August 2018

# Participatory Action Research Examining the Role of Physical Activity in Mentoring for Resilience

Francesca Gable
*The University of Western Ontario*

Supervisor
Misener, Laura
*The University of Western Ontario*

Graduate Program in Kinesiology

A thesis submitted in partial fulfillment of the requirements for the degree in Master of Arts

## Abstract

This study examined the use of a physical activity-based mentorship program to positively influence student mental health and resilience in post-secondary institutions. The process of relationship building was observed through regularly implemented physical activity interactions over time. The purpose was to determine the ability of a physical activity-based mentorship relationship to positively influence student resilience. A participatory action research methodology was used to engage with a population of 90 undergraduate Kinesiology students (30 mentors:60 protégés) over an 8-month period. 60 interviews and 13 focus groups were conducted, and 1500 pages of journal reflections were consulted to further understand the relationship building process. Qualitatively, results indicated that increased resilience and growth were demonstrated by both mentors and protégés occurring through the creation of a student community, and an increased adherence to regular physical activity. Time and the mentor-protégé pairing process are both necessary considerations for future programs of this nature.



**Key Words:** Mentorship, Leadership, Physical activity, Informal sport, Resilience, Participatory Action Research

## Co-Authorship Statement

The research conducted and presented in this dissertation is a component of my Master's program of study. The contributions of my advisor Dr. Laura Misener, as well as the endless support of various community members must be acknowledged. My original work offered in this thesis is accredited to collaborations had with many people that I interacted with over the past two years.

Note that a version of the Integrated Article, found in Chapter 3 has been submitted for publication under the authorship of Francesca Gable, Laura Misener, and Kevin Shoemaker.

**Acknowledgements**

"A life is not important except in the impact it has on other lives"

- Jackie Robinson

The past two years have somehow both flown by and seemed to last forever. If I have learned anything over my experience, it is how influential the kindness and support of others can be on an individual. I was lucky enough to have been influenced and supported by many special individuals whose wisdom I will carry with me forever. I will do my best to do them justice below…

I am lucky enough to have lots of loving and encouraging friends in my life. Whether it be keeping me motivated to write with new playlists, listening to me get things off my chest, or pushing me outside for a run, my friends always know just what to do. Many of these friends are also my colleagues, who have kept me laughing both on and off the job. Team Misener, there truly is no "I" in team, and this entire adventure of an experience would not have been the same without your laughs, love, and support. I must give a special shout out to my study buddy and confidant Kerri, we started and ended our journey's together, and I am so lucky to have had you! All of you have influenced me to be a better person and taught me to make each day the best day possible. Thank you for the endless smiles!

To my family, throughout my entire life you have encouraged me to succeed in anything I put my mind to. I know I'm not always easy to reason with, but your endless comfort and reassurance helped to get me to where I am today. Thank you for trusting me to make sound decisions when I would take unexpected turns down new paths. I hope to be half the parents that you are!

Last, but certainly not least, I want to thank a couple of very influential mentors I had during my time at Western. To Kevin, my graduate experience would not have been possible without your belief in me that I was capable of tackling such an immense project – in both its size and importance. You knew I was someone who had a hard time saying no, and I am so glad you nudged me in this direction! Without you, I would not have met Laura.

Laura, where do I begin! Your energy for life and academia has fueled my excitement over the past two years and given me a true appreciation for the power of qualitative work. As someone who also has a tendency to have a lot on their plate, it has been exciting and inspiring to watch you successfully accomplish everything that you have taken on over the past two years. You constantly challenge me to write better, speak better, and overall be better. Most of all, you have given me an awareness of language use that I do not think I will ever be able shake. I now ask myself "but what do I REALLY mean to say here?" in every conversation that I have – thank you for that. Through dancing, running, and hiking together you have sparked a fire in me to take big risks and live my life to the fullest. Thank you for being an incredible mentor.

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# Chapter 1: Introduction

## Context

The fourth year of my undergraduate degree, while full of new opportunities, proved to be very challenging; both mentally and emotionally. During the fall semester, a friend of mine lost his battle with mental health and committed suicide. It was this initial struggle that sparked my interest in creating change in the undergraduate community. Simultaneously, Western University had received results from a poll sent to students the year prior. Student responses indicated that their biggest struggle at University was their mental health. This information grabbed the attention of Dr. Kevin Shoemaker, a kinesiology professor at Western. Dr. Shoemaker, along with colleague Dr. Alan Salmoni, decided to reach out to the fourth-year undergraduate Kinesiology community to discuss the prevalence of this issue. Their intent as a research team was to brainstorm how our knowledge of the benefits of physical activity on mental health could be incorporated into program-wide change to benefit the student body. Along with eight other fourth year undergraduate students, I was presented with the opportunity to be part of this change. Under the guidance of Dr.'s Shoemaker and Salmoni, our aim was to incorporate a course in the Kinesiology undergraduate program to better prepare students for their post-secondary experiences and contribute to positive mental health. The nine fourth year students participated in an independent study during our final undergraduate semester where we underwent a process of brainstorming, reflecting, and planning. This process led us to agree on the development of a mentorship program, where first year Kinesiology students would receive support from upper year Kinesiology students. Within the mentorship program, students would be given instructions to perform regular physical activity together, and/or encourage each other to be active on a regular basis. While working on this project I developed a greater understanding

of the insufficient mental health support for students at Western, furthering my desire to make a change. As the semester ended and we were preparing to present the program to the administrators in the school of Kinesiology, I lost another very close friend to suicide. This event caused me great mental turmoil, and further solidified the need for this initiative to be put in place. Following this event, and after receiving funding to run a pilot version of the proposed mentorship program, I was given the opportunity to continue my involvement with the project in the role of a master's student. With the University's awareness of student mental health issues, and the interest of all faculties in addressing this, the proposed project was accepted, and became known as "Smart Healthy Campus" (SHC).

## Introduction

The rapid increase in cases of depression, anxiety, stress, and other mental health disorders being reported in university and college students is alarming (Flatt, 2013). Daily aggravations and/or life changing occurrences are being faced by students who lack the skills to cope, leading to an ongoing battle with mental health. It is concerning to think that when students exit the post-secondary environment and transition into careers that they will lack the skills and abilities to adapt to changes, as well as recover from setbacks (Light & Dixon, 2007). The degree to which an event will impact an individual's life and mental health is determined by their resilience, a skill that is developed over time and through social interactions (Connor & Davidson, 2003; Egeland, Carlson, & Sroufe, 1993; Sarkar & Fletcher, 2016). Physical activity prescribed to individuals struggling with their mental health have demonstrated lasting physical and mental health benefits (Mailey et al., 2010). Further, physical activity programs have been used to build resilience, promote mental well-being, and create social interaction within a community (Smith, Jones, Houghton, & Duffell, 2016).

Social interaction can occur in many different contexts, be it peer to peer, or mentor/leader to protégé. Leadership and mentorship are closely related concepts often being performed by the same individuals within an organization (Pittenger, 2000). The combined mentor-leader provides the commanding presence of a leader, coupled with the support and individual attention of a mentor. Leadership has been thoroughly examined in a sport management context pertaining to athletic departments, teams and organizations (Doherty, 1997), as well as on university campuses (Hilliard, 2010). Utilizing a mentorship model for leadership development within a university campus setting remains largely unexplored (Chen et al., 2014), despite evidence demonstrating the benefits of university student leadership initiatives (Hilliard, 2010) and peer mentorship (Preston, Ogenchuk, & Nsiah, 2014). Mentoring creates significant opportunities for leadership development (Poon, 2006). Just as mentors engage in intentional modeling and provision of opportunities to mentees, leaders must understand the role of followers and serve the best interests of those they aim to lead (Johnson, 2002; Poon, 2006).

My goal in completing this study was to evaluate the process of a physical activity-based mentorship relationship, and how the relationship between the mentor and protégé(s) helped to build resilience. This goal was achieved through the implementation of a kinesiology-specific interdisciplinary SHC initiative. This project supported interactions with two groups of undergraduate students; mentors (third- and fourth-year undergraduate students) and protégés (first-year undergraduate students) from the Western community.

**Research Objectives**

Physical activity is an important resource for increasing social and emotional well-being (Lubans, Plotnikoff, & Lubans, 2012). Improved resiliency allows individuals to better cope with daily stresses and challenges (Fletcher & Sarkar, 2013). The recent rise of undergraduate

students in need of mental health services calls for immediate attention in the form of proactive and preventative interventions (Flatt, 2013). The underlying intention behind the SHC was to improve the resilience and mental health of students in the Kinesiology program. The objectives behind this participatory action research study (PAR) were to examine the process of relationship building between a mentor and protégé(s) during course participation and physical activity-based interactions over time. To achieve this goal, I examined how the mentor/protégé relationship developed by using participant observation, reflective journal entries, and interviews and focus groups with both groups of individuals (mentors and protégés). My specific aim was to work with a group of undergraduate students from first, third, and fourth year and study the process of creating relationships in this physical activity-based mentorship program for considering the potential benefits on the participants. From the findings, I learned how to modify and grow the program for future success. I explored the mentorship process, engaged in the community, and investigated the following research objectives:

**RQ1**: How does the presence of a mentorship relationship aid in engaging in regular physical activity?

**RQ2**: How does the relationship between mentor and protégé influence resilience?

a) How is the relationship developed and supported?

b) What factors help support this?

## Methodology and Methods

### Participatory Action Research

A participatory action research (PAR) approach was utilized for data collection and analysis, action, and reflection throughout the project. PAR involves individuals taking action towards their own self-identified situations through a collective, self-reflective practice (Baum,

MacDougall, & Smith, 2006; Cameron, Hayes, & Mah Wren, 2000). Power is shared among the researcher and the researched, with the researcher often embedding themselves in the community (Baum et al., 2006). Decisions regarding data collection, analysis, and resulting action are made together by the researcher and the co-researcher community members (Baum et al., 2006). Research methods for PAR projects are flexible, as they often change within community co-construction (Cameron et al., 2000). Through an ongoing process of collective learning over a variable amount of time, the intention of PAR projects is to benefit the community (Cameron et al., 2000). The goal of PAR work is to achieve structural transformation while benefitting and improving the lives of those involved in the community (Brown & Tandon, 1983). The emergent nature of the process dictates the specific actions taken over time (Cameron et al., 2000). As such, Cameron et al. (2000) stressed that flexibility is required from all involved due to the dynamic nature of the research.

PAR is flexible in that it can use a range of qualitative and quantitative methods, often drawing upon the paradigms of critical theory and constructivism (Baum et al., 2006). As a constructivist, I understand that knowledge is co-constructed, and as such used this approach to co-construct my understandings with the mentor and protégé participants. In addition, all individuals involved engaged in a reflective process throughout the program (Cameron et al., 2000). The reflection component was necessary, as action and reflection must occur together (Baum et al., 2006). Reflection informed the researcher/co-researchers of their own understandings and their role in the research process (Rich & Misener, 2016). Further, scholars using PAR methodology have found that co-researcher involvement empowers and increases awareness of what the co-researchers are capable of regarding community change (Baum et al.,

2006; Brown & Tandon, 1983). By incorporating data from the community, I increased the validity and usability of the research findings (Case et al., 2014).

We[1] applied reflective practice as a participatory action research (PAR) tool. The reflection component of the PAR process was critical to the research process, and occurred throughout (Cameron et al., 2000). Baum and colleagues (2006) went so far as to stress that action and reflection must occur together. Reflective practice has been seen as a means of self-study that informs the researcher of their own understandings, and the role they play (Rich & Misener, 2016). Reflections can be useful for navigating power struggles, and demonstrate a commitment to improvement (Cameron et al., 2000; Rich & Misener, 2016). As PAR is an "iterative cycle that examine[s] personal meaning making, assumptions, questioning, and understandings" (Rich & Misener, 2016, p. 2), reflection was necessary and beneficial as an additional source of data. PAR research can be placed on a continuum that spans from a more structured comparison of social action (Lewin, 1946), to emancipatory educational purposes (Freire, 1972), and action science (Argyris, 1996). The project's strategy lay along the continuum, aligning more so with the work of Argyris (1996) who outlined learning from experience and reflective practice. These PAR traditions are demonstrated in the pre-existing intervention. Reflexivity, or the process of critical self-reflection (Rich & Misener, 2016), was explored with journaling throughout the study by myself and the undergraduate participants. By engaging in reflexive journaling, mentors were able to monitor their own evolving understandings of mental health, resilience, and leadership. As expanded upon in the findings, the mentors demonstrated a heightened awareness of their own strengths, weaknesses, and areas for growth. Through the use of content analysis, we examined

[1] In PAR literature, the primary researcher and community participants are regarded as "co-researchers" (Baum et al., 2006), but in my context and throughout the document for ease of differentiation between myself and the undergraduate students they will be referred to as 'participants'.

the reflective data considering the participants' explanations of their experiences in the program, and how physical activity influenced the mentor-protégé relationship.

**Data Collection**

Students from first, third and fourth year voluntarily participated in the Mentorship course and the research study over the an 8-month timeframe. Third and fourth year students received course credit for their participation, while first year students volunteered to benefit from the support of a mentor. Through e-mails and in-class presentations I was able to acquire a surplus of volunteers from both first, third, and fourth year cohorts over the 2015/2016 school year. Eligibility for third and fourth year students included being in the BA Honours program with an 80% average; exclusion criteria imposed by administrative structures. These requirements excluded students in the BSc program, as well as those whose grades were below the outlined minimum average. Course enrollment occurred on a first-come first-serve basis, and thirty senior students were admitted to the course. One third of these students were male, and the remaining two thirds were female. In addition, three hundred first year Kinesiology undergraduate were initially interested in participating in the program. Due to capacity restraints imposed by School of Kinesiology administration, the course was able to accommodate 58 first year Kinesiology students. Two additional protégés from the engineering department– one in first year, and the other in fifth year[2] were also initially part of the program. These engineering students were identified as requiring academic and social support, and therefore had interest in the mentorship program. One third of the protégés were male, and two-thirds female. Although gender data was collected, it was not considered relevant in the scope of this thesis document as the only data collected was based on a

[2] Both engineering students left the program early on due to the lack of program crossover between themselves and their respective mentors. Their mentors were left with one protégé for the remainder of the year.

normative gender binary. Further the pairings were done at random between mentor and protégé, without consideration for participant gender. With 30 upper-year Kinesiology students and 60 students interested in mentor support, we initially created a 1:2 mentor to protégé ratio and implemented the program over the 2016/2017 school year. Although the recommended ratio in the literature is 1:1 for mentor-protégé (Borić, 2014), the 1:2 ratio was the most feasible option given the capacity of the program.

Through the use of multiple methods of data collection, I gained a thorough understanding of the relationship process and individual experiences. At the start of the program, mentors were asked to answer baseline questions in the form of written responses regarding their intentions behind joining the program, and their initial perceptions of what it would entail (see Appendix A). On a bi-weekly basis, mentors were required to submit reflection pieces, as well as a log book. The reflection content was meant to incorporate their thoughts, feelings, and interpretations of the successes and struggles involved in this mentorship program. The reflections were not only key sources of data, but also crucial to the mentorship model, as PAR requires an "iterative cycle that examine[s] personal meaning making, assumptions, questioning, and understandings" (Rich & Misener, 2016, p.2). Log books included a record of the amount of time spent with their protégé, how often they communicated with them, and when they performed physical activity with their protégés. Subsequently, protégés were asked to submit a reflective journal, however this was not required due to their status as volunteers in the program. Guiding questions were provided to both mentors and protégés (see Appendix B) to help stimulate critical thinking on their experiences and the potential reasons behind their interpretations.

Additional interaction with the co-researchers occurred at the end of both semesters. In both December and April, I held semi-structured interviews with the mentors (60), and focus groups with the protégés (15). A list of days and times for interviews and focus groups were provided to the participants, and they were required to sign up by selecting a time slot on a first come, first serve basis. Interviews were one-on-one, while the number of students in each focus group ranged from 3-7 participants. Leading and probing questions were designed for both sets of interviews and focus groups, at mid-intervention and final intervention (see Appendices C-G).

Participant observation was another method that was employed over an extended period of time (eight months; Watts, 2011). During this time, it was important for the researcher to maintain reflexivity and preserve an ethical presence. These observations were documented in the researcher's personal journal.

In following with recommendations in the literature, I kept my own reflexive journal both throughout, and following, the eight-month program (Vaismoradi, Turunen, & Bondas, 2013). This included thoughts from my attendance at the weekly meetings with mentors and protégés. In line with what was asked of participants, I reflected on my personal highs and lows, thoughts, and feelings, while participating in the mentorship process. Reflecting, and discussing one's reflections, is important in PAR as it often "provoke(s) further reflections and … [leads to] adjustments to the research approach (Rich & Misener, 2016, p.5). I often shared my reflections with my academic supervisor and participants. This resulted in iterative conversations about the meanings associated with those reflections.

**Data Analysis**

In line with the PAR methodology, data analysis occurred as a continuous conversation with the co-researchers involved (Kidd & Kral, 2005). The key tenets of the PAR process were

outlined prior to data collection and data analysis to ensure the researcher understand the process of conducting research of this nature. This process of preparation was seen to be important in PAR studies, as indicated in the literature (Frisby, Reid, & Millar, 2005). Preparation included the participatory nature of the study that took the thoughts and interpretations of all participants into consideration (i.e. mentors and protégés), as well as the reflective nature of the chosen methodology (Cameron et al., 2000). I fully immersed myself in the data before beginning any formal data analysis (Vaismoradi et al., 2013). I used inductive content analysis to code categories directly from the text data (Elo et al., 2014; Vaismoradi et al., 2013). A large amount of text was analysed at both mid-intervention (MI) and final intervention (FI). This included reflection responses (MI and FI N=~1500 pages), interview transcriptions (MI N=30, FI N=30) and focus group transcriptions (MI N=8, FI=7). As such, a systematic coding and categorizing approach was ideal for finding trends, patterns, and relationships among the discourses of communication (Vaismoradi et al., 2013). I completed the initial open coding process with the assistance of NVivo data analysis software (Hsieh & Shannon, 2005; Schilling, 2006) The NVivo analysis process involves uploading all documents for analysis onto the software, and using the various features to help outline and organize the emerging themes. I completed the analysis by reading through the data and allowing themes to emerge in an inductive way. Following this, a second round of broad based deductive coding was completed. This process is based on literature-based knowledge and relationships, where I took the themes that emerged from the first round, and contrasted them with discussions in the literature. The final round of analysis involved consultation and confirmation of themes with my supervisor through many discussions regarding the emerging themes regarding the trustworthiness of the process. These discussions helped to guide my thought processes, and provided perspective on how I was interpreting the data. The other professors and administrative

team members involved in this program were informally consulted throughout, but they did not participate directly in the participatory process. This is because the intent of the PAR project was to assist the undergraduate Kinesiology community, and they were not members of that community. While immersing myself in the data, my own perspectives and understandings of my experience in the program changed; a key component of the PAR methodology (Elo et al., 2014; Hsieh & Shannon, 2005).

Ensuring the trustworthiness and credibility of my findings and conclusions as the researcher can be discussed using the terms conformability, dependability, transferability, and authenticity (Elo et al., 2014). Dependability refers to the stability of the data over time, and in different conditions (Elo et al., 2014). In this research project, the data was collected and combed through over an 8-month time frame. This time period allowed for varying circumstances for all participants involved. Analysing the data with this in mind contributed to the credibility of the findings. Conformability is an objective congruence across two or more different members of the data set, regarding meaning, accuracy, and relevance (Elo et al., 2014). This was established with the assistance of my supervisor, the senior administrative members, and the participants' themselves. At multiple time points throughout the project, findings were taken to all involved and I had discussions with all involved regarding their meaning and relevance. Transferability of the data indicates that the findings can be transferred to other settings and/or groups, and authenticity outlines the extent of which researchers can show a range of realities (Elo et al., 2014). The discussion of the experiences of 90 students was an indication of the data's transferability and the quotes used throughout the results demonstrate the authenticity of the data. These steps have helped with the trustworthiness to ensure that my findings could be relied upon for future reference and replication.

**Data Reporting**

Throughout the research process it was important to produce knowledge and action that would be directly useful to the community (Kidd & Kral, 2005). Developing knowledge and action outcomes that benefit the community involved are key aspects of PAR, and as such were of high priority in this study (Kidd & Kral, 2005). In a mutually collaborative environment, results were shared amongst the researchers and community co-researchers on more than one occasion. This cycle of feedback, action, and reflection is a critical component of PAR (Gibbon, 2002; Huang, 2010). Member checking was done both during the interviews and focus groups, as well as in open discussions held with the mentors and protégés. This process allowed the primary researcher to return to the community to confirm understandings of their feedback, and co-constructing a new understanding (Elo et al., 2014; Hsieh & Shannon, 2005). These understandings were relayed back in discussions with the committee of graduate students and professors involved in the initiative. Meetings with the participants occurred monthly and the primary researcher shared memos and field notes with all involved parties. Regular interactions kept participants and all associated individuals familiar with the goings on of the project as it evolved.

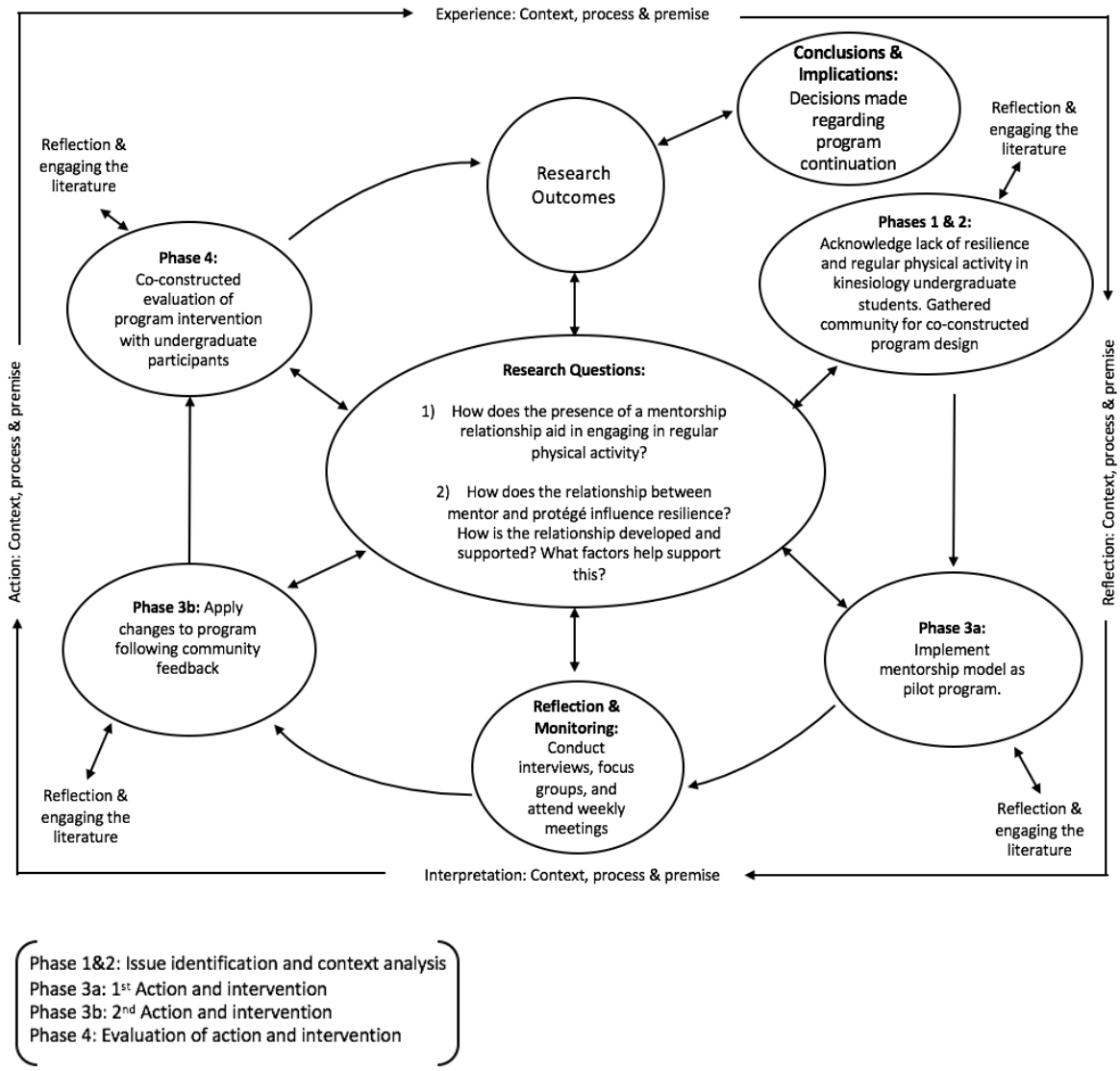


*Figure 1.* Single cycle of PAR mentorship model; design based off framework proposed by Shilbury and Ferkins (2015).

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# Chapter 2: Review of Literature

## Mentorship

The role of a mentor is dynamic, requiring a great deal of time, effort, and commitment to take on various roles to fit the needs of their mentees (Dziczkowski, 2013). Mentorship is most effective when working within a certain framework (Pittenger, 2000). Throughout a mentor and protégés' time together, the mentor must work to build the protégés confidence, while acclimating them to the new organization and/or program (Dziczkowski, 2013). These efforts on behalf of the mentor ideally create and maintain protégé interest in program participation. By providing the protégé with autonomy in decision making and encouraging them to take ownership over their actions, they are effectively developing the self-efficacy required by the protégé to take advantage of new opportunities (Dziczkowski, 2013; Pittenger, 2000).

Mentoring is intended to be a very positive experience for all involved, but both successes and challenges must be expected throughout. For mentors and protégés alike, "the benefits and advantages derived from a mentoring relationship include (a) reduction in stress and anxiety, (b) improved self-esteem, (c) increased professional skills, (d) increased insight, and (e) greater awareness of different approaches" (Bush & Coleman, 1995; Dziczkowski, 2013, p.355; Hobson & Sharp, 2005; Whitaker & Turner, 2000). Dziczkowski (2013) found that some challenges in mentoring included "time constraints, incompatible pairing of mentors and mentees, qualities of mentors, and training of mentors" (p.352). Careful consideration must be given to the evolution of effective mentoring when selecting and training mentors, as protégés are often vulnerable and impressionable (Pittenger, 2000). The trial and error experienced throughout participants' time together allow both parties in a mentoring relationship develop insight and awareness (Dziczkowski, 2013).

Mentorship programs help to develop resilience; protective factors that allow for positive adjustment and coping toward stressors (Friborg, Hjemdal, Rosenvinge, & Martinussen, 2003). Mentors must support protégés in their endeavours while remaining strong role models in all that they do (Grossman & Tierney, 1998). A mentor exhibiting an honest and sincere effort to persevere through adversity is inspiring. Witnessing a mentor overcome a challenging situation can teach protégés to do the same.

**Leadership and Leadership Development**

The recent recognition of young people's potential to create and bring about change is resulting in more opportunities to involve them as leaders to make a difference (Christens & Dolan, 2011). Unfortunately, student leadership development opportunities at post-secondary institutions are scarce, and as such University is not adequately preparing students for leadership roles (Zimmerman-Oster & Burkhardt, 2000). Students involved in leadership activities demonstrate maturity, self-discipline, resiliency, focus better on their goals, and learn to model the behaviour they expect while serving others (Hilliard, 2010). Organizing young adults to create social change and community development promotes psychological empowerment, sociopolitical development, and leadership development (Christens & Dolan, 2011). That being said, the difference between *leader* development and *leadership* development must be acknowledged. The former focuses on nurturing individual skills, while the latter encourages the individual to build both the organization and its members' capabilities (Day, 2001).

In an analysis of student leadership opportunities in a University setting, Hilliard (2010) found that early involvement in leadership opportunities can help students gain a greater interest in campus academic and social life. The nature of action learning in a PAR study like this study is well suited to facilitated leadership development due to the collaboration involved (Coghlan,

2004; Day, 2001; Raelin & Coghlan, 2006; Torbert, 1994). Additional benefits to student leadership at a University include, but are not limited to: creating a sense of ownership and responsibility, improving campus community relations, increasing peer autonomy, developing leadership in others outside of the campus spectrum, and gaining a better understanding of the self and others (Hilliard, 2010). Greater success can be achieved by both leaders and mentors if they are not afraid to seek out assistance from others in order to complete tasks (Dziczkowski, 2013).

As explained by Day (2001), leadership development involves building the organization and its members' capabilities. This integrative approach resembles social capital through enhancing individual effectiveness, building relationships, and strengthening social networks (McCallum & O'Connell, 2009). The structure of, and community aspect involvement in our leadership development-based program look like aspects of social capital. Chazdon and Lott (2010) indicated that successful leadership development incorporates social capital and relationship building in three ways: (1) bond like-minded people together and build trust, (2) bridge people with varied backgrounds and/or interests to other types of groups and organizations, and (3) link people and organizations to resources and information outside the community. Social capital elements, such as trust and community involvement, need to be continuously nurtured in order for organizations to successfully support the development of leadership capabilities (McCallum & O'Connell, 2009; Roberts, 2013). Social capital and leadership development interact in a cyclical nature, where the nurturing and development of one leads to the prosperity of the other, and vice versa.

**Mental Health and Physical Activity**

The prevalence of significant mental health problems in the college student population is alarming (Gallagher, 2007). In fact, "the age at which many mental health disorders manifest themselves is between 18 and 24, which coincides directly with the average age of student enrolment in high education" (Kessler et al., 2005). Zivin, Eisenberg, Gollust, and Golberstein (2009) conducted a longitudinal survey study with two time points two years apart and looked at (1) the change of one's mental health status and (2) the persistence and change in individuals' seeking help. Over one third of the 2843 students who responded indicated they were suffering from a mental health problem, with 60% having suffered from more than one (Zivin et al., 2009). University students have indicated pressure caused by academic stress to be a leading cause of their depression, anxiety, and suicide ideation (Flatt, 2013). Yet, there appears to be a deficiency in use of campus services due to a lack of perceived need for help (Zivin et al, 2009). In response, some colleges in the United States have altered their college counseling program to crisis management to meet the needs of students in higher education (Kadison & DiGeronimo, 2004).

An alternative approach to combatting the increase in poor mental health is the use of physical activity as a tool to build resilience and emotional mental well-being (Ho, Louie, Chow, Wong, & Ip, 2015; Penedo & Dahn, 2005). Physical activity directly combats mental health problems in four ways: "(1) treatment of mental illness and disorders, (2) prevention of mental illness and disorders, (3) improvement of mental and physical well-being of those with mental illness, and (4) improvement of mental well-being of the general population" (Fox, 1999, p.142). Physical activity energises individuals and improves their mood, with very active people rating themselves to have a high positive mental well-being (Fox, 1999). Flatt (2013) indicated

an inverse association between physical activity, depression, and anxiety. Two recent meta-analyses looking at exercise therapy for clinical depression determined (a) physical activity is associated with decreased risk of developing clinical depression (b) experimental studies show that aerobic and resistance exercise are effective in treating depression (c) effect [of physical activity] is of the same magnitude as psychotherapeutic interventions (Fox, 1999).

Fifty three percent of students surveyed from 1455 American Universities reported experiencing depressive symptoms beginning around the time of their post-secondary experience (Furr et al., 2001, as cited in Flatt, 2013). These responses stress the need for tackling the mental health crisis through the implementation of physical activity initiatives. Traditional physical activity methods, such as exercise, as well less conventional physical activity programs (e.g. dance, yoga) show significant reductions in perceived stress (Penedo & Dahn, 2005). This stress reduction was seen in separate samples from the United States and Canada totaling 55,000 subjects, "[whose] self-reported level of recreational physical activity correlated with better mental health, including fewer symptoms of both anxiety and depression" (Ströhle, 2009). Currently, no "gold standard" exists for the therapeutic administration of physical activity for individuals struggling with their mental health. As such, a mentorship peer-support model using physical activity as a primary medium for interaction was thought to be a strong approach to create positive mental health benefits.

**Resilience**

Resilience is defined as the "capability of individuals to cope successfully in the face of significant change, adversity, or risk" (Stewart, Reid, & Mangham, 1997, p. 22). Resilience is helpful in protecting individuals from the effects of negative stressors (Fletcher & Sarkar, 2013). Some personality traits affiliated with resilient individuals are hardiness and mental toughness

(Deuster & Silverman, 2013). Resilience is understood as either a trait, process, or outcome that changes over time, influencing how one appraises an event or situation (Fletcher & Sarkar, 2013). This concept is often incorrectly used synonymously with coping, which instead refers to the strategies used after an encounter has been appraised by an individual (Fletcher & Sarkar, 2013). Fletcher and Sarkar (2013) explained that this positive appraisal of a situation, or resilient mindset, can only become present when one is mentally, physically, and spiritually balanced. Additionally, high self-esteem, self-efficacy, and confidence are essential for resilience (Deuster & Silverman, 2013).

Ho and colleagues (2015) outlined resilience to play a significant role in mediating positive associations between physical activity and mental health in studies on adolescents' mental well-being. In programs that target resilience, it is equally important to challenge participants ability to cope as it was to provide them with sufficient support (Ho et al., 2015). Challenging individuals helped to develop their resilience, while the support assisted them with undue stress. Ströhle (2009, p.780) indicated that "the effects of physical activity might … result in higher resilience against (stress-associated) mental health disorders" (Charney, 2004; Cohen & Rodriguez, 1995; Cotman & Berchtold, 2002).

Resiliency does not present itself equally in all individuals, in fact it has been seen to protect against specific risk behaviours differently for males and females (Mistry, Mccarthy, Yancey, Lu, & Patel, 2008). Gender-tailored interventions may be required due to the differences in patterns of co-occurrence health behaviours and the influence of resilience factors (Mistry et al., 2008). To further aid in the development of resiliency, Kao, Rogers, Spitzmueller, Lin, and Lin (2014) determined that resilience is affected by intrapersonal and environmental factors. These include cognitive factors and competencies, and external resources and life events,

respectively (Kao et al., 2014). Mentoring individuals through failure helps to develop a more resilient mind-set (Ho et al., 2015; Kao et al., 2014). The understanding of mentorship and its potential to influence the resilience of others were the foundations of the program.

**Social Capital and Human Capital**

Forms of social capital, in regards to the work of Coleman, (1988) (e.g. trust, sharing of information, community development) were seen to emerge from the program over time. Social capital exists in the active connections among people, both within and beyond organizational boundaries (Coleman, 1988; McCallum & O'Connell, 2009)**.** Key social capital elements are "building relationships… nurturing trust, coordination, commitment [and]/or networks" (McCallum & O'Connell, 2009, p.158), all of which are achieved as a team effort by members of the community (Misener & Mason, 2006). Developing a high degree of trust among group members, or between mentor and protégé(s), is necessary before social capital can be fostered. Maintenance of this trust is just as important as its initial development (McCallum & O'Connell, 2009). Connections within and among communities develop a trusting environment that allows for the sharing of knowledge (White, Spence, & Maxim, 2006). Knowledge sharing can enable individuals or groups to access a pool of resources and supports (Emery & Bregendahl, 2014; McCallum & O'Connell, 2009). Further, "strong bonding social capital networks, with … members, that are bridged to school networks and linked to resources seem to have a positive effect on the transitions to high school and post-secondary institutions, graduate rates, and overall educational success" (White et al., 2006, p.74).

Cooperation and support from the greater community is a necessary platform to support a successful social capital building initiative (White et al., 2006). Additionally, White and colleagues (2006) indicated that with no clear 'rewards' or opportunities for societal

involvement, interest in program participation can diminish. Developing participant enthusiasm for experiential education, such as leadership training, has been linked to effort put forth by those involved (White et al., 2006). With this understanding, the provision of a formal leadership training program for involved mentors provided academic incentive.

Leaders view their role as one with a responsibility to many individuals, with the intent to work with community partners and build a collective energy for the sharing of knowledge and capital (McCallum & O'Connell, 2009). Bonding social capital, when incorporated in a large community can increase the potential for educational attainment (White et al., 2006). In addition to these intragroup relations (i.e. bonding), horizontal intergroup relations (i.e. bridging) and vertical intergroup relations in a society stratified by class, status, and power relations (i.e. linking) can help to further expand resource sharing and maintenance of social capital (White et al., 2006). It is important to recognize and appreciate the interactions and "social relations that generate trust, establish expectations, and create norms" (Misener & Mason, 2006, p.43).

When individuals involved in programs and/or organizations develop new skills and abilities, human capital has the potential to be formed (Coleman, 1988). Human capital refers to the pre-existing abilities and additional training of individuals (Coleman, 1990, as cited in Misener & Mason, 2006). Social and human capital are not fully independent of one another, as building human capital can enhance relationships and as such result in increased social capital, and vice versa (McCallum & O'Connell, 2009). Participation of members on an individual and group level nurtures a sense of ownership for program values (Misener & Mason, 2006). In some instances, social capital can expand to be available for use outside of the purposes set out by the program and/or organization (Coleman, 1988). Kemp (2002) stated that those who get involved in one community activity are often likely to be further involved in voluntary activities in and for

the community. These instances show promise for both individual and community development opportunities.

Mentorship studies have demonstrated successful creation of both social and human capital. Rawana and colleagues (2015), accounted for perceived mentor and protégé human capital benefits in a mentorship study. Mentors found they expanded their networks, learned to help others, gained confidence and experience in a leadership position, and developed skills for future careers (Rawana et al., 2015). Protégés stated that they enjoyed meeting new friends, finding people to connect with and gaining familiarity with school culture, all while receiving peer support (Rawana et al., 2015). Involvement in the community, regular collaboration, and the consideration of long term program policy all helped to build a sustainable organization (Christens & Dolan, 2011).

**Program Development and Implementation**

Due to the program design and implementation incorporated with this research study, it was necessary to delve into the literature regarding best practice. Introducing and implementing a new program in any capacity requires continuous re-visiting, consideration of critical perspectives, and ongoing development of new capacities (Christens & Dolan, 2011). Shared goals and understanding by all individuals in the program further ensures that organizational outcomes will be achieved (Pittenger, 2000). Building a leader within the program and/or organization additionally contributes to achieving sustainability (Christens & Dolan, 2011). This can be achieved by establishing a group focus on pre-determined learning objectives, and providing all involved with resources (Emelo, 2011).

Programs centered around mentoring and/or leadership development require additional considerations. Program design must involve regularly scheduled (e.g. monthly) group activities

to increase participant interaction, as well as encourage more intimate one-on-one session opportunities amongst mentors and protégés (Rawana et al., 2015). The opportunity to participate in follow-up sessions are important for reflection, self-awareness, and growth (Emelo, 2011). Supporting effective communication patterns and ample opportunities for contact will impact the intimacy achieved between and amongst participants and inevitable program success (Pittenger, 2000). Providing considerable attention to fostering communication demonstrates a resemblance to the use, and creation of, social capital as described by Coleman (1988) (e.g. sharing of information, social organization). Rawana et al. (2015) found that a program length of at least one academic year is ideal to provide time for participants to become more comfortable with each other and allow for more interactions,

Programs advertising mentor assistance to interested individuals must ensure that their mentors are adequately prepared and skilled to provide psychosocial support before being paired up (Pittenger, 2000). Emery and Bregendahl (2014) outlined six factors for successful relationship building that must be considered in the implementation of a leadership program: (1) trust, (2) alignment, (3) intentionality, (4) diversity, (5) readiness, and (6) perspective. Qualities such as approachability, strong leadership, knowledge of university resources, compassion, and being an upper-year student should be sought out when recruiting leaders (Rawana et al., 2015). Individuals with good interpersonal skills are better equipped from the outset, but training can also be offered for those who require additional assistance to develop those skills.

This study incorporated a variety of background information from the existing literature in order to gain a better understanding of how these fundamental concepts have been researched in the past, and how they could intersect in the present study. The distinction of mentorship and leadership as separate, complimentary entities proved useful when supporting mentors in their

protégé interactions. Previous research on various types of physical activity and their respective mental health benefits indicated that specific physical activity guidelines did not need to be provided in order to allow for positive program experiences. Additionally, a more in depth look at the meaning and benefits of heightened resilience linked with the intended positive impact of the program. With the nature of this study being that of program design and implementation, I found that gaining insight on key considerations and best practices was necessary in the research process. Lastly, as the notion of social capital emerged from the data analysis process, a deeper look into the literature regarding social capital was required. Consulting these different areas of literature provided me with an increased appreciation for previously conducted research. My increased knowledge in these realms allowed me to more accurately fill gaps in knowledge and implement a novel program.

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# Chapter 3: Building Health and Resilience: Mentorship, Leadership and Relationships

## Introduction

"Invisible" health concerns have become prevalent among post-secondary students (Chen et al., 2014), so much so that the increase in cases of depression, anxiety, stress, and other mental health disorders in University and College students is being classified as an international crisis (Chen et al., 2014; Flatt, 2013; Steptoe & Butler, 1996). With health as "a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity" (World Health Organization, 1946), the evident invisibility of some health concerns must be considered. The first-year transition is a critical time (Flatt, 2013), and the inability to cope with these new experiences is demonstrative of a lack of resilience among undergraduate students. All too often this results in mental health problems.

Resilience is a skill that is developed over time and through social interactions (Connor & Davidson, 2003; Egeland, Carlson, & Sroufe, 1993; Fletcher & Sarkar, 2013), demonstrated by the way that individuals are able to cope with stressors. New strategies to build resilience in the student population are being implemented given the increasing concern at many Universities regarding student mental well-being. Physical activity prescribed to individuals struggling with their mental health has demonstrated lasting physical and mental health benefits, such as relieving symptoms of depression and anxiety (Mailey et al., 2010, as cited in Flatt, 2013). These benefits have been acknowledged, resulting in a recent call for research on informal sport and physical activity settings helping to foster a sense of community (King & Church, 2017).

Social support is a large contributor to the therapeutic effects of physical activity, and thus beneficial in supporting mental health (Ströhle, 2009). This study evaluated the process of creating a physical activity-based mentor-protégé(s) relationship to positively influence health outcomes. A mentorship program implemented within a University undergraduate program supported this

initiative. This mentorship program supported first-year students in the School of Kinesiology at the University, with the instruction to encourage and perform regular physical activity with their mentor. This study focused on the process of developing relationships through physical activity that helped support resilience.

## Research Context

To support mental health and build more resilient students, a mentorship program, titled 'Smart Healthy Campus' (SHC), was developed to focus on the transition of first-year undergraduate students through a multi-faceted approach. The initiative involved three key components: a) mentorship, b) regular physical activity, and c) reflection. To begin, first-year students that volunteered their participation were assigned a mentor from a class of upper-level students (years three and four). Mentors were enrolled in a full-year course that involved building a mentoring relationship with first-year students and helping them to adjust to the University environment. At the outset of the initiative, general guidelines were given to all participants regarding mentor-protégé interaction, essentially encouraging the use of regular physical activity to support building the relationship. All individuals, mentors and protégés alike, were encouraged to maintain reflective journals of their experiences throughout their year (i.e. academic year of eight months) in the program. How the respective mentor and protégé groups chose to integrate their physical activity was left up to them, ensuring each process of relationship building and activity incorporation was unique. For this paper, we are interested in the role of physical activity in the relationship between mentor and protégé in helping support the program outcomes over time.

The relationships between mentors and protégés were examined with the intent to gain insight on the process of relationship building with regular physical activity as a moderator. We

look to further understand whether the suggested mental health benefits occurring stemmed from the role of physical activity and informal sport participation.

## Review of Literature

### Physical Activity and Mental Health in Practice

Mentorship involves an individual helping to shape the growth and development of a younger individual who trusts them; their protégé (Merriam, 1983). In an organizational setting, mentorship has been considered as a critical development tool for career success and professional development (Hunt & Michael, 1983). As organizational success is dependent on the mentoring outcomes, managers have been particularly interested with mentoring relationships (Pittenger, 2000). The presence of a mentor in an emotional interpersonal support and advisory role has been demonstrated to foster long term sustainability and growth for both the individual, and the organization (Hunt & Michael, 1983).

As Misener and Misener (2016), explained, "joint initiatives between educational, health, and social institutions using sport and leisure to address quality of life issues have emerged as important policy agendas" (Misener & Misener, 2016, p.695). Although outlined for organizational purposes, these concepts are transferable and could be applied to the benefits of an individual. Similarly, "sport and recreation organisations [were] increasingly recognized by the health sector as key players for promoting health… [and] increasing… physical activity levels" (Casey, Payne, & Eime, 2009, p.112). These organizational understandings can be transferred to the individual, as was intended in the implementation of the mentorship program. It has been seen that recognizing sport as an important contributor to positive health outcomes is necessary when moving towards a better understanding of physical activity for health and well-being (Olivola, Eubanks, & Lovelace, 2014).

The degree of organizational change required to bridge sport and health organizations can only be successful if the leader(s) of the organization are motivated to bring about this change, and have the capacity to do so (Casey et al., 2009). It is this top down support that is necessary to increase the potential success of program implementation. As Kinesiology professors and students, the leaders involved in the SHC believed, and continue to believe, in the use of sport and physical activity to bring about positive health benefits. From this supportive role, it was important for the mentor/leaders of the initiative to gain support from other key individuals in both the Kinesiology, and campus community. Generating support and collective interest in a health promotion strategy can be a challenge when being newly introduced to an organization (Casey et al., 2009). One must promote the idea at many levels of the organization in order to build awareness and develop interest and support for the change (Casey et al., 2009). Leaders both within, and overseeing the program, have the ability to bring about change if the relationships were developed appropriately.

The link between physical activity and mental health is important to examine because it is one that is not frequently reviewed but has the potential to be an effective combatant to the mental health crisis. Using the case of the SHC initiative, we examined the role of mentorship and relationship building in fostering positive health behaviours. We drew upon the conceptual links that framed the necessities of physical activity, leadership, mentorship, and health, as we identified the potential benefits that stemmed from a program of this nature.

**Mentorship as Leadership**

Physical activity has been used as a tool to build relationships, help develop character, and provide structure in the lives of individuals of all ages (Sherry, Schulenkorf, & Chalip, 2015). The physical activity was often facilitated by a leader or coordinator, but seldom was it used in combination with mentorship. The role of a mentor can vary from relationship to relationship,

often requiring the mentor to take on a variety of roles. MENTOR/National Mentoring Partnership (2003, p. 8, as cited in Choi, Park, Jo & Lee, 2015) referred to mentorship as a "structured and trusting relationship that brings … people together with caring individuals who offer guidance, support, and encouragement aimed at developing the competence and character of the mentee". Mentors have filled the position of a counselor, guide, tutor, coach, and sponsor at different points in time, ideally in a one-to-one relationship (Borić, 2014; Hunt & Michael, 1983). Mentoring was recognized as a personal relationship where a more experienced faculty member or professional acted as guide/role model/teacher to less experienced student or professional (Johnson, 2002). With this experience, they worked to nurture the talent of their followers in this setting; their primary concerns were the needs and development of their protégé(s) (Hunt & Michael, 1983; Johnson, 2002).

When looking at the benefits that protégés receive from a mentoring relationship, psychological enhancements included "role modeling, acceptance and confirmation, counseling, and friendship (mutuality)" (Johnson, 2002, p. 89). Mentoring relationships had the potential to provide motivation and accountability when paired with the suggestion of regular physical activity (Lawson, 2005). Depending on the protégés needs and goals, mentors provided protégés with opportunities to grow and be autonomous in their decision making (Hunt & Michael, 1983). However, what the protégé brings to the relationship could impact the mentorship outcomes; either positively or negatively (Hunt & Michael, 1983). It is the responsibility of the protégé to take full advantage and utilize the opportunity for personal development. The protégés' attitude and willingness to learn and grow from the relationship experience was a further determinant of program success. The success of the SHC program could only occur if all participants were involved in the efforts of the program. In the instances where protégés were unsure of how to

incorporate physical activity into their lives, or lack the enthusiasm to do so, the encouragement from their mentor helped to ensure this activity did happen, and in an enjoyable environment.

**Mental Health**

The topic of mental health has become a growing concern, not only in the university and college population, but beginning as early as adolescence (Chen et al., 2014; Flatt, 2013). As such, authors have investigated the prevalence of mental health concerns. Chen and colleagues (2014) found that 10-20% of a sampled population of individuals aged 11-17 were suffering from a mental health concern, and over 50% claimed to suffer from more than one concern (such as anxiety, depression, etc.). The first onset of many mental health disorders is often in young adulthood, with approximately half of young adults attending post-secondary education (US Department of Education, 2007, as cited in Zivin, Eisenberg, Gollust, & Golberstein, 2009). This indicates that not only is there a high prevalence of mental health in secondary institutions, but in post-secondary as well.

Stigma – self-stigma, public stigma, and attitudes towards help-seeking – is the most significant barrier present for those in need of seeking help (Chen et al., 2014). Instances where a greater number of mental health problems were reportedly suffered by an individual, the greater the accounts of self-stigma and a decreased willingness to seek help were seen (Chen et al., 2014). Low expectations of therapy outcomes and fear of negative public attitudes have led 36% of college students in Beijing, China to internalize their suffering, and in some cases cause increased thoughts of suicide (Chen et al., 2014; Yorgason, Linville, & Zitzman, 2008). Additional barriers discovered to preventing student use of available mental health resources were a lack of time and lack of sufficient knowledge of the available resources (Yorgason, Linville, & Zitzman, 2008).

Aside from the fear of public ridicule and disbelief in success from therapy, students acknowledged that they were unaware of the existence of the campus resources due to inadequate provision of information (Yorgason et al., 2008). Upon looking deeper into the reasons behind students' susceptibility to experiencing mental health problems, Chen et al. (2014) determined that low self-resilience, a lack of coping strategies in students, and the presence of trait anxiety or depression often made individuals susceptible to mental health concerns.

In terms of motivating a student to address their potential mental health concerns, students in the United States stated they were more comfortable receiving referral from friends and family versus a professional (Chen et al., 2014). As an extension of this understanding, we as researchers believed that educating mentors on how to be more aware of those around them, and how to assist their protégés reach out for help when necessary, generated a group effort towards improving the experiences of those on campus. Lubans, Plotnikoff, and Lubans (2012) demonstrated that physical activity is an important resource to increasing social and emotional well-being with at-risk youth. In the study of a mentorship program by Rawana, Sieukaran, Nguyen, and Pitawanakwat (2015), the authors noted mental health benefits included isolation prevention, community provision, stress relief, and increased confidence. This understanding has led scholars to consider the benefits of mentorship programs and physical activity in improving social well-being, and how the provision of a friend and supportive figure may make students feel more comfortable in addressing their mental health. This knowledge of student hesitation towards seeking help, unfamiliarity with the whereabouts of mental health services, and physical activity as a mental health prevention tool helped frame the purpose of implementing the SHC initiative.

**Intersection Between Physical Activity levels and Mental Health**

The prevalence of sedentary behaviours has been related to an increase in moderate depression (Steptoe et al., 1997). The physical and mental consequences of sedentary behaviour have been a large expense to the public health sector, and the realization of activity promotion as a solution has been seen as promising (Morris, 1994; Powell et al., 1994). This knowledge demonstrates a need for physical activity promotion to improve self-perceptions, mood, life satisfaction, and overall quality of life (Fox, 1999). In response, activity promotion could be seen as a cost-effective strategy for improving this problem. In a study by Ho, Louie, Chow, Wong, and Ip (2015), the authors found that physical activity was significantly correlated with self-efficacy, mental well-being, and resilience ($r=0.21$, $p<0.001$). Similar results have been found by many other authors, demonstrating that physical activity helped improve quality of life for those suffering from mental illness. Physically active individuals were more likely to enjoy receiving social support; and that high self-reported levels of physical activity were associated with better mental health (Smith, Jones, Houghton, & Duffell, 2016; Steptoe et al., 1997; Ströhle, 2009).

In a study looking at the activity levels of adolescents, Steptoe and Butler (1996) found that those who were engaged in more vigorous activity reported fewer mental health symptoms. There was a significant positive association between the psychological symptoms experienced, and lack of participation in vigorous recreation (Steptoe & Butler, 1996). Thus, the fostering of active lifestyles beginning in adolescence may help establish positive health habits, and physical activity as an important component of overall behaviour. A similar conclusion was reached by Ströhle (2009), who found that regular physical activity reduced the risk of developing depression, and that physical activity doses consistent with public health recommendations were effective for treatment of mild to moderate depression symptoms. Physical activity, in some instances, resulted

in higher resilience against mental disorders (Collishaw et al., 2016; Fox, 1999; Ho et al., 2015; Ströhle, 2009). Further, Penedo and Dahn (2005) and Smith and colleagues (2016) found that not only did it reduce depression symptoms, but regular physical activity was seen to improve mood.

With the understanding of the benefits of encouraging and promoting physical activity, Smith and colleagues (2016) implemented the creation of school games and increased competitive sport to develop mass community participation. This aforementioned method was suggested to help improve the quality of life of those suffering from mental health issues. The authors found that early intervention was the key to success, and that the recommendation of physical activity only demonstrated benefits with those suffering from generalized anxiety disorder and mild to medium mental health symptoms (Smith et al., 2016). Similarly, Penedo and Dahn (2005) found that those suffering from major depression demonstrated significant improvements in alleviation of symptoms when performing aerobic exercise. Furthermore, Smith and colleagues (2016) also provided strong evidence of the positive impacts of aerobic exercise on adults suffering from clinical depression. These benefits were more likely to be seen when participants are focusing on personal improvement goals (Fox, 1999). This strategy was further incorporated in the SHC initiative by requesting that the mentors and protégés work together to set physical activity goals and help support each other in reaching them.

In combination with regular physical activity, other authors discovered additional activities that, when paired with regular physical activity, demonstrated benefits to mental health. In particular, authors Ho et al. (2015) held debriefing sessions post-exercise that allowed participants to reflect on their performance and develop problem-solving strategies. In line with this process of reflection, Ströhle (2009) recommended the use of activity diaries to comment on the positive effects of regular activity. This written form of motivation was seen to be more effective when

paired with face-to-face counselling rather than verbal counselling alone (Ströhle, 2009). Both methods of regular de-briefing and the use of reflective journals were used as part of the SHC, where both mentors and protégés were given opportunities to share and discuss their thoughts and opinions.

From the literature, we can witness the rising mental health concerns, and acknowledge how physical activity prescriptions have been successful in combatting and treating the effects of mental health. Coupling this understanding with the importance of the presence of a mentor/leader, the purpose of this research was to examine the process of relationship building through a university physical activity-based mentorship program. From this, we worked to determine if it was the regular physical activity, or the social interaction, that led to the suggested increase in resilience, health and mental health benefits, for student participants.

## Methodology

### Participatory Action Research (PAR)

A participatory action research (PAR) approach was utilized. PAR is a collective, self-reflective practice that is based on a cyclical process of data collection and analysis, action, and reflection, and involves people that are taking action towards their own situations (Baum, MacDougall, & Smith, 2006; Cameron, Hayes, & Mah Wren, 2000). This study adhered to the five principles of PAR: (1) increased community participation, (2) community must identify the issue, (3) research must address collective learning and the issue, (4) the research methods are flexible, and (5) the end product must benefit the community (Cameron et al., 2000). All participants were members of the kinesiology undergraduate community, who identified with the growing mental health concern. Through informal discussion and regular communication with participants, researchers and participants began to gain a better understanding of the relationship

building process collectively. The data collection process was flexible, allowing participants to reflect on their experiences how they saw fit (e.g., point form versus paragraph style, daily versus weekly documentation). Ultimately, the research and the SHC was intended to benefit the student community. From the research findings, the researchers aimed to theoretically inform mentor-protégé relationships based on the practical application of physical activity to the mentor-protégé practices.

Researchers who have utilized the PAR methodology drew on the paradigms of critical theory and constructivism to co-construct their understandings of reality with participants (Baum et al., 2006). The researchers, and student participants from the kinesiology undergraduate community contributed to the research process by participating in interviews (mentors), focus groups (protégés) and completing reflections regularly (Baum et al., 2006; Carpenter, Rothney, Mousseau, Halas, & Forsyth, 2008; Case et al., 2014). This incorporation of the community members played an indispensable role, as it increased the validity and usability of the research findings (Case et al., 2014). In addition, co-researcher participation strengthened the awareness of those involved regarding what they were truly capable of (Brown & Tandon, 1983). I formally reached out to the students weekly, and informally on a regular basis, in order to gain their insights, either verbally, or in written form. Although ensuring that all participants were informed throughout was time-consuming, it was a necessary practice in order to remain aligned with the PAR methodology (Cameron et al., 2000).

The reflection component of the PAR process was critical to the research process, and occurred throughout (Cameron et al., 2000). Reflective practice has been seen as a means of self-study that informs the researcher of their own understandings, and the role they play (Rich & Misener, 2016).

# Methods

## Data Collection

Participants from the community included over one hundred undergraduate students as mentors and protégés (60 protégés and 30 mentors). Recruitment of participants was done verbally, allowing for voluntary participation. Mentor involvement was through a one academic year credit course format, with protégé involvement structured as an opportunity to receive support. Mentors and protégés were grouped together in a 1:2 ratio (respectively) at the beginning of the program. Interactions among myself and the co-researchers/participants were scheduled once-weekly, allowing for verbal data collection. Mentors completed bi-weekly journal reflections detailing their experiences in the program and with their protégés as part of their course requirements; interested protégés were encouraged to reflect and share their submissions as well. At the mid-intervention point (MI; 4 months) and final intervention (FI; 8 months), interviews were held with mentors, and focus groups were run with the protégés.

## Data Analysis

Reflection documents (~1500 pages), in addition to the transcribed documents from the interviews (30 from mid-intervention, 30 from final intervention) and focus groups (8 from mid-intervention, 7 from final intervention), were analyzed threefold. The initial analysis process for both mid- and final intervention periods involved open coding through the tool of NVivo, with a second round of broad-based inductive coding, and a final round of deductive coding based on the literature-based knowledge on relationships, and themes discussed in the findings. Although mentors and protégés referenced outcomes they were experiencing while in the program, these outcomes were not measured. The research focus remained on the process of relationship building and use of physical activity as a moderator. Anecdotal references from mentors and protégés

experiences are referenced with the substitution of a pseudonym, to protect the participant's identity.

## Findings and Discussion

Several nodes emerged from the data that the researchers further grouped into five main themes through thematic coding: 1) mentor-protégé 'fit', 2) relationship building, 3) developing self-awareness, 4) the continuum of physical activity, and 5) the role of sport and physical activity. These five themes were then linked to form a conceptual model (see Figure 1) that outlines the progression of mentor-protégé interaction from a starting point as strangers, with the beginnings of the creation of relationships, and unanticipated self-discovery.

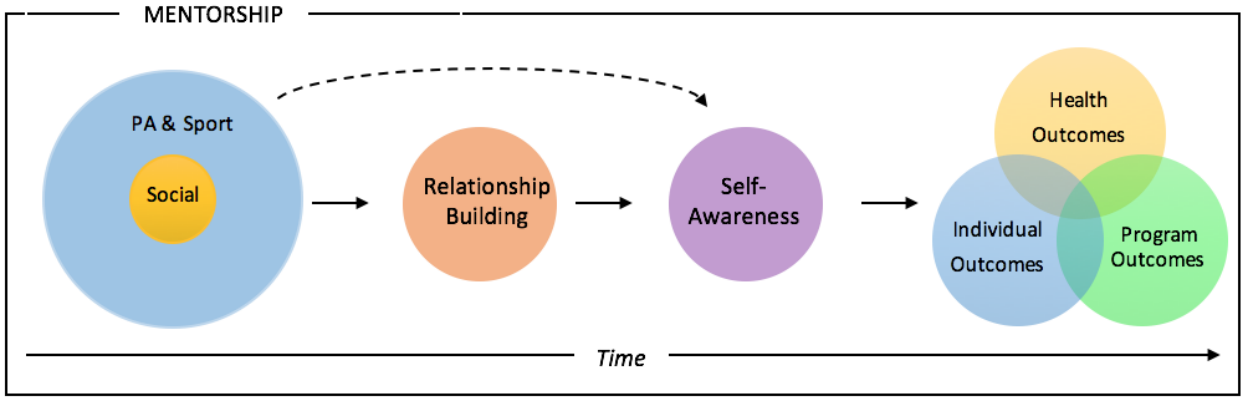


*Figure 2.* Conceptual model of the mentorship experience, depicting the process in which social interaction, supported by physical activity (PA) and sport led to self-awareness, and various outcomes.

### Conceptual Model

The process by which the mentorship groups developed relationships, and regulated their communication, interactions, and physical activity varied during their eight months in the program. The in-person interaction that resulted from physical activity performed in a social setting, led to various means of social physical activity (e.g. going on walks, recreational basketball, etc.). These social interactions helped further build relationships among, and/or within mentorship groups. In

some cases, the development of these relationships resulted in an amplified self-awareness; as commented upon by both mentors and protégés. In other instances, self-awareness was seen as the primary outcome of the social interaction through sport and physical activity. This is further unpacked in the later discussion on developing self-awareness.

From the process of relationship building and the increased self-awareness, health, program, and individual outcomes were reflected upon by mentors and protégés alike. An increased resilience to academic pressures was reflected upon by one mentor: "the fact that it's final exams, and it's [been] a really hellish last few weeks of school with so much due… and I didn't have any mental breakdowns!" (FI Mentor Interview, Jennifer). Additional referenced outcomes included, but were not limited to, increased resilience to new academic pressures, the recognition of physical activity and exercise as stress relief, an inclination to 'put the other first', and improved time management skills. These outcomes led to self-reported overall improvement in social, physical, and mental well-being for both mentors and protégés alike.

An important variable in the process of relationship building was time; "having interactions with them and getting to know them over time was definitely beneficial" (FI Mentor Interview, Betsy). The more time the mentorship groups spent together allowed for a larger number of interactions. These relations varied, with some interactions focused on physical activity and informal sport, social interaction and sharing personal anecdotes, and in some instances both. The connections and physical activity that occurred were seen to be a result of the surrounding mentorship process, and thus encouraged student participation in physical activity and sport.

From the conceptual model described above, data analysis was focused on the process of how relationships were built in the program. The themes discussed in the following sections draw

connections between the mentorship relationships and how sport and physical activity was used as a mediator in relationship development.

**Mentor-protégé fit.** Four factors were perceived as necessary to optimize the potential for relationship building related to fit: 1) mentor-protégé ratio, 2) age, 3) gender, and 4) academic program.

Many mentors and protégés commented on the preferred ratio of mentor to protégé grouping being either 1:1, or 1:2, stating that "it would be very hard to have more than two protégés" (MI Mentor Interview, Jennifer). Ratios larger than this were thought to be unsuccessful as they would hinder the ability to develop in-depth relationships with all participants involved; "I really liked how they kept the mentor-protégé numbers very close to one-on-one or one to two at most… making it any bigger would really … lose the personal aspect (FI Focus Group, Derek). Similar sentiments towards the 1:1 ratio being ideal in mentoring relationships have been expressed in the literature (Robertson, Cooper, Sarkar, & Curran, 2015).

Hunt and Michael (1983) have described a mentor as an older, experienced, and concerned individual. For the protégés, their mentors appeared to provide a sense of comfort and safety. Protégés found their presence similar to what a parent would provide; "It's nice to have that… not a parent figure, but an older figure that's there when your parent can't be there" (MI Protégé Focus Group, Miranda). A preferred, or ideal age difference could not be concluded based on varying participant responses. An older mentor was referred to as more beneficial by some protégés, as they felt an older mentor had more experiences to draw upon and share with their protégé to assist them and answer their questions:

> I like having an upper year to help me with things. Because [my mentor] is in 4$^{th}$ year which is kind of nice because she's already been through 1$^{st}$, 2$^{nd}$, and 3$^{rd}$ year, so she's

> already given me a bunch of tips and stuff on school, and it's kind of nice having a gym buddy. (MI Protégé Focus Group, Catherine)

In the unique situation where the protégé and mentor were the same age, less positive feedback was received, as the protégé did not feel as if they could learn anything from their mentor. One mentor commented on their experience in reference to this; "[my protégés] haven't really reached out to me like some other mentors were talking about" (MI Mentor Reflection, Ben). In contrast to this, there were those relationships that suggested age difference (or lack thereof) became irrelevant over time, as one protégé commented "as we got to know each other more it turned more into a friendship rather than one [individual] being dominant" (FI Protégé Focus Group, Teddy). From these responses, it was thought that experience was not directly related to age, and therefore experience was more important to consider when determining mentor value.

The socially constructed notion of sex was seen as both a barrier and a facilitator to the relationship, as well as participation in the program. Participants discussed the potential impact of same-gender versus cross-gender groupings on program experience and outcome. In some instances where mentors had a same-gender and cross-gender protégé, it was revealed that it was easier to interact and have discussions with their same-gender protégé. One female mentor indicated, "[it's] not that I [didn't] connect with the male, but it was hard…it's different… in the end it would have been easier having two girls" (FI Mentor Interview, Brittany). Similarly, a female protégé discussed the potential differences having a male mentor would bring, admitting that "[she didn't] know if she would talk to some guy about [her] problems" (MI Protégé Focus Group, Eliza). In these situations, it was a challenge for both mentors and protégés emphasizing the need to find ways in which to make a connection with each other. Informal sport and physical activity were used by mentors in attempt to bridge this gap in communication. This concept is

discussed further in the theme observing the 'role of informal sport and physical activity'. Borić (2014) stressed the importance of same-gender pairings when working with children. However, gendered pairing regarding mentorship in the young adult age group has not been readily discussed in regard to mentorship in existing literature.

Home program acted as a starting point for many of the relationships, allowing mentorship groups to discuss their academics on a familiar level that all participants would understand. One mentor commented on the challenges experienced in having a protégé from a program other than theirs:

> One [is] a first-year student in Kin so I'm more easily able to talk to her about stuff and we've got a lot more in common. The other one, I have a fifth-year engineering student, so it's just… it's very different [and] I have no idea what to talk to him about and [I] find the conversation is a lot more strained (MI Mentor Interview, Jack).

This was a re-occurring theme as the relationships progressed towards exam times where some groups would "study at [the library] or grab a bite to eat" for a study break. Many participants commented on the convenience and added help it was to have a mentor in the same program: "It's a good thing to have someone in fourth year that's mentoring me because I can learn more about the program itself" (MI Protégé Focus Group, Cristina). The added challenges with the lack of this common starting point were made clear, and it was found that "it [was] really important to have someone that [was] in the same program" (MI Protégé Focus Group, Lola), as otherwise mentors "[couldn't] really be there for [them] academically" (FI Mentor Interview, Morgan). This was concerning, as adjusting to post-secondary academic expectations is a large part of the transition. Hunt and Michael (1983) found that when mentors were in a position to pass along organization-specific knowledge, or in this case program-specific knowledge, organizational success and long-

term sustainability and growth was a positive outcome. This allows researchers to infer that providing mentors in the same academic program would benefit mentorship program longevity. In addition to this, it would lead to greater success for the individuals within the program year after year.

The discussion of group ratio, age, gender, and program crossover all indicated that a like-mindedness was beneficial among mentor and protégé(s). Similarities and shareable experiences helped to initiate the relationship among participants, aiding in the facilitation of activities and interaction. When mentors utilized physical activity and/or informal sport to stimulate the relationships, like-mindedness within the mentorship group aided in solidifying them. Although the factors of age difference and same/cross-sex relationships were present in discussion, the more in-depth matter of aligning mentalities came through as a helpful starting point when determining a best-practice pairing process. As seen in the data, this like-mindedness supported the development of the mentor relationships, with the potential to foster a positive mindset towards both the school environment, and the benefits of regular physical activity.

**Relationship building.** As time progressed from initial meeting to halfway point, and eventual program termination, each mentorship group developed their relationship in a different manner. Much of the processes involved trial and error in the types and frequencies of interactions. For all participants the relationship began in a formal manner, where many of the participants commented on the initial interactions being awkward and superficial; “it was awkward at first getting to know a total stranger” (FI Mentor Interview, Jonathan). This eventually progressed, in many circumstances, to the mentor being considered a friend; this process of befriending has been seen in previous research as a necessary part of mentoring (Chen, Watson, & Hilton, 2016). Individuals began to share personal anecdotes with one another, resulting in a reciprocal

relationship of conversation initiation, and genuine interest in how the other was doing. One mentor noted that "although [they] were physically active, [they] were also emotionally active, as [their protégé] was opening up to [them] about [their] life and what [they] were experiencing" (MI Mentor Reflection, Cory). Some found off-campus physical interaction as most beneficial; "I got lot closer [with my protégé] because we did some outside of school stuff… we were both referees for a basketball tournament and spent five hours together talking… that was the biggest bonding moment we had" (FI Mentor Interview, Trina). This further exhibited the key role that physical activity and sport played in mediating the process of deeper mentorship relationships.

Many types of interactions supported the development of relationships. For some mentorship groups, sport was viewed and utilized as a successful tool for building a relationship. Through competition, and the practice and demonstration of specific sport skills, they thrived in helping each other and challenging each other to excel in the sport being played. For those groups that all enjoyed playing a particular sport, these regular sport interactions were anticipated as a fun form of stress relief and activity. One mentor speaks to their experience with a protégé, where sport and activity was used as a way in which the protégé could blow off some steam and enjoy the support from their mentor:

> She contacted me in advance and explained she had a rough week and needed a good outlet. When I heard of this I thought of playing squash. Serving helped her channel the aggression she was feeling all week. Squash seemed to calm her down afterwards and relieve some stress. (MI Mentor Reflection, Jonathan)

Interacting in larger social groups (e.g. spending time with other mentorship groups) was found to be enjoyable, as it allowed for expanding social networks. When these large group activities were successfully coordinated, they were quite popular for participants; the "most fun part of the day

was rock climbing with my protégé and other protégé-mentor groups" (FI Mentor Reflection). Others enjoyed the outdoors for their regular interactions, taking advantage of sunny days to go on walks around campus and/or the University city, spending time in conversation (FI Mentor Reflection, Stuart). The outdoor environment was referred to as "refreshing" (FI Mentor Reflection, Jennifer), and in some cases "needed… to vent about what [was occurring] in their lives" (FI Mentor Reflection, Jonathan).

**Developing self-awareness.** Observing the manner in which mentors and protégés became more aware of their words and actions, and the noted outcomes helped form the researchers understanding of participant self-awareness. The process of mentors and protégés using regular self-reflection demonstrated a deeper thought process both before, during, and after interactions. In literature discussing mentoring and personal development, scholars have found self-awareness by both the mentor and protégé to be important (Dziczkowski, 2013). Increased self-awareness can lead to increased thoughtfulness, which researchers have found strengthens relationships. Demonstrations of self-awareness ranged from introspective thoughts, to outward actions. The practice of reflection has been documented on many accounts as a tool used to help leaders grow, and become better leaders and mentors (Marques, 2010). Mentors commented on becoming aware of their actions:

> I guess the impact it's having on me, more about learning about who I am type thing and things I've never thought of, like the type of person I want to be. It's just a lot of this self-reflecting I've never done before and I guess a lot of 'a-ha' moments that I'm realizing about myself. (MI Mentor Interview, Will)

> Before this program, I often wouldn't realize that I was over-stressed until it was too late, and I was having a mental breakdown. I find that through my physical activity and self-reflection in this program, I am becoming more mindful of what is going on in my life and this in itself helps me to handle my stress in a better and more positive way. (FI Mentor Reflection, Jennifer)

Reflections indicated that during challenging events, and difficulty in their own mentorship relationships, participants demonstrated a refusal to admit defeat. Mentors in particular maintained a strong desire to achieve success in both the mentorship relationship as a whole, and for their individual relationships with each protégé. During imperfect times in the process of relationship development, many mentors remained understanding towards their protégés when their behaviour was not reciprocal, appreciating the efforts they did make, and maintaining a positive attitude because "[one] never know[s] what's really going on in [someone's] life" (FI Mentor Interview, Jack). One mentor indicated they were aware that their protégé was not responding to their attempts at communication. In response, they admit to committing to "take the time over winter break to think about how [they were] going to get [their protégés] together and doing more [activity] on their own" (MI Mentor Interview, Trina). Looking back at their previous efforts and the lack of positive response from their protégés, Jennifer reflected that they "had to realize that this wasn't motivating enough for [their protégé]" (FI Mentor Interview). With this acknowledgement the mentor altered their approach and asked for more feedback from their protégé(s). Throughout the program, it was understood that building the relationship was a "work in progress" (MI Mentor Interview, Chet) where you "try, you fail, you try again, and then eventually, you succeed" (FI Mentor Interview, Angela). In the event that mentors and protégés were unable to attain or maintain a positive outlook, the relationship took a negative turn, resulting in some participants

dropping out of the program. As mentors and protégés accumulated experiences with each other, many developed an ability to anticipate and prepare for their own challenges.

Some protégés demonstrated increased self-awareness of their physical activity levels through altering their behaviours and decisions. One protégé commented, "[My friends and I] made the conscious decision to walk [to class] because we know we're not going to get exercise if we don't" (Protégé Focus Group, Arizona). A similar realization was made by another protégé who stated they "always force[d] [their] roommates to take the stairs" (Protégé Focus Group, Denny) instead of the elevator.

Mentor responses indicated an elevated degree of awareness of their surroundings. One mentor realized that "there [were] a lot of students actually struggling, which [they were] very surprised with" (MI Mentor Interview, Angela). Betsy admitted to becoming "a lot more conscious of what other people [could be] going through, as far as stress, anxiety, and mental health" (MI Mentor Interview), and Amy realized that working on yourself is a "life-long process" (FI Mentor Interview). In addition to this increased awareness of surroundings, mentor's behaviours towards others changed:

> [I'm] just realizing that everyone does have something underneath that we might not see or know and it's not fair to look at first years or people who are lonely or by themselves or anyone and look at them and judge them like that, so it's made me a much more open person to talk to everyone on campus (MI Mentor Interview, Amy).

Coupled with this awareness was an acknowledged appreciation for the practice of reflection. Although these reflections were a course requirement for mentors but not protégés, both groups became more accountable to themselves, to the program, and to the other members of their mentorship group. Being in the role of either mentor or protégé led to the creation of personal

growth in different ways. Will, a mentor, vocalized great program appreciation: "I feel more aligned with who I was when I started coming here, and my [core] values… I feel like I lost myself. So, the fact that it just brought everything together and made me focus on loving myself, just focus on *my* goals… I just feel everything was re-aligned again" (FI Mentor Interview). Many mentors voiced similar opinions, owning their newfound self-appreciation, and enjoying their interactions with others. In part of the protégés, their growth was demonstrated in the form of coming into their role as University students and acknowledging the use of physical activity as a coping mechanism. Shane stated he "had no idea doing physical activity was such a stress reliev[er]" (FI Protégé Focus Group), and Preston described that having a mentor was a positive experience that made him "feel more prepared for next year" (FI Protégé Focus Group). Awareness of self and others in turn led to appreciation, overall creating a more positive atmosphere for all participants.

**The continuum of physical activity.** Physical activity is defined as "any bodily movement produced by skeletal muscles that results in energy expenditure" (WHO, 2018). Participation in physical activity was revealed on a continuum, ranging from leisurely walks through the park, to more vigorous informal sport activities such as stationary biking, weight lifting, or playing squash. Higher intensity activity was often referred to as exercise by participants. Exercise is an activity that, although often used synonymously, does not have the same meaning as physical activity. Exercise is "planned, structured, and repetitive and has a final … objective" (Casperson, Powell, & Christenson, 1985). An additional subset of activity often performed by participants was informal sport, which was seen to fall under a combined understanding of both the definitions of physical activity and exercise.

How individuals chose to engage in physical activity, and their respective understandings of physical activity, differed. Physical activity and sport were seen to be performed both

independently, and in groups (three or more individuals). One mentor "made plans with [their protégé] to play pickup volleyball Friday afternoon with a few other mentor-protégé groups" (MI Mentor Reflection, Morgan). Another "[mentorship] group got together a couple times to play volleyball, [and] badminton, [sometimes] with other protégés" (MI Protégé Focus Group, Addison). Informal sport interactions of this nature have been shown to facilitate experiences of resilience, belonging, trust, social inclusion, and mutual respect (Johns, Grossman, & Mcdonald, 2014).

The prevalence of informal sport participation (e.g. recreational badminton, volleyball, squash, etc.), and the incurring social interaction was a key relationship builder for many participants. One mentor discussed the critical role of informal sport; "if [they were] playing volleyball … with a group of people, [they found] it more enjoyable as opposed to [them] going to the gym by [themselves]" (MI Mentor Interview, Ben). Protégés indicated their primary appreciation for program participation to be "more about the physical activity" (FI Protégé Focus Group, Izzie), when time spent with their mentor was scheduled around a mutual interest in physical activity (i.e. weekly drop-in basketball). Similarly, another mentor shared an anecdote from spending time with their protégé "at drop-in badminton, [and] just after [the] game [they] were sitting there and talking – and [their protégé] … open[ed] up" (MI Mentor Interview, Lily). It seemed that through informal sport participation at a recreational level, protégés became relaxed enough to share their personal thoughts and feelings with their mentor. These activities were seen to be enjoyed by mentors and protégés alike, as explained by one protégé; "we played squash and I had so much fun, it was a great time, my mood was so much better after that" (MI Protégé Focus Group, Adele). Secondary to gaining depth in their relationships, the social interaction was seen

to have a noticeably positive impact on mood contagion (Johnson, 2009). This was related to the increased adherence to physical activity due to the coupled social interactions.

Initially when encouraged to engage in physical activity-based social interactions, the most common issue was that physical activity was *perceived* as exercise; "I hate the gym! I hate it so much! I'm not an exercise person…" (MI Mentor Interview, Jennifer). The stigma associated with exercise can act as a deterrent to participation, as many were intimidated with the understanding of exercise (i.e. increased heart rate, competitive surroundings). In contrast to this, when simply viewed as an enjoyable social interaction, the participation in sport and/or physical activity was a staple in the participant's regimen. One mentorship group met twice weekly to participate in drop-in recreation (FI Protégé Focus Group, Shane), and some found their interactions to continue longer than expected because of how much fun they were having (FI Mentor Reflection, Topanga). The physical activity became the moderator to open up space for communication. This sentiment was also described by the protégés, with one explaining how "drop-in volleyball [was] actually a lot of fun because [they had] a group of other protégés and mentors and it was a good opportunity to meet other people in [their] program and meet upper years also" (MI Protégé Focus Groups, Nicole). This establishment of a community helped to make the campus environment a more comfortable space for protégés with more familiar faces.

In-person interaction was key for communication of program expectations and program goals, allowing both mentors and protégés to clearly define their goals they hoped to achieve from program involvement. Many of these interactions were documented as fun and enjoyable, keeping a light-hearted tone that encouraged participants to return for repeated physical activity interactions. Eime and colleagues (2013) re-affirmed this, outlining fun as a primary motivator for voluntary participation. Many mentors found "working out with [their] protégés put [them] in

better spirits" (MI Mentor Reflection, Brittany). Some mentor-protégé "didn't work out that often together but ended up doing a lot of different things" (FI Focus Group, Stephanie), with the ability to just "take a walk… got [them] outside [and] was a lot more psychologically benefitting than expected" (FI Focus Group, Lexie).

**The role of sport and physical activity.** Eime and colleagues (2013) have outlined 'fun', 'choice' and a social environment as primary intrinsic motivators for voluntary participation. Many mentor-protégé interactions were documented as fun and enjoyable, which encouraged participants to return for repeated physical activity interactions. In-person interaction was key for communication of program expectations and program goals. This allowed for both mentors and protégés to clearly define the goals they hoped to achieve from program involvement. Mentors found that "working out with [their] protégés put [them] in better spirits" (MI Mentor Reflection, Brittany). Some mentor-protégé groups "didn't work out that often together but ended up doing a lot of different things" outside of the structured gym environment (FI Focus Group, Stephanie). Further, many participants found the ability to just "take a walk… got [them] outside [and] was a lot more psychologically benefitting than expected" (FI Focus Group, Lexie).

Trust was developed through many interactions over time, giving mentors and protégés the confidence required to confront each other with feedback. Johnson (2002) discussed the importance and need to dedicate sufficient time and energy into mentoring relationships in order to gain rapport. One mentor commented that "in terms of building a foundation, building trust… [they] met with each of them separately and stated what [their] goals were… and what [they] were looking to get out of the mentorship program" (MI Mentor Interview, Alan). Mentors and protégés provided motivation and encouragement to each other, pushing each other to attend physical

activity sessions and social gatherings. It is necessary to obtain this dynamic between mentors and protégés in order to establish mutual respect and understanding (Hunt & Michael, 1983). Verbal encouragement was not always direct, as the knowledge that their mentor/protégé was expecting them at their planned activity-based interaction was, much of the time, enough to convince them to follow through on their original plans. This knowledge of 'the other' waiting for them also aided in holding participants accountable; "there's a certain amount of accountability when you're with somebody else. If you're tired you might [not go], but when there's someone else they're kind of pushing you even without saying anything, just them being there" was motivation enough (FI Protégé Focus Group, Erica). Of all the interactions documented (coffee dates, gym plans, walks, etc.), those that involved simultaneous socializing and physical activity were "more enjoyable", and often strengthened the relationship(s); "it was better… more fun… before I would normally work out alone or just meet friends because it was a regular thing to me [but with] the protégés I could tell it was a fun social thing as well (FI Mentor Interview, Will). This outlined a cycle, where the social aspect of the mentorship interactions increased mentor and protégé adherence to regular physical activity, and the newfound appreciation for physical activity led to regularly scheduled interactions. Time spent together resulted in more conversations and added opportunities to become more comfortable with each other.

The practice of considering the best interest of others taught participants the importance and reward of putting another individual first. This awareness falls in line with the act of servant leadership, where the mentor/leader is fully committed to the needs of the protégé (Du Plessis, Wakelin, & Nel, 2015). Committing time to another individual requires successful time management that takes into account one's own schedule, and that of the other(s). Within the program, participants were required to find a balance between physical activity, academics, and

other demands (e.g. social life). Participants acknowledged improved time management, as well as an understanding of the importance of mastering its practice. Mentors found that their time management skills improved over time, where "trying to balance [academics], social life, and physical activity is easier now than it was at the beginning of the year where I felt I could only do one or the other" (FI Mentor Reflection, Shawn). Protégés in turn appreciated the "push to be a bit more structured" (FI Protégé Focus Group, Hannah). Part of considering the needs of the 'other' involved participating in regular physical activity with their protégé(s) and encouraging its daily occurrence in some form. This form of empowerment towards 'the other' is necessary and important for protégé growth and development (Kouzes & Posner, 1983, as cited in Russell & Stone, 2002). For some participants, this addition altered their regular lifestyles, while for others it acted as reaffirmation for something that was already an integral part of their routine. In either case, physical activity was found to be a source of stress release and enjoyment.

Appreciating physical activity led to acknowledging differentiation between physical activity and exercise. This was contrary to participants' initial understanding of these concepts as synonymous. The perception and understanding of physical activity, from many of the participants at the beginning of the program was that physical activity was another way to explain exercise. Over time, and through the researcher's interactions with participants, key distinctions emphasized that not all beneficial forms of activity are those that come from bouts of vigorous activity. Several participants commented on this duality; "today was an eye opener and made me realize that exercise is not only the gym, there are many services offered at the rec centre and I should try to use them" (MI Mentor Reflection, Shawn). Similarly:

> There is a difference between 'exercise' and 'physical activity'. [One protégé] does not like going to the gym or engaging in a regimented exercise routine, but [they do] walk to

> campus every day and is a Foot Patrol volunteer most nights. I explained that walking is a great form of physical activity, and [they were] very relieved to hear this (MI Mentor Reflection, Jennifer).

This realization led to an increased appreciation for the benefits of low intensity physical activity, especially when done in a social setting. Danielle reflected that "being physically active together [was] such a great way to bond, while improving [their] health and wellness overall" (FI Mentor Reflection). In one instance where Cory was under a "tremendous amount of stress, meeting up with [their protégé] really ground[ed them] as a mentor. [They were] reminded that in times of stress, [they] need to rely on healthy coping mechanism such as exercise, to give [their] mind and body some relief" (FI Mentor Reflection). Further, physical activity was described by the participants as an academic reprieve; "I have begun to realize that a simple walk or jog in nature really works to clear my head" (FI Mentor Reflection, Amy). Thus, physical activity in all of its forms was seen to effectively increase participant appreciation for the benefits of regular physical activity, as well as provide a comfortable and enjoyable outlet for mentor-protégé interactions.

In line with Ho, Louie, Chow, Wong, and Ip's (2015, p.3) understanding of resilience - the "ability to recover from adverse situation(s)" – the implementation of this program was intended to increase participant appreciation for regular physical activity, as well as to increase the resilience of participants. Danielle admitted that if "they had not participated in this program, [they] would not have the same mental resilience [had in past years] (FI Mentor Reflection). This was demonstrated through discussions of persevering through challenging points in participants' lives, whether those related to work, school, or personal relationships.

## Conclusions and Implications

The implementation of an upper-year support system through mentorship aided in transitioning first-year students into a post-secondary undergraduate environment. Embedding mentors into the physical activity program helped not only to encourage student participation in physical activity but was also seen to lead to other positive outcomes such as personal growth, improved time management skills, and an increased awareness of others. In accordance with the literature, one's personal growth and increased awareness of others has been seen to come from exposure to new settings, overcoming challenges, and working on the development of others (Chun, Litzky, Sosik, Bechtold, & Godshalk, 2010; Schyns, 2011).

Formalized exercise has a stigma associated with it, where students are oftentimes too intimidated to participate. Formal exercise has been associated with competition and high skill level – which is not for everyone. This is an important consideration for how programs are marketed and promoted. In this case, it was stressed that the program's intent was to promote regular *physical activity*, not necessarily regular *exercise* or sport. Broadening one's understanding of 'health enhancing physical activity' to include activities such as brisk walking, or gardening, has been done to help encourage individuals to make active choices on a more regular basis (Ströhle, 2009). Promoting and clarifying the program expectations in this way proved to be a challenge, and reiteration was required on a weekly basis for the first four months of the program. Once understood, activity performed within mentorship groups began to vary and diversify, occurring in locations other than the campus recreation facility.

The realization of physical activity existing on a continuum supported participants in incorporating regular physical activity into their daily lives. Ensuring that physical activity occurred was critical to the development of mentoring relationships. A cycle appeared with the

role of physical activity, where the mentorship relationship was necessary for physical activity to occur, and the participation in regular physical activity was motivated by the presence of the mentor/protégé. This social interaction was seen as a key driver of enjoyment in physical activity, and ease of mental stresses. In addition, it has been seen that when subordinates receive "support, trust, and other tangible and intangible benefits from their organization… they feel obliged to reciprocate such benefits" (Gouldner,1960, as cited in Bedi, Alpaslan, & Green, 2016, p.520).

Long-term health implications are only attainable if the matters stressed in the program; such as mentorship, regular physical activity, and the associated social interaction; are tended to. This is an important consideration for managers of organizations and/or facilities, where social interaction may not be a key component in the work environment. Creating opportunities for staff to interact, such as staff socials or a separate common area, can help to boost staff morale and improve their mentality in the workplace.

**Managing Sport for Health**

The understanding of sport, and the traditional boundaries that are associated with sport need to be considered, in particular with the consideration of mental health outcomes. With the knowledge that sport has both social and health benefits, activities such as university recreational sport options (e.g. intramurals) are often referenced in a university setting as a means for students to get active and integrate themselves within the school community. As beloved as these activities are for some participants, there are those who find the environment overly intense and competitive, discouraging them from participating (Smith & Carron, 1990). Perpetuating a single notion of sport can hinder relationships between individuals and physical activity, as well as relationships between individuals. A connection can be made in a managerial setting, where encouraging employee activity in the narrow confines of sport can be limiting and shows no benefits in

implementing sport to create health benefits. In contrast, this study demonstrates how a broadened understanding of participation in physical activity helped to facilitate the process of relationship building among participants, between sport and participant, and led to desired positive health outcomes.

**The Importance of Reflexivity**

A requirement of the mentors, protégés, and the primary researcher, was that regular practice in self-reflection occurred, also referred to as reflexivity. "Reflexivity can be described as a self-criticality among researchers" ( Marcus, 1994, p.187, as cited in Kidd & Kral, 2005), or a "conscious self-awareness" (Finlay, 2002, p.532). In PAR work, all participants are considered researchers, collectively constructing an understanding of the research. Reflexivity is an important part of participatory research approaches. Key thinkers who influenced the development of participatory action research, such as Lewin (1946) and Freire (1972) emphasized the importance of "action-reflection cycles and a critical consciousness" (Rich & Misener, 2016, p.2). Commitment and sensitivity to the context of the community in which the research takes place is achieved through reflexivity and recognition of the positionality and assumptions of the researcher in relation to those of the community (Rich & Misener, 2016). In a sport management context, Rich and Misener (2016) stated that "increased reflexivity could help sport management practitioners be more attentive to the power relations inherent in the research processes and delivery of sport and recreation in communities" (p.10-11). This awareness can help in the success of program delivery, as well as ensuring that the community understands the 'why' and the 'so what' behind the introduction of the program.

In reading and analyzing the anonymous reflections of the mentors and protégés, individual experiences were compared, allowing the primary researcher to gain an idea of the varying ways

in which relationship development occurred, as well as the differing interpretations and demonstrations of regular physical activity. As Finlay (2002) states, "through the use of reflexivity, subjectivity can be transformed from a problem to an opportunity" (p.531). From this understanding, we can infer that although all reflections are written with a personal association to them, we as researchers can make connections and draw constructive conclusions from this information.

## Conclusion

Overall, the mentorship relationship, as developed through regular physical activity interactions, was seen to build self-awareness, and demonstrated an initial positive effect on mental health. In the context of the program, the relationship between physical activity and mentorship was almost cyclical, where mentorship encouraged the physical activity, and the enjoyment of physical activity interactions led to further mentorship interactions, and overall strengthening of the mentorship relationship. The presence of physical activity contributed to the creation of positive health outcomes, however physical activity is not enough on its own. With physical activity as the moderator, the process of building the mentor-protégé relationship with the intent of creating mental health outcomes led to an appreciation for physical activity, and what it can do for an individual.

In reference to managerial relevance, the implementation of a mentorship program, the promotion of regular physical activity, and the provision of opportunities for staff to interact could prove to be beneficial to the mental health of the employees. The creation of a positive, supportive environment that encourages regular activity and social engagement for the benefit of staff mental health can help to boost staff morale. Additionally, it has the potential to influence staff effectiveness and efficiency at work; inspiring workers to be their best selves leads to a successful

organization. Furthermore, promoting the program in a supportive manner that outlines a clear distinction between physical activity and exercise would help increase staff adherence to participation. Overall, re-considering the emphasis on exercise by health campaigns would help create outreach to a broader target audience.

This study outlines the opportunity that social physical activity has in order to initiate relationship building, self-awareness, and outcomes on a health, program and individual level. The program's results are cyclical; demonstrating that regular physical activity is critical to solidifying relationships, and as such, the continuation of physical activity.

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# Chapter 4: The Emergence of Social Capital

## Social capital and the SHC initiative

Social capital was an unanticipated outcome of the SHC program that emerged from the data over time. The PAR nature of the study allowed for myself to interact both with the participants and their reflective data on an ongoing basis. Displays of community, reciprocity and trust were seen; concepts that align with my understandings of Coleman's (1988) paper *Social capital in the creation of human capital.* In this paper, Coleman provided an explanation of the concept of social capital, the many forms by which social capital can be displayed, and the social environments in which it can be observed and examined. Social capital was not quantitatively assessed, but it was qualitatively and subjectively documented in reflections, interviews, and focus groups. Within over one thousand pages of participant data, there were many instances where participants commented on experiences and realizations that resembled Coleman's (1988) forms of social capital. As such, social capital literature was consulted to gain a better understanding of the various theories and concepts associated with social capital. In the following sections, I further unpack the notion of social capital, how aspects of the program were seen to resemble social capital, and how social capital markers benefitted the participant experience and the program's success.

Social capital is "embodied in relations among persons" (Coleman, 1988, p.118), and is characterized by reciprocal relationships embedded within social networks (Coleman, 1988). When examining the development of the SHC mentorship model, particular emphasis was placed on the dynamic between senior student mentors and first year protégés. Social capital has gained much attention in sport management research in examining inter-organizational relationships (e.g. Misener & Doherty, 2013) and community development (Misener & Mason, 2006). Little research has examined the potential of educational programs to enhance social capital for

participants. University campuses are described by White and colleagues (2006) as resource-rich environments that are advantageous for social capital to operate and thus an ideal environment for leadership development.

Social capital has been discussed in contrasting ways within the literature. Coleman (1988) stated that "social capital inheres in the structure of relations between actors and among actors" (p.98). Bourdieu and Putnam's social capital is more exclusionary, focusing instead on marginalisation and disparity, where more privileged individuals have greater access to resources (Kitchin & Howe, 2013). With the program focus being on community, I chose to base my understanding of social capital and how it can be demonstrated from Coleman's notion of capital. I came to the conclusion that the SHC program design and findings resembled my understandings of Coleman's notion of social capital. I made connections between the SHC participant data, and forms of social capital as indicated by Coleman. These forms include: (a) trust and trustworthiness, (b) sharing of information, (c) norms and social structure, (d) appropriable organization, and (e) social capital and human capital (Coleman, 1988). The following sections will provide an in-depth explanation of the connections between findings and Coleman's (1988) social capital.

**Trust and Trustworthiness**

Reciprocal trust between and among individuals is a key element of social capital (Roberts, 2013). A high degree of trust and trustworthiness is required for all members of a productive program or organization. Members of these programs must be able to trust each other to answer to expectations and obligations of performance; without this, a program cannot be successful (Coleman, 1988). Trust takes time for individuals to feel comfortable opening up to an otherwise complete stranger. In the context of the SHC, mentors indicated awareness of the time

required to build trust when taking on their role of supporting others. Mentors understood that they would have to "work hard and show true commitment so that the[ir protégés] [could] trust [them]" (MI Mentor Reflection, Jack). Cohen and Prusak (2001) indicated that leaders (in this case mentors) set the tone for a relationship by encouraging trust through open and honest communication. This was indicated by one mentor who stressed the need for "honesty [and] trust]… [and] some common ground, otherwise it could be tough, not only to enjoy the time when you're together but also for them to want to reach out to you or you to reach out to them" (FI Mentor Interview, Dean). The need for time to develop trust was apparent across all mentorship groups, but the amount of time required to do so varied. Some mentors acknowledged around the mid-intervention point that "one of [their] protégés wouldn't really open up at the beginning, and then gradually as [they] met a few more times [the protégé was] the only one that [did] all the talking" (MI Mentor Interview, Feeny). The mentor's patience, and the protégés eventual comfort in communicating with their mentor further shows how trust takes time to developed. Other mentorship groups took longer to cultivate trust, reflecting at the final intervention point that "the more [they] spen[t] time with someone, the more [they] got to know them and the more they trust[ed them]" (FI Mentor Reflection, Eric). This reciprocal commitment from both parties over the length of the program was necessary for the relationship to occur. Time helped mentorship groups to "communicate better and gain a mutual understanding" (FI Mentor Interviews, Eli), where "protégé(s) emphasized the importance of building strong and supportive relationships of trust and confidence" (FI Mentor Reflection, Angela). The trust felt with connections made within and beyond the program boundaries was a key factor in supporting the development of trust (McCallum & O'Connell, 2009).

**The role of social media.** All participants used technology and social media throughout the program. Technology and social media both enhanced and hindered the formation of trust and reciprocal accountability. In many ways, the use of social media led to more frequent communications and allowed for groups to schedule regular interactions. The reciprocal communication and increased time spent together appeared to assist in the process of building trust. In this way, technology could be considered a tool in supporting the development of social capital. Adversely, when technology was not used in a responsible way, communication attempts were disregarded or ignored, or plans were cancelled last minute via text, frustration and distrust resulted. Below I expand on both the benefits and challenges of technology and social media use in a program of this nature and demonstrate how it can remain a positive fixture in program design if responsible use is taught to participants.

All participants owned cellphones, and for program purposes used them for general communication and organizing interactions. "Snapchat challenges" (FI Mentor Interview, Libby), Facebook group messages (FI Mentor Interview, Shawn), Instagram, and shareable google docs were used to document and share physical activity interactions with each other. These methods of sharing participant accomplishments and activities were in some instances a motivator and helped with accountability. One mentor explained that "sending each other photos [of their physical activity] in a texting group became motivation to work out more" (FI Mentor Interview, Amy). Increased interactions between participants led to the use of social media to displayed ways in which to be physically active. Other mentorship groups had discussions of how to best communicate and "decided to keep in touch through text messages [to] ensure [they] were accountable in fulfilling [their] physical activity" goals (FI Mentor Reflection, Angela).

Contrary to these positive observations, in some instances the use of technology to communicate was viewed as a negative. Watkins, Hunt, and Eisenberg (2011) noted that the recent dependence on technology makes students unable to tolerate typical human effects and experiences. Students preferred texting to cancel plans as opposed to speaking on the phone or in-person. Avoiding the confrontation associated with an in-person conversation meant that participants did not have to take immediate responsibility for their actions. Further, the ease of sending a text message and avoiding the consequences for one's decision led to a lack of accountability within some mentorship groups. A few mentors commented on instances where they had waited for their protégés at a planned interaction, and their protégés neglected to show up with insufficient communication (FI Mentor Reflections, Ben and Betsy). In situations where these text cancellations occurred frequently, it appeared to cause distrust among mentorship groups, impairing the trust and relationship building process; "I was a little hesitant to believe [my protégé] because [they had] bailed on me last minute before on plans we made" (FI Mentor Reflection, Libby). The use of technology to cancel plans acted as a barrier to reciprocity.

The dangers of social media and technology use, and overuse, are prevalent in this technology-heavy era. Young (2004) "found an association between problematic internet use [i.e. excessive hours per day] and a number of mental health issues, including depression, anxiety, social isolation, shyness, low self-esteem, and lack of social and emotional skills". Furthermore, the use of, and reliance on mobile phones have been seen to cause mental health concerns for students on university and college campuses (Flatt, 2013). Mental health concerns related to mobile phone use included reports of stress, depression, and sleep disturbances (Flatt, 2013). Awareness of the frequency of technology use, and the dangers of overuse indicate a need for balance between the use of technology for communication, and coping. I believe that internet and

technology usage can be beneficial and compliment the program intentions when used in moderation.

Aside from online reflection documents, the program did not use technology in the design. The use of technology to promote regular physical activity, send encouraging messages, and communicate for regular interactions are potential positive implementations for the program in future. Additionally, incorporating a chatroom or group forum could allow for discussion among all members of the program. To maintain balance, it would be necessary to remind students that direct in-person communication is more beneficial for relationship development and help expand the development of social capital development. Providing outlets for positive communication through the use of technology could further contribute to the creation of social capital and knowledge sharing.

**Sharing of Information**

Coleman (1988) outlined the ability and opportunity to share information with others as a way in which social capital is demonstrated. The SHC program brought many individuals together who may not have otherwise interacted with one another. This environment allowed for the creation of networks and communities to develop, providing access to information through various social relations, resembling social capital. Many networks were created and cultivated within the bounds of the SHC initiative. These connections are similar to White and colleagues (2006) discussion on social capital regarding bonding, bridging, and linking. Social capital can be categorized as bonding (relationships within a group or community), bridging (relationships between groups), or linking (relationships between groups or individuals across levels of hierarchy or power) (White, Spence, & Maxim, 2006).

The bonding that occurred within the program describes the intragroup relationships created among protégés, and likewise among mentors. Mentors found the mentor community very helpful. One mentor commented that throughout their undergrad they "surround[ed themselves] with a lot of the same people who [were] similar minded … being introduced to new people with different goals, different ideas of what they want out of life and what it means to be resilient and successful [was] eye opening" (FI Mentor Interview, Jack). In instances where mentors worked to bring protégés together, protégés enjoyed expanding their network of individuals experiencing the University transition. These same-year relationships may not have existed previously without the opportunities provided by the SHC program.

Bridging social capital describes the horizontal intergroup connections made between protégés and mentors in their mentorship groups, or with protégés and mentors from other mentorship groups. Quite a few "mentors connected some of their protégés with other mentors just so they both had a bigger network" (FI Mentor Interview, Alan) and invited other groups to activities so protégés could meet more people (FI Mentor Interview, Rider). Many "protégés expressed interest in the inter-group activities… want[ing] to meet other participants of this program" (FI Mentor Reflection, Lily). The communities of protégés and mentors were interwoven in many ways, but differences existed that led these relationships to be termed as 'bridging'. Although some protégés and mentors referred to the relationships within their mentorship groups as 'friendships', the mentors maintained an influence outside of this capacity. This was due to the many roles mentors had to fill during their interactions with protégés. Throughout the program, mentors shared the knowledge gained from their training experiences with their protégés. In many instances protégés would ask for their mentor's assistance, other

times mentors interfered without being asked. The mentors' participation in LET gave them a superior knowledge-base compared to their protégés.

Linking relationships were formed when the students became connected with those in positions of power and gained access to the LET team (more specifically mentors). In many instances, mentors reflected on reaching out to myself, and some professors associated with the SHC for guidance, support, and inquiries of their own. The avenue of research was one found to be very compelling for protégés. For example, after referring one protégé to speak to one of the more senior members of the research team, he was able to become more involved in additional research projects on campus. One mentor reached out to me on how to better support their protégé when they themselves were recovering from an injury. After reassuring them that their health was priority, I connected them with a friend of mine who was doing research on their injury and could provide them with injury-specific information and assistance. The importance and validity of these vertical intergroup relations can explained through the foundational work of Granovetter's (1973) *The strength of weak ties*. In this paper, Granovetter explains how "weak ties are more likely to link members of different small groups", allowing for more connections to be made (Granovetter, 1973). These weak ties are "indispensable to individuals' opportunities and to their integration into communities" (Granovetter, 1973) leads to the development of social capital.

Overall, both protégés and mentors contributed to, and benefitted from, information sharing through increased, frequent social interactions. Different outcomes were created for participants as a result of (a) the resources provided by the program, and (b) participant knowledge gained from experience prior to entering the SHC (Coleman, 1988). Opportunities for shared information have been identified by Coleman as a key form of social capital.

**Norms and Social Structure**

The SHC program had a flexible format but maintained a few structural pillars to help guide participants in a similar direction. This closed social structure, as explained by Coleman (1988), is required so that expectations and sanctions can exist and be monitored in order to guide behaviour. However, the structure of the SHC was intended to allow for more individuals to reap the program benefits, making it non-exclusionary.

Upon involvement in the program, mentors and protégés understood that the commitments of time, physical activity performance, and interacting with others were requirements of involvement. The SHC in-class time was a one-hour a week responsibility in which all participants were expected to attend and participate in a semi-formal classroom environment. Outside of this, mentorship groups were to determine when, and in what form, they would interact and be physically active. The physical activity requirement was defined loosely, so as not to restrict participants to one type of activity or location over others. With sufficient understanding of this expectation, participants reflected on enjoying a variety of activities, and in some cases adhering to the practice of regular physical activity beyond the program. In regard to the expected social interaction, "a prescriptive norm within a collectivity that constitutes an especially important form of social capital is the norm that one should forgo self-interest and act in the interests of the collectivity" (Coleman, 1988, p.104). Specifically, this indicates that acting for the benefit of the collective is an expectation of the program. In turn, these actions benefit the individual.

**Appropriable Organization**

Once a program exists for one set of purposes, it can aid other individuals, "constituting social capital available for use" (Coleman, 1988, p.108), in this case working with the SHC. In a

university environment, programs similar to SHC can encourage students to become more familiar with the campus culture, increase their networking abilities, and gain confidence. The creation of a safe and trusting space that provides notable benefits worked to maintain program interest and increases the chances of program longevity (White et al., 2006). Similar programs of this nature encouraged students to become more familiar with the campus culture therefore increasing their networking abilities, and gaining confidence (Roberts, 2013). Creation of a safe and trusting space that provided notable benefits helped the students maintain interest in the program and increased the chances of program longevity. The noted growth of participants' communities and, evidently, support systems indicated greater chances of program success (Misener & Mason, 2006). Anecdotes from mentors and protégés indicated appreciation for the benefits they received from the program. Many "found the whole mentorship [experience] rewarding" (FI Mentor Interview, Jonathan). Skills such as time management and resilience were notably improved, as indicated subjectively by participants. One mentor expresses this during a discussion on stress; "[my] stress level has been pretty constant, so the fact that I can take on more and maintain a pretty low stress level … speaks to the program" (FI Mentor Interview, Morgan). One mentor specifically credited the regular physical activity and presence of a larger support system to her beneficial experience:

> I have, at the end of every other year, [been] so overwhelmed that [I've] almost just want[ed] to cry, and eat, and sleep for a day, [but] then [I had] to go back and tackle it. [Now] I [am] okay! I'm good! I feel positive, I feel resilient… I really do think that this program has helped me with my mental resiliency, and I think that comes from having the physical activity in your life more often, as well as having a protégé to vent to; but, also the support network of mentors because it brought me together with my peers even

> more so than before in the last four years of Kin, so it was a great support network to have". (FI Mentor Interview, Jennifer)

Mentors found the experience to be "reciprocal. The[ir protégés] were learning a lot, but [they felt they were] learning even more" (FI Mentor Interview, Feeny). Although the SHC's intentions were to aid students in their post-secondary transition, mentors benefitted in turn. The impact that mentors had on their protégés was seen to instill a desire in them to be mentors in the future:

> [This experience has] been really positive. I've honestly really enjoyed it and I had a lot more resources this year than I thought I would to be honest. I thought I was going to come to university and have no one and I was going to be super independent. But I think mentorship programs are really important and I want to be a mentor in the future. This support has really helped in managing stress and just dealing with it". (FI Protégé Focus Group, Owen)

Involvement in the mentorship program at the kinesiology undergraduate level allowed students the opportunity to foster relationships within, and between groups. Additionally, the program provided participants with access to valuable campus resources. The growth of the students' communities, and "healthy balanced lifestyle between academic and extracurricular activities" (FI Mentor Reflection, Angela) led to a perceived heightened degree of mental resilience for participants (FI Mentor Reflection, Danielle). Anecdotes from participants clearly indicated the program benefits, and the need for its continuation within the Kinesiology program. Sharing these anecdotes with incoming prospective program participants could contribute to program promotion, and evidently its continuation. The program's intentions were to incorporate social interaction in a mentorship form, with the practice and performance of regular physical

activity. In addition to adhering to these requirements, participants increased their level of campus knowledge, and involved non-SHC participants in their activities. These actions demonstrate participant and program growth and prosperity that exceeded researcher expectations.

**Social Capital and Human Capital**

Social capital identifies aspects of social structure by their functions, and in turn the value of the resources these functions can provide to other individuals (Coleman, 1988). Alternatively, human capital is comprised of individual resources (Chen, Zheng, Yang, & Bai, 2016), including health, well-being, attitudes, and competencies of individuals (Lawson, 2005). Through formal, structured training (i.e. LET) and the mentorship experience overall, the SHC program contributed to participant human capital through the knowledge and skills gained in their various interactions and class involvement. Although the protégés did not receive formal training (i.e. LET for mentors), under their mentor's guidance, interest was appropriated with protégés to continue in the program in future. Both the formal and informal leadership development that occurred through program involvement was seen to resemble the human capital that social capital helps to foster.

**Leadership development.** Utilizing a mentorship model for leadership development within a university campus setting remains largely unexplored (Chen et al., 2014). Scholars have demonstrated the benefits of university student leadership initiatives (Hilliard, 2010) and peer mentorship (Preston, Ogenchuk & Nsiah, 2014).

Leadership development creates opportunities for norms of social capital to foster, in turn contributing to individual participant human capital. As Coleman (1988) explained, it is not possible to develop human capital without social capital, and leadership competencies fall under

both human and social capital (McCallum & O'Connell, 2009). The production of human capital requires leaders to be aware in order to adapt and refine their leadership skills (Schyns, 2011). Self-awareness and awareness of others are equally important skills for a leader to develop, as the perception of the leader by the protégé needs to be considered when determining leader effectiveness (Schyns, 2011). In the context of the SHC, practicing regular reflection allowed participants to "reflect on the qualities [they] currently had and the ones [they] liked versus didn't like… it was eye opening and really motivated [them] to want to be better [people]" (MI Mentor Reflection, Will). These reflections maintained a focus on the self, as well as on 'the other' (i.e. the protégés), creating total awareness.

Before putting individuals in a position to impact the lives of others, developing as a leader requires them to establish their own ethical framework for both themselves and their followers to abide by (Hilliard, 2010). A leader's self-awareness and assurance in their moral stance will allow them to more effectively communicate with others and impact their credibility (Kouzes, James, Posner, & Barry, 1990). The development of trust and confidence in a leader requires them to be consistent in what they preach and how they act (Hilliard, 2010). Many mentors found that they re-aligned with their values during this experience, as they discovered the moral compass within which they operate. One mentor admitted that he "[needed] to understand and know who [they were] before [they could] go help others" (FI Mentor Interview, Anthony). Having "the opportunity to reflect on [their] own skills, rather than just have someone else tell [them]" (MI Mentor Interview, Will) allowed mentors to determine what they could improve on, and how to better mentor others. In line with this finding, Day, Fleenor, Atwater, Sturm, and McKee (2014) stated that when leaders look back on their past experiences and use them to help guide others through their problems it helps the leader gain clarity and awareness.

Schyns (2011) outlined that *leader* development focuses on the individual, and *leadership* development focuses on those involved in the wider social context. The SHC initiative required that all mentors expressed a clear concern for positively impacting the lives of 'the other' (i.e. their protégés). This first and foremost required mentors to plan in advance for when they could give the protégés sufficient time. Many mentors indicated that they "had a really great connection with [their] protégé, [they] had a schedule, [they] had a plan" (FI Mentor Interview, Richard). Setting aside time for regular interactions showed the protégés that their mentors were genuinely concerned for their well-being and wanted to spend time with them in order to ensure their success. Mentors also demonstrated concern by regularly reaching out and communicating with their protégé(s). Communication with protégés ranged from "check[ing] in with [protégés] just to make sure things were good" to "make sure things were on the right course for their [protégés] goals, both academic, athletic" or other (FI Mentor Interview, Rider). This thoughtfulness was appreciated by the protégés, they were confident that their "mentor [was] always there… that support [was] reassuring" (MI Protégé Focus Group, Mark). Mentors and protégés alike commented on "appreciat[ing] the experience… [and] learning from other people to see how everyone interacts" (MI Mentor Interview, Shawn). The forms of social capital demonstrated within the SHC participant community led to the skill acquisition of awareness for the mentors. The leadership development component of the program not only created human capital for mentors, but the mentors' contribution to the protégés experience helped to develop their human capital as well.

Teaching leadership from an organizational perspective can improve participant performance and outputs (Schyns, 2011). Mentors involved in the SHC were required to participate in 'Leadership Effectiveness Training' (LET) to contribute to their professional

development, knowledge translation, and ensure their preparation in supporting others. Partaking in the LET made mentors feel connected to one another as a community of individuals looking to make a difference within a greater community. Many mentors noted that in using the skills acquired in the "LET training…[their] relationships with [their] protégés [were] so much better" over time (FI Mentor Interview, Chet). The relationship improvement experienced by participants due to leadership skill acquisition aligned with Hilliard's (2010, p.96) statement that "creating visionary student leaders at the university or individuals within an organization for the future could possibly help to improve the quality of life and opportunities for others to grow academically, culturally and socially". Personal growth for the mentors, and the potential for external growth, were contributors to the creation of social capital by the SHC initiative. Leadership development can further be achieved through interactions with others; learning from their behaviours and gaining their input. The process of leadership development "involves constantly developing new capacities and critical perspectives through collaborative action and democratic participation" (Christens & Dolan, 2011 p.544).

The connections created within SHC allowed participants to gain perspective from others, representing the knowledge sharing discussed in reference to social capital. With the expansion of their protégés network, one mentor noticed that "at first [their protégés] were really dependent on [them]… but once [they] started doing group things, they [became] more comfortable with messaging other protégés" (MI Mentor Interview, Will). Gaining insight from others not only helped widen perspective but was also beneficial when individuals were given autonomous opportunities. In these instances, being confident in the decision required a process of generating ideas, analysing the quality of the idea, and then acting on them (Day et al., 2014). It is not always easy to take the lead, as "initially less experienced participants may struggle with

thinking of themselves as a leader; however, over time the concept of leader becomes a part of one's identity" (Roberts, 2013, p.65). This challenge was accepted and acknowledged by mentors who at first found "this [experience] was a challenge for [them] but [they] plan[ned] on growing from it" (MI Mentor Reflection, Anthony). Further, the "program not only help[ed] the protégés, but… also help[ed] the mentors" (MI Mentor Reflection, Brittany). Allowing opportunities for leadership development seemed to instill confidence in individuals to lead (mentors and protégés alike), whether they were placed in those leadership opportunities (e.g. protégés given opportunities to be autonomous) or sought those opportunities out independently (e.g. volunteering to be a mentor in SHC).

The SHC's contribution to leadership development and leadership experience led to an increase in community involvement and growth, resembling the norms of social capital. Enhancing leadership development helped build individual effectiveness, relationships, and strengthened the social network (Roberts, 2013). The "creation of new connections and the enhancement of relational dynamics such as respect, trust, shared norms, values, and expectations" (Nahapiet & Ghoshal, 1998) was outlined by participants as the program progressed. During the initial interactions among mentorship groups, mentors asked their protégés "'What do you want to get out of this program?' 'What do you want to improve on?' 'What are your goals?' 'What do you like to do?' 'What's your preferred form of physical activity?'" (MI Mentor Interview, Morgan). These conversations helped align everyone's intentions and organize their time together. Within the positive learning space provided by the SHC, program leaders supported innovation (Day et al., 2014). Reflecting back on their experience, one protégé admitted that "at the beginning [of the program they were] so scared to even go to a group fitness class by [them]self. But now [they are] … going out and doing

everything [they] can because [they] might as well" in this environment full of possibilities (FI Protégé Focus Group, Heather).

Formal reparation for the mentor's present role (i.e. LET), combined with the confidence provided with multiple years of undergraduate experience, led mentors to seek out opportunities to interact with others and expand their community. This involved mentors reaching out to other mentors, interacting with their protégés regularly, and networking with other mentorship groups. Accountability was not only required to ensure these interactions occurred but remained an important aspect for programming intended to grow and evolve (Emery & Bregendahl, 2014). Mutual commitment and accountability was initially a challenge for mentorship groups. Some mentors were quite "annoyed and frustrated with [their] protégés" when their communications were being ignored (FI Mentor Reflections, Ben). By remaining persistent and "plac[ing] more emphasis on some mandatory" time together, protégés were held accountable, and participant enjoyment in the program increased (FI Mentor Interview, Rider). Program longevity is impaired when individuals are not enjoying what they are doing, or do not see the benefit of their participation (Emery & Bregendahl, 2014).

Leadership development was necessary to begin the domino effect of social and human capital creation, more specifically knowledge sharing and translation, and community expansion. Confident, capable leaders acted as positive role models for their protégés. Knowledge and insight was communicated and shared within and between mentorship groups. Lastly, program enjoyment and noticeable participation benefits peaked protégé interest in assuming the role of mentors in their senior years, suggesting that the program will be sustainable in the future.

Social capital was a positive outcome of the SHC program. Although not anticipated or measured from program outset, it's emergence from the data corresponded with my

understanding based on the work of Coleman (1988). Trust and trustworthiness was developed over time and seen to be both helped and hindered by social media use. The sharing of information within and between mentorship groups was facilitated by the inclusive and information-rich SHC environment. Despite the flexible format of the SHC, it maintained norms and social structure that allowed expectations to be maintained and withheld among participants. The SHC demonstrated itself to be an appropriable organization that increased participant confidence in expanding their campus networks and led to noted personal growth. Lastly, the product of social capital contributed to participant human capital through leadership development initiatives. I believe that program continuance and transferability can be made possible with maintained consideration for social capital as an outcome.

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# Chapter 5: Conclusions and Future Directions

## What next?

When we began designing and implementing this mentorship program, there were no similar mentorship initiatives in existence on campus. Although research existed in similar areas, no University undergraduate mentorship initiatives intended to improve the first-year transition through regular PA interactions. Further, to my knowledge, there were no mentorship programs in existence with the aim of making a positive impact on students' mental health and resilience. As such, the SHC initiative was unique and allowed for rich and useful data to be collected. My goal when designing this study was to evaluate the process of relationship building through a physical-activity based mentorship program, and how this relationship helped to positively impact mental health and resilience. I have since learned from both the experiences and feedback of the SHC participants, which has allowed myself to make connections and apply considerations for future programs of its kind. In the following section I will summarize the main findings of the project and offer suggestions for future mentorship programs in similar contexts.

## What did we learn?

Over the eight-month program I was able to gather a tremendous amount of information from various perspectives of individuals involved. In analysing and interpreting interview, focus group, and reflection data, I determined key findings and offer insights for future program considerations.

**Mentor-protégé fit.** Mentor-protégé fit proved to be one of the most important aspects of the program for those involved. In regard to creating the best mentor-protégé fit possible, mentor:protégé ratio, gender pairings, experience, and program overlap must be considered. Mentors and protégés alike disclosed that they felt the lower the ratio the better. The alternative to this would mean larger, less intimate groupings that do not always allow personal, trusting

relationships to be formed. Positive interactions were documented in both same-gender and cross-gender scenarios. Certain topics were noted as easier to discuss with partners of the same gender (e.g. significant others, puberty), but overall same or cross-gender pairings were not conclusively seen to indicate one was more successful than the other. In many cases at the end of the program participants admitted to having positive experiences with both males and females, and appreciated the growth gained from the experience regardless. Males and females need, and provide, varying types of support in different ways (O'Brien, Biga, Kessler, & Allen, 2010). It would be beneficial to take gender into account in future programs when grouping individuals, given the results from Kao, Rogers, Spitzmueller, Lin, and Lin's (2014) study indicating the positive effects of psychosocial mentoring on protégé resilience in same-gender pairings. Similar to the comfort found in interacting with those of the same gender, program overlap played a role in group cohesion. Discussions on how to improve their undergraduate experience in the program made protégés appreciate their participation in the program, and the benefit of the mentor relationship. Lastly, a mentor's cumulative experiences made them more effective and useful in comparison to their age in relation to their protégé. Mentors have the potential to make a large contribution to the personal and professional achievements of their protégé (Hunt & Michael, 1983). With this understanding, attending to the mentor-protégé fit would help to support participant and program success. Overall, future mindfulness regarding these findings would create a like-mindedness among the groupings that would positively impact the mentor-protégé fit.

**Informal sport participation.** The beneficial impact of regular physical activity (PA) and informal sport participation was an important realization for participants. There was a learning curve for mentors and protégés to grasp a full understanding of the meaning behind the

program's physical activity requirements. Distinguishing the broader definition of physical activity and not specifically indicating that formal exercise was necessary helped increase mentor-protégé adherence to more frequent physical-activity based interactions. In future programs, ensuring this distinction is understood would prevent the program from being exclusionary based on people's perception of the physical activity requirements. Many participants enjoyed informal forms of activity, including regularly scheduled walks, engaging in conversation pedalling on stationary bikes, and off-campus activities (e.g. bowling, rock climbing). Other participants preferred to participate in non-competitive forms of sport, such as pick-up basketball, or mini-games of volleyball at the campus recreation centre. For all aforementioned activities, the concepts of 'choice' and 'fun' were vital for participation. At the beginning of the program, mentors used physical activity and informal sport participation as a means of getting to know each other and build trust. Over time, the role of PA and informal sport changed from a means of initiating a relationship, to one that furthered its growth. Informal sport and/or activities are different from organized/formal sport because those who participate in the former are typically intrinsically motivated (Erickson & Côté, 2016). A participant's decision to continue in an informal sport activity is based off of their enjoyment, ensuring long term participation (Erickson & Côté, 2016). Participants felt comfortable sharing personal anecdotes and asking each other for advice while engaging in activity together. In addition to the enjoyment from being physically active together, afterwards it was realized that these interactions were a means of stress relief. Participants found it beneficial to take as little as thirty minutes out of their day to move their bodies and disclose their thoughts and feelings to trusted individuals. This practice eased participants' minds and led to them leaving the interaction with a clear head and relaxed mindset. There was also a large social motivation to participating in informal sport.

Some participants interacted more exclusively with those in their mentoring group, but other groups joined together in larger group activities. Through these activities and interactions, participants expanded their social circle. Physical activity and informal sport participation created an environment for participants to freely share what they felt comfortable sharing, engage in activity to better their health – both physical and mental – and distract themselves from external stresses.

**Reflection.** All mentors were required to engage in reflection, while protégés were encouraged to participate in reflective practice. From these reflections, collected bi-weekly, participants recognized which of their own behaviours they could improve on, and in some cases which relationships were evolving quicker than others. Participants were initially unsure of how to implement the practice of reflection into their daily lives. Some participants chose to reflect daily, while others reflected retrospectively at the end of the week. Over time, participants learned to appreciate taking time out of their schedule to look internally and reflect on their day. Many participants indicated that they would be continuing this practice after their program participation requirements were over. Reflection led to a heightened participants self-awareness, and in turn individual growth. Participants came to realize how their behaviour affected those around them. The reality that mentors may not be fully aware of others' realities, made them more careful in how they interacted with their protégés. Developing self-awareness is a strong and necessary indication of leadership development (Roberts, 2013). This realization is one that is transferable, potentially beneficial to relationships of any capacity, as well as in a workplace. Chapter 3 outlined the importance of reflection from all involved, including the researcher. In a personal journal, I reflected back on my interpretations of participant interactions, thinking back to my undergraduate experience and empathizing with participant concerns. Reflective practice

was overall seen as a beneficial and necessary component of the program. Reflection and self-awareness positively influenced the strength of relationships, and the speed in which trust was created among participants.

**Social capital.** The plethora of relationships developed in the program, and the ways in which participants interacted with each other, allowed for the fostering of social capital. In chapter 3 I outlined how the growth and learning experiences of participants were dependent upon the various relationships formed. The importance of these relationships and connections were further unpacked in chapter 4. The University environment provided ample resources which made the setting an ideal place for the mentorship program to be implemented. Many participants commented on the trust they built with each other over time, and through interactions in various areas on and off campus. Trust is a necessary pillar in the creation of social capital, and therefore was a primary contributor to that which was created in the program (Roberts, 2013). Once participants began trusting each other, personal growth and the sharing of knowledge and resources became possible. These trust-based relationships led to the creation of communities. Documentation of these communities was done so in participant reflections and discussed openly in the interviews and focus groups. Some participants considered themselves part of multiple communities. The communities that existed included the mentor community of support, the individual mentorship group communities, the greater SHC participant community, the campus community (e.g. joining clubs, counsel groups, campus employment), and the University community. The knowledge of, and access to, campus recreation, student health services, academic resources, clubs and counsels, and student entertainment was shared through connections made. Bonding, bridging, and linking social capital became apparent in the horizontal and vertical connections among the mentorship program participants, and the greater

campus and University city community (White, Spence, & Maxim, 2006). Involvement in these communities increased participant interest in future association with the program. Some mentors hoped that their anecdotes could be shared with prospective individuals to encourage them to participate as mentors. Some protégés hoped to become involved as mentors themselves in the future. Understanding, appreciation for program involvement, and noted interest in future participation helped to increase chances of program longevity and success.

Given the prevalence of technology in today's student population, and society in general, use of social media and technology was considered in the program. Social media both helped and hindered the building of relationships. Cellphones were the primary tool for communication among mentorship groups. Texting was used to organize the details for in-person interactions and checking in on individual physical activity participation. Social media outlets (i.e. Facebook, Instagram, Snapchat) were used as a tool to hold each other accountable by documenting and sharing proof of physical activity. In circumstances where participants were wanting to cancel on pre-organized plans, texting was used as a last-minute form of letting their mentorship group know. Additionally, mentors commented that their texts were at times ignored, as texting holds no face-to-face accountability. Hiding behind technology and not taking responsibility for one's decisions and actions is one of the dangers of social media and technology (Young, 2004). This led to distrust of protégés in part of the mentors and slowed down the process of their relationship building. As with anything, both the positive and negative must be considered when looking forward to improving the program. No best practice for technology use in mentoring exists (Dziczkowski, 2013), but taking participant feedback and observations into consideration for future program design is a step in a positive direction. Engaging in up front discussions with

participants on appropriate and respectful ways to communicate with each other works towards achieving balanced use of technology and social media.

E-mentoring is a concept introduced in discussions on the potential future of mentoring. It is an adaptation of traditional mentoring that is also referred to as cyber or virtual mentoring (Dziczkowski, 2013). E-mentoring was originally introduced in order to explore the ability to mentor outside of potential geographical constraints (Dziczkowski, 2013). The ease of scheduling over text messages noted by our participants was also found by Dzickowski (2013). With e-mentoring, mentors and protégés exclusively communicate over electronic media such as e-mail and online discussion boards (Dziczkowski, 2013). This aspect of e-mentoring contradicts one of the successful aspects of the SHC; in-person interaction. In-person interaction increased the speed of building trust between mentor and protégé. A version of e-mentoring was present with some mentors when texting was also used for the intention of brightening the others' day. Other mentors used texting to send out physical activity reminders during times of academic stress. Despite the noted benefits of this tech-centered concept, more research to determine best practices in this realm is necessary (Dziczkowski, 2013). However, future mentorship programs of this nature could consider implementing responsible technology as a communication channel to enhance the relationship.

Leadership development was generated outright through the mandatory participation in Leadership Effectiveness Training (LET) by mentors. By breeding human capital, leadership development works to develop social capital (Coleman, 1988). Participant (i.e. mentor) leadership skills were directly shaped through LET, and indirectly through their experiences over the eight-month program. Both mentors and protégés commented on leadership effectiveness in their reflections and interview and focus group discussions. Self-awareness is an important

leadership skill to develop, as it helps one grow and better themselves in their communications and interactions with others, and how they carry themselves (Schyns, 2011). Leadership development involved participants focusing on the *other,* weighing the needs and schedules of others into decision making and time spent together, and checking in regularly on how each other was doing. As much as mentors and protégés learned to consider the *other*, they also noted learning from each other. Accepting that there is much to be learned from those around you was a sign of maturity and growth, and furthered leadership development.

Analysing participant documents led to the understanding of social capital emerging as an outcome. Comments on trust, community development, social media use, and leadership development all resembled forms of social capital as explained by Coleman (1988). Taking mentor and protégé feedback into consideration for future program implementation is necessary when working towards program improvement and longevity.

**Moving Forward – Proposed Model**

Focus must be directed to future program structure, development, and continuation with the completion of the pilot project. The creation and design of the SHC pilot project was based off compiled best practice from other mentoring initiatives and leadership literature. The findings led to the creation of a proposed model for future program implementations of this nature based on interactions between researcher and participants, and participant data. From the discussions had in chapters 3 and 4 regarding participant feedback and researcher observations, I came up with theoretical and practical program considerations (see Figure 3).

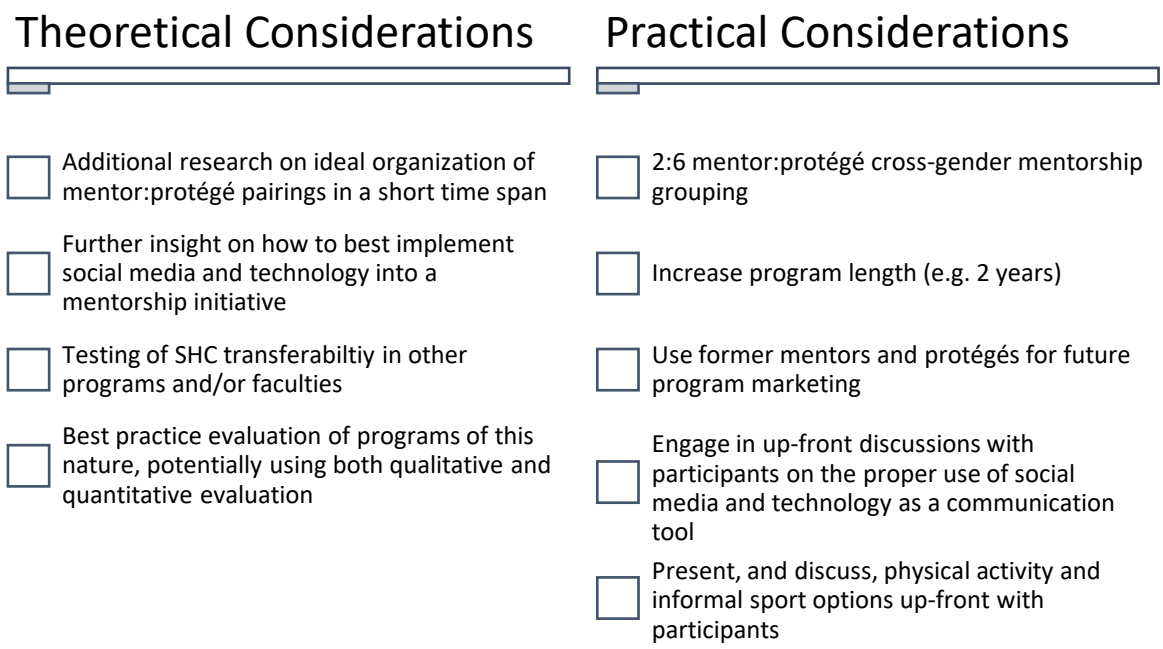


*Figure 3*. Theoretical and practical recommendations for future physical activity-based mentorship programs

Chapter 3 outlined findings based on participant data and program feedback. From these I, along with the participants, co-constructed recommendations for future program changes (see Figure 3). This included first and foremost a 2:6 cross-gender mentor:protégé ratio, where a mentor of each gender would be paired with six protégés of both genders. This change would allow individuals to build more connections within their mentorship group and communicate topics with the individual whose gender they find most appropriate for the discussion. Participants commented on the dynamic of same-gender versus cross-gender pairings, and the ease in communicating with same-gender mentorship groups. Despite this, it is inevitable that individuals will interact with both genders outside of controlled academic environments. Growth comes from learning how to interact with all individuals. The 2:6 ratio allows for this while not restricting or limiting participant interaction and growth.

Mentors and protégés indicated that an increased program length would be ideal, as it takes time to develop a trusting relationship. By organizing interactions at the beginning of the school year through a formal interaction, participants would be able to get to know each other earlier on. Leaving the decision to continue the relationship after program completion to the participants would also allow for the possibility of relationship longevity.

Up-front discussions with participants from the beginning of the program can help ensure better participant understanding throughout. These discussions would include appropriate use of technology and social media in relationship building, and examples of *physical activity* that are not limited to an understanding solely of *exercise*. Given the instances where technology was misused, and the time needed to generate correct participant understanding of physical activity interactions, these discussions could assist in expediting the process of building trusting relationships. Lastly, continuous evaluation through collective discussions and feedback can work to keep participant opinions into consideration as the program evolves.

**Conclusion**

Throughout this project, I discovered how some factors do and do not work in a physical-activity based mentorship program. Mentor-protégé fit must first and foremost be taken into consideration before other aspects can fall into place. Ensuring participant understanding of appropriate and valid forms of physical activity can help foster a genuine enjoyment and appreciation for regular physical activity. Creating a supportive mentor community with regular interactions can help share information on best practice mentoring tactics, providing mentors with a discussion outlet, and leading to improved interactions with protégés. Continuous evaluation and feedback from the participant community makes the community feel heard and

appreciated. Applying feedback, where doable, to the program structure as it progresses allows it to best fit the needs of those involved.

The SHC mentorship initiative was the first of its kind on campus, making it an insightful addition to the pre-existing mentorship and leadership literature. The program incorporated physical activity and mentorship to help assist first years in their post-secondary transition, with the intention to have a positive impact on participant mental health. This multi-faceted approach helped benefit participant physical, mental, and social health by keeping them physically and socially active on a regular basis. The university atmosphere allowed for ease of access to resources for both academic and health needs. As well, the countless opportunities to expand one's social network and join clubs, teams, counsels, and other such groups led to the fostering of social network, stemming from the program. Mentors gained leadership experience and instilled an interest in protégés to be mentors in the senior years of their undergrad degree. Further research should be done on how programs of this nature can be expanded on a larger scale to impact the lives of more individuals.

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Young, K. (2004). Internet addiction: A new clinical phenomenon and its consequenes. *American Behavioural Scientist*, *48*(4), 402–415.

## Appendix A: Baseline Questions for Mentors

1. What is your understanding of what it means to be a good mentor? A good leader? Explain.
2. What are your motivations for joining the program?
3. What are your expected outcomes for joining the program?
4. What is your understanding of the physical activity expectations?

## Appendix B: Bi-Weekly Mentor/Protégé Reflection Questions

1. Describe your mentorship experience from these past two weeks? How did you feel when these experiences were happening? Why did you feel this way?

2. How do you feel about your relationship with your mentor/protégé's? How has it changed?

3. What are learning about yourself from this mentorship experience?

4. What forms of physical activity did you participate in with your mentor/protégé's these past two weeks? Why was it successful? How did everyone feel about the activities?

5. What changes, if any, would you make for next week?

6. Reflect on anything else that happened this week. Why was it significant to you?

## Appendix C: Mid-Intervention Mentor Interview Questions

*Dialogue before each interview:*

This interview will be recorded (click record). It is December __, with participant #__.

The purpose of this interview is to understand your experience of being a mentor in Kin 4444. There are no right or wrong answers; please tell us what you truly think and feel. The following information will not be presented and/or shared with anyone in such a way that you will be personally identified. You have been assigned a unique study number to maintain confidentiality. My focus will be on you the entire time, so I ask that you do not use any technology such as your phone. If at any point you have questions and need clarification, please do not hesitate to ask.

*Interview Questions & Probes:*

1. What were your motivations for joining the program? (What motivated you to join the program?)
    a. b. What excited you about being a mentor (what excites you about this program)?
2. What is it like working with your protégé?
    a. What's going well? Please provide an example. → With reference to working with your protégé, as well as the overall program
    b. What are you finding challenging? Please provide an example. → With reference to working with your protégé, as well as the overall program
    c. What has surprised you so far? Please provide an example. → With reference to working with your protégé, as well as the overall program
3. What impact is working with your protégé having on you?

   a. What have you noticed about your own health/mental health/levels of stress/resiliency? → Reflect on your health/mental health/levels of stress/resiliency (your ability to cope with these situations/how you deal with it)
   b. In what ways have you helped your protégés manage their own responsibility/stressors?
   c. In what ways have you incorporated physical activity into your mentoring?
   d. Explain the ways in which you and your protégés have been active together.
4. What have you learned so far about who you are as a mentor?
   a. Describe the mentorship relationship you have developed with your protégés.
   b. How would you describe your mentorship characteristics?
   c. What other skills, if any, do you feel you need, going forward as a mentor? → Referring to either skills you feel you need to learn/want to learn, or to skills you wish to utilize that you haven't already
5. What else have you noticed about how being a mentor has impacted you, since working with your protégés?
6. How do you see this evolving next term? (Referring to either the mentor-protégé relationship and/or the mentorship program)
7. What else would you like the researchers to know about your mentorship experience so far?
   a. What is important for us, the researchers, to know that we have not asked you about?

## Appendix D: Mid-Intervention Protégé Focus Group Question

*Dialogue before each focus group:*

This interview will be recorded (click record). It is December __, with focus group #__.

The purpose of this interview is to understand your experience of being a protégé in this mentorship program. There are no right or wrong answers; please tell us what you truly think and feel. The following information will not be presented and/or shared with anyone in such a way that you will be personally identified. My focus will be on you the entire time, so I ask that you do not use any technology such as your phone. If at any point you have questions and need clarification, please do not hesitate to ask. Let's begin!

*Focus Group Questions and Probes*

1. Why did you choose to be involved in this course?
    a. Comment on the voluntary aspect
    b. Motivations?
2. Describe your experience as a protégé this term?
3. Describe the relationship between you and your mentor?
    a. When do you see this guidance – academic or non-academic situations?
    b. How are you communicating?
        i. How frequently?
        ii. Method of communication (i.e. texting, face to face, etc.)
    c. Describe the last interaction you had?
        i. Is this common?
4. How have you felt about incorporating regular physical activity into your life? How has it been having someone to be active with?

   a. Probe based on what answers they are saying (i.e. if they talk a lot about their gym frequency: “It seems like this is what you are primarily doing… what about this? – then reference walking vs. taking the bus, stairs vs. elevator, etc.)

5. Describe the stresses/anxieties, if any, you have experienced this term? Has having a mentor helped with these?
   a. Think about a stressful/anxious time you have had this semester. How did you reach out to your mentor to deal with it? (Don’t have to provide exact details)
6. What would you like to see more/less of next term?

## Appendix E: Final Intervention Mentor Interview Questions

*Dialogue before each interview:*

This interview will be recorded. It is April__, with participant #__, at post-intervention.

The purpose of this interview is to understand your experience of being a mentor in Kin 4444. There are no right or wrong answers; please tell us what you truly think and feel. The following information will not be presented and/or shared with anyone in such a way that you will be personally identified. You have been assigned a unique study number to maintain confidentiality. My focus will be on you the entire time, so I kindly ask that you do not use any technology, such as your phone. If, at any point, you have questions and need clarification, please do not hesitate to ask.

*Interview Questions & Probes:*

1. What was it like to work with your protégé?
    a. What surprised you? Please provide an example.
    b. What aspects of being a mentor did you find rewarding? Challenging?
2. What impact did working with your protégé having on you?
    a. What did you notice about your own health/mental health/levels of stress/resiliency?
    b. How did being a mentor assist or conflict with your own stresses/responsibilities?
    c. What did you notice about your own participation in physical activity?
        i. Did you find it challenging? Why or why not.
    d. What else have you noticed about how being a mentor has impacted you, since
    e. working with your protégés? What else /any other impacts? → (Personally, professionally?)

3. What have you learned about who you are as a mentor?
    a. How would you describe your mentorship characteristics now that the course is done?
    b. How has your understanding of mentorship changed over the course of this program? What factors have played a role in your thinking about mentorship?
    c. What do you feel you need to optimize your mentorship skill-set?
4. What advice would you give to future mentors in this course?
5. What characteristics would you say are important for a successful mentor-protégé relationship?
6. What else would you like the researchers to know about your mentorship experience so far?
7. Explain what changes, if any, would you recommend for the program in the future?
    a. What else should we know moving forward?

## Appendix F: Final Intervention Protégé Focus Group Questions

*Dialogue before each focus group:*

This focus group will be recorded. It is April__, with focus group #__, at post-intervention.

The purpose of this interview is to understand your experience of being a protégé in Kin 4444. There are no right or wrong answers; please tell us what you truly think and feel. The following information will not be presented and/or shared with anyone in such a way that you will be personally identified. My focus will be on you the entire time, so I kindly ask that you do not use any technology, such as your phone. If, at any point, you have questions and need clarification, please do not hesitate to ask. Let's begin!

*Focus Group Questions & Probes:*

1. How have you found the experience of having a mentor this year?
    a. Rewarding?
    b. Challenging?
2. Describe the relationship between you and your mentor?
    a. How has it changed?
    b. How did it meet your expectations? How did it fail to meet your expectations?
3. How, if at all, has having a mentor assisted with learning to handle any stresses or anxieties experienced this past year?
4. After being part of this program, how do you feel about incorporating regular physical activity into your daily life?
    a. How has it been different doing it with a group?
5. Explain what changes, if any, you would recommend for the program in the future?
6. Is there anything else you would like to share with us about your experience?

**Curriculum Vitae**

**Francesca Gable**

## EDUCATION

2016-2018 | Western University, London, ON
**Master of Arts [Candidate], Leadership and Sport Management in Kinesiology**
(expected completion: May 2018)

2012-2016 | Western University, London, ON
**Bachelor of Science in Kinesiology**

## RESEARCH INTERESTS

- Mentorship
- Leadership
- Physical activity promotion
- Relationship between physical activity and mental health
- Creating social capital through leadership development

## RESEARCH CONTRIBUTIONS

Fried, R. R., Karmali, S., Irwin, J. D., Gable, F. L., & Salmoni, A. (2018). Making the grade: Mentors' perspectives of a course-based, smart, healthy campus pilot project for building mental health resiliency through mentorship and physical activity. *International Journal of Evidence Based Coaching and Mentoring, 16*(2). (Accepted, Expected August 1st, 2018).

Fried, R. R., Karmali, S., Irwin, J. D., Gable, F. L., & Salmoni, A. Making the grade: Mentors' perspectives of a course-based, smart, healthy campus pilot project for building mental health resiliency through mentorship and physical activity. London Health Research Day. London, Ontario, May 10, 2018. Poster Presentation.

Wasser, K., Gable, F., & Misener, L. (2018, June). *Mentorship through physical activity for resilient students* (Teaching and Learning Fair presentation). Presented at the North American Society of Sport Management (NASSM) conference in Halifax, Nova Scotia, Canada.

Gable, F., & Misener, L. (2017, November). *Building resilience through sport: Developing student mentors* (oral presentation). Presented at the Sport Management Association of Australia and New Zealand (SMAANZ) conference in Gold Coast, Queensland, Australia

Gable, F., & Misener, L. (2017, April). *Developing student mentors: Building resilience through sport and physical activity* (poster presentation). Presented at the Western University Kinesiology Graduate Students Association Symposium in London, Ontario, Canada

Mentor de-brief sessions (2017, January & April).

## RELEVANT EXPERIENCE

| | |
|---|---|
| Sept 2017-Dec 2017 | Graduate Teaching Assistant<br>2230 Introductory Exercise Physiology<br>Western University |
| Jan 2017-Apr 2017 | Graduate Teaching Assistant<br>2230 Introductory Exercise Physiology<br>Western University |
| Sept 2016-Dec 2016 | Graduate Teaching Assistant<br>4432 Physiology of Exercise<br>Western University |

## WORK EXPERIENCE

| | |
|---|---|
| May 2018-Present | Western Student Recreation Centre \| London, ON<br>**Program Administrative Coordinator Sport Western Summer Camps** |
| Apr 2017-April 2018 | Western Student Recreation Centre \| London, ON<br>**Shift Supervisor for Membership Services** |
| Apr 2017-April 2018 | Western Student Recreation Centre \| London, ON<br>**Lifeguard and Swim Instructor for Aquatics** |
| Jan 2013-Apr 2016 | Western Student Recreation Centre \| London, ON<br>**Fitness Instructor for Fitness and Wellness** |

## CONFERENCE ATTENDANCE AND PARTICIPATION

| | |
|---|---|
| June 2018 | North American Society for Sport Management Conference \| Halifax, Nova Scotia |
| April 2018 | Kinesiology Graduate Students Association Symposium \| London, Ontario |
| November 2017 | Sport Management Association of Australia and New Zealand \| Gold Coast, Australia |
| May 2017 | North American Society for Sport Management Conference \| Denver, Colorado |

| | |
|---|---|
| April 2017 | Kinesiology Graduate Students Association Symposium \| London, Ontario |
| March 2017 | Sport for Development and Peace Symposium \| Champaign, Illinois |

## SCHOLARSHIPS AND AWARDS

| | |
|---|---|
| December 2017 | Faculty of Health Sciences Travel Award, *$430* |
| September 2016 | Western Graduate Research Scholarship, *$6080* |