Assessing the Occupational Leadership Efficacy of Sport Management Students

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Abstract

A cross-sectional study was used to examine how sport management undergraduate students judge their capabilities to occupy leadership positions in the sport industry; their occupational leadership efficacy (OLE). Specifically, this study explored differences in capability judgments between groups of students who were completing sequential courses within a sport management undergraduate program, and if and/or how male and female students differed in OLE. Of a total population of $N = 484$, $n = 154$ students of a 4-year Undergraduate Sport Management program were surveyed. An analysis of covariance was completed to determine if significant differences existed between courses completed (i.e., years) and sex. Results indicate no difference in OLE between years or between sex. However, the covariates Sport Employed and Sport Leader had significant impacts on OLE. Sport management educators can use these results to improve undergraduate degree programs. Self-efficacy can be fostered using strategies linked to Bandura's (1997) four sources.

Keywords: Self-efficacy, Leadership, Sport Management, Survey, Covariance

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CHAPTER I

INTRODUCTION

Statement of the Problem

Sport has become a major part of society, which has led to an increased interest in professions in the sport industry, meaning competition for sport management positions is higher than ever (Belson, 2009; Belzer, 2014). Much of the augmented competition comes from the growth of sport-related programs at universities and colleges throughout North America. In Canada, there are currently 16 universities offering undergraduate Sport Management degree programs, and in the United States, there are over 300 (Belzer, 2014; NASSM, 2015a; NASSM, 2015b). Each year, hundreds of students graduate from these institutions, many of them with lofty aspirations to attain sport industry positions; and particularly positions that encompass leadership roles. However, job offers in sport organizations to recent graduates are infrequent, which has led to very few available opportunities for these individuals to be hired, and an even lesser chance for them to advance through the organizational hierarchy toward leadership roles (Belson, 2009).

Women in the sport industry. In addition to the concern of decreased sport employment opportunities is the realization that sport organizations are considered to be a 'boys' club'; the disparity between the number of male and female employees is still very high, specifically in leadership positions (Burton, 2014). To further illustrate, in 2014 women held 15.6% of all executive positions and 11.7% of all board positions in Canadian professional sport organizations (Pellegrini, 2014). For example, in Toronto's commercial organization Maple Leaf Sports & Entertainment (MLSE), there is only one woman on their 14-person leadership team (Pellegrini, 2014). She holds the position of

Vice President, Marketing and Communications (MLSE, 2015). In terms of overall

percentages for professional sport leagues, women hold 29%, 30%, and 35% of the

management positions in the National Football League, Major League Baseball, and

National Basketball Association, respectively (Grappendorf & Burton, 2014). Adding to

this is the tendency of major organizations to hire retired male players as executives; for

example, Steve Yzerman (Vice President, Detroit Red Wings) or Billy Beane (General

Manager, Oakland Athletics) (Rush, 2014).

Public sport organizations in Canada boast slightly higher percentages regarding

female leaders who are employed; however, such organizations have yet to achieve at

least an equal 50/50 hiring ratio. According to a 2009 report featuring a policy on sport

for women and girls, 37% of the Sport Canada-funded organizations are led by women

(Government of Canada, 2009).

In the American intercollegiate sport setting of the National Collegiate Athletic

Association (NCAA), there are several employment opportunities, specifically for

positions including coaches, administrators, therapists, and directors (Acosta &

Carpenter, 2012). The number of women who are employed in many of these positions is

the highest it has ever been; however, there are still significantly more men working in

intercollegiate sport than women (Acosta & Carpenter, 2012). As an example, Lapchick

(2015) notes that in Division I NCAA Football Bowl Division schools, 5.6% of all

athletic directors were women. Acosta and Carpenter (2012) also comment on female

representation in intercollegiate sport: 20% of intercollegiate team coaches are women;

20.3% of all athletics directors are women; 9.2% of NCAA athletics departments have no

women employed in administration; 30.7% of head athletic trainers are women; and, 9.8% of sports information directors are women (Acosta & Carpenter, 2012).

Despite the advancements women have made in sport over the years, there are strong indications within both Canadian and American sport contexts that men still dominate leadership and managerial roles in the North American sport industry.

Women in sport education. Despite evidence that the job market for the sport industry in North America is small, countless students still attend post-secondary schools with the hope of turning their love of sport into a career. The influx in student interest is evident from the hundreds of sport management programs that currently exist across North America (NASSM, 2015a; NASSM, 2015b). In these programs, students learn business theories and principles, applying them to the sport industry and connecting that knowledge to specific industry activities (Brock University, 2010). There is one limiting common characteristic among these sport management programs, though; they are made up of primarily male students (Floyd Jones, Brooks, & Mak, 2008; Moore, Parkhouse, & Konrad, 2004).

The experiences that students have—particularly female students—throughout their undergraduate education may affect their desire and drive to become leaders in sport organizations. For example, Pellegrini (2014) notes that a lot of "talk" in sport management education settings centre on "box scores conversations" (p. 28). Some students believe that their intelligence and potential is in direct correlation with their ability to recite sports statistics. Subsequently, this "talk" may be driving away females who feel as if they cannot keep up with the statistical sports chatter of their male student counterparts (Pellegrini, 2014). Harris, Grappendorf, Aicher, and Veraldo (2015)

conclude that female students in sport management programs are fully aware of the

negative gender stereotypes that exist in sport, but still have a desire to work hard to

overcome that barrier.

Women as leaders. Additionally, women are forced to deal with society's lack of

leadership expectations for them. Sandberg and Scovell (2013) present an analogy that

explains the female leadership issue using a marathon setting, stating:

Imagine that a career is like a marathon…where both men and women arrive at

the starting line equally fit and trained. The gun goes off. The men and women

run side by side. The male marathoners are routinely cheered on: 'Lookin' strong!

On your way!' But the female runners hear a different message. 'You know you

don't have to do this!' the crowd shouts. Or 'Good start – but you probably won't

want to finish.' (p. 100)

Often, men are encouraged, and sometimes expected, to achieve leadership positions.

Conversely, women are applauded for trying, but are then told that they are not expected

to be leaders. Their desire for leadership is construed as selfish because an ingrained

belief is that women should be at home taking care of their families (Sandberg & Scovell,

2013). Because of their sex, women start off at a disadvantage in their quest to become

leaders and the challenges are multiplied for those who continue to want to be leaders in

sport organizations.

To reverse these trends and encourage equality, there needs to be better

development of future leaders, whereby much of that development could occur within

students' undergraduate educations (e.g., sport management curriculum, programs). Such

programs, via their faculty, administrators, and educators, should support students' goals

and instruct them on how to become the best leaders in the industry. They should instill

in students an inherent belief in their capabilities to be successful employees in sport

organizations. Specifically, sport management programs should accept the challenge of

increasing the number of females in the sport industry by increasing the number of

female students who enroll in these programs. There is a need to positively impact

females' beliefs in their leadership capabilities, thereby helping to reshape the industry's

ideals regarding female leaders in sport.

Self-efficacy & Sport Industry Leadership

While a leader's success can originate from different sources, Rachel Lewis,

Chief Operating Officer (COO) of the Vancouver Whitecaps, believes "you have to start

with a belief in yourself that you can do the job. Get on with it. Just do it. Then people

will believe that you belong" (Pellegrini, 2014, p. 28). Here, Lewis is pointing toward the

construct of self-efficacy, which is the belief in one's capabilities to achieve certain

outcomes (Bandura, 1977). For the purpose of this study, the researcher has developed

the concept of occupational leadership efficacy (OLE), combining self-efficacy (Bandura,

1997), occupational self-efficacy (Betz & Hackett, 1981), and leadership efficacy

(Quigley, 2013). OLE is therefore defined by the researcher as judgments that students

have in their capabilities to occupy leadership positions in a particular industry. Within

the current study, the industry of interest is the sport industry.

Often, the deficiency of female leaders in sport is attributed to internal problems

within the organization and its culture, such as power imbalance, gender stereotyping,

and discrimination (Burton, Barr, Fink, & Bruening, 2009; Eagly & Karau, 2002; Sartore

& Cunningham, 2007; Schein, 2007). However, Sartore and Cunningham (2007) discuss

how one's negative beliefs about his or her capabilities could be holding themselves (i.e., women) back from aspiring to occupy leadership roles. Their research warrants further investigation into how males and females judge themselves and their capabilities, and how those self-judgments may be different between the sexes. Self-efficacy is one powerful construct that can address such an investigation.

Bandura (1997) describes why it is essential to understand self-efficacy, especially for those who are in the career development stage. First, someone's self-efficacy will determine his or her approach versus his or her avoidance behaviours (Bandura, 1997). For example, students determine what they will try and what they will not, and those with stronger self-efficacy will 'try' leadership positions (Bandura, 1997).

For students, a strong sense of self-efficacy will also benefit them in terms of the quality of their performances with coursework, tests, or job training (Bandura, 1997). For students enrolled in post-secondary degree programs, how they perform academically may impact their future goals, which may lead some toward leadership roles.

Finally, Bandura (1997) notes that self-efficacy must be understood in order to assess one's persistency when dealing with obstacles. In order for any student to be successful in their future endeavours, he or she must be able to overcome the occasional failure, misstep, or dissuading message from society (Bandura, 1997). Given the degree of competition within the sport industry for any prospective employee—and especially for females—it is necessary that a student's self-efficacy is strong enough to combat the difficulties and potential job obstacles he or she will most definitely face. It may be possible that one's inner conviction is the "make or break" factor determining whether or not he or she will achieve leadership goals.

Self-efficacy has been studied extensively, often to better understand different phenomena, such as career and occupational decision-making (e.g., Betz & Hackett, 1981). Additionally, self-efficacy has been linked broadly to leadership (e.g., Quigley, 2013) and career opportunities in the sport and leisure industry (e.g., Cunningham, Bruening, Sartore, Sagas, & Fink, 2005). These studies support use of self-efficacy to explain behavioural tendencies, supplementing the notion that such a construct can be used to potentially explain the deficiency of women in leadership positions in the sport industry, as well as to shed light on how a sport management program may increase or decrease one's beliefs in his or her capabilities. To date, very little research has been completed that investigates how males and females within an undergraduate sport management program context judge their own capabilities to be in leadership positions in a particular industry.

Purpose of the Study

As such, building from Cunningham et al. (2005) who examined how self-efficacy was related to sport and leisure career choices, this study will examine OLE for the sport industry. A primary purpose of this study is to determine how sport management undergraduate students judge their capabilities to occupy future leadership positions in the sport industry. A secondary purpose of this study is to explore the differences in OLE between students, grouped according to their completed sequential courses within an sport management undergraduate program. A final purpose of this study is to explore differences in OLE between students grouped by sex who have completed sequential courses within their sport management undergraduate. To fully understand self-efficacy, it must be linked to an additional behaviour (Bandura, 1997).

Therefore, self-efficacy was combined with leadership-related occupational decision-making to create OLE. It is a factor under the umbrella of self-efficacy, but is unique from self-efficacy.

Thus, this investigation will contribute to sport literature by examining how OLE differs for students (1) by sex; and (2) between Sport Management undergraduate completed courses (i.e., between undergraduate years). Both men and women struggle in their attempts to secure employment positions in sport organizations and the competition for leadership positions is strong (Belson, 2009; Belzer, 2014). Women especially struggle to progress in sport organizations toward leadership positions (Burton, 2014; Burton et al., 2009). There is limited scholarly research on the attribution of self-efficacy to explain this gender underrepresentation. The results from this study will serve to fill this research gap.

Research Questions

This study will answer the following research questions:

1. How do students in a 4-year undergraduate sport management program judge their capabilities to be employed in leadership positions in the sport industry (i.e., their OLE)?;

2. Does sport industry OLE differ between groups of students who have completed sequential courses in a 4-year undergraduate sport management?; and,

3. Does sport industry OLE differ for male and female students enrolled in a 4-year undergraduate sport management?

In the next section, a theoretical background on self-efficacy is provided and related literature on the construct is reviewed.

CHAPTER II

THEORETICAL BACKGROUND

The following section will discuss the theoretical background of self-efficacy by defining it, explaining its sources, and describing how it impacts individuals' choices, efforts, settings, and persistence. In addition, self-efficacy's application to occupational and career decision-making, leadership, and the sport industry will be discussed. Also, the literature on females as leaders, females in sport, and females as sport leaders will be reviewed.

Social Cognitive Theory

Bandura's (1986) social cognitive theory (SCT) is a behavioural model that encompasses important constructs, such as self-efficacy and outcome expectations. The belief of SCT is that a personal sense of control affects behavioural change (Luszczynska & Schwarzer, 2005). SCT has received considerable scholarly attention in career-related literature (e.g., Lent, Brown, & Hackett, 1994), has extensive theoretical backing (e.g., Bandura, 1977, 1982, 1984, 1997), and has become the basis for many studies on human behaviour, particularly research involving occupational and career choices of young adults (e.g., Betz & Hackett, 1981). Self-efficacy, specifically, has been identified as a concept that warrants increased scholarly attention (Conklin, Dahling, & Garcia, 2013).

Self-efficacy is broadly defined as an individual's judgments of his or her own capabilities to execute certain courses of action in order to produce desired effects and accomplishments (Bandura, 1977, 1982, 1984, 1986, 1997). Chosen courses of action, effort expended, and perseverance and resilience are influenced by one's self-efficacy beliefs (Bandura, 1997). One's degree of self-efficacy is the combination of one's

cognitive, social, and behavioural skills into integrated courses of action to combat

continuous changing realities that may have stressful and unpredictable elements

(Bandura, 1997). Often, one's self-efficacy is assumed to be representative of his or her

self-confidence, but the two concepts are not identical. Self-confidence is a personal trait

that is not subject to change; however, self-efficacy is a perception, or awareness, of self-

judgment that may change over time (McCormick, Tanguma, & López-Forment, 2002).

Self-efficacy is "not a discrete act, it is the exercise of control" one has over his or her

behaviour and the consequential events (Bandura, 1984, p. 235).

Bandura (1997) differentiates between self-efficacy expectations and outcome

expectations. Self-efficacy expectations are the convictions one has that successful

execution of appropriate behaviours will produce desired performances (Bandura, 1997).

However, outcome expectancies relate to one's judgment that the performance will

produce a likely consequence (Bandura, 1997). Put another way, a self-efficacy

expectation is 'can I do this?', while an outcome expectation is 'if I do this, what will

happen?' (Lent et al., 1994).

It is necessary to differentiate between the two sets of expectations because even

if someone expects that his or her behaviours will lead to certain outcomes, a sense of

low self-efficacy will not make that outcome a reality (Bandura, 1997). For example, an

event coordinator may have outcome expectations such that him or her coordinating a

successful event will result in recognition, praise, and money. However, the event

coordinator must first believe that he or she can effectively complete the necessary

requirements for running a successful event (i.e., securing enough volunteers, creating

appropriate contingency plans) in order achieve such outcome expectations.

Additionally, Bandura (1997) addresses the distinction between self-esteem and self-efficacy. Although both contribute to human life quality, self-esteem is a self-worth evaluation, but self-efficacy is primarily concerned with one's personal capabilities (Bandura, 1997). To elaborate, one can have low self-efficacy for a given capability, such as leadership, but if he or she does not attach his or her self-worth to their leadership skills then he or she will not experience a decrease in self-esteem (Bandura, 1997).

Within self-efficacy there is a dynamic interplay between self-referent thought, action, and effect, whereby one's self-referent thoughts will vary depending on the activities and circumstances one endures (Bandura, 1997). For example, a manager in the midst of a stressful situation (i.e., conflict between subordinates) may procure negative self-referent thoughts and a decreased belief in his or her ability to produce the mediating result desired. In order to ensure a competent performance in any situation, one must have a strong sense of self-efficacy (Bandura, 1997).

Sources of Self-efficacy

The concept of self-efficacy is based on four main information sources, including: 1) performance accomplishments; 2) vicarious experiences; 3) verbal persuasions; and 4) physiological and emotional arousals (Bandura, 1977, 1982, 1984, 1986, 1997; Bandura & Adams, 1977).

First, *performance accomplishments*, also known as enactive attainments, are derived from personal experiences of mastering tasks or activities. This particular source of information on self-efficacy is the most useful, given that prior successful experiences will increase one's self-efficacy, whereas failures will decrease one's self-efficacy (Bandura, 1997). For example, someone who successfully gives a presentation and

masters the task of public speaking will increase the belief in his or her capabilities to give another successful presentation in the future.

Second, *vicarious experiences* involve watching other people perform tasks and activities successfully, leading one to believe that he or she too can successfully perform comparable tasks and activities (Bandura, 1997). Here, the relating concept of "anything you can do, I can do too" is in effect. Seeing others succeed can increase one's own self-efficacy, but seeing others fail can have the opposite effect (Bandura, 1997). For example, a university student may doubt his or her ability to answer a professor's questions in lecture, but when witnessing peers confidently and correctly responding to such questions, he or she will believe that he or she, too, can participate vocally just as well.

Third, *verbal persuasion* is a powerful tool that can be used to instill a belief in people about their successful coping abilities (Bandura, 1997). For example, a student's self-efficacy for a task such as a written exam can increase if his or her professor verbally communicates that he or she believes in said student's abilities to achieve a good grade. While it is a less powerful source than performance accomplishments, it still bolsters self-change and aids in skill development and the increase of self-efficacy (Bandura, 1997).

Fourth, the states of *physiological and emotional arousals* contribute to one's self-efficacy and can be used to assess one's capabilities (Bandura, 1997). Such states help one to determine his or her stress and anxiety levels during difficult tasks (Bandura, 1997). For example, those who are tense and agitated are less likely to judge themselves as highly efficacious, which will result in less than successful performances.

Self-efficacy can also differ in terms of magnitude/level, generality, and strength (Bandura, 1997). According to Bandura (1997), magnitude refers to the task size or the task difficultly level, which affects one's expectations of self-efficacy. For example, someone may believe that he or she is only efficacious enough to tackle very small tasks. Generality refers to the simplicity of an experience or a task, whereby when one takes on and is successful with a more complicated experience or task, such success will create more mastery occurrences and in turn will increase one's self-efficacy (Bandura, 1997). Last, the strength of self-efficacy has been analyzed, with the finding that strongly efficacious people persevere longer at difficult tasks (Bandura, 1997).

Impact of Self-efficacy

How one perceives his or her self-efficacy will have a direct impact on one's activity choices, behavioural and environmental settings, motivations, thoughts, emotions, exertion of effort, and coping persistence against situational obstacles and aversions (Bandura, 1997; Salomon, 1984). In particularly stressful situations, self-efficacy percepts can determine one's behaviours, thoughts, and emotions, and aid in the predictions of human action and reaction (Bandura, 1997). For example, Shuck, Otten, Kleinjan, Bricker, and Engels (2014) study on smoking cessation demonstrated that highly self-efficacious individuals changed their smoking habits for the better.

Self-efficacy mediates action and can impact how one prepares for and performs a task (Bandura, 1997). For example, stronger self-efficacious people can usually invest less preparatory effort because they believe in their capabilities to complete a task and do not feel the need to prepare (Bandura, 1997). It is believed that task outcomes are contingent on the quality of performances and that self-efficacy can predict present and

future performances (Bandura, 1997). The issue, however, is that self-doubt weakens one's performance and contributes heavily to behaviours, while diminishing performance accomplishments (Bandura, 1997).

An outcome significantly influenced by one's level of self-efficacy is the settings and environments in which he or she is comfortable. For example, if one perceives a threatening setting or task that is believed to exceed one's coping abilities, he or she will fear and avoid confronting that situation (Bandura, 1997). Conversely, settings and situations that are deemed manageable are those in which one will become more assuredly involved (Bandura, 1997). For example, individuals will avoid striving for occupational work settings in which they do not believe they can succeed.

Expended effort is another element that is heavily affected by one's level of self-efficacy. Specifically, those with stronger self-efficacy make greater and more active efforts, having more persistence in threatening situations, which helps develop beneficial experiences to further reinforce their self-efficacy (Bandura, 1997). However, individuals with low self-efficacy lack coping efforts, which results in defensive behaviour, and continued fears and doubts (Bandura, 1997). Those with low self-efficacy tend to avoid difficult tasks or give up altogether when faced with challenges (Bandura, 1997). Moreover, Bandura (1997) described how one could develop a stronger sense of self-efficacy if he or she is successful with minimal effort compared to successes brought about with high effort. Therefore, even if one is highly persistent, his or her repeated failures at a task can decrease self-efficacy.

To increase one's self-efficacy, individuals must use acquired skills from mastering threatening situations to disconfirm any misbeliefs about their fears (Bandura,

1997). For example, managers may fear confrontational aspects with employees when giving performance reviews. Yet, by performing that very task, managers can develop their communication skills, commensurate to overcoming that fear and increase their self-efficacy. While managers may be successful, self-efficacy will decrease if managers then uncover an intimidating factor during their situational interactions (Bandura, 1977). Therefore, if during a performance review, the employee becomes very vocally upset and defensive towards the manager, the manager may ultimately have a lessened opinion of his or her capability to fairly assess their subordinates.

CHAPTER III

REVIEW OF LITERATURE

Career & Occupational Self-efficacy

As a construct, self-efficacy can explain a variety of social phenomena such as phobias, stress, physical ability, and addiction (Bandura, 1977). Betz and Hackett (1981) were the first scholars to suggest that Bandura's self-efficacy theory could explain an individual's career decision-making process and career development. In their study, self-efficacy was measured among undergraduate male and female students in relation to the expectations of traditionally male (e.g., accountant, engineer, lawyer, physician) and traditionally female (e.g., dental hygienist, elementary teacher, secretary) occupations (Betz & Hackett, 1981).

The separation of occupations based on gender allowed Betz and Hackett (1981) to determine if any sex differences in self-efficacy expectations and the types of perceived career options existed. As such, these scholars found significant differences existing in self-efficacy for traditionally male and traditionally female occupations (Betz & Hackett, 1981). Specifically, males had equal self-efficacy for both types of occupations, but females had higher self-efficacy for traditionally female occupations and lower self-efficacy for traditionally male occupations (Betz & Hackett, 1981). Essentially, the authors interpreted that females felt they could not master the educational requirements and functions of typically male occupations (Betz & Hackett, 1981).

Their results suggested that students' self-efficacy expectations in relation to gendered occupations affected their career choice process; if students, specifically, have low occupational self-efficacy, they may start eliminating certain career options deemed

unattainable (Betz & Hackett, 1981). Females, especially, could begin avoiding

occupations due to low self-efficacy, which could prevent their development of new

interests or behaviours that follow such interests (Betz & Hackett, 1981).

Betz and Hackett's (1981) work was pivotal for many scholars studying career

and occupational tendencies. Their research on self-efficacy was particularly useful for

understanding and facilitating females' career development and for potentially explaining

why so few women occupy traditionally male jobs (Betz & Hackett, 1981).

For the purpose of this study, and as derived from Betz and Hackett's (1981)

work, occupational (or career) self-efficacy (OSE) is defined as the belief in one's

capabilities to complete the educational requirements and to master the job function skills

needed to achieve certain occupations. Studying the relationship between self-efficacy

and occupational preference is important because how one perceives his or her own

abilities may be more important than his or her actual abilities. In turn, these perceptions

may cause people to eliminate potentially rewarding jobs from consideration (Wheeler,

1983); an individual's low self-efficacy scores may contribute to career indecision

(Taylor & Betz, 1983).

A major predictor in one's level of OSE could be the number of males or females

who are already in certain positions in particular industries. Several scholars replicated

Betz and Hackett's (1981) research with further investigations on self-efficacy's

relationship to traditionally male or female-dominated occupations and career decision-

making (Nevill & Schlecker, 1988; Post-Kammer & Smith, 1985; Rotberg, Brown, &

Ware, 1987; Wheeler, 1983). These studies support the relationship between self-efficacy

and career choice, but while some researchers found gender differences in self-efficacy

scores (Clement, 1987; Nevill & Schlecker, 1988; Post-Kammer & Smith, 1985; Wheeler, 1983), other researchers found that gender did not predict career-related self-efficacy (Rotberg et al., 1987). Wheeler (1983) found that career indecision is often attributed to the number of males or females who already work in those occupations.

Several scholars also measured OSE without analyzing gender differences (Lent, Brown, & Larkin, 1984; Luzzo, 1993; Taylor & Popma, 1990), where again, researchers found that self-efficacy was related to career decision-making attitudes and career indecision (Luzzo, 1993; Taylor & Popma, 1990). Notably, Lent et al. (1984) found a relationship between student self-efficacy and academic achievement. Specifically, individuals' confidence in their own capabilities to complete the necessary educational program requirements and job duties of certain occupations were found to positively affect their grades and persistence to progress through the program.

Although OSE studies can be useful for either gender, Betz and Hackett (1981, 1997, 2006) recognized that researching self-efficacy's connection to occupational decision-making is particularly beneficial in the investigation of the underrepresentation of females in non-traditional female occupations. Hackett and Betz (1981) speculate that, "strong internal barriers develop which restrict their range of options [and] low expectations of success are a major source of internal constraints" (p. 337).

There is a constant need for research on students' career decisions and the barriers influencing such decisions "due to the quickly changing job market and technology, globalization of labour, and the critical need for job skills" (Kelly & Hatcher, 2013, p. 105). In a recent study, Kelly and Hatcher (2013) looked at college students' career decision-making self-efficacy and career barrier differences to further test the

relationships posited by Betz and Hackett (1981). They found that students' ages and

ethnicities significantly predicted their career decision-making self-efficacies, concluding

that older college students were generally more self-efficacious and had fewer career

barriers because they have had time to mature (Kelly & Hatcher, 2013). This result calls

for further research on how self-efficacy can differ over a range of ages, for example, the

range of ages across four years of an undergraduate program.

Hackett and Betz (1981) recommended that further research be conducted,

examining career/occupation-related behaviours and their relationship to self-efficacy,

especially among female samples. Betz and Hackett (1997) comment,

> Most would agree that it is not gender per se that leads to discrepant career
>
> behaviour on the part of young men and women but, rather, that it is aspects of
>
> gender role socialization that influence the differences in the choices and career
>
> outcomes of men and women in our society (p. 385).

Perhaps a continued focus on the impact of self-efficacy on gender role socialization in

the workforce—particularly in a male-dominated field such as the sport industry—may

bring further awareness to the situation and encourage solutions.

Women in Leadership

There has been no shortage of literature addressing the subject of women in

leadership, with much focus on their underrepresentation in such roles. Leadership is

recognized by many as a male-dominated paradigm and is often framed with the phrase,

"think manager – think male" (Eagly & Karau, 2002; Schein, 2007; Shaw & Hoeber,

2003). Several scholars have studied the paucity of female organizational leaders and

managers (e.g., Eagly & Karau, 2002; Eagly, Makhijani, & Konsky, 1992; Hoyt, 2010;

Hoyt & Simon, 2011). While researchers and practitioners constantly discuss the

reasoning behind this limitation, Hymowitz and Schellhardt (1986) have coined the

phenomenon as the 'glass ceiling' effect, which represents invisible barriers preventing

women from acquiring leadership positions in organizations (cf. Hoyt, 2010).

Several scholars have studied this leadership phenomenon for many years. Eagly

et al. (1992) discovered that when women displayed stereotypically masculine leadership

styles and held typically male-dominated roles, subordinates evaluated them more

negatively than they did male leaders. Hoyt and Simon (2011) tested the impact that

female leader role models had on women when working within stereotypically male

positions (e.g., Supreme Court Justice Ruth Bader Ginsberg), finding that women's self-

perceptions and leadership aspirations decreased when exposed to female leader role

models. When the same women were exposed to top male leaders, however, results were

opposite such that their self-perceptions and leadership aspirations increased (Hoyt &

Simon, 2011). To this finding, Sandberg and Scovell (2013) acknowledge that "one of the

obstacles to more women gaining power has sometimes been women already in power"

(p. 163), where leadership-aspiring women can be biased against dominant women

leaders.

Women in Sport Leadership

In order to narrow the breadth of information regarding leadership and gender, the

focus of this research will center on the sport industry, a male-dominated industry that is

underrepresented by female leaders (Acosta & Carpenter, 2012; Burton, 2014; Burton et

al., 2009; Cunningham, Doherty, & Gregg, 2007; Pellegrini, 2014). Although it is

understood that women's participation on the field of play has increased, there is still a

deficiency of women in leadership positions in the sport boardroom, particularly within

administrative and managerial positions (Burton et al., 2009). Women still face many

obstacles and challenges in their attempts to secure top-level leadership roles in sport

organizations (Burton, 2014).

Sartore and Cunningham (2007) propose that it may be societal and ideological

gender beliefs that prevent women from entering the sport industry, which can result in

self-limiting behaviours and decreased self-efficacy for women who are involved in this

dynamic (Sartore & Cunningham, 2007). The way women limit themselves (e.g.,

perceived lack of qualifications and expectations of failure) could be attributing to their

underrepresentation in sport leadership positions (Sartore & Cunningham, 2007).

Scholars have used sport organizations as examples of work environments experiencing

gender stereotyping, an issue which may explain the lack of women in sport leadership

positions (Sartore & Cunningham, 2007).

Gender stereotyping. Sartore and Cunningham (2007) describe sport

organizations as "rich in hegemonic masculinity and comprised of job positions that are

associated with traditional and gender sex-role stereotypes" (p. 259). The issue of gender

stereotypes is often referred to in previous research as a major barrier to women's

leadership progress in sport organizations (e.g., Burton et al., 2009; Hoyt & Blascovich,

2010; Schein, 2007; Simon & Hoyt, 2012). It is such negative stereotypes about female

leaders that contribute to the continual disparity between genders (Eagly & Carli, 2007).

Women, in the face of such stereotypes, are required to work especially hard to overcome

them, or else risk eliminating the sport industry as a potential future outcome (Harris et

al., 2015).

Specifically, gender stereotyping, as described by Heilman (2001), is the idea that men and women differ in terms of their agentic (achievement-oriented) traits and their communal (social/service-oriented) traits. Men are described as having masculine agentic traits and are characterized as being aggressive, independent, dominant, decisive, and self-confident (Heilman, 2001). Women, on the contrary, are assumed as having feminine communal traits and are considered to be more helpful, sympathetic, affectionate, kind, and nurturing (Heilman, 2001). While these traits are not actual characteristics of each gender, they are societal perceptions of the normative attributes men and women are expected to demonstrate through their behaviour (Heilman, 2001).

Eagly and Karau (2002) supplement Heilman's (2001) definition of gender stereotyping with social role theory, which is the belief that there are certain qualities that are suitable for each gender to possess. In addition, there are societal expectations about the positions in the workplace that men and women should occupy (Eagly & Karau, 2002). An example of this could be how society views men as being dominant and aggressive (Heilman, 2001); therefore, it is expected that they should occupy coaching positions, as those are roles often held by men with those perceived characteristics. If women have lower self-efficacy, they will not "try" these positions that are societally unsuitable for them (Bandura, 1977).

Social role theory was followed by Eagly and Karau's (2002) role congruity theory, which is the assumption that the underrepresentation of women leaders may be explained by gender stereotyping in organizations. When women aspire to these leadership positions, their best chance for success will require their adoption of 'masculine' traits and these aforementioned agentic qualities (Burton et al., 2009). Again,

women must adopt a strong sense of self-efficacy in order to achieve leadership positions (Bandura, 1977).

When women demonstrate agentic traits, they may engage in subconscious 'sex-matching' and 'trait-matching' (Heilman, 2001; Sartore & Cunningham, 2007). Sex-matching is when "men and women are matched to specific jobs based on the ratio of men and women currently occupying such positions" (Sartore & Cunningham, 2007, p. 248). In line with sex-matching, women will be more attracted to positions in which many women are currently working and vice versa for men. For example, dental hygienist is a popular occupation for women (Betz & Hackett, 1981); therefore, other women will consider that as a future career option.

In turn, Heilman (2001) outlines that with trait-matching, men and women are best suited for positions requiring the matching stereotypical skills and abilities (Heilman, 2001). Specifically, women will be matched to positions requiring communal, service-oriented skills (e.g., secretary), whereas men will be matched to positions requiring agentic, achievement-oriented skills (e.g., head coach). Schein (2007) and Burton et al. (2009) contend that management and leadership skills are characteristically agentic; and, therefore, are more commonly associated with men. According to these theories, Schein (2007) purports "a male appears more qualified, by virtue of his gender alone, than does a female to enter and advance in management" (p. 7).

Leadership Efficacy

In the previous sections, one's affinity for leadership positions in sport has been outlined as being attributed to his or her internal beliefs and to the internal organizational conditions (e.g., gender stereotyping). Bandura's (1997) self-efficacy theory may also be

used to explain this affinity. Earlier, work by Betz and Hackett (1981) outlined that self-efficacy was linked to occupations and career decision making, where one's belief in his or her abilities to perform the requirements and duties necessary to achieve job positions is related to one's career progression. Although research in this area is relatively new, more scholars have studied how self-efficacy is related to leadership (e.g., Hannah, Avolio, Luthans, & Harms, 2008; Machida & Schaubroeck, 2011; McCormick, 2001; Paglis & Green, 2002; Quigley, 2013), finding that self-efficacy can be vital in determining one's ambition for leadership or managerial positions (McCormick et al., 2002; Van Vianen, 1999). As such, Quigley (2013) defines Leadership Efficacy (LE) as one's belief in his or her "capability to lead others and fulfill whatever roles are necessary in that capacity" (p. 580).

According to Quigley (2013), one's LE changes and develops over time and has major implications in the overall improvement of leader effectiveness in organizations. In her study, Quigley (2013) analyzed Masters of Business Administration (MBA) students who were a part of a 4-day immersive business simulation, finding that LE scores were higher among respondents who were more extraverted and had a higher cognitive ability (Quigley, 2013). Furthermore, Quigley (2013) found that respondents' LE differed over time depending on their level of emotional stability, agreeableness, and openness to experience. Moreover, after expert sources gave respondents feedback on their performance in the simulation, the respondents' LE increased (Quigley, 2013). These findings demonstrate that respondents' LE can be affected via performance accomplishments (e.g., a business simulation), verbal persuasion (e.g., feedback), and physiological arousals (e.g., emotional stability), all of which are factors established by

Bandura (1997). As such, it appears that many factors can alter individuals' LE, both positively and negatively, over the course of an educational experience.

      Leadership efficacy and gender. As previously noted, the issue of underrepresentation of females in leadership positions has been well addressed and studied by many scholars (Eagly et al., 1992; Eagly & Karau, 2002; Eagly & Carli, 2007; Hoyt, 2010; Hoyt & Simon, 2011). To delve further, scholars have recently begun to study the issue using LE to potentially explain why more men than women work in leadership roles in organizations. While valuable, very few studies have examined LE as a whole, irrespective of gender. Instead, LE is often assessed with a focus on gender differences, particularly emphasizing a woman's lack of self-confidence and lower self-efficacy in her leadership abilities (e.g., McCormick et al., 2002). According to Hoyt (2005), women with higher levels of LE have a higher affinity for leadership positions, essentially meaning that when women have more confidence in their capabilities to lead, they will confidently pursue working within leadership roles. However, a real issue arises when considering women who have low LE.

      A common study sample for LE research has been female students enrolled in collegiate science, technology, engineering, math, and medicine programs, given the typical male-dominated nature of these programs (Dugan, Fath, Howes, Lavelle, & Polanin, 2013; Isaac, Kaatz, Lee, & Carnes, 2012). Dugan et al. (2013) examined how females' leadership aspirations when enrolled in these male-dominated programs were affected by their LE. These researchers compared these female participants' aspirations with females enrolled in other non-male dominated programs, reporting that, while all women had similar leadership capacity, those in the male-dominated programs scored

lower on LE than did women from the other programs (Dugan et al., 2013). Hoyt (2005)

accedes that females' low LE, particularly during their university or college experience,

can be a major influencing factor in determining whether or not they pursue future

leadership positions.

As such, it is necessary to determine strategies to reverse this trend and raise LE

for women studying within male dominated programs. Similar to Dugan et al. (2013),

Isaac et al. (2012) sampled women enrolled in male-dominated programs (e.g., science,

mathematics, engineering). Their initial LE was measured and, after participation within

a specially designed educational intervention leadership course for females, there were

increases in their LE (Isaac et al., 2012). In an alternate study, Momsen and Carlson

(2013) also did a pre- and post- measure of LE and found that graduate-level females who

participated in a 3-year "Women and Leadership" course increased their LE. These

results are evidence of reputable methods of increasing students' self-efficacy,

specifically women.

Self-efficacy in the Sport Industry

Often, self-efficacy in the sport industry is assessed using social cognitive career

theory (SCCT; Lent et al., 1994). SCCT comes from Bandura's (1986) SCT and

encompasses how self-efficacy, outcome expectations, and choice goals affect one's

academic and career choices (Lent et al., 1994). While Bandura's (1986) SCT assesses an

individual's behaviour and self-system, SCCT has a distinct connection to one's career

decision-making process where occupational interests are positively affected by self-

efficacy and optimistic outcome expectations (Lent et al., 1994). To reiterate, one's

interest in a particular position is caused by his or her belief in his or her capabilities to

perform the job tasks and the associated perceived positive outcomes from acquiring that position (Cunningham et al., 2005). While self-efficacy and outcome expectations were defined in the previous sections, one's "choice goals" are an individual's intentions to become involved in a specific action (Lent et al., 1994).

Cunningham et al. (2005) utilized SCCT to study students' affinity for career options in the sport and leisure industry and found that self-efficacy affected outcome expectations and choice goals, and all three were positively connected with vocational interests. Essentially, an individual's desire to enter the sport and leisure industry depended on the strength of those three constructs.

In alternate studies, Cunningham et al. (2007) and Cunningham, Sagas, and Ashley (2003) measured the self-efficacy, outcome expectations, and choice goals of assistant coaches to determine their head coaching intentions. Cunningham et al.'s (2007) sample included coaches from Ontario University Athletics (OUA) and they found that males expressed significantly greater levels of self-efficacy compared to females, which had an impact on their outcome expectations and goals (Cunningham et al., 2007). Cunningham et al. (2003) sampled coaches from the NCAA and exhibited similar results. Specifically, males had greater levels of self-efficacy than females and, therefore, had stronger desires to become head coaches (Cunningham et al., 2003). These results further provide support for the importance of self-efficacy and its ability to impact other constructs.

Summary of Literature

Betz and Hackett (1981) found that males and females had significantly different levels of self-efficacy based on the traditional nature of an occupation; for example,

males had equal levels of self-efficacy for jobs that were traditionally male-dominated and traditionally female-dominated. However, females had lower levels of self-efficacy for traditionally male-dominated jobs compared to traditionally female-dominated jobs (Betz & Hackett, 1981). This result is consistent among other scholars (e.g., Clement, 1987; Nevill & Schlecker, 1988; Post-Kammer & Smith, 1985; Wheeler, 1983).

Given the unequal proportion of males and females in the sport industry (Burton, 2014), vicarious experience (in particular) would be assumed to be lower for females as they do not see other females in sport management positions. Cunningham et al. (2003; 2007) also maintain the notion that males have higher levels of self-efficacy compared to females in their study on the head coaching aspirations of assistant coaches. Therefore, the gap remains in understanding how sport industry OLE is different for male and female undergraduate students in light of this disparity.

Irrespective to gender, Kelly and Hatcher (2013) found that older students demonstrated higher self-efficacy than younger students, which supports the notion that a students' self-efficacy can be different throughout the years of an undergraduate program. The gap remains in unpacking where changes in sport industry OLE may occur across an undergraduate program, and specifically understanding if students' OLE is different depending on the number and type of courses they have sequentially completed in an undergraduate sport management degree program. Bandura (1997) upholds the four sources of self-efficacy (performance accomplishments, vicarious experiences, verbal persuasion, and physiological arousals), which may occur throughout an undergraduate program, thus affecting differences in OLE between the years.

In regards to self-efficacy and its connection to leadership, it has been found that female students enrolled in traditionally male-dominated programs (e.g., science, technology, engineering, mathematics, and medicine) had lower levels of LE than female students enrolled in non-male-dominated programs (Dugan et al., 2013; Isaac et al, 2012). LE can be positively affected using Bandura's (1997) four sources of self-efficacy (Dugan et al., 2013; Isaac et al, 2012). Additionally, Quigley (2013) determined that LE changes and develops over time and also found support for Bandura's (1997) self-efficacy sources (e.g., verbal persuasions and performance accomplishments in business simulations). The gap remains in understanding LE of students in sport management programs. Due to the unequal proportion of males and female in this type of program (Floyd Jones et al., 2008), performance accomplishments may be categorized and weighted differently by students. For example, male students may perceive that their ability to recite sports statistics (i.e., box scores) elevates them above other students and will, therefore, increase their OLE.

There are numerous North American colleges and universities that offer undergraduate sport management degrees (NASSM, 2015a, NASSM, 2015b), and there is increased competition to secure employment in the sport industry due to its competitive nature (Belzer, 2014). Self-efficacy can be used to address how students who aspire to work as leaders in the sport industry judge their capabilities to do so (i.e., OLE) (see Cunningham et al., 2003; 2005; 2007). Given that sport management programs are dominated by male students (Floyd Jones et al., 2008), and the sport industry is primarily governed by male leaders (Pellegrini, 2014), it is especially necessary to consider OLE of

female students as a potential factor that could be identified and managed (e.g., increased) prior to entry into the industry.

Based on the previous literature on self-efficacy, particularly the work done by Bandura (1997), Betz and Hackett (1981), Quigley (2013), and Cunningham et al. (2003; 2005; 2007), the construct of occupational leadership efficacy (OLE) was created by the researcher as a facet of self-efficacy for the purpose of this study. To reiterate, OLE is a students' judgment of their capabilities to occupy leadership employment positions in a particular industry, specifically, the sport industry.

Research Questions & Hypotheses

Primarily, the purpose of this study is to determine how sport management undergraduate students judge their capabilities to occupy future leadership positions in the sport industry. Secondarily, this study will explore the differences in OLE between groups of students who have completed sequential courses within their sport management undergraduate program. Finally, this study will explore differences in OLE between students grouped by sex who have completed sequential courses within their sport management undergraduate program. To address the purpose and guide the research, three research questions were formed:

1. How do students in a 4-year undergraduate sport management program judge their capabilities to be employed in leadership positions in the sport industry (i.e., their OLE)?

2. Does sport industry OLE differ between groups of students who have completed sequential courses in a 4-year undergraduate sport management?

3. Does sport industry OLE differ for male and female students enrolled in a 4-year undergraduate sport management?

To serve the purpose and research questions, the following hypotheses are put forth:

Hypothesis 1. Based on the rationale that self-efficacy is higher in older students (Kelly & Hatcher, 2013) and Quigley's (2013) support of Bandura's (1997) sources of self-efficacy, there will be significant differences in sport industry OLE scores for students that have sequentially completed no courses, one course, two courses, and three courses in an undergraduate sport management program.

> **1a.** Students who have completed three sequential courses will demonstrate higher levels of sport industry OLE compared to students who have completed two courses, one course, or no courses.

> **1b.** Students who have completed two courses will demonstrate higher levels of sport industry OLE compared to students who have completed one course or no courses.

> **1c.** Students who have completed one course will demonstrate higher levels of sport industry OLE compared to students who have completed no courses.

> **1d.** Students who have completed no courses, but have sport-related employment experiences, will demonstrate higher levels of sport industry OLE compared to students who have completed no courses, but have no sport-related employment experiences.

Hypothesis 2. Based on the work done by Betz and Hackett (1981), Dugan et al. (2013), and Cunningham et al. (2003; 2007), it is hypothesized that males will

have higher sport industry OLE than females in an undergraduate sport

management program.

    2a. When students with no sport-related employment experiences have not

completed any courses, males will have higher sport industry OLE than

females.

    2b. When students with sport-related employment experiences have not

completed any courses, males will have higher sport industry OLE than

females.

    2c. When students have completed one course, males will have higher

sport industry OLE than females.

Given the previous hypotheses, which infer that female students will have a lower

level of OLE compared to male students, the influence of Bandura's (1997) sources of

self-efficacy is presumed to resonate more with female students as they progress through

their academic program. Specifically, according to Bandura's (1997) sources of OLE,

females could be influenced by (1) sport industry-related performance

accomplishments; (2) vicarious experiences of sport management female peers and

industry professionals who deliver guest lectures/presentations; or (3) verbal

persuasion feedback from experienced peers and professionals within the sport

management program. Thus, where the previous hypotheses suggest that female students

start at a lower baseline level of OLE, Bandura's sources of self-efficacy suggest that

completion of courses within an undergraduate program leads to greater variation in

increases in OLE for female students (see also Isaac et al., 2012; Momsen & Carlson,

2013).

2d. When students have completed two courses, males and females will have equal levels of sport industry OLE.

2e. When students have completed three courses, females will have equal, or higher, levels of sport industry OLE than males.

In the next chapter, the research design and methodology of the study will be outlined; specifically, how the construct of OLE was measured to explain how sport management students judge their sport industry OLE. Further, participant recruitment, the sampling strategy, instrumentation, data analysis, and hypotheses tests will be discussed.

CHAPTER IV

METHODOLOGY

From a review of the literature, it is evident that numerous studies exist on self-efficacy and how one's judgments of their capabilities can be linked to occupational decision-making and leadership. Additionally, the characteristics of the male-dominated sport industry have been carefully documented (e.g., Acosta & Carpenter, 2012; Burton, 2014; Burton et al., 2009; Pellegrini, 2014), where scholars have clearly demonstrated that females are underrepresented in the sport industry, especially within leadership positions.

Role of Researcher

This research will contribute to the current literature on self-efficacy, leadership employment, and sport, and will also be beneficial to sport management educators within degree programs across North America. With that, it is noted that the researcher has some personal connection to the topic. Having completed a 4-year undergraduate sport management degree program, the researcher has first-hand direct understanding of the experiences that students have in this type of program, female students in particular. Being a female in a male-dominated program can be difficult and developing high levels of self-efficacy comes with its challenges and, in the researcher's case, can take many years.

The researcher has made assumptions during the course of the current study, which are based on previous research and related self-efficacy literature. However, the researcher recognizes the subjective views that are associated with the research. The limited prior research that does exist supports the assumption that OLE will increase as

students progress through a degree program; however, based on the researcher's personal

experience, a decrease in OLE could be expected for both males and females. It appeared

that students would begin their program in their first year feeling very optimistic about

their futures in the sport industry, many of them stating their desire to be top-level

employees in sport organizations (e.g., the General Manager of the Toronto Maple

Leafs). Over the course of their academic programs, the realization sets in regarding how

competitive the sport industry is and how rare it is to achieve these top-level executive

positions. Therefore, the goal of this research is to shed colloquial light on if and how a

sport management degree program affects one's OLE and to provide evidence to

educators regarding the nature of OLE, particularly for females who are underrepresented

in the sport industry.

In the following sections, the methodology for this study is described in order to

clarify how the stated hypotheses were empirically assessed. Specifically, (1) the sample

(i.e., sport management students) and data collection techniques are explained, followed

by (2) a discussion of the survey design in general and instrumentation to measure OLE

more specifically (see Appendix A for OLE Survey), (3) an outline of the reliability and

validity assumptions, and (4) the study's data analysis techniques, hypotheses, and

assumptions.

Participants

To measure sport industry OLE, the researcher used a purposive sample of

students enrolled in sport management undergraduate courses at Brock University. The

use of this post-secondary institution is justified as it is home to the largest dedicated

undergraduate sport management program in Canada and, arguably, all of North

America. Further, this program was chosen as an appropriate purposive sample given its international reputation as one of the top five undergraduate sport management programs in the world (Masters of Sport, 2015). The population of interest for this research was undergraduate sport management students.

Quigley (2013) notes that when assessing the judgments of one's capabilities, especially in terms of sport industry leadership, it is beneficial to use a student sample and to assess self-efficacy across the entirety of an undergraduate program. This provides further insight into proper leadership development among the millennial generation, a generation of individuals who may lack effective leadership skills (Howe & Strauss, 2007). Thus, the targeted sample included students enrolled in four (n = 4) chosen undergraduate sport management courses. Approximately forty (n = 40) students per course, for a total sample of 160 (n = 160), was the target number of participants.

In order to effectively measure OLE for the sport industry, these students were the target sample because they were assumed to have a desire to be employed in the sport industry in some capacity in their future. University programs claim to be beneficial to the development of students and future industry leaders, so utilizing sport management students will determine if this type of program influences students' self-efficacy. The study fills a gap in the research because survey respondents were students across four years of an undergraduate program, where differences across those years could be assessed and the implications may relate to a field that has not been extensively studied; OLE in the male-dominated sport industry.

Sampling Strategy

Given the research topic was proposed to and accepted by the researcher's committee, the researcher submitted an application outlining the proposed study to the Brock University Research Ethics Board (REB). Ethics approval from the REB was thus granted sometime later on September 15, 2015. As previously mentioned, the target sample consisted of Brock University sport management undergraduate students. Four courses were chosen as the target population for recruitment, including: SPMA 1P92 (Understanding Sport Industry Sectors), SPMA 2P05 (Management Concepts in Sport Organizations), SPMA 3P21 (Managing Human Resources in Sport Organizations), and SPMA 4P09 (Leadership in Sport Management).

These courses were ideal to serve the purpose of this study because course content encompasses similar organizational behaviour and leadership concepts related to the psychological and sociological realms of sport management and the theoretical concepts covered in the current study (e.g., leadership and self-efficacy). Such concepts are developed and expanded upon as students move through the program. Ideally, students' self-efficacy regarding management and leadership would change and grow as students learn concepts associated with management and leadership within these classes, thereby completing the necessary requirements of these courses (i.e., performance accomplishments).

To account for the covariates of age and year of study, OLE for the sport industry was measured across the entirety of the program based on courses the students had successfully completed. Although both male and female students across four undergraduate courses were surveyed, sex was used as an influential variable in the

analyses. Given Burton's (2014) acknowledgement that females have a lessened desire for sport leadership positions, a specific emphasis was placed upon whether female students differ from their male counterparts regarding OLE.

Participant Recruitment Strategies

To recruit the appropriate number of participants, the researcher provided a short presentation at the start of a lecture within each chosen undergraduate course (see Appendix B for Recruitment Script). Specifically, during these presentations, the researcher outlined details of the study, emphasized voluntary participation, and addressed the incentive of a prize draw for those who chose to participate. The researcher also provided student participants with contact information during each presentation, asking them to make contact via email if they were interested in participating.

To maintain a timely data collection schedule, these presentations occurred in the first semester of Brock University's 2015/2016 undergraduate calendar, specifically, in the last week of September. Data collection was intended to start at the beginning of October due to its theoretical relevance; specifically, at this time students should have obtained partial knowledge of the course content and, as such, could be classified as not yet having completed the course.

Data Collection

Initially, the researcher communicated four pre-determined survey completion dates, times, and locations to interested student participants and requested that they select their preferred date and time to complete the survey. These four survey completion dates all occurred in the first week of October, 2015. The researcher sent confirmation emails to the students who responded and attached a letter of consent for them to read prior to

the survey completion date (see Appendix C for Letter of Consent). Students were additionally handed the letter of consent at the time of survey completion and were asked to re-read, sign, and return the consent form with their completed survey.

After the first week of data collection, the target sample was not achieved and there was a noted lack of student representation from the 2P05 and 4P09 classes (see Table 1 on p. 47). To remedy the low number of student respondents, the survey was sent via email to sport management students enrolled in the four chosen courses. Those interested could participate in the study and bring the survey to the researcher upon completion. Still, the target sample had not been achieved. For a final data collection attempt, the researcher attended a lecture for each course, requested the course instructor to leave the room (as per REB protocol), reiterated the survey's purpose, prize incentive, and voluntary participation, and handed the survey to any interested students. This strategy occurred over two weeks (i.e., two data collection periods) to comply with course instructors' lecture schedules and the researcher was able to receive the desired number of respondents through this data collection strategy.

In total, the data collection period occurred over four weeks, resulting in four different collection weeks, or 'time periods' (see Table 1 on p. 47). The incentive for participation was four prize draws, one per course. Each student who participated had his or her name entered into the draw and one winner was randomly selected from each course. The course with the lowest number of representing participants was SPMA 2P05; however, it can be hypothesized that the incentive was not large enough for this group. One year prior to the current data collection, this same group of students was offered a chance to complete a leadership survey that would result in a one percent bonus mark on

their overall course grade. The drop in perceived incentive value (draw for a prize versus a bonus mark) may have led some SPMA 2P05 students to decide not to participate.

Sample

Of the total population of N = 484 students in the four selected undergraduate courses, n = 163 students completed the survey, resulting in a 34% response rate. To specify, the sample included 69 out of 258 students (27%) who had not yet completed any target courses, 21 out of 82 students (26%) who completed SPMA 1P92, 35 out of 89 students (39%) who completed SPMA 1P92 and SPMA 2P05, and 29 out of 55 students (53%) who completed SPMA 1P92, SPMA 2P05, and SPMA 3P21. Additionally, the sample included nine crossover students (6%) who were enrolled in courses non-sequentially (see Table 1).

Table 1

Data Collection Time Periods & Summary of Sample

	Time 1 (Sept. 28 - Oct. 2)	Time 2 (Oct. 5 - Oct. 9)	Time 3 (Oct. 19 - Oct. 23)	Time 4 (Oct. 26 - Oct. 30)	**TOTAL**
SPMA 1P92	n = 15	n = 0	n = 0	n = 54	n = 69
SPMA 2P05	n = 7	n = 0	n = 14	n = 0	n = 21
SPMA 3P21	n = 21	n = 2	n = 11	n = 1	n = 35
SPMA 4P09	n = 4	n = 3	n = 0	n = 22	n = 29
Crossovers	n = 4	n = 1	n = 3	n = 1	n = 9
TOTAL	n = 51	n = 6	n = 28	n = 78	**n = 163**

To simplify, students who had not yet completed any target courses are labeled, 'Year 1,' students who have completed only SPMA 1P92 are labeled 'Year 2,' students who have completed SPMA 1P92 and SPMA 2P05 are labeled 'Year 3,' and students who have completed SPMA 1P92, SPMA 2P05, and SPMA 3P21 are labeled 'Year 4.' These labels will be utilized throughout the rest of the document .

The nature of the research involves examining students who have sequentially completed courses in an undergraduate sport management program. Therefore, nine out of 163 participants (6%) were eliminated from analysis as they had a non-traditional undergraduate course experience and did not complete their sport management courses sequentially. As such, they essentially did not fit the sample. The updated sample, n = 154, was comprised of 76% male students (n = 117) and 24% female students (n = 37), which is indicative of the overall sex distribution in the sport management undergraduate program at Brock University.

Students in Year 1 were a noticeably larger group (n = 69) compared to the other three groups (n = 21, n = 35, n = 29). Therefore, to aid the analysis and decrease the likelihood of making a Type II error, the Year 1 sub-sample was split into two separate groups to achieve a more equal sample size. Specifically, Bandura (1997) highlights how previous successful experiences (i.e., performance accomplishments) can increase an individual's self-efficacy. For the purpose of this research, it can be assumed that students' previous experiences of successfully finding employment in the sport industry can increase their OLE. Thus, Year 1 was split based on whether or not they have had employment experience in the sport industry. Those who had not had employment experience were labeled Year 1a (n = 34) and those who have had employment experience were labeled Year 1b (n = 35) (see Table 2).

Table 2

Distribution of Sample (Courses Completed, Sex, Totals)

	Year 1a	Year 1b	Year 2	Year 3	Year 4	TOTAL
	N = 34	N = 35	N = 21	N = 35	N = 29	N = 154
Male	n = 28	n = 27	n = 11	n = 27	n = 24	N = 117
Female	n = 6	n = 8	n = 10	n = 8	n = 5	N = 37

Instrumentation

To address the study's purpose, research questions, and hypotheses, OLE was measured using a quantitative survey research design. Creswell (2013) defines quantitative research as "an approach for testing objective theories by examining the relationship among variables" (p. 4). Using surveys to measure OLE provides a numeric description of attitudes, opinions, or trends among a larger population by studying only a sample of that population (Creswell, 2013). The use of quantitative surveys to study self-efficacy-related behaviours is supported by researchers of several published studies (e.g., Betz & Hackett, 1981; Cunningham et al., 2005; Quigley, 2013; Taylor & Betz, 1983; Van Vianen, 1999). Further, this quantitative research design for measuring OLE was a form of non-experimental, cross-sectional, correlational research. According to Field (2013), correlational research involves the observation of natural events without researcher interference, while measuring variables at a single point in time. Specifically, in the current study, the researcher measured students' OLE in relation to their sex and the specific undergraduate courses they had completed.

The structure of the OLE survey was based on Cunningham et al.'s (2005) study on self-efficacy for sport and leisure industry positions and on McCormick et al.'s (2002) study on self-efficacy and leadership (see Appendix A for OLE Survey). However, survey items were tailored so as to: 1) fit the proposed sample; 2) achieve the study's purpose; and 3) address the research questions. Specific words were added to the items to specify "leadership position" and "sport organization/industry." This was done to maintain clarity for the students and to ensure ensuing responses could be transferable to the study's purpose of assessing self-efficacy for leadership in a sport-related capacity.

Section 1 (of two Sections) of the survey included demographic items, while subsequent questions measured sport industry employment interest and salary expectations. Field (2013) recognized the importance of addressing potential extraneous factors called covariates while completing survey research. Thus, to account for covariates, Section 1 of the survey included questions meant to measure respondents' previous post-secondary school experiences, undergraduate year of study, students' perceived average grade, sport-related employment, sport-related volunteer positions, and leadership experiences, including captaincy roles. These covariates were chosen because the method of analysis being completed aims to find the differences between variables while taking into account, or statistically controlling for, extraneous factors (Keith, 2006). Therefore, it is essential to identify the factors that could most affect a student's OLE.

Specifically, previous scholarly research supports the addition of similar covariates (e.g., average grades, leadership experiences, sport experiences) in surveys related to self-efficacy, leadership, and sport (Cunningham et al., 2005; McCormick et al., 2002; Van Vianen, 1999). Additionally, the survey included a description of the parameters of the "sport industry," as well as a list of potential leadership positions, to ensure that all students understood the parameters of the survey items. Therefore, clarity and consistency could be maintained among the respondents' OLE item answers.

Section 2 of the instrument measured students' OLE. There were 13 OLE statements where respondents were required to rank answers on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) (see Table 3 on p. 54 for description of survey items). Betz, Hammond, and Multon (2005) found support for the use of the 5-point response continuum in self-efficacy surveys when they compared two

studies that used a 10-point Likert scale to their current study that used a 5-point Likert

scale. Betz et al. (2005) concluded that the 5-point measure was at least as reliable, if not

more reliable, than the 10-point alternative. In the current study, survey items adapted

from Cunningham et al. (2005) measured students' capability judgments relating to the

acquisition of and performance in leadership positions. Survey items adapted from

McCormick et al. (2002) measured students' capability judgments relating to specific

leadership abilities and tasks. In particular, the survey items represented three OLE

factors; OLE General, OLE Performance, and OLE Task (see description of these factors

on p. 54-55).

Reliability. According to Field (2013), reliability is "whether an instrument can

be interpreted consistently across different situations" (p. 13) and is necessary to account

for when doing statistical analyses in order to mitigate and identify measurement error.

The use of proven reliable survey examples from existing research helped to ensure an

acceptable reliability measure/internal consistency. The most common measure of survey

scale reliability is Cronbach's alpha; often, a value of .70 or higher is viewed as

acceptable (Field, 2013).

The leadership self-efficacy survey used by McCormick et al. (2002) was adapted

from a measure developed by Kane and Baltes (1998) and has a high reliability score

with a Cronbach's alpha of .90. The sport/leisure industry self-efficacy measure used by

Cunningham et al. (2005) was adapted from Van Vianen's (1999) managerial self-

efficacy measure and has a Cronbach's alpha of .82. These acceptable measures of

reliability supported the decision to use existing surveys to measure OLE within a sport

industry context. After the survey was administered and results were obtained, the

reliability of OLE items representing OLE General were tested using SPSS and an

acceptable Cronbach's alpha score of .79 was found. OLE Performance and OLE Task

were single item measures and thus did not lend themselves to reliability coefficients.

The use of single item measures is supported because the construct, OLE, is concrete and

understood similarly by all respondents due to the descriptions provided on the survey

(Fuchs & Diamantopoulos, 2009). Additionally, there was a level of redundancy among

several of the items (i.e. OLE 1, OLE 2, and OLE 3; see Table 3 on p. 54), which also

supports the use of reducing the measures to single items (Fuchs & Diamantopoulos,

2009).

Validity. Another instrument property considered was validity, which is the

generalizability of a survey and whether or not it "actually measures what it sets out to

measure" (Field, 2013, p. 12). Because the proposed survey examines students' self-

judgments of their capabilities, it is vital to assess how the survey's items represent the

construct being measured (Field, 2013). Furthermore, two categories of validity that were

assessed include: face and content.

Face validity is achieved when a survey appears to measure what it intends to

measure (Sechrest, 1984). Therefore, based on previous research, the survey items related

to self-efficacy appeared to measure OLE (see Cunningham et al., 2005; McCormick et

al., 2002).

The aim of *content validity* is to capture a domain or universe of behaviours with

the survey items, where the "domain" or "universe" is defined and survey items are fit to

that definition (Sechrest, 1984). In this case, the domain or universe is the issue of sport

leadership and how young adults self-judge their capabilities to be leaders in the sport

industry (i.e., OLE). Therefore, because OLE was defined and thirteen related items were used to assess this construct, content validity was achieved.

Data Analysis

Data were first entered into a Microsoft Excel spreadsheet, and then subsequently into SPSS Version 23 and coded appropriately. The dependent variables were OLE General, OLE Performance, and OLE Task, and the independent variables were sex and courses completed. Males and females were coded as "1" and "2," respectively. The courses students had completed were coded as "1" (Year 1a), "1.5" (Year 1b), "2" (Year 2), "3" (Year 3), and "4" (Year 4).

For the purpose of this research, covariates of interest were included to control for extraneous factors that could affect a student's OLE. Those factors include students': age, average grade, sport-related work and volunteer experiences, leadership position experiences, and captaincy experiences. They will be labeled throughout the remainder of the document as: 'Age', 'Average Grade', 'Sport Employed', 'Sport Volunteer', 'Sport Leader', and 'Captain'.

Data screening. After these data were collected, electronically entered into SPSS, and appropriately coded, they were cleaned, revealing four (4) missing values from the OLE items out of a total of 2,002 data points. That resulted in a missing data percentage of .002, which is considered to be a very small amount (Enders, 2003). These missing values were replaced with the mean values of the associated items in order to avoid losing data points and reducing sample size (Dodeen, 2003).

Screening of OLE survey items. The 13 OLE survey items were assessed for

variance levels and theoretical significance and four items were selected for analysis,

including OLE 2, OLE 3, OLE 6, and OLE 12 (see Table 4 on p. 55).

Table 3

Survey Items and Associated Mean Values

Label	Item	Mean	Included
OLE 1	*I expect I can perform well in a leadership position in the sport industry.*	4.28	No
OLE 2	***I have self-assurance that I could earn a leadership position within the sport industry.***	**4.21**	**Yes**
OLE 3	***Because of my capabilities, I expect I will be able to earn a leadership position within the sport industry.***	**4.16**	**Yes**
OLE 4	*I am capable of learning the skills needed for a leadership position in the sport industry.*	4.55	No
OLE 5	*I am confident I could successfully work as a leader within the sport industry.*	4.36	No
OLE 6	***I could perform well as a leader across different group settings in a sport organization.***	**4.06**	**Yes**
OLE 7	*I could motivate employees in a sport organization.*	4.18	No
OLE 8	*I could build employees' confidence in a sport organization.*	4.24	No
OLE 9	*I could develop teamwork in a sport organization.*	4.44	No
OLE 10	*I could 'take charge' when necessary in a sport organization.*	4.31	No
OLE 11	*I could communicate effectively in a sport organization.*	4.19	No
OLE 12	***I could develop effective task strategies in a sport organization.***	**3.89**	**Yes**
OLE 13	*I could assess employees' strengths and weaknesses in a sport organization.*	4.18	No

The chosen items epitomize an accurate representation of successful leadership

role acquisition and performance. To elaborate, OLE 2 ("I have self-assurance that I

could earn a leadership position within the sport industry") and OLE 3 ("Because of my

capabilities, I expect I will be able to earn a leadership position within the sport

industry") were established as measures of students' general self-perceptions in their

capabilities to achieve a leadership position in the sport industry. OLE 6 ("I could

perform well as a leader across different group settings in a sport organization") was

determined to measure students' self-perceptions of their capabilities to engender a

successful performance in their leadership employment role. Finally, OLE 12 ("I could

develop effective task strategies in a sport organization") measures students' self-

perceptions of their capabilities to complete actual leader tasks.

　　　　Both OLE 2 and OLE 3 measure the general capability self-perceptions of

students and are similar in averages and standard deviations (see Table 4). Therefore, to

more accurately portray the face validity of the constructs, OLE 2 and OLE 3 were

combined to create the new item, 'OLE General.' Subsequently, OLE 6 was retained and

termed 'OLE Performance' and OLE 12 was termed 'OLE Task.'

Table 4			
OLE Item Descriptive Statistics			
Item	New Title	Mean (*M*)	Standard Deviation (*SD)*
OLE 2 (M = 4.21, SD = .68)	OLE General	4.19	.60
OLE 3 (M = 4.16, SD = .70)			
OLE 6	OLE Performance	4.06	.71
OLE 12	OLE Task	3.89	.67

　　　　Finally, due to the fact that data collection occurred over four different time

periods, an analysis was completed in SPSS to determine if there were any differences in

the four selected OLE scores between those periods. No significant differences were

found in OLE 2, OLE 3, OLE 6, and OLE 12, with a minimum value of p = .13.

Hypotheses Tests

　　　　The hypotheses were tested in SPSS using an Analysis of Covariance (ANCOVA)

and a two-way ANCOVA. An ANCOVA controls the influence of related variables, or

covariates, on the dependent variable, OLE. The two-way ANCOVA analyzes both

independent variables; sex and courses completed. Field (2013) notes that ANCOVAs

account for unexplained variance, increasing analysis sensitivity by reducing error

variance. They remove any bias influence that the covariate could have on the dependent

variable (Field, 2013). The ANCOVA test includes the addition of covariates in order to

insinuate the most accurate results. The first hypothesis tested the differences in sport

industry OLE scores between the five sub-samples (i.e. Year 1a, Year 1b, Year 2, Year 3,

and Year 4) of an undergraduate sport management program. The second hypothesis

tested the differences in sport industry OLE scores between male and female students in

the five sub-samples. Analyses were run in SPSS in an attempt to reject the associated

null hypotheses:

> **Null Hypothesis 1.** There will be no significant differences in sport industry OLE
>
> scores between Year 1a, Year 1b, Year 2, Year 3, and Year 4 students in an
>
> undergraduate sport management program. $M_{1a} = M_{1b} = M_2 = M_3 = M_4$.
>
> **Null Hypothesis 2.** There will be no significant differences in sport industry OLE
>
> scores between males and females in an undergraduate sport management
>
> program. $M_M = M_F$.

Assumptions

There are six (6) assumptions of ANCOVA that were tested prior to analysis.

Those assumptions are independence of observation, univariate normal distribution, equal

cell sizes, homogeneity of variance, independence of covariate on independent variable,

and homogeneity of regression slopes (Field, 2013). Additionally, bivariate correlations

were run to assess covariate multicollinearity.

Independence of observation. Although it was not statistically testable, it appears that the data sets did not influence each other as it was a cross-sectional study and there were no duplicate participants. This was ensured as each student who completed the survey also filled out a consent form with his or her student email address and handed both documents in together. These email addresses were documented and used to organize survey participation. Therefore, the independence of observations assumption was met.

Univariate normal distribution. The univariate normal distributions of OLE General, OLE Performance, and OLE Task were assessed at each level of both independent variables. In order to meet this assumption, the mean, median, and mode must be similar, while skewness (symmetry) and kurtosis (peakedness) are between $\pm$ 2 (George & Mallery, 2011). For the overall sample (n = 154) on each dependent variable (i.e., OLE General, OLE Performance, and OLE Task), this assumption is met. Also, this assumption is met for each dependent variable on the level of sex. However, this assumption is violated for Year 3 on OLE Performance and OLE Task. On both independent variables, Sex and Courses Completed, the assumption is violated for the following: Year 2 males (OLE General), Year 3 males (OLE Performance and OLE Task), Year 1a females (OLE Performance and OLE Task), Year 2 females (OLE Performance), Year 3 females (OLE General and OLE Performance), Year 4 females (OLE Performance).

Essentially, these violations of normal distribution occurred due to the high mean values and relatively low standard deviations. There are two possible explanations for these violations. First, in general, groups of students ranked OLE very high and the data

were nonsymmetrical, skewed highly to the right; or, second, groups of students ranked

OLE in a very similar manner, causing a very peaked or highly plateaued distribution of

data. Though there was relatively low variation in the OLE scores, the analysis was

carried out and results were interpreted accordingly.

Equal cell size. The groups of Year 1a, Year 1b, Year 2, Year 3, and Year 4 were

not exactly equal in size, due in part to enrollment numbers (see Table 5) as certain

courses allowed for more students than others. Additionally, it was speculated that the

Year 2 cell size was smaller because of the perceived lack of incentive (see p. 46-47 for

further explanation). Strategies were used, however, to attempt the creation of equal

sizes; for example, the Year 1 population was significantly larger, so subgroups Year 1a

and Year 1b were created. For these reasons, the assumption of equal group sizes for

Courses Completed was met and there was increased confidence in the analysis.

Table 5

Group Sizes (Courses Completed and Sex) & Course Enrollments

Total Population	Year 1a	Year 1b	Year 2	Year 3	Year 4	TOTAL
	N = 258		N = 82	N = 89	N = 55	N = 484
Male	n = 28	n = 27	n = 11	n = 27	n = 24	N = 117
Female	n = 6	n = 8	n = 10	n = 8	n = 5	N = 37
Total Sample	**N = 34**	**N = 35**	**N = 21**	**N = 35**	**N = 29**	**N = 154**

Due to the nature of the sex distribution in Brock University's Sport Management

degree program, the sample includes more males than females. This leads to the

possibility of making a Type II error. Additionally, Tabachnick and Fidell (2007) note

that if there is larger variance in the group with the smaller n compared to the group with

the larger n, an ANCOVA test can be too liberal and lead to potential Type I errors.

Again, due to the nature of the population, artificially equalizing n (i.e., via case deletion)

is unwise, as the differences could be distorted and lose generalizability (Tabachnick &

Fidell, 2007). Therefore, a strategy recommended by Tabachnick and Fidell (2007) was

completed in the main ANCOVA analysis using SPSS to mitigate this issue. This strategy

weights the mean scores by the sample sizes, giving heavier weighting to the larger

sample sizes, thereby reducing the potential for Type II error (Tabachnick & Fidell,

2007). The results indicate that there is no difference between the adjusted values and the

original results (see Table 6) .

Table 6

SPSS-Adjusted Type II Results

HYPOTHESIS 1	
OLE General & Courses Completed	$F(4, 147) = .97$, $p = .42$, $\eta_p^2 = .03$
OLE Performance & Courses Completed	$F(4, 147) = 1.31$, $p = .27$, $\eta_p^2 = .04$
OLE Task & Courses Completed	$F(4, 147) = .64$, $p = .64$, $\eta_p^2 = .02$
HYPOTHESIS 2	
OLE General & Sex	$F(1, 150) = .39$, $p = .53$, $\eta_p^2 = .00$
OLE Performance & Sex	$F(1, 150) = .02$, $p = .89$, $\eta_p^2 = .00$
OLE Task & Sex	$F(1, 150) = .01$, $p = .92$, $\eta_p^2 = .00$
INTERACTION	
OLE General – Sex & Courses Completed	$F(4, 147) = 1.62$, $p = .17$, $\eta_p^2 = .05$
OLE Performance – Sex & Courses Completed	$F(4, 147) = 1.56$, $p = .19$, $\eta_p^2 = .04$
OLE Task – Sex & Courses Completed	$F(4, 147) = 1.65$, $p = .17$, $\eta_p^2 = .05$

Homogeneity of variance. Homogeneity of variance measures if the variance in

one group is roughly equal to the variance in another group (Field, 2013). This

assumption was tested on the independent and dependent variables using the Levene's

statistic, which reported a non-significant ($p > .05$) F-statistic for each analysis.

Therefore, the assumption was met, meaning the group variances were not statistically

different or significant.

Independence of covariates. In order to meet the independence of covariates

assumption, the covariates must be independent of Sex and Courses Completed, so there

is no effect on the covariates by the independent variables (Field, 2013). The assumption

is met if there is a non-significant ($p > .05$) F-statistic. This was tested using a one-way

analysis of variance (ANOVA) with the covariates and the independent variables. The

included covariates were: Age, Average Grade, Sport Employed, Sport Volunteer, Sport

Leader, and Captain. Additionally, Sex was included in the analysis of Courses

Completed, and vice versa. Based on test results for Courses Completed, the assumption

was violated for Age, Average Grade, Sport Employed, and Sport Leader. Based on the

results of the test for Sex, the assumption was violated for Sport Leader. This meant that

Sex and Courses Completed were affecting the covariates, to some degree. Although

these violations occurred, all covariates were still used in the analysis (see bottom of p.

60 for further explanation).

   Homogeneity of regression slopes. Homogeneity of regression slopes examines

the relationship between the dependent variables (OLE General, OLE Performance, OLE

Task) and the covariates, determining if they are roughly equal at all independent variable

levels (Field, 2013). This is assessed statistically by running a custom ANCOVA design

and determining if there is a non-significant ($p > .05$) F-statistic in the interaction effects.

For Courses Completed and OLE Performance, the assumption is violated for Sport

Volunteer ($p < .05$). For Courses Completed and OLE Task, the assumption is violated

for Sport Volunteer ($p < .05$) and Sport Leader ($p < .05$).

   Multicollinearity. Due to the covariate violations reported above, the

multicollinearity of the covariates (i.e., Age, Average Grade, Sport Employed, Sport

Volunteer, Sport Leader, and Captain) was assessed in SPSS using bivariate Pearson

product-moment correlations. These correlations were run to determine the level of

relationship between the variables. Although correlations were reported as significant,

only one correlation was found above .50; Courses Completed and Age, $r(153) = .61, p <$ .001. This result is incumbent upon the fact that, traditionally, as students get older, they advance to the next year of an undergraduate program and the next level of course. These results warrant the inclusion of the covariates in the ANCOVA, as multicollinearity does not appear to be an issue (Field, 2013; Tabachnick & Fidell, 2007).

CHAPTER V

RESULTS

The appropriate methodology was established in the previous chapter and the analysis was run in SPSS Version 23. The following chapter outlines the overall descriptive statistics of the participants (see Table 7 on p. 64) and describes the results of the ANCOVA tests, indicating whether or not the null hypotheses were rejected.

Participant Descriptive Statistics

To reiterate, N = 154 students across the 4-year Undergraduate Sport Management program at Brock University were surveyed. There were n = 34 students in Year 1a, n = 35 students in Year 1b, n = 21 students in Year 2, n = 35 students in Year 3, and n = 29 students in Year 4. Out of 154 students, n = 117 (76%) were male and n = 37 (24%) were female. The students ranged in age from 17 years to 37 years and their average age was M = 19.90 years old.

It was essential, in addition, to derive from the sample the potential extraneous factors that could affect OLE, such as a high grade average. Students generally indicated high letter grade averages; 48% perceived an 'A' average and 40% perceived a 'B' average. As such, there was a potential for Sample Selection Bias, as the belief is that students with higher grade averages would be more inclined to complete an academic research survey. Additionally, there was a potential for Social Desirability Bias, as students may be inflating their grades to appear more intelligent. Students' current or previous sport-related work, volunteer, and/or leadership experiences could impact their OLE as well. To summarize, 56% of the sample had indicated sport-related employment experiences; 91% of the sample indicated sport-related volunteer experiences; and 62%

of the sample indicated having held leadership positions at sport related organizations.

Leadership positions were defined as any role where the individual was responsible for,

and/or had authority over, another individual. Finally, 77% indicated that they had

occupied sport captaincy roles. These extraneous factors, or covariates, were added to the

analyses.

Table 7

Overall Descriptive Statistics (Independent Variables & Covariates)

Variable	n (%)
Participants (students)	154 (100%)
Student Sex	
Male	117 (76%)
Female	37 (24%)
Sport Management (SPMA) Courses Completed	
Year 1a - None (without sport-related employment experiences)	34 (22%)
Year 1b - None (with sport-related employment experiences)	35 (23%)
Year 2 - SPMA 1P92	21 (13%)
Year 3 - SPMA 1P92 & SPMA 2P05	35 (23%)
Year 4 - SPMA 1P92, SPMA 2P05, & SPMA 3P21	29 (19%)
Student Age (*M = 19.90 years)	
17 years	5 (3%)
18 years	45 (29%)
19 years	24 (16%)
20 years	30 (20%)
21 years	25 (16%)
22 years	11 (7%)
23 years	8 (5%)
24 years	2 (1%)
25+ years	4 (3%)
University Grade Average	
A (80% - 100%)	74 (48%)
B (70% - 79%)	62 (40%)
C (60% - 69%)	16 (10%)
Prefer not to answer	2 (1%)
Sport-related Volunteer Experiences (SVE)	
Students with SVE	140 (91%)
Students without SVE	14 (9%)
Sport-related Employment Experiences (SEE)	
Students with SEE	86 (56%)
Students without SEE	68 (44%)
Sport-related Leadership Positions (SLP)	
Students with SLP	96 (62%)
Students without SLP	58 (38%)
Sport Participation Captaincy Experiences (SPCE)	
Students with SPCE	119 (77%)
Students without SPCE	35 (23%)

Hypothesis Test Results

The first hypothesis was analyzed with an ANCOVA and results were derived for three factors: OLE General, OLE Performance, and OLE Task. Specifically, Hypothesis 1 posits a statistical difference for student sport industry OLE between Year 1a, Year 1b, Year 2, Year 3, and Year 4 of an undergraduate sport management program. The second hypothesis was analyzed with a two-way ANCOVA and results were derived for three factors: OLE General, OLE Performance, and OLE Task. Hypothesis 2 suggests a statistical difference between male and female student sport industry OLE in an undergraduate Sport Management program. For both hypotheses, the covariates of Age, Average Grade, Sport Employed, Sport Volunteer, Sport Leader, and Captain were included in the analysis, as well as Sex and Courses Completed, where appropriate.

Hypothesis 1. The following results demonstrate the comparison of courses completed in relation to the outcomes of OLE General, OLE Performance, and OLE Task. First, after conducting the one-way ANCOVA comparing the effect of Courses Completed on OLE General, controlling for the covariates, the null hypothesis cannot be rejected; $F(4, 147) = .97$, $p = .42$, $\eta_p^2 = .03$, observed power = .30. This infers that OLE General is not significantly different between groups of students who have completed courses as they progress through their academic program. One covariate defined by experience employed in sport had a significant effect on OLE General, $F(1, 151) = 5.31$, $p = .02$, $\eta_p^2 = .04$, observed power = .63.

After conducting the one-way ANCOVA comparing the effect of Courses Completed on OLE Performance, controlling for the covariates, the null hypothesis cannot be rejected; $F(4, 147) = 1.31$, $p = .27$, $\eta_p^2 = .04$, observed power = .40. This infers

that OLE Performance is not significantly different between groups of students who have completed courses as they progress through an academic program. Two covariates, defined by having experience employed in sport and by having experience as a leader in sport have a significant effect on OLE General: Sport Employed, $F(1, 151) = 7.14$, $p = .01$, $\eta_p^2 = .05$, observed power $= .76$, and Sport Leader, $F(1, 153) = 6.37$, $p = .01$, $\eta_p^2 = .04$, observed power $= .71$.

After conducting the one-way ANCOVA comparing the effect of Courses Completed on OLE Task, controlling for the covariates, the null hypothesis cannot be rejected; $F(4, 147) = .64$, $p = .64$, $\eta_p^2 = .02$, observed power $= .21$. This infers that OLE Task is not significantly different between groups of students who have completed courses as they progress through an academic program.

Hypothesis 2. The following results demonstrate the comparison of sex of participant in relation to outcomes of OLE General, OLE Performance, and OLE Task. After conducting the one-way ANCOVA comparing the effect of Sex on OLE General, controlling for covariates, the null hypothesis cannot be rejected; $F(1, 150) = .39$, $p = .53$, $\eta_p^2 = .00$, observed power $= .10$. This infers that OLE General is not significantly different between male and female students. One covariate defined by having experience employed in sport had an effect on OLE General, $F(1, 150) = 5.70$, $p = .02$, $\eta_p^2 = .04$, observed power $= .66$.

After conducting the one-way ANCOVA comparing the effect of Sex on OLE Performance, controlling for covariates, the null hypothesis cannot be rejected; $F(1, 150) = .02$, $p = .89$, $\eta_p^2 = .00$, observed power $= .05$. This infers that OLE Performance is not significantly different between male and female students. One covariates, defined by

having experience as a leader in sport had a significant effect on OLE Performance: Sport

Leader, $F(1, 151) = 4.97$, $p = .03$, $\eta_p^2 = .03$, observed power = .60.

After conducting the one-way ANCOVA comparing the effect of Sex on OLE

Task, controlling for covariates, the null hypothesis cannot be rejected; $F(1, 150) = .01$, p

$= .92$, $\eta_p^2 = .00$, observed power = .05. This infers that OLE Task is not significantly

different between male and female students.

Hypothesis 2: Interaction. Assessing the interaction of Courses Completed and

Sex, a two-way ANCOVA comparing the effect of Courses Completed and Sex on OLE

General, controlling for covariates, was conducted and the null hypothesis cannot be

rejected; $F(4, 147) = 1.62$, $p = .17$, $\eta_p^2 = .05$, observed power = .49. This infers that OLE

General is not significantly different between male and female students who have

completed courses as they progress through an academic program. One covariate defined

by having experience employed in sport had an effect on OLE General, $F(1, 151) = 5.27$,

$p = .02$, $\eta_p^2 = .04$, observed power = .63.

After conducting a two-way ANCOVA comparing the effect of Courses

Completed and Sex on OLE Performance, controlling for covariates, the null hypothesis

cannot be rejected; $F(4, 147) = 1.56$, $p = .19$, $\eta_p^2 = .04$, observed power = .47. This infers

that OLE Performance is not significantly different between male and female students

who have completed courses within an academic program. One covariate, defined by

having experience as a leader in sport, had an effect on OLE Performance: Sport Leader,

$F(1, 153) = 7.82$, $p = .01$, $\eta_p^2 = .05$, observed power = .79.

After conducting the two-way ANCOVA comparing the effect of Courses

Completed and Sex on OLE Task, controlling for covariates, the null hypothesis cannot

be rejected; $F(4, 147) = 1.65$, $p = .17$, $\eta_p^2 = .05$, observed power $= .50$. This infers that

OLE Task is not significantly different between male and female students who have

completed courses as they complete an academic program.

Isolation. To further explore the data and gain insight into trends of each sex and

each year individually, different analyses occurred after levels of the independent

variables were isolated. As a note, take caution in interpreting these results as the

elimination of one or more levels of Sex and Courses Completed produces results that

have not accounted for the variances in the eliminated variables.

Analyses were conducted by isolating one level of the independent variable,

Courses Completed, at a time. Two-way ANCOVAs were conducted on OLE, combining

Sex and each level (Year 1a, Year 1b, Year 2, Year 3, Year 4) of Courses Completed,

independently. Significant differences were found for Sex and Year 2 on OLE Task, $F(1,$

$20) = 7.39$, $p = .02$, $\eta_p^2 = .36$, observed power $= .71$. This infers that males and females in

Year 2 have significantly different OLE Task scores. To clarify, females ($M = 4.09$, $SD =$

.57) scored significantly higher than males ($M = 3.45$, $SD = .82$). Significant differences

were also found for Sex and Year 4 on OLE Performance, $F(1, 28) = 6.15$, $p = .02$, $\eta_p^2 =$

.23, observed power $= .66$. This infers that males and females in Year 4 have significantly

different OLE Performance scores. To clarify, males ($M = 4.08$, $SD = .58$) scored

significantly higher than females ($M = 3.80$, $SD = .45$) (see Table 8).

Table 8		
Means and Standard Deviations of Isolation Analyses		
	Males	**Females**
Year 2 (OLE Task)	$M = 3.45$, $SD = .82$	$M = 4.09$, $SD = .57$
Year 4 (OLE Performance)	$M = 4.08$, $SD = .58$	$M = 3.80$, $SD = .45$

CHAPTER VI

DISCUSSION & CONCLUSION

The main findings discussed above reveal a deficiency of difference in students'

sport industry OLE, which is a telling outcome in itself. In the following chapter, those

results are discussed in connection to related literature and to the current status of the

Sport Management undergraduate degree program at Brock University. Additional

discussion is provided for the analyses that isolated sex and completed courses.

Limitations of the current research, future research recommendations, and implications of

the research results for sport management educators will also be outlined. Finally, a

conclusion will be provided to summarize results and how the research addressed its

purpose.

Completed Courses & Self-efficacy

In the examination of sport management students' sport industry OLE, the

number and level of courses a student has completed had no significant impact on how

students judge their capabilities to be in leadership positions in the sport industry,

specifically. A student who is in their last year of the program, nearing graduation, has

similar self-efficacy, or capability judgments, to a first year student who has yet to

complete an undergraduate course in the program.

Bandura (1997) emphasizes that one's level of self-efficacy comes from sources

including: performance accomplishments, vicarious experiences, verbal persuasion, and

physiological arousals. Failure to reject the null hypotheses may derive from the fact that

students may not be fully experiencing these sources during their undergraduate sport

management program courses. Alternatively, students may be entering into their

undergraduate degree with an already inflated level of self-efficacy based on their successes in high school, previous jobs or volunteer roles, or influential and motivational speeches from mentors.

Encouragingly, significant decreases in students' capability judgments were not found, so it can be postulated that students in this program of study are not having destructive experiences or receiving negative feedback in regards to their capabilities of being leaders in the sport industry. Overall, the sport management curriculum appears to be maintaining a generally high level of OLE between the four courses (i.e., SPMA 1P92 Understanding Sport Industry Sectors; SPMA 2P05 Management Concepts in Sport Organizations; SPMA 3P21 Managing Human Resources in Sport Organizations; and SPMA 4P09 Leadership in Sport Management).

Self-efficacy in sport management programs. The related literature speaks primarily to measuring self-efficacy for those entering the sport industry and how it is related to one's goals or expectations for the future (see Cunningham et al., 2003; 2005; 2007). In order to increase self-efficacy, Bandura's (1997) four sources of efficacy must be applied in the correct context. The sample of the current study had relatively high levels of OLE, which may indicate that elements within the undergraduate curriculum are antecedents to increased OLE. This supports previous research that suggests leadership courses and business simulations impact self-efficacy (e.g., Isaac et al., 2013; Momsen & Carlson, 2013; Quigley, 2013).

In this undergraduate sport management program sample, students' performance accomplishments may include achieving high grades in courses or on assignments and tests, completing successful presentations, writing high-quality papers, and

comprehending theories. Vicarious experiences among students could include exposure to guest speakers from the sport industry or witnessing the academic successes of fellow peers. Verbal persuasion directed to students could come from industry professionals, professors, parents, or peers. Furthermore, students may be receiving messages of hope for leadership positions for students across the program, internally within the program itself. Physiological arousal may also occur inadvertently based on students' emotional stability; for example, during exams when stress levels are high, students could elicit lower levels of self-efficacy. In this sample, students did not complete the survey during an examination period. Thus, the absence of this traditionally stressful event may have positively affected OLE.

The findings of this research indicate a consistently high level of sport industry OLE among students for each factor of interest (i.e., General, Performance, and Task) in each of the four undergraduate courses. In order for students to maintain that high consistent level of self-efficacy, it appears that they are receiving enough of Bandura's (1997) sources to maintain their capability judgments. Amelink, Artis, and King Liu (2015) note that students' self-efficacy may be impacted, significantly or not, through successful assignment completions (i.e., performance accomplishments), interactions with alumni in the industry (i.e., vicarious experiences), positive feedback from professors (i.e., verbal persuasion), or proper anxiety identification (i.e., physiological arousals). However, these sources may not be providing additional stimulus to inflate OLE for students in a sport management program, as there was no difference in capability judgments between any of the four courses. This result is consistent with studies done on similar male-dominated 4-year programs, such as engineering, where students' self-

efficacy was not different based on the program year in which they were currently

enrolled (Concannan & Barrow, 2009; Marra, Rodgers, Shen, & Bogue, 2009).

Self-efficacy among millennial-aged students. In further assessment of the

absence of differences between the groups is the acknowledgment of the sample's

characteristics as a group. The current population of university students in this study can

be classified by age as the 'millennial' generation, in that they were born between the

years of 1982 and 2004 (Howe & Strauss, 2000). Millennials, as described by Howe and

Strauss (2000), are special, confident, team oriented, achieving, pressured, sheltered, and

conventional. They are also described as being more technologically inclined, ambitious,

prone to multi-tasking and collaborative work, and possess a desire to be involved

(Briggs, 2007; Murray, 2011; Phillips & Trainor, 2014). However, it has also been

identified that these characteristics of millennials may serve as a catalyst for their sense

of entitlement.

It may be this idea of "specialness" that is impacting students' OLE scores. If

their parents, teachers, and/or caregivers are consistently reminding them of their

superiority, uniqueness, and exceptionality, their capability judgments may become

inflated because of that message. This overemphasis of self-worth and achievement is

negatively affecting their education; for example, they are overly concerned with grades

and assignments, constantly requesting feedback from professors (Howe & Strauss, 2007;

Stewart and Bernhardt, 2010; Phillips & Trainor, 2014).

Previous research has described that the majority of millennials "do not have the

necessary skills to lead effectively" (Lykins & Pace, 2013, p. 44). The absence of self-

efficacy differences among these sport management students may be due to their

leadership development capabilities; their lack of industry experience may be preventing

them from fully developing proper leadership skills. Specifically, millennial students

acknowledge their proficiency in technology, but admit their lack of diplomacy,

communication, listening, patience, and relationship building skills (Lykins & Pace,

2013). Further, leadership must be learned constantly and consistently throughout a

student's undergraduate experience, with a specific emphasis on actual skill practice in

order to truly develop the characteristics (Navarro & Malvaso, 2015). Thus, it may be

presumed that millennials require more focused leadership development strategies that

are designed specifically with these demographics' characteristics in mind.

To affect change in students' self-efficacy for leadership, appropriate methods

could be developed to aide them in the understanding and acquirement of the necessary

skills (Rosch & Caza, 2012). The lack of difference in students' OLE may be a result of

the lack of methods for influencing leadership development available to students

throughout the undergraduate program. Structural constraints, such as growing class

sizes, make such a recommendation challenging. Researchers in the past have identified

that in-class methods such as hands-on experiences, group work, related activities, and

guest speakers can promote leadership development among millennials (Navarro &

Malvaso, 2015; Therrell & Dunneback, 2015).

In addition, previous research supports structured leadership development

programs with curriculum and their ability to improve leadership efficacy and leadership

practice among students (Dugan & Komives, 2007; Rosch & Caza, 2012; Segar, Hershey,

& Dugan, 2008). These methods may be absent, to a certain degree, from the program of

study in this research due to its increase in student applicant acceptances. As the program

increases in size, personalized leadership development may be harder to ensure, as faculty must cater to the needs of a larger class size. Programs may remedy this by introducing a leadership development coordinator position to help shed light on, and improve, student leadership development.

Impact of extraneous factors. Of note, there were two extraneous factors that had significant effects on sport industry OLE: previous sport employment experiences and previous sport leadership experiences. First, previous employment in a sport organization impacted students' judgments in their capabilities to achieve leadership positions and perform successfully in them (i.e., OLE General). Second, previous experiences in sport leadership roles only impacted students' judgments of their capabilities to perform successfully in their position (i.e., OLE Performance). These results are important as they are potentially generalizable to a larger population of worldwide sport management students, many of whom who may have out-of-class sport-related experiences.

These results demonstrate the importance of in-field sport experiences and the impact they can have on how one judges his or her capabilities in a given context (see p. 77 for further discussion). Based on these results, it is hypothesized that experiential learning may be more influential for OLE than actual course curriculum. This type of learning occurs when students immerse themselves in practical industry experiences outside of the classroom, such as internships. Experiential learning will provide many opportunities for work-related performance accomplishments, as well as verbal persuasion from supervisors (Bandura, 1997).

Students' capability judgments to complete tasks associated with being in a leadership position (i.e., OLE Task) were not impacted by any extraneous factors. Based on the results of the analysis, having in-field experience in the sport industry impacted how students feel about their capabilities to earn leadership positions and perform well in them. However, it did not impact how they feel about their capabilities to complete actual leadership tasks. This may be again related to Bandura's (1997) self-efficacy sources. Students who have previous experiences of successfully earning sport volunteer positions or sport leadership positions and performing well in them could increase their self-efficacy to do it again in the future. Though, if students were not granted major responsibilities or asked to tackle specific tasks in these past positions, their self-efficacy will remain unaffected. This is an important finding as it relates to creating valuable internship or experiential experiences within an undergraduate program (see Gault et al., 2000; Odio, Sagas, & Kerwin, 2014).

Sex & Self-efficacy

Similar to Hypothesis 1, there is no difference for male and female students' OLE in this sample. Encouragingly, it appears that male and female students in this sample feel equally capable to achieve leadership positions in the sport industry in the potential future. When students' capability judgments were examined, based on both the courses they have completed and their sex, there was also no difference in male and female student OLE. The judgments of their capabilities to achieve a sport leadership position (OLE General), perform successfully in it (OLE Performance), and complete the associated leadership tasks (OLE Task) was unaffected by their position in the sport management program and their sex. For example, if male and female students have

completed three courses and are nearing graduation, both sexes feel equally capable of achieving future leadership positions in the sport industry. Also, male students who have completed three courses feel just as capable as male students who have completed two courses.

Sex does not appear to impact capability judgments, which is a finding supported in previous self-efficacy research (see Everhart & Chelladurai, 1998; Kelly & Hatcher, 2013; Rotberg et al., 1987). However, this result is of interest as previous research has found self-efficacy differences between the sexes (see Betz & Hackett, 1981; Cunningham et al., 2003; 2007; Dugan et al., 2013; McCormick et al., 2002). A potential explanation for this result may be the apparent absence of bias in this undergraduate sport management program. Any performance accomplishment, vicarious experience, verbal persuasion, or physiological arousal is available to both male and female students. Opportunities are presented for everyone resulting in an equal playing field.

It is well known that the sport industry is one that is male-dominated and highly competitive (see Belzer, 2014; Burton, 2014; Harris et al., 2015; Pellegrini, 2014), yet the findings in this research indicate that males are not surpassing females in terms of sport industry OLE. Female students are aware of the sport industry barriers they may face, such as gender stereotypes and role conflict, but seem to still be excited and passionate about future careers in sports (Harris et al., 2015). This could possibly be due to the realization of an increase in female leaders in sport organizations over the last decade (see Acosta & Carpenter, 2012). Female students may be gaining self-efficacy notions from seeing females, such as Becky Hammon (Assistant Coach, San Antonio Spurs), Jennifer Welter (Coach, Arizona Cardinals), Sarah Thomas (Referee, National Football

League) and Kathryn Smith (Coach, Buffalo Bills), secure top leadership positions in a

variety of professional sport organizations (Almasy, 2016). These may not be positions

female students are necessarily striving for; however, these women have broken

professional sport barriers through these achievements, which may have a stronger

impact on female students. In addition, the majority of instructors in the Sport

Management Department at Brock University are females, which immediately exposes all

students, especially females, to strong female sport leaders. Although these are examples

of vicarious experiences attainable by both sexes, females may associate more strongly

with the inspirational stories of these trailblazing leaders.

  Impact of extraneous factors. In further support of the extraneous factors

included in the analysis, students' sport industry OLE between sexes was influenced by

experiences of being employed in sport organizations and by leadership positions in

organizations and on sport teams. Specifically, students' capability judgments to achieve

sport leadership positions (i.e., OLE General) were impacted by whether or not they had

worked in sport previously. Also, students' capability judgments to perform successfully

in sport leadership positions (i.e., OLE Performance) were impacted by whether or not

they had related sport leadership experiences as employees. It appears that having past

employment experiences and leadership experiences could be more influential in

students' levels of OLE than course curriculum.

  Bandura (1997) emphasizes the strength of performance accomplishments in

affecting one's self-efficacy. Experiential learning allows students to gain many different

in-field performance accomplishments by completing a variety of sport-related practical

duties. Previous research has supported that experiential learning, such as internships,

better prepares students for careers by: enhancing their job-specific skills (e.g., creative thinking, networking, communication) and refining their professional development and reputation by completing challenging projects or receiving timely feedback (Braunstein-Minkove & DeLuca, 2015; Gault et al., 2000; Odio et al., 2014; Pauline, 2013; Stratta, 2004). These examples provide further support to the hypothesis that experiential learning has a strong influence on the capability judgments of students in a sport management degree program.

Isolations of Sex & Completed Courses

To receive a more in-depth look into these data, analyses completed with isolations different levels of completed courses. That way, specific differences between only Year 2 students, for example, could be assessed. However, these ensuing results must be treated with caution due to the elimination of the variances from the missing variables.

Year 2 self-efficacy. Each level of students' completed courses was isolated, so males and females could be compared in each Year. In Year 2 (i.e., completion of one undergraduate sport management course), females had more belief in their capabilities than males to perform leadership tasks in a sport leadership position (i.e., OLE Task). This result does not coincide with the literature supporting the notion that males have higher self-efficacy than females (Betz & Hackett, 1981; Cunningham et al., 2003; 2007; McCormick et al., 2002; Post-Kammer & Smith, 1985). However, Quigley (2013) notes that one's self-efficacy in connection to his or her leadership capabilities can change, differ, and develop over time.

OLE was assessed early in the semester (i.e., October); therefore, it appears that male and female students begin their undergraduate experiences with equal capability judgments. In Year 2, students have completed one required sport management course and its requirements and female students have successfully advanced (i.e., performance accomplishments), despite the obvious realization that males greatly outnumber females in the sport industry (Acosta & Carpenter, 2012; Burton, 2014; Burton et al., 2009; Pellegrini, 2014).

Betz and Hackett (1997) note that it may be "gender role socialization" that truly influences the differences between males and females (p. 385). In other words, it appears that sport management programs, similar to the sport industry, are comprised mainly of males (Floyd Jones et al., 2008). When female students successfully complete course-related tasks despite the adversity of being a minority sex, it could greatly influence their capability judgments to complete future job-related tasks. As was previously mentioned, there has been a perceived increase in female leaders in professional sport organizations (Almasy, 2016). This could affect females in Year 2 who have strong convictions to be sport leaders, yet may not fully grasp the competitiveness of the sport industry and the dedication it takes to reach those upper-level positions, thereby affecting their OLE scores in comparison to male students.

Year 4 self-efficacy. Similar to the previous finding, male and female students in Year 4 had different beliefs in their capabilities to perform successfully in a sport leadership position, specifically; males appeared to have higher capability judgments than females after successfully completing three years of undergraduate sport management courses. This result relates more closely to previous literature, which supports higher self-

efficacy in males compared to females (Betz & Hackett, 1981; Cunningham et al., 2003;

2007; Post-Kammer & Smith, 1985).

At this stage in the program, most female students have accrued numerous

performance accomplishments (e.g., assignment completions), vicarious experiences

(e.g., female guest speakers), and verbal persuasions (e.g., positive feedback). However,

they are more fully aware of the levels of competitiveness and male domination in the

sport industry. As such, females may be interpreting that their sex has put them at a

disadvantage, making them seemingly unable to perform as successfully as males in

leadership positions. Female students' emotional states (i.e., their physiological arousals),

especially in their final year, may be affecting lower levels of OLE, as they could be

experiencing heightened levels of stress and anxiety about the future. This leads to the

supposition that more could be done via Bandura's (1997) four sources to impact female

students who are at this particular stage; approaching graduation and thinking about

futures in the sport industry. All students may feel anxious about graduating from

university, especially with the knowledge of diminishing job opportunities in the sport

industry, long hours, and low pay (Belson, 2009; Belzer, 2014; Harris et al., 2015). Such

a pervasive emotional state is important for sport educators to consider as they develop

their curriculum moving forward.

Limitations

Several limitations exist which may have affected the legitimacy of the research.

The scope of this study is limited in that it is cross-sectional, not longitudinal, in that the

current study examined students' capability judgments at one point in time and compared

years, which was aligned with the chosen method served. This limits the scope of the

research. However, with appropriate time, a longitudinal design would have allowed for a

comparison of years with similar participants and an assessment of the development of

capability judgments. Such a longitudinal study in the context would last four years, but

due to the length of the researcher's degree program (two years), a longitudinal research

design was not possible.

A sample selection bias may have occurred during participant recruitment,

limiting the researcher's ability to accurately reflect the sport management population.

Specifically, a bonus mark for each participating student was the originally intended

incentive for survey completion, proven effective in past research conducted with Brock

University sport management students. That incentive was rejected by the Research

Ethics Board and replaced with prize draws for gift cards. This replacement could have

drawn the moderate response rate and reduced the sample size for each year, as survey

participation did not automatically guarantee a reward for each participant. Additionally,

it is believed that a bonus mark would have drawn a more well-rounded sample of

students who are under-performing in their courses and would benefit from an increased

grade average. For example, students in Year 2 were the smallest sample size, interesting

given they were participants in a research study in their first year where they received the

bonus mark upon survey completion. In the future, a bonus mark, or another form of

guaranteed reward, could be offered to each participant to help acquire a more diverse

and populous sample.

There were issues with regard to unequal group sizes, which can impact the

results and increase the possibility of making a Type II error. While the populations of

each of the four courses were different, the researcher made modifications to incur the

most equal sizes possible (e.g., dividing Year 1 into two groups). Additionally, the nature

of the sex distribution in Brock University's Sport Management program was an

unavoidable issue; that is, male students greatly outnumber female students across the

entirety of the program, which caused unequal group sizes. Future researchers could

address this issue prior to the outset of the research by setting up an experimental design,

ensuring each group has an equal number of participants.

     During the development of the survey, it was vital to consider other variables that

may have an impact on student sport industry OLE. Based on previous related research

(e.g., Cunningham et al., 2005), specific covariates were selected that could potentially be

impactful, particularly for students in an undergraduate degree program. However, there

were several covariates that were not included in the survey, as they were deemed

unattainable (e.g., actual grade average, parental income, sport industry connections). The

omission of these covariates may call into question the validity of the results, but it was

recognized that there were many variables that could impact OLE, all of which could not

be accounted for in the analysis.

     When initial assumptions of ANCOVA were tested, there was a violation of

normal distribution; specifically, the skewness (symmetry) and kurtosis (peakedness) did

not fall within the normally accepted range, slightly limiting the validity of the results.

This was due to the high mean OLE scores and low associated standard deviations.

Visually, it was clear that these data were skewed to the right and positively peaked at the

highest end of the 5-point Likert scale. In the future, a 7-point or 10-point Likert scale

could be applied to possibly incur greater variation in the scores.

Implications for Sport Management Educators

This research contributes to theory via the measurement of OLE; an extension of self-efficacy. For the purpose of this research, OLE was assessed in connection to the sport industry; however, researchers can use OLE in future studies to address other occupational or career contexts for various populations outside of sport industry-aspiring students. The results of this research allow the sport management faculty and staff in the sampled department the opportunity to determine how the 4-year degree and associated courses are impacting students' judgments in their capabilities to be employed as leaders in the sport industry.

University degree programs, such as the Bachelor of Sport Management program at Brock University, are designed and implemented to provide students with the tools and skills they will need to be successful in the future. Students spend thousands of dollars on tuition to attend relevant lectures in order to develop their professional selves. Exposure to effective program curricula is important for students so they can become more assured of themselves and their capabilities in regards to their imminent employment experiences. Sport management courses should be addressing the different "steps" that have been identified throughout this research, including: 1) one's OLE to achieve and secure a leadership position; 2) one's OLE to perform successfully in said leadership position; and 3) one's OLE to master the tasks associated with being in said leadership position.

Self-efficacy within course curriculum. The faculty members who teach the four courses of interest in this study, including: Year 1a, b: Understanding Sport Industry Sectors; Year 2: Management Concepts in Sport Organizations; Year 3: Managing Human Resources in Sport Organizations; and, Year 4: Leadership in Sport Management)

can consider Bandura's (1997) self-efficacy sources and how they may be integrated within curriculum and associated learning activities. A core goal of undergraduate degree programs is to develop students, prepare them for their future, and set them up for employment success (Rae, 2007). The sport industry is evolving, as are the students who are attempting to enter it; therefore, instructors need to consider adapting the curriculum (Braunstein-Minkove & DeLuca, 2015). Enhancing students' capability judgments heading into their sport industry careers should be a goal of sport management departments' faculty. Based on the results of the current study, students possess a generally high level of capability judgments; however, improvements to levels of students' OLE can always be made.

In Year 1 (SPMA 1P92), course curriculum focuses on very broad aspects of the sport industry, including governance and funding. Additionally, students are required to complete an experientially based volunteer assignment, totalling an 8-hour commitment. To impact OLE further, Year 1 students could complete miniature weekly assignments about sport organization situations where they are required to, for example, use problem solving skills to remedy an issue of funding. Or, for example, use critical thinking to properly structure the governance of an organization. The assignments should not be overly complicated, but should allow students to use the knowledge they developed in high school and attempt to translate it to their university studies. Each assignment could precede its relevant lesson, which may help students' identify their mistakes using course content. With each assignment completion, students may gain performance accomplishments related to leadership in a given context.

In Year 2 (SPMA 2P05), course curriculum focuses on the non-profit sector, specifically discussing management in relation to power, politics, and structure. This course focuses heavily on content, but also engages students with a practical project that centres on a viable community based non-profit organization. To impact sport industry OLE further, instructors could challenge students' public speaking skills by randomly selecting one or two students each class and having them present something to their peers. The instructor could ask them their opinion on the lecture content presented that day or on something relevant to sport that occurred in media. They should not be marked on content, but instead should use it as an opportunity to practice speaking in front of their classmates. Presentations are imminent in their future both as students and possibly as professionals, so if public speaking becomes a performance accomplishment, their OLE could increase.

In Year 3, course curriculum focuses on managing individuals in a sport organization and related principles such as recruitment, interviews, orientation, and evaluation. To impact sport industry OLE further, instructors could set up a "job application simulation" assignment. One half of the class could be designated as the employer, writing a position description, planning interview questions, and designing an orientation plan. The other half of the class could be designated as the prospective employee, writing cover letters and resumes, applying for particular jobs, and doing interview preparation. Subsequently, students could conduct mock job interviews as class presentations. This simulation would allow for hands-on practice of necessary skills, hopefully leading to performance accomplishments and vicarious experiences.

In Year 4, course curriculum focuses on how leadership theories can be applied to sport, including roles, behaviours, and leader/follower development. Leadership simulations could be used to effect sport industry OLE, particularly by giving students opportunities to gain leadership-related performance accomplishments. Students could be separated into groups at the beginning of the semester and be responsible for solving a weekly leadership-related sport organization scenario. Each week, a different group member should be the designated leader who is responsible for leading group discussion, ensuring assignment submission, and facilitating a debriefing session. Additionally, each week, a different group should present their solution to the scenario in order to gain performance accomplishments in public speaking and communication.

In order to increase capability judgments, such that students may enter and be successful in the industry as a leader, specially designed leadership programs, workshops, or job fairs could be implemented for students in their final year to increase their capabilities, expose them to opportunities, and initiate their networking. Industry professionals could be scheduled to give specific lectures on post-graduation anxiety, stressing their own struggles of their transition from university life to professional life. Instructors or guidance counselors could arrange sessions with students to discuss their future intentions and provide suggestions. These are different examples of how Bandura's (1997) self-efficacy sources can be effectively used to impact students in this important life stage.

Because of the impact that experiential learning (e.g., previous work experiences or internships) had on OLE, curriculum developers and instructors may want to consider ways to integrate in-field experiences into each undergraduate year to fully harness their

benefits on students' self-efficacy. This is already the case for Year 1 (i.e., SPMA 1P92), where students are required to complete eight hours of sport-related volunteering. However, more educators could consider employing practical field experiences within their courses to enhance the curriculum and increase students' OLE for the sport industry.

Future Research Recommendations

This study focused on assessing sport leadership employment capability judgments of students in a 4-year undergraduate sport management degree. Specifically, it was a cross-sectional study and differences were assessed between students in four sport management courses, each occurring in one undergraduate year of study. Future research could employ a longitudinal study design in order to track the development of student OLE as they journey across all four years of their undergraduate program. Due to the traditional 4-year undergraduate education experience of most students, a longitudinal study would allow for generalization to the program under study and provide conclusions that may be transferred to other sport management programs.

The construct of self-efficacy was used exclusively for this research because it was highlighted as potentially the most important facet of human agency (Bandura, 2000). However, self-efficacy, especially in relation to careers in the sport industry (e.g., Cunningham et al., 2003; 2005; 2007), is studied along with outcome expectations and choice goals to comply with Lent et al.'s (1994) SCCT. Future research could examine both the outcome expectations and the choice goals of sport management students, along with their self-efficacy, to determine how the three constructs are connected.

In the future, researchers could also focus on the extraneous factors that were of significant interest in the analyses, including: past experiences of employment in a sport

organization and past leadership experiences in a sport organization. Both of these factors were shown to have an impact on student sport industry OLE, which leads to the belief that experiential learning may have a bigger effect on students' self-efficacy.

Additionally, there could be further exploration of the unique levels of OLE that were found to exist among Year 2 students and Year 4 students (i.e., females indicated higher levels than males). Follow-up interviews could be conducted to examine why males and females are reporting different levels of OLE within these specific cohorts.

The sample for this research was drawn from the sport management undergraduate program at Brock University. This program has received accolades as the largest dedicated program in Canada, and was also ranked as one of the top five undergraduate programs in the world (Masters of Sport, 2015). Future research could use samples from other post-secondary institutions across North America. Numerous Canadian and American colleges and universities offer sport management or sport business programs to applicants. OLE can be assessed in these other schools where a full undergraduate curriculum in sport management is not adopted. Specifically, sport management programs that are embedded as "minor programs" in larger kinesiology programs may be ripe for examination to determine if OLE is unique in that particular curricular context.

Conclusion

Undergraduate university or college education is a common path towards future employment that many young individuals take. Often, school is followed by a career that encompasses the educational practices and life lessons that were learned in courses in one's degree program. Students use these courses to expand their knowledge and increase

their beliefs in their capabilities to be successful in their future careers. Specifically, this

study examined students' beliefs in their leadership capabilities for sport industry

positions. Overall, the results demonstrate that students feel capable enough to be leaders

in the sport industry, based on their responses to the OLE survey statements. Essentially,

they are very sure of their capabilities to be in future leadership positions in the sport

industry, which is a positive sign for undergraduate sport management programs, such as

the one at Brock University. However, there are no differences in students' capability

judgments across the four years or between males and female students. Based on these

results, the assumption is that all students, at all stages throughout their undergraduate

experience, equally believe they can acquire leadership positions in sport organizations,

perform successfully in them, and complete the required tasks associated with the

positions.

These lack of differences challenge post-secondary sport management educators

to consider curriculum changes that may have a stronger impact on students' sport

industry OLE. Although the specific courses of interest in this research had no impact on

OLE, the most telling result was the impact of experiential learning on students'

capability judgments. Those who had worked in sport previously, especially in leadership

roles, gained experiences that influenced their personal capability judgments related to

leadership tasks and skills for sport organizations. Sport management faculty can use

these results to consider how the learning that occurs through internships, for example,

can be achieved in courses in concert with curricular lessons and assignments.

Students are demonstrating a sense of self-perceived capableness. They are

approaching their potential sport industry careers feeling fully capable to be successful.

While the job acquisition process can be demanding, the first step is one's belief in one's

capabilities to do what needs to be done. In an industry comprised primarily of male

leaders, such as the sport industry, this is an important mind-set for females to possess.

The fear in the past was that females simply did not believe that they were capable to be

leaders in the sport industry; however, these results show highly self-efficacious female

sport management students. To produce top-performing male and female graduates for

the sport industry, sport management program faculty and administrators need to

continue to explore the importance of self-efficacy and the major role it plays in

determining students' sport leadership career aspirations.

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APPENDIX A

Occupational Leadership Efficacy Survey

Thank you for agreeing to participate in this study. This study aims to determine how you feel about your capabilities to be a leader in the sport industry. The following survey is comprised of two (2) sections and should take approximately ten to fifteen (10-15) minutes to complete. Please read the instructions carefully and respond to every statement and question.
****

For this survey, the term "sport industry" refers to the following sport sectors:
- **Public** (e.g., a government/ministry organization involved with sport; Sport Canada)
- **Commercial/private** (e.g., a for-profit organization involved with sport; Toronto Maple Leafs)
- **Non-profit** (e.g., a not-for-profit, voluntary-based sport organization; Niagara Rapids Volleyball Club)

****
Section 1: General Student Information - Please check off or write the response(s) that applies to you in the spaces provided.

1. What is your sex?

€ Male   € Female   € Prefer not to respond

2. What is your age?

_____   € Prefer not to respond

3. What is your race/ethnicity?

_____   € Prefer not to respond

Continued on Next Page

4. Is Brock University your first post-secondary institution?

€ Yes   € No

*If 'No', please list all other universities or colleges at which you have attended and the programs in which you have been enrolled.

_____

_____

_____

5. What is your current major at Brock University?

_____

6. What is your current undergraduate year of study?
€ First
€ Second
€ Third
€ Fourth
€ Unsure
€ Other (e.g., First/Second year, Second/Third year) _____

7. What is your approximate letter grade average as a Brock University student or incoming from high school (for first year students)?

€ A+ → A-   (100% - 80%)
€ B+ → B-   (79% - 70%)
€ C+ → C-   (69% - 60%)
€ D+ → D-   (59% - 50%)
€ F   (49% - 0%)
€ Prefer not to answer

Continued on Next Page

8. Are you currently employed?

€ Yes   € No

*If 'yes,' please list the companies/organizations at which you are currently employed and your current employee title for each company/organization that you list.

_____

_____

_____

9. Have you ever held an employee position in any sport organizations or sport-related organizations (including PAID internships)?

€ Yes   € No

*If 'yes,' please list those sport organizations/companies and your employee title for each of the organizations/companies you list.

_____

_____

_____

10. Have you ever volunteered for any sport organizations or sport-related organizations (including UNPAID internships)?

€ Yes   € No

*If 'yes,' please list those sport/sport-related organizations for which you have volunteered and your volunteer position or title for each sport organization listed.

_____

_____

_____

11. Have you ever held a leadership position in any of your previous volunteer or paid experiences (in or out of sport)?

€ Yes   € No

*If 'yes,' please list the types of leadership positions and the organization at which each leadership position took place.

_____

_____

_____

12. Have you ever played/participated in a team or individual sport?

€ Yes   € No

    *If 'Yes,' have you ever been the captain of one or more of your teams?

    € Yes   € No

13. Within your Sport Management peer group (i.e., group project members, friends you sit with in lecture), **how many** individuals have held leadership positions in the sport industry (for example: coach, captain, program coordinator)?

_____   € I don't know   € I don't have a peer group

14. Please check off which Brock University Sport Management courses you are **currently taking**.
€ SPMA 1P92 (Understanding Sport Industry Sectors)

€ SPMA 2P05 (Management Concepts)

€ SPMA 3P21 (Managing Human Resources)

€ SPMA 4P09 (Leadership in Sport Management)

15. Please check off which Brock University Sport Management courses you have **completed**.
€ SPMA 1P92 (Understanding Sport Industry Sectors)

€ SPMA 2P05 (Management Concepts)

€ SPMA 3P21 (Managing Human Resources)

€ SPMA 4P09 (Leadership in Sport Management)

16. Working in the sport industry is something that interests me.

€ Yes   € No   € I don't know
Continued on Next Page

17. I intend to be employed in a leadership position in the future.

€ Yes   € No   € I don't know

18. I intend to be employed in a **sport industry leadership position** in the future.

€ Yes   € No   € I don't know

19. "When I graduate, I would like to be employed at a": (Please check all responses that apply to you. You may select more than one).

€ Commercial Sport Organization (e.g., professional sport team)
€ Public Sport Organization (e.g., Sport Canada)
€ Non-Profit Organization (e.g., Right to Play)
€ Other (Please list): _____
€ I do not want to work in a sport organization. I would want to work in:
_____(name of organization)

20. What is your expected salary for your first position entering the sport industry?
        $_____

****

Section 2: Occupational Leadership Efficacy for Sport Industry – In this section, please indicate how you judge your own capabilities to work as a leader in the sport industry. Please circle one (1) response for each statement that best applies to you right now.
*Leadership positions could include, but are not limited to: Event Manager, Director of Sales, Facility Manager, Coach, Accounting Manager, Marketing Director, General Manager Promotions Coordinator, Public Relations Director, Head Scout

1. I expect I can perform well in a leadership position in the sport industry.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

2. I have self-assurance that I could earn a leadership position within the sport industry.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

3. Because of my capabilities, I expect I will be able to earn a leadership position within the sport industry.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Continued on Next Page

4. I am capable of learning the skills needed for a leadership position in the sport industry.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

5. I am confident I could successfully work as a leader within the sport industry.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

**These next statements relate to how you view your own leadership abilities.

6. I could perform well as a leader across different group settings in a sport organization.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

7. I could motivate employees in a sport organization.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

8. I could build employees' confidence in a sport organization.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

9. I could develop teamwork in a sport organization.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

10. I could 'take charge' when necessary in a sport organization.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

11. I could communicate effectively in a sport organization.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

12. I could develop effective task strategies in a sport organization.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

13. I could assess employees' strengths and weaknesses in a sport organization.

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

THANK YOU FOR YOUR TIME
(If you have any questions, please email Michelle at SPMAresearch@gmail.com.)

APPENDIX B

Participant Recruitment Script

Hi everyone, my name is Michelle Dykstra and I am a Graduate Student under the supervision of Dr. Shannon Kerwin in the Department of Sport Management at Brock University. I am here to invite you to participate in a research project entitled "Assessing the Occupational Leadership Efficacy of Sport Management Students."

The purpose of this research is to explore if students believe they are capable to be leaders in the sport industry with a focus on if and how males and females are different. Should you choose to participate, you will be asked to attend one session and fill out a survey, taking approximately 10-15 minutes of your time. The survey will require you to answer questions about your perceptions of your own leadership capabilities.

Participation in this study is strictly voluntary. All participating students will have their name entered into a draw to win prizes. There will be one draw for each class. Participation, non-participation, or withdrawal will in no way affect your academic standing at Brock. You can withdraw participation at any time, but your name will remain in the prize draw.

If you agree to participate in the study, I am asking you to email me at SPMAresearch@gmail.com [will be placed on the board in the classroom and uploaded to Sakai]. Once I receive your email, I will send you three different possible session dates, along with the time and location of each one. You can, then, respond to the email with your selection of the timeslot that works best for you. The session will take part in a booked room at Brock University. If the date and time of the first three sessions don't work with your schedule, we can arrange an alternative one at your discretion.

APPENDIX C

Letter of Consent

BROCK UNIVERSITY DEPARTMENT OF SPORT MANAGEMENT INFORMED CONSENT FORM

Date: September 28, 2015 – October 1, 2015
Title of Study: Assessing the Occupational Leadership Efficacy of Sport Management Students

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INVITATION
You are invited to participate in a study that involves research about Sport Management students and sport industry leadership. The purpose of this study is to examine if students believe they are capable to be leaders in the sport industry with a focus on if/how males and females are different. Please take a moment to read this form before participating in the study and contact the student principal investigator (PI) (Michelle Dykstra, SPMAresearch@gmail.com) if you have any questions regarding the study. If you agree to participate please bring this consent form, signed, to your first survey session. If you forget the form, one will be provided to you.

WHAT'S INVOLVED
By emailing the student PI, you have shown interest in participating in this survey study. You will be notified of three (3) different the locations, dates, and times to attend the survey session. You will email the student PI with your preferred timeslot. Consent will be obtained through the submission of this signed consent form to the student PI and attendance at the session. You will also indicate your Brock University student email address on this form to ensure confidentiality and to act as an identifier for participants. During the session you will complete a survey regarding your own personal perceptions of your capabilities to be in sport industry leadership employment positions. Participation will take approximately 10-15 minutes. Participation, non-participation, or withdrawal from the study will in no way affect your academic standing at Brock.

POTENTIAL BENEFITS AND RISKS
There may be assumed risk associated with participation in that Dr. Kerwin will have access to the hard copy surveys of each participant. However, there will be absolutely no penalty in course-related material for non-participation in the study. A possible benefit of your participation is that you will bring attention to Sport Management programs and whether or not its curriculum is beneficial to students' leadership self-perceptions. Also, your participation will help address the issue of the lack of females in sport industry leadership positions. This study will focus on how male and female students differ in terms of their self-perceptions of their leadership capabilities. Through your contribution, the findings will help indicate how both genders progress through a sport management program and where the major differences occur.

INCENTIVE
Possible benefits of participation include the opportunity to have your name entered into a draw to win a prize. There will be one prize draw for each class that will occur after data collection. Winners will be

notified via their email address. Participants will still have the opportunity to participate even if they decide to withdraw from the study.

CONFIDENTIALITY
At no point in the survey will participants be asked for their names. You will be asked to provide your Brock University student email address on this consent form for the purpose of notifying participants of data collection dates/times/locations and relaying information about the prize draw. After the survey session, the hard copy consent forms and email lists will be stored in a locked filing cabinet in the office of the student PI. A master list of e-mail addresses will be held on an electronic file on the password protected computer of the student PI. The list of e-mail addresses will be immediately destroyed after prizes are distributed. Email addresses will not be linked to names or included in the reporting of the findings.

Due to the specific demographic questions asked in the questionnaire, the data collected cannot be considered to be anonymous, nor can they be anonymized. Data, however, will be kept confidential. Data collected during this study will be stored on a password-protected computer, and hard copies (surveys, consent forms) will be stored in a locked cabinet in the office of the student PI. Data will be kept for a maximum of four years, after which time all documents will be destroyed. Other than the student PI, no one will have direct knowledge of which students participated in the study. The list of e-mail addresses of the students that participated in the study will be immediately destroyed after the prizes are awarded to the winners. Access to the survey data will be restricted to the student PI (Michelle Dykstra) and faculty supervisor (Dr. Shannon Kerwin).

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 without penalty. Participants will still have the opportunity to participate in the prize draw. If participants withdraw from the study, their data will be destroyed. Please note that the results of the research will be anonymous.

PUBLICATION OF RESULTS
Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available to those who indicate during the session that they want a summary of the study upon completion. If you did not indicate that you would like a summary of the study during one of the sessions, you may contact the student PI at any time (contact information listed above) and request for one upon completion.

CONTACT INFORMATION AND ETHICS CLEARANCE
If you have any questions about this study or require further information, please contact Michelle Dykstra or Dr. Shannon Kerwin using the contact information provided above. This study has received ethics clearance from the Research Ethics Board at Brock University. If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, reb@brocku.ca.
Thank you for your assistance in this project. Please keep a copy of this form for your records.

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

Name: _____

Brock University student email address: _____@brocku.ca

Signature: _____ Date: _____

□ I would like to receive a summary report of the completed study.