charlebois
SUPERVISOR: Julie Stevens

TITLE: 2017 Scottie's Tournament of Hearts Impact Analysis

ETHICS CLEARANCE GRANTED

Type of Clearance: NEW Expiry Date: 2/28/2018

The Brock University Social Science Research Ethics Board has reviewed the above named research proposal and considers the procedures, as described by the applicant, to conform to the University's ethical standards and the Tri-Council Policy Statement. Clearance granted from 2/13/2017 to 2/28/2018.

The Tri-Council Policy Statement requires that ongoing research be monitored by, at a minimum, an annual report. Should your project extend beyond the expiry date, you are required to submit a Renewal form before 2/28/2018. Continued clearance is contingent on timely submission of reports.

To comply with the Tri-Council Policy Statement, you must also submit a final report upon completion of your project. All report forms can be found on the Research Ethics web page at http://www.brocku.ca/research/policies-and-forms/research-forms.

In addition, throughout your research, you must report promptly to the REB:

a) Changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) All adverse and/or unanticipated experiences or events that may have real or potential unfavourable implications for participants;
c) New information that may adversely affect the safety of the participants or the conduct of the study;
d) Any changes in your source of funding or new funding to a previously unfunded project.

We wish you success with your research.

Approved: 

Ann-Marie DiBiase, Chair
Social Science Research Ethics Board

Note: Brock University is accountable for the research carried out in its own jurisdiction or under its auspices and may refuse certain research even though the REB has found it ethically acceptable.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of research at that site.

Appendix C: Survey Questionnaire

2017 Scottie's Tournament of Hearts
February 18-26, 2017

Demographic Questions

Q1- What is your gender?
Answers:

- ❑ Female
- ❑ Male
- ❑ Other

Q2- To which racial or ethnic group do you most identify with?
Answers:

- ❑ Black
- ❑ Middle Eastern
- ❑ Asian/Pacific Islander
- ❑ Caucasian
- ❑ Latino or Hispanic
- ❑ Indigenous
- ❑ Other
- ❑ Choose not to reply

Q3- In what year were you born?

Q4- What is your approximate household income?
Answers:

- ❑ Under $5,000
- ❑ $5,000-$9,999
- ❑ $10,000-$14,999
- ❑ $15,000-$19,999
- ❑ $20,000-$24,999
- ❑ $25,000-$34,999
- ❑ $35,000-$49,999
- ❑ $50,000-$74,999
- ❑ $75,000-$99,999
- ❑ $100,000-$149,999
- ❑ $150,000-$199,999
- ❑ $200,000-$249,999
- ❑ $250,000 and over
- ❑ Choose not to reply

Q5- What is your highest level of education?
Answers:

- ❑ University Degree
- ❑ University Certificate (below bachelor's degree)
- ❑ College Diploma
- ❑ Trade Certificate or Diploma
- ❑ Graduate Degree
- ❑ High School Diploma or Equivalent
- ❑ No Formal Education

Q6 – What is your occupation (please select the one category that most accurately reflects your current employment)?
Answers:

- ❑ Management
- ❑ Business Finance & Administration

- ❑ Natural & Applied Sciences
- ❑ Health
- ❑ Education, Law, Social, Community & Government Services
- ❑ Art, Culture, Sport & Recreation
- ❑ Sales and Service
- ❑ Trades, Transport & Equipment Operations
- ❑ Natural Resources and Agriculture
- ❑ Manufacturing & Utilities
- ❑ Retired
- ❑ Student
- ❑ Unemployed

Q7 – Are you a….
Answers:

- ❑ Current Curler
- ❑ Past Curler
- ❑ Never Been a Curler

Q8 – How often do you participate in curling?
Answers:

- ❑ More than once per week
- ❑ Once per week
- ❑ Occasionally

Q9 – Have you attended previous curling events?
Answers:

- ❑ Yes **If yes, proceed to Q10
- ❑ No * If no, proceed to Q11

Q10 – If you have attended past curling events, please select all of the types of events you have attended:
Answers:

- ❑ World Events (e.g. World Men's Curling Championships)
- ❑ National Events (e.g. Roar of the Rings, Brier)
- ❑ Provincial Events (e.g. Provincial Championships)
- ❑ Professional Events (e.g. Skins Games, Grand Slam of Curling)
- ❑ Regional Events (e.g. Regional Championships)
- ❑ Local Events (e.g. Local Bonspiel)

Q11 – What is your area of residence?
Answers:

- ❑ St. Catharines
- ❑ Niagara Region

- ❑ Ontario (within 320km of St. Catharines)55
- ❑ Ontario (320km+ of St. Catharines)
- ❑ Out of Province (within Canada)
- ❑ International

Event Impact Questions

Q9 – Please consider both the positive and negative impacts of the Scotties Tournament of Hearts Based on the scale below (1 being completely disagree and 7 being complete agree) please provide your perception of the impacts of the 2017 Scotties Tournament of Hearts.

	1 –completely disagree	**2 –agree very little**	**3 –somewhat disagree**	**4-Neutral**	**5-Somewhat Agree**	**6 –agree a great deal**	**7 –completely agree**
Economic Impact Questions							
Increased economic activity for local business							
Increased employment opportunities							
Increased community development investments							
Accelerated community growth							
Excessive spending by government to support operational costs of the event							
Increased product prices (e.g. Hotels, meals, etc.)							
Environmental Impact Questions							
Increased the amount of litter and waste							
Increased air pollution							
Increased noise levels							
Caused environmental damage to local community							
Resulted in traffic congestion							
Social Impact Questions							
Enhanced the community pride of residents							
Reinforced community spirit							
Enhanced the sense of being a part of the community							
Increased number of cultural events							
Increased the understanding of the other cultures							

and societies of visitors							
Provided an incentive for the preservation of local culture							
Provided residents opportunity to meet new people							
Increased interest in international sport events							
Increased Global Image							
Increased National Image							
Enhanced media visibility							
Improved image of St. Catharines							
Enhanced international recognition of host community							
Increased community identity in the country							
Increased opportunity of enjoying curling events							
Increased volunteering opportunity							
Provided learning opportunity of a new sport							
Provided a high-quality entertainment opportunity							
Generated excitement to the host community							
Increased hardship for finding parking							
Increased problems for using public transportation							
Increased road closures/disruption							
Increased crime							
Increased risks of terrorism (e.g. bomb threat, etc.)							
Increased disturbance from visitors (e.g. hooligans, disorder, and vandalism)							
Increased psychological anxieties due to security risks/concerns							
Local residents were not a primary consideration for the event							
Disrupted the lives of local residents							
Caused issues between visitors and local residents							
Increased social conflicts between supporters and non-supporters of the event							

Appendix D: Script to Approach Respondents

Excuse me (sir/ma'am), do you have a moment to fill out a quick survey?

negative response

That's fine, thank you, enjoy the (event).

Or Thanks anyway, have a nice day!

positive response

(While handing iPad to participant)

I have a quick survey for you to fill out, we are conducting research to understand what impacts you think hosting the Scottie's Tournament of Hearts has on the Niagara area. The survey will take 10-15 minutes for you to complete. If you wish, you can also enter a draw to win tickets to the Tim Horton's Brier in Ottawa later this year.

Collect survey

Thank you very much for your time, have a great day! Enjoy the (event)!

Appendix E: Informed Consent and Introduction Letter

****Insert Brock Centre for Sport Capacity Logo on Survey Monkey webpage****

Project Title: 2017 Scottie's Tournament of Hearts Impact Analysis

INVITATION
You are invited to participate in a study that involves research. The purpose of this study is to determine the economic, social and environmental impact on the Niagara region of hosting the 2017 Scottie's Tournament of Hearts. **This project is being conducted in partnership with Curling Canada.**

WHAT'S INVOLVED
As a participant, you will be asked to answer a brief survey detailing your estimated spending on specific products/services while attending the 2017 Scotties Tournament of Hearts women's national curling championship. In addition, you will also be asked of your perceived impact that the event has had on the community. Participation will take approximately 10 minutes of your time.

POTENTIAL BENEFITS AND RISKS
There are no known or anticipated risks associated with your participation in this study. We hope to support Curling Canada in its effort to improve its delivery of the Scotties Tournament of Hearts, and other national events.

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 this study. Furthermore, because our interest is in the average responses of the entire group of participants, you will not be identified individually in any way in written reports of the research. Data are collected through an online survey tool called Survey Monkey. Please note that because SurveyMonkey is located on an American server, data are subject to American Homeland Security laws such as the Patriot Act; however, no identifying information will be collected.

Data collected during this study will be stored electronically within password protected user accounts and computers. Data will be kept indefinitely and may be used for future studies comparing economic impact analyses of future sporting events.

Access to this data will be restricted to the principal investigators only.

Curling Canada will receive a final report with summaries of the economic impact results generated from the data; however, will not at any point have access to the raw data. Aggregate study results will be shared through the Tourism Regional Economic Impact Model that calculates impact results.

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 prior to submitting your responses, and may do so without any penalty or loss of benefits to which you are entitled. Due to your anonymity as a participant it is not possible to identify and withdraw your data after submission.

PUBLICATION OF RESULTS

Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available on the Curling Canada website upon the study's completion. It is anticipated that results may be available as of September 1, 2017.

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact either of the individuals listed below. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University **REB 16-87**. 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.

Principal Investigator/Faculty Supervisor:
Dr. Julie Stevens, Associate Professor
Department of Sport Management
Brock University
P: (905) 688-5550 Ext. 4668
E: jstevens@brocku.ca

Student Principal Investigator:
Chris Charlebois, MA Candidate
Department of Sport Management
Brock University
E: cc07hh@brocku.ca

[Note: comment below will be listed at bottom of online survey consent page]

By checking the box below, I agree to provide my e-mail address for the opportunity to enter a draw to win a set of tickets to a future Curling Canada championship.

"**Click here to provide consent to allow Curling Canada to contact you if you are selected as a winner"**

*If selected, drop down option to allow e-mail entry will be provided

[Note: comment below will be listed at bottom of online survey consent page]

If you wish to receive updates on the findings of this study, please check the box below. If you **did not** provide an e-mail address to enter the draw, please provide it below.

*If selected, drop down option to allow e-mail entry will be provided

[Note: comment below will be below listed at bottom of online survey consent page]

By checking the box below, 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 prior to submitting my survey responses.

“Click here to provide consent and proceed to survey questions”

Appendix F: Coding Key

Variable	Value	Variable	Value
Gender		**Occupation**	
Female	1	Management	1
Male	2	Business Finance & Administration	2
Age Group		Natural and applied sciences	3
54 or less	1	Health	4
55+	2	Education, Law, Social, Community & Government services	5
Ethnicity		Art, Culture, Sport and Recreation	6
Caucasian	1	Sales and Service	7
Indigenous	2	Trades, transport and equipment operators	8
Latino/Hispanic	3	Natural resources and agriculture	9
Middle Eastern	4	Manufacturing and utilities	10
Other	5	Retired	11
N/A	6	Student	12
Household Income		Unemployed	13
$5,000	1	**Curling Participation**	
$5,000-$9,999	2	Current/Past Curler	1
$10,000-$14,999	3	Never Curled	2
$15,000-$19,999	4	**Curling Attendance**	
$20,000-$24,999	5	Have Attended Past Events	1
$25,000-$34,999	6	Had not attended past events	2
$35,000-$49,999	7	**Area of Residence**	
$50,000-$74,999	8	Niagara Region	1
$75,000-$99,999	9	Outside of Niagara	2
$100,000-$149,999	10	**Education Group**	
$150,000-$199,999	11	Graduate Degree	1
$200,000-$249,999	12	University Degree	2
$250,000+	13	College Diploma	3
N/A	14	University Certificate & Trade Certificate	4
Income Levels		High School	5
$5,000-$34,999	1	No Formal Education	6

$35,000-$99,999	2			
$100,000+	3			
Education				
University Degree	1			
University Certificate	2			
College Diploma	3			
Trade Certificate	4			
Graduate Degree	5			
High School	6			
No Formal Education	7			

Appendix G: Descriptive Statistics and Frequency Tables

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	143	0.0	59.8	59.8
	2	96	0.0	40.2	100.0
	Total	239	0.0	100.0	
Missing	System	1048336	100.0		
Total		1048575	100.0		

Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	226	0.0	94.6	94.6
	2	3	0.0	1.3	95.8
	3	1	0.0	0.4	96.2
	4	1	0.0	0.4	96.7
	5	3	0.0	1.3	97.9
	6	5	0.0	2.1	100.0
	Total	239	0.0	100.0	
Missing	System	1048336	100.0		
Total		1048575	100.0		

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	19	2	0.0	0.8	0.8
	20	3	0.0	1.3	2.1
	21	3	0.0	1.3	3.3
	22	1	0.0	0.4	3.8
	23	1	0.0	0.4	4.2
	24	2	0.0	0.8	5.0
	25	1	0.0	0.4	5.4
	26	2	0.0	0.8	6.3
	27	3	0.0	1.3	7.5
	28	3	0.0	1.3	8.8
	29	6	0.0	2.5	11.3
	31	6	0.0	2.5	13.8
	32	6	0.0	2.5	16.3
	33	4	0.0	1.7	18.0
	34	2	0.0	0.8	18.8
	36	4	0.0	1.7	20.5

	38	2	0.0	0.8	21.3
	39	2	0.0	0.8	22.2
	40	2	0.0	0.8	23.0
	41	2	0.0	0.8	23.8
	42	2	0.0	0.8	24.7
	43	5	0.0	2.1	26.8
	44	2	0.0	0.8	27.6
	45	4	0.0	1.7	29.3
	46	3	0.0	1.3	30.5
	47	4	0.0	1.7	32.2
	48	3	0.0	1.3	33.5
	49	6	0.0	2.5	36.0
	50	1	0.0	0.4	36.4
	51	5	0.0	2.1	38.5
	52	3	0.0	1.3	39.7
	53	6	0.0	2.5	42.3
	54	7	0.0	2.9	45.2
	55	5	0.0	2.1	47.3
	56	7	0.0	2.9	50.2
	57	9	0.0	3.8	54.0
	58	8	0.0	3.3	57.3
	59	5	0.0	2.1	59.4
	60	10	0.0	4.2	63.6
	61	11	0.0	4.6	68.2
	62	7	0.0	2.9	71.1
	63	9	0.0	3.8	74.9
	64	10	0.0	4.2	79.1
	65	3	0.0	1.3	80.3
	66	3	0.0	1.3	81.6
	67	8	0.0	3.3	84.9
	68	10	0.0	4.2	89.1
	69	3	0.0	1.3	90.4
	70	3	0.0	1.3	91.6
	71	4	0.0	1.7	93.3
	72	1	0.0	0.4	93.7
	73	4	0.0	1.7	95.4
	74	3	0.0	1.3	96.7
	75	2	0.0	0.8	97.5
	78	2	0.0	0.8	98.3
	81	2	0.0	0.8	99.2
	86	2	0.0	0.8	100.0
	Total	239	0.0	100.0	
Missing	System	1048336	100.0		
Total		1048575	100.0		

Annual Household Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	0.0	1.3	1.3
	2	1	0.0	0.4	1.7
	3	4	0.0	1.7	3.3
	4	3	0.0	1.3	4.6
	5	2	0.0	0.8	5.4
	6	12	0.0	5.0	10.5
	7	26	0.0	10.9	21.3
	8	38	0.0	15.9	37.2
	9	39	0.0	16.3	53.6
	10	46	0.0	19.2	72.8
	11	23	0.0	9.6	82.4
	12	10	0.0	4.2	86.6
	13	5	0.0	2.1	88.7
	14	27	0.0	11.3	100.0
	Total	239	0.0	100.0	
Missing	System	1048336	100.0		
Total		1048575	100.0		

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	107	0.0	44.8	44.8
	2	7	0.0	2.9	47.7
	3	57	0.0	23.8	71.5
	4	17	0.0	7.1	78.7
	5	19	0.0	7.9	86.6
	6	31	0.0	13.0	99.6
	7	1	0.0	0.4	100.0
	Total	239	0.0	100.0	
Missing	System	1048336	100.0		
Total		1048575	100.0		

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	14	0.0	5.9	5.9
	2	28	0.0	11.7	17.6
	3	1	0.0	0.4	18.0
	4	30	0.0	12.6	30.5
	5	41	0.0	17.2	47.7
	6	11	0.0	4.6	52.3
	7	13	0.0	5.4	57.7
	8	10	0.0	4.2	61.9
	9	2	0.0	0.8	62.8
	10	6	0.0	2.5	65.3
	11	61	0.0	25.5	90.8
	12	16	0.0	6.7	97.5
	13	6	0.0	2.5	100.0
	Total	239	0.0	100.0	
Missing	System	1048336	100.0		
Total		1048575	100.0		

Curling Participation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	101	0.0	42.3	42.3
	2	76	0.0	31.8	74.1
	3	62	0.0	25.9	100.0
	Total	239	0.0	100.0	
Missing	System	1048336	100.0		
Total		1048575	100.0		

Have you attended previous curling events?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	172	0.0	72.0	72.0
	2	67	0.0	28.0	100.0
	Total	239	0.0	100.0	
Missing	System	1048336	100.0		
Total		1048575	100.0		

What is your area of residence?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	100	0.0	41.8	41.8
	2	139	0.0	58.2	100.0
	Total	239	0.0	100.0	
Missing	System	1048336	100.0		
Total		1048575	100.0		

Appendix H: MANOVA Results – Age

Source	Factor	df	Mean Square	F	Significance
Corrected Model	Economic Benefits	1	6.524	3.678	0.056
	Security	1	1.509	0.696	0.405
	Community Pride	1	2.158	1.550	0.214
	Community Development	1	1.736	1.129	0.289
Intercept	Economic Benefits	1	6607.429	3724.630	0.000
	Security	1	1160.226	534.800	0.000
	Community Pride	1	6697.835	4810.157	0.000
	Community Development	1	7707.209	5013.536	0.000
Age Group	Economic Benefits	1	6.524	3.678	0.056
	Security	1	1.509	0.696	0.405
	Community Pride	1	2.158	1.550	0.214
	Community Development	1	1.736	1.129	0.289
Error	Economic Benefits	237	1.774		
	Security	237	2.169		
	Community Pride	237	1.392		
	Community Development	237	1.537		
Total	Economic Benefits	239			
	Security	239			
	Community Pride	239			
	Community Development	239			
Corrected Total	Economic Benefits	238			
	Security	238			
	Community Pride	238			
	Community Development	238			

Appendix I: MANOVA Results – Income

Source	Factor	Df	Mean Square	F	Significance
Corrected Model	Economic Benefits	3	1.005	0.557	0.644
	Security	3	1.899	0.875	0.455
	Community Pride	3	1.643	1.180	0.318
	Community Development	3	0.710	0.458	0.712
Intercept	Economic Benefits	1	4447.614	2465.408	0.000
	Security	1	821.690	378.642	0.000
	Community Pride	1	4691.497	3369.128	0.000
	Community Development	1	5313.137	3430.723	0.000
Income Levels	Economic Benefits	3	1.005	0.557	0.644
	Security	3	1.899	0.875	0.455
	Community Pride	3	1.643	1.180	0.318
	Community Development	3	0.710	0.458	0.712
Error	Economic Benefits	235	1.804		
	Security	235	2.170		
	Community Pride	235	1.392		
	Community Development	235	1.549		
Total	Economic Benefits	239			
	Security	239			
	Community Pride	239			
	Community Development	239			
Corrected Total	Economic Benefits	238			
	Security	238			
	Community Pride	238			
	Community Development	238			

Appendix J: MANOVA Results – Education

Source	Factor	df	Mean Square	F	Significance
Corrected Model	Economic Benefits	1	0.217	0.121	0.729
	Security	1	4.361	2.022	0.156
	Community Pride	1	0.051	0.037	0.848
	Community Development	1	1.230	0.799	0.372
Intercept	Economic Benefits	1	4737.893	2631.297	0.000
	Security	1	897.059	415.802	0.000
	Community Pride	1	4847.032	3458.891	0.000
	Community Development	1	5644.621	3666.724	0.000
Education Levels	Economic Benefits	1	0.217	0.121	0.729
	Security	1	4.361	2.022	0.156
	Community Pride	1	0.051	0.037	0.848
	Community Development	1	1.230	0.799	0.372
Error	Economic Benefits	237	1.801		
	Security	237	2.157		
	Community Pride	237	1.401		
	Community Development	237	1.539		
Total	Economic Benefits	239			
	Security	239			
	Community Pride	239			
	Community Development	239			
Corrected Total	Economic Benefits	238			
	Security	238			
	Community Pride	238			
	Community Development	238			

Appendix K: MANOVA Results – Sport Affinity

Source	Factor	df	Mean Square	F	Significance
Corrected Model	Economic Benefits	3	1.920	1.071	0.362
	Security	3	1.282	0.588	0.623
	Community Pride	3	1.700	1.221	0.303
	Community Development	3	1.919	1.251	0.292
Intercept	Economic Benefits	1	3661.282	2042.749	0.000
	Security	1	696.512	319.798	0.000
	Community Pride	1	4023.971	2891.266	0.000
	Community Development	1	4335.527	2827.659	0.000
Curling Participation	Economic Benefits	1	4.221	2.355	0.126
	Security	1	1.872	0.859	0.355
	Community Pride	1	0.206	0.148	0.700
	Community Development	1	0.577	0.376	0.540
Have you attended previous curling events?	Economic Benefits	1	0.030	0.017	0.898
	Security	1	2.427	1.114	0.292
	Community Pride	1	0.903	0.649	0.421
	Community Development	1	0.504	0.329	0.567
Curling Participation * Have you attended previous curling events	Economic Benefits	1	0.153	0.085	0.770
	Security	1	1.237	0.568	0.452
	Community Pride	1	1.589	1.141	0.286
	Community Development	1	5.072	3.308	0.070
Error	Economic Benefits	235	1.792		
	Security	235	2.178		
	Community Pride	235	1.392		
	Community Development	235	1.533		

Total	Economic Benefits	239			
	Security	239			
	Community Pride	239			
	Community Development	239			
Corrected Total	Economic Benefits	238			
	Security	238			
	Community Pride	238			
	Community Development	238			

Appendix L: MANOVA Results – Residency

Source	Factor	df	Mean Square	F	Significance
Corrected Model	Economic Benefits	1	0.398	0.221	0.639
	Security	1	1.463	0.674	0.412
	Community Pride	1	0.153	0.109	0.741
	Community Development	1	1.239	0.805	0.371
Intercept	Economic Benefits	1	6456.096	3587.056	0.000
	Security	1	1115.025	513.919	0.000
	Community Pride	1	6561.946	4684.104	0.000
	Community Development	1	7568.109	4916.345	0.000
Area of Residence	Economic Benefits	1	0.398	0.221	0.639
	Security	1	1.463	0.674	0.412
	Community Pride	1	0.153	0.109	0.741
	Community Development	1	1.239	0.805	0.371
Error	Economic Benefits	237	1.800		
	Security	237	2.170		
	Community Pride	237	1.401		
	Community Development	237	1.539		
Total	Economic Benefits	239			
	Security	239			
	Community Pride	239			
	Community Development	239			
Corrected Total	Economic Benefits	238			
	Security	238			
	Community Pride	238			
	Community Development	238			