

Exploring the Development of Trust in the Athlete-Physiotherapist Relationship

by

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Abstract

Sport injury is prevalent and may lead to negative psychological consequences for athletes. When athletes become injured, they may turn to a physiotherapist to help them rehabilitate. An athlete's trust in their physiotherapist may have an impact on their mental and physical rehabilitation. This study explores how trust is developed and maintained as well as the subjective outcomes of trust during rehabilitation. The qualitative lens of phenomenology was used to interview eleven athletes about trust in their physiotherapist. These athletes had experienced injury that resulted in removal from their sport and a rehabilitation process of 5 weeks or more. These interviews were transcribed and coded until saturation in the data was found. Four major themes of Baseline Trust, Trust Development, Trust Maintenance, and Partnership were found. Strengths, limitations/delimitations, and future directions were discussed to contextualize the contributions of this study for sport psychology and trust research.

List of Abbreviations Used

ACL Anterior Cruciate Ligament

MCL Medial Collateral Ligament

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Chapter 1: Introduction

Participating in athletic activities often fosters a sense of identity and community that is based in sport. For individuals who have competed throughout their lives at increasing levels of skill, a sport-based identity can be even more prominent (Cieslak, 2004). Unfortunately, injury is an ongoing and commonplace issue in the world of sport and can threaten an athlete's sport identity. From 2016-2017 the Canadian Institute for Health Information (2017) reported roughly ten thousand injuries because of participation in sport. A Statistics Canada report by Billette and Janz (2015) found that, from 2009-2010, injury from sport accounted for 35% of all injuries in the country. Those at the greatest risk of sport injury were young people (age 12-19) with 66% of all injuries occurring from sport, followed by working age (20-64) with 28% of injury occurring from sport. Injury often leads to an athlete being unable to participate in training or competition in their sport. The removal of an athlete from their sport may create negative health outcomes both physically from the injury, and mentally from the psychological consequences of being away from their sport. These negative psychological consequences have been compared to the stages of grief, particularly the stages of anger, denial, and bargaining (Zakrajsek et al., 2017). Further, the tendency for athletes to value their sport status as a part of their identity makes this study population particularly emotionally vulnerable when that sport identity is threatened by injury (Cieslak, 2004).

One way for an athlete to overcome these negative effects is when an athlete successfully completes a rehabilitation process which is often done in Canada through creating a partnership with a physiotherapist. For an athlete, the role of a physiotherapist is someone who guides them through a physical rehabilitation plan for their injury and

works with them throughout their rehabilitation with regular appointments, check-ins, strength tests, and many other injury specific rehabilitation tools. The relationship that is established between an athlete and a physiotherapist during rehabilitation has the ability to impact the health outcomes of rehabilitation and thus it is important to understand from a research perspective (Arvinen-Barrow et al., 2009; Clement et al., 2013; Hildingsson et al., 2018).

One area of the athlete-physiotherapist relationship that lacks research investigation is the existence of trust within the rehabilitation relationship. Particularly, how trust may be developed and maintained and what impact trust may have on rehabilitation. Trust has been defined by Borum (2010) as “a willingness to accept vulnerability and risk based on confident expectations that another person’s future actions will produce some positive result” (p.9). The existing athlete-physiotherapist relationship literature exhibits qualities that suggest trust may be involved in the rehabilitation process. An athlete may be both physically and mentally vulnerable after a sport injury (Zakrajsek et al., 2017) which may lead an athlete to value a trusting relationship with a physiotherapist that they felt could help them achieve their rehabilitation goals.

Trust has been noted in the literature as having both emotional and rational aspects (Lewis and Wiegert, 1985). Emotional and rational aspects of the athlete-rehabilitation provider relationship have also been discussed in previous literature, but not in terms of trust. Rehabilitation providers have been noted as going beyond providing medical support to engage in emotional support and positive encouragement to help an athlete manage the negative mental aspects of injury (Arvinen-Barrow et al., 2009; Clement et al., 2013; Hildingsson et al., 2018; Podlog et al., 2010). A systematic review

by Forsdyke and colleagues (2015) concluded that one of the antecedents for an athlete's successful return to play (i.e., an athlete returns to training and competition in their sport) was having the level of emotional support they believe they needed from their rehabilitation provider. Athletes valuing emotional support from their rehabilitation provider may represent the athlete's need for emotional trust during rehabilitation. The link between emotional support and successful return to play may also mean that emotional trust plays a role in rehabilitation outcomes. The rational side of trust may also be present in the athlete-physiotherapist relationship.

Rational trust may relate to research that has found a positive impact of goal setting on rehabilitation (Hildingsson et al., 2018; Lu & Hsu, 2013; Podlog et al., 2010). If an athlete can see that the physiotherapist is able to help them reach smaller goals, this may validate that the physiotherapist has the competency to help the reach their overall rehabilitation goal. Trust may be a concept that contextualizes current research and provides further insight into the relationship between the athlete and their physiotherapist beyond medical treatment. Trust has a potentially significant role of the rehabilitation journey for injured athletes. The current study has attempted to address a gap in the literature about the athlete-physiotherapist relationship by exploring the concept of trust.

Purpose and Methods

The purpose of the current study was to (1) explore how athletes develop and maintain trust in their physiotherapist during injury rehabilitation and (2) explore the impact trust has on subjective rehabilitation outcomes for athletes. This study was exploratory in nature and provided initial steps in understanding how trust was developed

and maintained and what implications it may have on rehabilitation so that future studies may explore the role of trust in rehabilitation further.

The qualitative lens of phenomenology was used to guide the methods for the study. Phenomenology is concerned with understanding the lived experiences of people who have interacted with a certain phenomenon. It also recognizes how someone's personal background would shape how they interact with that phenomenon. For athletes who may have additional psychological stressors from a sport injury, trust may be developed and maintained in a unique way. To explore how athletes develop and maintain trust, this study examined the phenomenon of trust in the athlete-physiotherapist relationship. Athletes who had undergone rehabilitation with a physiotherapist within the past 12 months were interviewed. Interviews were conducted using a semi-structured interview approach and were analyzed to find relevant themes that describe how athlete trust was developed and maintained in the athlete-physiotherapist relationship and the impact trust has on subjective rehabilitation outcomes for athletes.

Summary

The focus of the current study is trust in the athlete-physiotherapist relationship during sport injury rehabilitation. Sport injury is prevalent and may lead to many negative psychological consequences for athletes (Clement et al., 2015; David & Hitchcock, 2018; Frank & Hsu, 2013; Forsdyke et al., 2015; Zakrajsek et al., 2017). Athlete trust in their physiotherapist may have an impact on their rehabilitation journey through both mental and physical aspects. Therefore, an exploratory study into how trust is developed and maintained as well as the impact trust may have on subjective rehabilitation outcomes was needed as an initial step in understanding the role of trust in rehabilitation. Chapter

two will expand on the literature surrounding the factors of trust, sport injury, mental impact of injury and rehabilitation on athletes, trust in a medical context, and trust-like actors. Chapter three will expand on the methodology and methods chosen for the study.

Chapter 2: Literature Review

Trust in the athlete-physiotherapist relationship has several factors to consider. This chapter will provide an overview of the literature on the concept of trust and how it may be understood in differing contexts, the existence of sport injury and its impact on athletes, as well as the current understanding of the athlete-physiotherapist relationship. The aim of this review is to explore the current understanding of trust and how it may fit within the context of the athlete-physiotherapist relationship.

Understanding Trust

The current study is an exploration into trust in the athlete-physiotherapist relationship, therefore, literature surrounding trust will be reviewed to understand the academic perspective of trust, inform how to engage participants on the topic of trust, and to establish a rationale as to why trust may exist in the athlete-physiotherapist relationship. To explore the concept of trust in the literature the following areas will be discussed: the definition of trust, the levels of trust, the subcategories of trust, and the environment needed for trust.

Definition of Trust

The concept of trust has been defined in many ways within the literature. Borum (2010) combines several ideas to conclude that trust “operates under conditions of acknowledged interdependence and is characterized by a willingness to accept vulnerability and risk based on confident expectations that another person’s future actions will produce some positive result” (p. 9). The definition Borum suggests of a person in a vulnerable state willing to taking a risk, based on a perceived positive outcome, is generally agreed upon throughout the research (Borum, 2010; David & Hitchcock, 2018;

Hupcey et al., 2001; McAllister, 1995) and will be used as the over-arching definition of trust for this research study.

For the current study, I felt that understanding trust research should be situated from the theoretical principals on which trust has been derived as well as suiting the study population. In particular, the work of Lewis and Wiegert (1985) will be discussed to showcase the duality of trust. Sport injury has a high level of emotional and physical toll on athletes. The trust research explored for this study should also reflect and emotional aspect through affective trust and a physical aspect through cognitive trust. I recognize that multiple definitions and theories of trust exist in the current literature. I have chosen this theory as I wanted to explore literature that talks to the theory of trust as opposed to trust as a measurable concept. I have not measured trust beyond assigning the context of high or low trust. Grounding my study in theoretical principals was a choice I made to fully understand the concepts of trust beyond qualitative applications. I have also married this older work with the definition provided by Borum (2010). Again, Borum's work does not use trust as a measurable quantitative concept but explores trust as a working theory. This more recent work along with the work of Lewis and Wiegert have been chosen to represent trust as a basis on which to explore trust further with the theoretical underpinnings of trust incorporated. These definitions will be explored throughout this thesis and helped to shape the interview guide, which in turn has shaped the data.

Lewis and Wiegert (1985) theorized that trust exists as a way for people to narrow the likely outcomes of a plan or action to a more favourable option. Without trust, the complexity of considering all possible outcomes of any given plan would be debilitating

for taking any forward action. When a person feels they can trust someone, as Borum (2010) defines, there is an expectation of a positive result. This expectation may be seen as a narrowing of the perceived outcomes, which may make following a plan less overwhelming for an individual. The narrowing of possible outcomes also suggests differing levels of trust. The degree at which a person feels outcomes have been narrowed would signal either high or low trust. If a trust-er felt that a trustee would help them produce only the most ideal outcomes, this would suggest a high level of trust. If a trust-er felt that a trustee would only help them slightly improve the possible outcomes, this would suggest low trust. The variance in trust can also be somewhat inferred from the latter half of Borum's definition of trust which states trust is given on the expectation of producing "some positive result" (p. 9). The use of the word 'some' implies that there could be differing levels of expectations from the trust-er. Lewis and Wiegert have explored the varying levels of trust which will be discussed in the next section.

Levels of Trust

Trust in the athlete-physiotherapist relationship could exist on varying levels. An athlete could have the perception that their physiotherapist will help them achieve a very positive rehabilitation outcome or may feel that their physiotherapist is only slightly increasing the chance of a positive rehabilitation outcome. Both of these situations would still have the concept of trust present but would be categorized as high trust or low trust, respectively. Lewis and Wiegert (1985) conceptualized an academic understanding of trust through comparing existing theories of trust within sociology. Lewis and Wiegert used the the categories of emotionality and rationality to explain the varying degrees at which trust can exist. Emotionality was defined as the trust-er feeling an emotional bond

to the trustee similar to friendship or love while rationality was defined as the trust-er seeing merit in the trustee's ability to help them achieve their goal. They outlined a model that suggests rational thought and emotional thought exist within differing levels to produce differing types of trust. The levels proposed were virtually absent, low, and high. When emotionality and rationality are both high, trust was labeled as ideological in nature meaning that trust was deeply rooted in the trust-er's belief system. When emotionality was high and rationality was low, this was labeled affective trust as it was based in the affect the trust-er had for the trustee. When rationality was high and emotionality was low, this was labelled cognitive trust as it was based in the logical cognitions of the trust-er to see the trustee as capable of helping them. Finally, when rationality or emotionality were virtually absent, trust did not exist and instead concepts such as faith (virtually absent rationality, high emotionality), rational prediction (virtually absent emotionality, high rationality), or panic (rationality and emotionality both virtually absent) were in its place.

The current study also recognises the levels of low, high, or virtually absent when describing trust. For the purpose of the current study, the terms of affective and cognitive trust have been used as opposed to rationality and emotionality to maintain consistency in terminology. That is, the level of affective trust will refer to how much the participant felt that they had an emotional connection with their physiotherapist and the level of cognitive trust will refer to how competent the participant felt their physiotherapy's ability to help them was. For example, if a participant is described as having high affective trust this would mean they had a high level of emotional connection to their physiotherapist. If they did not feel an emotional connection this would be considered

low affective trust. If a participant is described as having high cognitive trust this would mean they felt their physiotherapist was capable of helping. If they did not feel their physiotherapist was capable of helping them this would be considered low cognitive trust. If the participant had both high cognitive and affective trust this was referred to as the existence of ideological trust. If the emotional or rational side of trust was virtually absent this was referred to as faith (affective trust without cognitive trust) or rational prediction (cognitive trust without affective trust).

The context of a participant's particular experiences may also shape how they view and engage with the phenomenon of trust with their physiotherapist. For example, participants who experience a shorter rehabilitation period or are injured outside of their competitive season may not see the value of affective trust as part of their athlete-physiotherapy relationship. Being with a physiotherapist for a shorter amount of time could negate the need for a personal connection as the relationship could be seen as more temporary. Being injured outside of the competitive season may result in the perception that there is enough time to fully rehabilitate without losing competition opportunities. This time could lower the risk/stress involved and therefore lower the need for emotional support. Affective and cognitive trust will be further explored in the next section.

Affective and Cognitive Trust

Trust through the lens of social interaction also comes with added psychological factors. In Borum's (2010) definition of trust, the use of the phrase "willingness to accept" (p. 9) may suggest an emotional component beyond trusting in a rational way. Being in a vulnerable state may introduce the need of an emotional component to trust. Affective trust has been defined by Lewis and Wiegert (1985) as an emotional investment

by both the trust-er and trustee similar to friendship. If the vulnerable person sees the trustee as genuinely wanting to help the trust-er to reach a positive outcome because of an investment in their emotional wellbeing, then affective trust can be established. Affective trust is often associated with characteristics like good communication, having a mutual goal, and reciprocated caring (Lewis & Wiegert, 1985; McAllister, 1995). Affective trust could be present in the athlete-physiotherapist relationship as the athlete may value the feeling of mutual emotional investment as part of their rehabilitation experience.

The other subcategory of trust defined by Lewis & Wiegert (1985) is cognitive trust and is based in the perception that the trustee has the capabilities to help them achieve their goal. Cognitive trust comes from the trust-er having a lack of knowledge or abilities to complete a task or reach a goal but not of complete ignorance. The trustee must be aware of their lack of competence and the need for assistance for trust to form. When someone recognizes that they are in need of assistance they will use the knowledge they have to make a leap in cognition to trust someone for support. This can also be applied to a medical context. For example, if a person breaks their foot, they may choose to seek medical attention based on the prior knowledge they have about hospital services. When a doctor suggests a medical intervention to help the broken foot, they would make a leap in cognition to trust the doctor based on their internal logic that the doctor would have the abilities and knowledge to help them reach the goal of healing their foot. In the current study, athletes engaged in cognitive trust to feel that their physiotherapist had the ability to help them beyond their own ability to heal. Without cognitive trust, athletes would not see any value in the rehabilitation experience in terms of health outcomes. Athletes who do not have cognitive trust in their physiotherapist may opt to find a new

physiotherapist whom they had cognitive trust in, or let their body heal naturally.

Therefore, if an athlete-physiotherapist relationship exists it is very likely that cognitive trust also exists which supported the current research to examine trust in the athlete-physiotherapist relationship. The environment needed for trust to exist will be further explored in the next section.

Environment for Trust to Exist

The study population of injured athletes fits environment needed to become a trust-er based on the literature that has been discussed. Lewis and Wiegert (1985) positions trust as a necessary component for all social relationships as it is used to limit the complexity of navigating one's life. As previously mentioned, trust can be a way to narrow the perceived outcomes of a plan or relationship, increasing the perception that a positive outcome will be more likely. When trust creates a perception that a positive outcome is more likely, this make is easier for a trust-er to commit to taking actions towards their goal. The relationship that existed between injured athletes and physiotherapists in this study had at least some social aspect and needed both the athlete and the physiotherapist to take action to achieve the rehabilitation goal. Following the logic of Lewis and Wiegert, this would mean that there is an environment in rehabilitation that would warrant the existence of trust in the athlete-physiotherapist relationship.

An injured athlete would also fit the description of vulnerability that must be present in a potential trust-er that has been discussed in the literature. The definition of trust first presented in this review by Borum (2010) stated that a trust-er would need to have a "willingness to be vulnerable" (p.9). The idea that vulnerability is linked to the

need for trust was pre-dated by Mayer and colleagues (1995) who similarly stated the willingness for a party to be vulnerable in their definition of trust. When an athlete experiences sport injury they are in a vulnerable state both physically and mentally, which will be explored in the next two sections of this literature review. The vulnerability of an injured athlete may contribute to the environment in which trust is needed within the athlete-physiotherapist relationship.

The environment needed for trust exists within the athlete-physiotherapist relationship during rehabilitation. There is a vulnerable person both physically and mentally (the injured athlete) who works with a physiotherapist to increase their perception of a positive result. This athlete-physiotherapist relationship can have social aspects, which further increases an environment where an athlete may need to trust their physiotherapist. The environment for trust being present in rehabilitation between the athlete and the physiotherapist supports the purpose of the study to explore how athletes develop and maintain trust in their physiotherapist during injury rehabilitation and explore the impact trust may have on subjective rehabilitation outcomes for athletes.

The next section will review literature surrounding frequency of sport injury and common sport injuries. This will provide context to the type of physical injuries that the participants in the study may have been experiencing as well as the frequency of injury in the sport world. This context is relevant to exploring trust in the athlete-physiotherapist relationship in three ways. First, injury would be the motivating factor of an athlete seeking rehabilitation and would give context to what types of injuries may be seen within the study. Second, as previously stated, injury could contribute to an environment in which trust is needed through the establishment of a physical vulnerability. Third, the

frequency of injury can give a sense of how prevalent instances of the relationship between an athlete and physiotherapist may be and further support the need for exploration into trust in their relationship.

Sport Injury

Injury in sport can be defined in many ways. As previously stated, the Canadian Institute for Health Information (2017) reported roughly ten thousand injuries from sport between 2016-2017. Injury, in this report, was defined as an incident in sport that resulted in hospitalization. The injury rate was highest in Canadians aged 18-64 with most reported injuries coming from cycling, followed by skiing/snowboarding and animal riding. The frequency of injury, as defined by hospitalization, may not capture the true prevalence of sport injury. Another Canadian study by Fridman and colleagues (2013) defined sports-related injuries as “injuries that occur as a result of participating in physical activity for the purposes of competition or recreation; these injuries involve individuals who participate in both organized and unorganized sports” (p.1). Fridman and colleagues examined data based on emergency department visits of youth (ages 5-19) across six provinces and found 56 691 sports-related injuries between the years of 2007-2010, which would be closer to an average of almost 19 000 per year for youth alone. Fridman and colleagues found the highest injury rate in soccer followed by hockey and cycling. The discrepancy in outcomes of these studies highlights the differences that both age and data collection methods can make on our understanding of sport injury.

Defining injury by hospitalization or emergency department visits still may not capture the prevalence of sport injury. Many injuries (especially as athletes become more elite) are dealt with internally by the network of health professionals who work with the

team, such as physiotherapists and athletic trainers. Some studies have collected injury data from sport monitoring or surveillance systems (Rejeb et al., 2017; Yang et al., 2012). Yang and colleagues (2012) used a monitoring system of daily, detailed, injury logs for each team member, which documented 1317 injuries over a three-year study period from 260 collegiate level athletes. Similarly, Rejeb and colleagues (2017) documented 643 injuries over five competitive seasons from 166 young elite athletes based on a surveillance system that recorded any physical complaint brought to the attention of medical staff. Considering the differences in frequency of injury depending upon data collection methods, these reported numbers should be considered a guideline to show how common injury is in sport, as opposed to an accurate statistical representation.

Sport injury can also be understood in terms of time away from training and competition (Arden et al., 2016; Rejeb et al., 2017; Timpka, et al., 2014). Athletes are generally taught to play through pain on a regular basis, and at times even glorify pain as a way to earn respect and build character (Deroche et al., 2011). Therefore, injury in sport can be defined as some type of loss in functioning that cannot be overcome by an athlete's ability to tolerate the pain and causes them to stop their participation in the sport (i.e., training and competition). Timpka and colleagues (2014) address the lack of common terminology to define different levels of severity in sport injury and suggest the use of several definitions to clearly define what type of injury is being discussed. These definitions have been used by the current research to guide defining sport injury. Timpka and colleagues define sport injury as a "loss or abnormality of bodily structure or functioning resulting from an isolated exposure to physical energy during sports training or competition that following examination is diagnosed by a clinical professional as a

medically recognized injury” (p. 425). Beyond this initial overarching definition, Timpka and colleagues also define a subset of sport injury as it relates to sport performance. Under the category of sport performance Timpka and colleagues define sport incapacity as the “sidelining of an athlete by a sports authority (the athlete her/himself, coach, manager, sports committee) due to reduced ability to perform a planned sports activity following an isolated exposure to physical energy during sports training or competition” (p. 425).

For the current study, participants include athletes who have sustained an injury severe enough to be pulled from competition and training and must have undergone a rehabilitation process to regain strength and/or ability in pursuit of returning to their sport. This encompasses both the definition of sport injury and the sport performance definition of sport incapacity as defined by Timpka and colleagues (2014). This study will utilize a definition of sport injury that combines the definitions of sport injury and sport incapacity from Timpka and colleagues. The understanding of sport injury for this study will be an athlete who has sustained an injury which has debilitated their bodily movement enough to halt their ability to compete or train at the level of competition they were engaging in prior to injury. This definition can capture acute injury, chronic injury, or an injury that has regressed to the point of halting competition and training. This definition will be used to access the athletes who have experienced the loss of their normal sport routine making the rehabilitation process a more significant life event. The next section will outline injuries which would most likely result in sport incapacity.

Common Sport Injuries

When an athlete experiences sport incapacity after sport injury they may choose to undergo rehabilitation with a physiotherapist. The goal of this rehabilitation is for athletes to regain strength/mobility and possibly to return to training and competition. The consensus statement on return to sport from the First World Congress in Sports (Arderm et al., 2016) outlined the most common sport-related injuries and their return to sport rate. Basic knowledge of these injuries has helped contextualize participant rehabilitation experiences and prepared the researcher for the potential injuries that would be associated with the participants. Knowledge of the return to sport rate may also play a role in athlete's initial appraisal of their injury and their outlook on the rehabilitation process. If athletes are aware that their type of injury has a low return to sport rate, they may feel more risk involved in their rehabilitation. Trust has been linked to the concept of risk (Borum, 2010) and therefore increased risk may have had some influence on trust development and maintenance for participants in the study.

Common injuries include acute knee injuries [i.e., anterior cruciate ligament (ACL) injuries and medial collateral ligament (MCL) injuries in particular], acute hamstring injuries, groin injuries, Achilles tendon injuries, and shoulder injuries. Each injury was reported with a percentage of athletes who were able to successfully return to sport after their rehabilitation (Arderm et al., 2016). Hamstring (100%) and groin (>85%) injuries had the highest rates of return to sport. ACL injuries had a 50% return to sport rate, however, within this 50% only 65% return to their pre-injury sport, while MCL injuries are noted as having a lower return to sport than ACL injuries. Shoulder injuries lacked proper evidence for a return to sport percentage causing a high amount of

uncertainty in rehabilitation. Similarly, return to sport rates for Achilles tendon injuries were varied (between 10-86% for Achilles tendinopathy and 29-87% for Achilles rupture). Achilles injuries had a high rate of re-injury (44%) compare to other injuries in the study. As a result, a noted reason for an athlete not returning to sport was a fear of re-injury. The return to sport percentage may affect an athlete's assessment of risk involved in their rehabilitation which has been a factor needed for trust (Borum, 2010). Exploring trust across differing injuries has provided differing lived experiences of trust in rehabilitation which helped to strengthen the findings of the study.

Summary

The prevalence and severity of sport injury has been established within sport research literature. Although data collection methods result in differing frequencies of injury, a large population of injured athletes exist. Sport injury and sport incapacity (Timpka et al., 2014) may lead athletes to seek a trusting rehabilitation relationship as they are physically vulnerable and may have varying return to sport risk. In the next section of the literature review the mental impact of sport injury will be explored.

Athletes who have a physical injury may also experience mental instability because of the impact the injury has on their sport status and lifestyle. This impact may exacerbate the vulnerable state athletes are in. The increased feeling of vulnerability in both physical and mental aspects supports the need for exploration into trust as vulnerability has been noted in trust definitions as an antecedent to the need for trust (Borum, 2010).

The Mental Impact of Injury and Rehabilitation on Athletes

Athletes may experience psychological hardships as a result of injury that can lead to potentially major problems with anxiety, anger, and depression from being away

from their sport (Clement et al., 2015; Hildingsson et al., 2018; Podlog et al., 2014). These hardships can begin from the initial moment that the injury occurs. Clement and colleagues (2015) found that athletes had an initial cognitive appraisal of their injury. If the injury was perceived as severe, the athlete showed an increased negative reaction. For many participants, negative reaction was linked to thoughts of being unable to compete or train in their sport. During the initial cognitive appraisal athletes reported believing they would never play again and initially being fearful of the rehabilitation time. It is important to note, however, that this reaction was not always based on actual severity. Clement and colleagues also found that athletes who did not perceive an injury as initially severe (even if it was a severe injury) had a more positive cognitive appraisal of the injury than those who perceived their injury as severe. This reaction to injury suggests that it is not the injury itself that causes athletes to experience negative emotions. The negative emotions come from the idea of long-term removal or performance deterioration in their sport.

The negative reaction to sport incapacity may be linked to the concept of identity foreclosure, to which elite athletes are susceptible (Cieslak, 2014). Identity foreclosure, in a sport context, would be when an individual makes a commitment to their sport in a way that shuts down any other exploration into their identity beyond their identity as an athlete. Cieslak defines athletic identity as the amount an individual holds value in their status as an athlete above all other factors of their identity. Cieslak theorized that the more time spent dedicated to sport, the more an athlete is vulnerable to taking on sport as the basis for their self-worth. When an athlete must stop participating in their sport, it could threaten their athletic identity. A deterioration in athletic identity may be why the

experience of being injured has been found to be emotionally negative for athletes (Clement et al., 2015; Hildingsson et al., 2018; Podlog et al., 2014). The possible influence of athletic identity also supports the need for exploration into trust for this specific study population. Athletes who are competing in elite sport have most likely dedicated a large portion of time to their skill and fitness. When severe injury happens, there is a sudden lack of control over their sport status and a possible deterioration of their athletic identity. Unlike someone experiencing a graduation or retirement where there may be time to come to terms with a possible shift in identity, injury can be very sudden. The dramatic change in lifestyle that can come with a severe sport injury has been linked to feelings of grief (Zakrajsek et al., 2017). The athletes in this study may face not only physical challenges from their injury but emotional challenges in accepting their rehabilitation. With the athletes in an emotionally vulnerable state, the need for trust may be heightened and highly valued by the participants in this study.

Negative changes in identity have been discussed by Thing (2005). Using a qualitative approach, Thing gathered data from female handball players who had suffered ACL injuries and the players' parents. One set of parents interviewed felt that even though their daughter was staying strong in the face of rehabilitation, they saw changes in the way their daughter conducted herself such as being quieter, not wanting to discuss her injury or being frustrated with her loved ones. The athletes themselves also echoed this sentiment. Thing goes on to describe sport injury as a potential crossroads in life planning that can change the identity of an athlete. Changes in identity as discussed by Thing and Cieslak (2014) may support the idea that sport injury can cause a deterioration in athletic identity for athletes. The deterioration of an athlete's self worth may be a contributing

factor to the negative psychological consequences experienced by some injured athletes. Experiencing a major deterioration of self-worth may also add to the vulnerable state of the athlete. The vulnerable mental state caused by threats to identity may have contributed to creating a space in which trust was a valued part of rehabilitation for the athletes in the study. As Lewis and Wiegert (1985) discussed, athletes may be motivated to narrow the possible outcomes of rehabilitation that would further challenge their athletic identity. Through trust in a physiotherapist, they may be able to perceive a return to sport and increased self-worth as the more probable outcome of rehabilitation. This also supports the need for exploration into the athlete population as these threats to identity may change how much they value trust as a patient undergoing rehabilitation.

Thing (2005) reported participants voicing their frustration in having the only source they knew to let off steam and regulate their emotions and energy (i.e., sport participation) no longer an option. The athlete's construction of handling their own emotional regulation through physical activity was no longer available to them, which may have left them more vulnerable to negative emotions. Forsdykes and colleagues (2015) discuss the concept of low emotional integrity as the intentional non-disclosure or lying about emotions that an athlete may feel toward their injury. Engaging in low emotional integrity can add to a sense of isolation that may already exist for an athlete who is experiencing sport incapacity. Forsdyke and colleagues (2015) advises practitioners to be aware of athletes who may have low emotional integrity and create opportunities for athletes disclose how they are feeling about their injury and the rehabilitation process. Through athlete reflection and emotional integrity, the rehabilitation process could be seen by athletes as an opportunity for growth that can

facilitate positive health outcomes. Emotionality, as previously discussed in the literature review, is a factor of trust. The emotional components of dealing with a sport injury may have translated into the need for affective trust as it is centered in the emotional connection to the trustee. If a physiotherapist was able to support athletes through the emotional side of their injury, affective trust could be developed.

Another worry for injured players is not only being away from opportunities to perform, but actively losing fitness and abilities in their sport while they are in rehabilitation. A case study by Tibbert and colleagues (2015) followed a football player through his season as he tried to improve his performance and standing within the team. He had experienced an injury in his preseason and still felt he was behind in fitness levels months later during the competitive season because he had not received the same training opportunities as his teammates. Similarly, Thing (2005) had a participant who felt that even when she returned to her sport, she would be fundamentally different from her peers who had not experience such a severe injury. She felt that even after successful rehabilitation she would always need to be more cautious and take less risk than her peers for the rest of her career to lower the danger of re-injury. She believed this extra caution would always leave her at a disadvantage and affect her ability to perform at the same level previous to her injury. As previously stated, the risk of re-injury and worry from time away from sport could increase the perception of vulnerability and risk in the rehabilitation process which would contribute to an environment where trust is needed.

The negative appraisal about an athlete's return to play outcome that was discussed by Thing (2005) shows the need for psychological rehabilitation as well as physical rehabilitation. Podlog and colleagues (2014) reason "rehabilitation is not

complete until the athlete is psychologically ready to return to play. Just as athletes must progress through a physical healing process, they must also address the psychological consequences of injury and the challenges of rehabilitation” (p. 902). Forsdyke and colleagues (2015) also noted the importance of athletes regaining their confidence to have a successful return to competition and training that may be a result of psychological rehabilitation. Injured athletes need to regulate their emotions and use coping strategies during rehabilitation (Clement et al., 2015; Forsdyke et al., 2015; Thing, 2005). If their existing emotional regulation skills and coping strategies are based in their sport, then the athlete may face additional struggles with their emotional rehabilitation. The psychological rehabilitation that is needed in relation to physical rehabilitation aligns with cognitive and affective trust. Cognitive trust may be needed by athletes to feel that their injury will be successfully rehabilitated while affective trust may be needed to feel that their physiotherapist cares about them and their welfare.

Contrasting the negative outlook of some athletes, Clement and colleagues (2015) found participants excited to see what they could do when they returned, as well as having a renewed appreciation of their sport with the realization that it could be taken away. Some athletes even presented feelings of being stronger in both character and body from having been through rehabilitation. Exploring the impact trust has on subjective rehabilitation outcomes for athletes may align with these findings providing further context as to a possible reason why some athletes feel positively about their rehabilitation outcomes and some do not.

Outcomes of rehabilitation seem to be the main focus of athlete-physiotherapist relationship literature. Athlete-physiotherapist related literature will be reviewed in the

next section. Reviewing the current research perspective on the interactions between athletes and physiotherapists will contribute to the current study in two ways. First, the understanding of what could be expected in terms of interpersonal behaviours from both the athlete and the physiotherapist during rehabilitation will aid in the understanding of the two roles (athlete and physiotherapist) involved in the possible trusting relationship. Second, reviewing what is known about the athlete-physiotherapist relationship will highlight the gap in understanding the role of trust and how it may be associated with the effects that certain behaviours seem to produce.

Athlete-Rehabilitation Provider Relationship

The existing literature on the interactions between athletes and a rehabilitation provider in rehabilitation describes a dynamic that goes beyond the transaction of services. The journey through rehabilitation involves the existence of an interpersonal relationship between the athlete and the rehabilitation provider that considers both the physical and mental aspects of sport injury as discussed in the previous two sections. The literature about rehabilitation relationships between an athlete and a rehabilitation provider seems to be predominately about the athlete-athletic-trainer relationship. An athletic trainer providing rehabilitation is more prevalent in the United States of America which may be why this is the focus of most sport rehabilitation relationship literature. Research about the physiotherapist, the athlete-physiotherapist relationship and the athlete-athletic trainer relationship will be reviewed to understand the current literature on the athlete-rehabilitation provider relationship.

Exploring the Physiotherapist Role

The Public Service Health Care Plan (2018) defines physiotherapy.

Physiotherapists are regulated in Canada under the Canadian Alliance of Physiotherapy Regulators (CAPR) and have a broad scope in potential patients and practice. They diagnose and treat musculoskeletal issues, as well as neurological, cardiorespiratory and multisystem injuries, illnesses, and disabilities for the general public. In the domain of sport, they are often part of the support teams that work with athletes and may work individually or in groups with other physiotherapists to provide care for athletes. Beyond their role as a physical rehabilitator, physiotherapists also implement strategies and behaviours to help their patient stay motivated, stay positive, and adhere to their rehabilitation plan (Arvinen-Barrow et al., 2009).

The idea of affective and cognitive aspects of the physiotherapy practice has been highlighted in past research, but not in the context of trust. Klaber and Richardson (1997) establish some of the first research on the differences between instrumental and affective behaviours that a physiotherapist may utilize. They described instrumental behaviour as relaying information and skills, asking questions, and giving feedback. Affective behaviours were described as reassurance, encouragement, listening, and rapport building. Both affective and instrumental behaviours were important to patient motivation and satisfaction and are similar to the current understanding of trust as being both cognitive and affective.

The Therapeutic Alliance is one way that physiotherapists learn to interact with their clients and aligns closely to factors of trust. The Therapeutic Alliance is an emerging theory within physiotherapy that focuses on the care that encompasses

biological, psychological, and sociological lenses to create an alliance between the physiotherapist and the patient (Søndenå et al., 2020). In a concept analysis Søndenå and colleagues outline five master attributes to describe the current landscape of literature behind the Therapeutic Alliance. These attributes were noted as ‘seeing the person’, ‘sharing the journey’, ‘communication’, ‘therapeutic space’, and ‘fostering autonomy’. The attributes of ‘seeing the person’ and ‘communication’ are particularly reminiscent of affective aspects of trust. For example, ‘seeing the person’ was described as the physiotherapist making an active effort to see their patient beyond their pathology. This was achieved through “discussion that focused on learning personal characteristics, values, beliefs, and demonstrating acceptance of their unique world view in establishing connections” (p. 4). ‘Seeing the person’ also had a subtheme of ‘giving of the self’ which outlined self disclosure as a behaviour that a physiotherapist could utilize to help solidify their relationship with the patient. This attribute aligns closely with the investment in a trust-er’s emotional wellbeing and exhibiting reciprocated care which was used to define affective trust. Particularly, the idea of reciprocated care could be strengthened by personal disclosure from the physiotherapist to help to create a friendship-like relationship that was used to described affective trust (Lewis and Wiegert, 1985). Similarly, the attribute of ‘communication’ was described as using the patient’s background and active listening as a basis with which to engage in effective communication with their patient. Good communication as also been discussed previously as part of affective trust. The description provided by (Søndenå et al., 2020) expands upon this idea to exemplify what this good communication aspect could look like in a rehabilitation setting. With the overlapping concepts between the Therapeutic

Alliance and the understanding of affective trust, it would be possible to conclude that developing trust could be why these concepts have been linked to a higher level of care. Further, the specific study population of athletes who could be experiencing additional mental strain that is linked to their sport status could need additional considerations not only for trust development but for the Therapeutic Alliance. Exploring trust could support and expand the understanding of the Therapeutic Alliance by providing more context for how trust may be motivating the positive outcomes found from these physiotherapy attributes. Collecting data from this specific study population could particularly help physiotherapist who work within the sport world and their understanding of the role trust plays in trying to achieve a therapeutic alliance with their patients. Research surrounding these more interpersonal strategies and behaviours that have been linked to athletes specifically will be reviewed as more possible influences of trust in the athlete-physiotherapist relationship.

Athlete-Physiotherapist Relationship Literature

Arvinen-Barrow and colleagues (2009) stated that physiotherapists are aware of the emotional progression of athletes through different emotional stages during rehabilitation, which has been supported by Zakrajsek and colleagues (2017). The stages Arvine-Barrow and colleagues (2009) identified were grieving, depression, and acceptance among others. Physiotherapists noted that they interacted with athletes by taking note of an athlete's personality, sport, and time of injury (related to competition), but ultimately relied on their own instinct to guide interactions (Avinen-Barrow et al., 2009). This suggests that there may be an array of possible strategies used by physiotherapists to interact with athletes during rehabilitation as they are partially shaped

by the client with whom the physiotherapist is interacting and partially shaped by the physiotherapist's personal judgment.

Rehabilitation providers have expressed a desire for more (or better quality) psychological preparation in dealing with the emotional needs of their patients (Arvinen-Barrow et al., 2009; Driver et al., 2017; Zakrajsek et al., 2017). In addition, Driver and colleagues (2017) found that although physiotherapists generally have a high regard for (and recognize the importance of) psychological intervention for athletes, barriers exist in their ability to provide these types of strategies. Barriers included lack of knowledge, prioritization of physical rehabilitation, time constraints, and feelings of psychological support being beyond the scope of their profession. Without the implementation of evidence-based psychological strategies, physiotherapist may rely on past experience to guide their interaction with patients (Arvinen-Barrow et al., 2009; Driver et al., 2017). In terms of the current study, multiple types of behaviours or interactions from the physiotherapist were described by athletes as contributing to the development and maintenance of trust. The variety in interactions between athletes and physiotherapists led to a variety of ways trust was developed and maintained. The rest of this section will look more closely into two types of strategies that have been noted extensively in the literature about the athlete-rehabilitation provider relationships during rehabilitation. Literature that focuses on both the athlete-physiotherapist relationship and the athlete-athletic trainer relationship will be included as physiotherapists and athletic trainers would share a similar role in the rehabilitation process for an athlete. Reviewing this literature may further exemplify how both cognitive and affective trust may be present in the athlete-physiotherapist relationship. This will support the purpose of the current study to explore

the development and maintenance of trust and its impact on subjective rehabilitation outcomes specifically in terms of an athlete-physiotherapist relationship.

Interpersonal Strategies Used During Rehabilitation

This section will discuss two strategies that are prevalent in the literature about athlete-rehabilitation provider relationships. Goal setting and social support will be reviewed and compared to the factors of trust that have been previously discussed to highlight how these strategies may be linked to the existence of trust within these athlete-rehabilitation provider relationships.

Goal setting seems to be one of the most employed strategies that both physiotherapists and athletic trainers use to interact with their athletes and motivate them to adhere to their rehabilitation plan (Ardern et al., 2016; Avinen-Barrow et al., 2009; Clement et al., 2013; Frank & Hsu, 2013; Hildingsson et al., 2018; Lu & Hsu, 2013; Podlog et al., 2010). Short-term, realistic, and obtainable goals give the athlete renewed purpose in a lengthy rehabilitation process. Goals that are set by the rehabilitation provider have been reported as frustrating when an athlete does not understand how the smaller goal(s) relate to their overall rehabilitation (Hildingsson et al., 2018). Avinen-Barrow and colleagues (2009) reported all physiotherapists that were interviewed stressed the importance of not just focusing on the complete achievement of a goal but the general progress that was attained. Further, a participant indicated that even when an athlete failed to meet a goal, she found it was vital to make sure the athlete understood that getting, for example, 80% of the way there, was still an achievement and an indication of healing. This was deemed important by physiotherapists to keep athletes engaged and positive about their rehabilitation (Avinen-Barrow et al., 2009).

The positive impact of goal setting could be related to the concept of cognitive trust. If an athlete meets a smaller goal, it may be a way to affirm the athlete's perception that the physiotherapist is providing a rehabilitation plan that will help achieve their overall goal. If an athlete does not meet a goal, this may cause cognitive trust to decrease as it may signal an inability for the physiotherapist to help with their overall goal. The findings from Avinen-Barrow and colleagues (2009) that suggest a physiotherapist reminding their athlete of their progress even when a goal was not achieved could follow similar logic. In the situation of a failed rehabilitation goal where cognitive trust may be questioned, a reminder of the overall progress could limit or prevent cognitive trust from decreasing. If an athlete recognizes that progress was still made, it could aid in maintaining the perception that the physiotherapist will be able to help them reach their overall goal.

Athletes may seek social support from their rehabilitation provider as a strategy for dealing with the mental impact of injury. Yang and colleagues (2010) define social support as "the number and quality of individuals on whom a person can rely during periods of stress" (p.372). Social support can be further explained by an early definition from Cobb (1976) in which a person provides "one or more of the following three classes: (1) information leading the subject to believe that he is cared for and loved. (2) information leading the subject to believe that he is esteemed and valued. (3) information leading the subject to believe that he belongs to a network of communication and mutual obligation" (p. 300). Yang and colleagues (2010) compared the sources of social support an athlete utilized in a pre-injured state to a post-injured state. Yang and colleagues (2010) formulated a questionnaire which was given to 260 collegiate, NCAA, Division 1

athletes from 13 different sports about their sources of social support. If the athletes became injured, they were followed up with three months later to complete the questionnaire again in a post-injury state. Of the 260 participants, 42 completed the questionnaire three months after they were injured. The questionnaire included questions such as “Whom could you really count on to be dependable when you need help?” and ‘Whom could you really count on to help you feel better when you are feeling generally down in the dumps?’” (p. 373). Participants could respond to these types of questions by identifying which of the following people in their life fit the question: family, friend, coach, athletic trainer, physician, counselor, or other. In comparing the results from the athletes who answered the questionnaire at both time points, they found 49% of participants reported their athletic trainer providing social support in their pre-injured state. When athletes completed the questionnaire in a post-injured state, 83% of athletes reported receiving social support from their athletic trainers. This increase in athletes using athletic trainers for social support post-injury may suggest an emotional aspect of the athlete-rehabilitation provider relationship. Social support from the rehabilitation provider can also have a tangible impact on the rehabilitation of the injury. Receiving social support from the rehabilitation provider has also been linked to athlete satisfaction, adherence, and motivation (Forsdyke et al., 2015; Hildingsson et al., 2018; Podlog et al., 2010). Although social support has been identified as a factor of the athlete-rehabilitation provider relationship and rehabilitation outcomes, there is a gap in the literature to understand why this would be happening. In reflecting on affective trust literature, the overlap between these two concepts may provide context to why social support seems to be part of the athlete-rehabilitation provider relationship. Social support may act as a way

for the athlete to build affective trust in their rehabilitation provider which, in turn, may produce outcomes such as athlete satisfaction, adherence, and motivation.

Affective trust has been connected with rapport building and the belief that someone has your best interest at heart (Borum, 2010; Klaber & Richardson, 1997; McAllister, 1995). The definition of social support from Cobb (1976) aligns closely with affective trust. The idea of feeling cared for, valued, and having a communication network are similar to the establishment of and the belief that someone has your best interests at heart and having rapport with someone. The overlapping concepts between social support and affective trust could be evidence to support the possible existence of affective trust in some athlete-physiotherapist relationship. Further, trust could be a motivating factor for why social support has been found to have a positive impact on the rehabilitation of athletes. As an initial step in understanding how trust may be connected with previous literature on social support, an exploration into trust in the athlete-physiotherapist relationship has been conducted in the current study.

The behaviours of physiotherapists can positively or negatively effect an athlete's perception and motivation toward rehabilitation (Avinen-Barrow et al., 2009; Gard & Lundyik Gyllensten, 2000; Hildingson et al., 2018). While the literature supports the strategies that physiotherapists and athletes may use during rehabilitation (such as goal setting or social support), there is a gap in understanding why these strategies are important. Why would an athlete care about getting social support from their physiotherapist or having positive interactions with them? Why would setting goals and receiving positive feedback in pursuit of these set goals matter to an athlete in rehabilitation? Why would a relationship between an athlete and a physiotherapist be

important at all in rehabilitation? The concept of trust may provide the context that is needed to further understand why these interpersonal strategies between a physiotherapist and an athlete seem to have an impact on rehabilitation. A first step in answering these larger queries is to explore trust within the athlete-physiotherapist relationship and the impact trust has on subjective recovery outcomes. Through an initial exploration into trust, there was some overlap with these existing strategies from physiotherapists and athletes. The findings from this initial exploration could be used for future studies to examine trust as a motivating factor behind the positive outcomes of strategies like goal setting and social support.

Although research on trust in the specific athlete-physiotherapist relationship is a gap in the literature, looking at trust in other medical contexts may provide insight into how trust may be developed and maintained for injured athletes. The next section will discuss trust literature within medical contexts to examine potential overlap between other medical relationships and the rehabilitation relationship between athlete and physiotherapist.

Trust in a Medical Context

Medical research involving trust presents promising findings that may relate to how trust may be developed and maintained in the relationship between physiotherapists and injured athletes. Patient trust in physicians has been linked to both adherence, and patient satisfaction (Bernhardsson et al., 2017; Jneid et al., 2018; Lee & Lin, 2010) spanning across differing illnesses and injuries. Adversely, the opposite relationship has also been found where a lack of trust may lead to lower compliance and questioning of medical advice provided by their physician (Manderson & Warren, 2010). Evidence of

trust in the patient-physician relationship is relevant to the current study as it presents a similar treatment-based relationship between a patient and a medical service provider attempting to help them meet their health goals. Reviewing literature surrounding trust and its effect on medical outcomes can provide insight into what was found in terms of the impact of trust on subjective outcomes in the current study.

Lee and Lin (2010) explored the relationship of trust and adherence in regard to diabetic treatment plans. Trust in the patient-clinician relationship first resulted in strong self-efficacy and a positive outlook on health outcomes, which in turn led to greater adherence and better health outcomes. Cognitive trust in the clinician was theorized as the main factor that led to an increase in objective health outcomes. Whereas Lee and Lin (2010) theorized that trust led to increased self-efficacy which, in turn, increased patients' self-reported health and satisfaction. Lee and Lin (2010) provide a basis for trust having an impact on adherence in treating diabetes that requires major lifestyle change. As discussed previously, sport injury also marks a major lifestyle change for athletes and requires a high level of adherence during rehabilitation. The findings from Lee and Lin (2010) support the exploration into how trust may impact subjective rehabilitation outcomes for athletes as there are similarities in the environments of both studies. The current study has built upon this research by diving deeper into the two subcategories of affective and cognitive trust and has provide more context to the specific behaviours from the medical service provider to aid in producing the perception of trust.

Through assessing the patient-physiotherapist relationship outside of sport, Klaber and Richardson (1997) highlight keyways that the practitioner must incorporate both situations where affective and cognitive behaviours can be used in their interaction with

patients. For instance, reassurance was examined as a positive way to lower patient anxiety and stress. Though, Klaber and Richardson (1997) go on to clarify that ‘bland’ reassurance that is not specific to the patient’s current situation may have the opposite effect of increasing anxiety and cause doubt for the patient in their rehabilitation plan. Instead, Klaber and Richardson (1997) suggest that reassurance should incorporate specific medical insight into the problem to ensure a positive response from patients. If some physiotherapist behaviours need both cognitive and affective elements to produce a positive result, this may indicate that the subcategories of trust are a factor in these interactions. Athletes may need cognitive and affective elements in communication from their physiotherapist because it aids in the perception that their physiotherapist is trustworthy.

White and colleagues (2011) explored trust in varying medical diagnosis and treatment scenarios. The researchers gave participants a fictitious report of a patient’s symptoms and a physician’s diagnosis and treatment plan. The symptoms presented were either high or low risk and diagnoses fell within four categories of true positive, true negative, false positive and false negative while the treatment fell within two categories of high or low severity. The study found several implications of trust on the differing scenarios given, but most relevant to the current study was the finding that trust had both an emotional and cognitive aspect. Those with higher levels of overall trust were more sympathetic to the fictitious physicians even when error occurred in diagnosis and treatment. White and colleagues (2011) suggested that the impact of trust may be critical for patient tolerance to inevitable medical errors. The process of rehabilitation may also include moments of medical error or stalls in progress from varying factors. The ability

for trust to make a patient more tolerant of medical issues may translate to the participants in the current study discussing how trust helped them maintain their relationship with their physiotherapist during rehabilitation issues. The ability of trust to possibly increase tolerance for medical issues further supports the importance of understanding how trust is developed and maintained in a rehabilitation context.

The findings from White and colleagues (2011) were also supported by findings from Hannawaa and colleagues (2015) who concluded that having a high level of trust played a significant role in predicting patient forgiveness of physician medical error. In Hannawaa and colleagues' (2015) study, physician disclosure style also played a major role in both trust and forgiveness for patients. Participants were shown a video of a physician disclosing a medical error with a high or low nonverbal disclosure style and the level of forgiveness and trust were measured. A high nonverbal disclosure style was defined by features such as appropriate touch, leaning in, attentiveness and interest, conversational turn taking, and positive affect (noted as appropriate smiling and pleasant tone) among other features. Patients who experience low nonverbal disclosure of medical error from their physician were found to be less likely to forgive the physician, less likely to trust the physician, more likely to avoid the physician and be less compliant with treatment. The nonverbal disclosure style seems closely related to affective trust as it exhibits relationship building qualities and may signal reciprocated caring. If an injured athlete fails to meet a set rehabilitation goal, there may be a similar instance of affective trust acting as a buffer to the possible decreases in cognitive trust they have in their physiotherapist. The athlete may be more likely to be sympathetic to rehabilitation issues than to blame the physiotherapist for a lack of rehabilitation results.

Manderson and Warren (2010) identified trust as being both implicit (in this context meaning patients had initial trust for their physicians) and developed over time. Manderson and Warren (2010) used a qualitative approach to interview patients who had undergone recent amputation and rehabilitation to relearn to walk. From this, competency, agency, control, confidentiality and disclosure were found as important dimensions of trust that shaped the rehabilitation process. Most relevant to the current study were competency and agency. The area of competency is similar to the concept of cognitive trust previously discussed. Manderson and Warren (2010) detail the need for communication about adverse outcomes and the disclosure of limits to the practitioner's knowledge as part of trust building. Patients seemed to view disclosure of knowledge limits and negative outcomes as examples of honesty to reaffirm that their physician was not withholding information from them. This is in partial contrast with the previously discussed decrease in motivation that athletes felt when a physiotherapist suggested quitting their sport or communicated disappointment in the athlete when not meeting their set progress goals (Hildingsson et al., 2018). The difference in these findings may be due to how the information is presented or the differing contexts of amputation rehabilitation and sport injury rehabilitation.

The dimension of agency as described by Manderson and Warren (2010) is similar to the idea of affective trust, where the practitioner had the patient's best interests at heart and advocated for them. Again, Manderson and Warren expanded upon this to note that an overall decrease in patient trust during rehabilitation happened when practitioners were inconsistent in their treatment. Physicians sending seconds or nurses to check up on patients and patients having to re-answer questions for multiple healthcare

staff led to a decrease in trust. In contrast, the appreciation patients felt for doctors who took time to check in on them, find answers for them, and deliver information to them personally and in a timely manner led to an increase in trust. Although consistency in a rehabilitation provider may be more easily achieved in an athlete-physiotherapist relationship, it is important to note that feeling your healthcare professional has enough time for you and remembers your concerns and progress can be important in building trust in rehabilitation.

Medical literature on trust presents varied results. Some studies suggest that aspects of cognitive trust and affective trust are distinct and lead to differing outcomes (Lee & Lin, 2010; Manderson & Warren, 2009). Other studies suggest that trust is built when both affective and cognitive trust are presented together and work dynamically to achieve overall trust (Hannawaa et al., 2015; Klaber & Richardson, 1997; White et al., 2011). Along with this, external variables such as team affiliation and consistency of the healthcare provider may also have influence over patient trust (Cohen et al., 2016; Manderson & Warren, 2010). The unique risk and pressure to return to sport in an athlete-physiotherapist relationship may also play a role in how trust is developed and maintained and whether affective and cognitive trust is built dynamically or separately. Without a concrete structure of how trust is developed and maintained there needs to be more exploratory qualitative work into the concept of trust. The literature reviewed gives an overview of how trust has been understood in other medical contexts so as to understand how it may work in the athlete-physiotherapist relationship. In the next section, trust-like actors will be explored to highlight what trust could be mistaken for by

participants and how trust may transform into these similar concepts over the course of rehabilitation.

Trust-like Actors

Trust is a specific concept that has been well defined in the literature, however, there are other similar concepts that can often be confused for trust such as confidence and dependency. The distinction of trust from trust-like actors is particularly important for medical application of trust as the differences between confidence, trust, and dependency must be considered.

Trust and confidence in others can sometimes be mistaken for the same concept but when looking closer at the literature, confidence does have differences from trust.

Trust usually occurs when there is higher perceived risk involved in a situation.

(Kollock, 1994; Meyer & Ward, 2013). For example, during an important competition, if a team was significantly leading in points, athletes would be confident that they were going to win the game. However, if the game was tied in points, athletes would have much more need to trust each others' abilities in achieving a positive outcome in the game. This shows that with less risk (a team significantly in the lead) less trust needs to be present as confidence in the outcome is unwavering. However, when risk is involved (a team who is tied) trust is very important. The athlete-physiotherapist relationship mirrors this example as athletes may have to forego confidence in their rehabilitation, as they do not know if the rehabilitation will result in their desired health outcome. The idea of risk may also relate back to the return to sport percentages associated with different types of athletic injury previously discussed (Arden et al., 2016). If the athlete is aware that an injury has a high return to play history (i.e., hamstring injuries which have a 100%

return to sport rate) they may feel little to no risk during rehabilitation. If an athlete is aware that an injury has a low or uncertain return to play history (i.e., Achilles tendon injuries with high variability in return to sport rate) they may feel an extreme amount of risk and may even exhibit dependency instead of trust.

Dependency and trust also share a similar likeness but are also distinct. As previously stated, to trust someone there needs to be vulnerability but also a willingness to trust, not simply a need to rely on someone out of necessity (Lewis & Wiegert, 1985). This can be challenging in medical applications as a decrease in health status can create a gray area between trust and dependence, especially when patients do not have a choice in their healthcare provider. Dependency comes when risk is high, and an individual has little to no control to be able to help him or herself (Meyer & Ward, 2013). In patients with coronary heart disease, Meyer and Ward (2013) found that during routine appointments with their general practitioner, trust was discussed in terms of the length of time they had been with their physician, a comparison to a previous bad experience making their physician seem more trustworthy, an active engagement to seek someone they trusted before seeing them regularly, or they did not accord trust or mistrust to the relationship at all because of the low risk involved. However, when asked if they would trust an unknown doctor during an emergency cardiac event answers constantly referenced having no choice or no alternative but to trust them, clearly indicating a difference between trust and dependency.

When considering the existence of confidence, trust, and dependency and how they are associated with risk, trust may be on a spectrum. This spectrum would have aspects of both risk and control for the person at risk. Figure 1 shows the proposed

continuum as dependency (high risk, low control), trust (moderate risk, moderate control), and confidence (low risk, high control). It is difficult to determine where an athlete would fall during rehabilitation because of the lack of trust research within this dynamic. There is high risk for their sport future, they are often sent to a team physiotherapist without an abundance of choice, and there can be internal and external pressure to return to play quickly (Podlog et al., 2014), which would align more with dependency. An athlete could fall into dependency if they felt their return to sport is in high risk and are sent to a team physiotherapist without feeling they had a choice in their healthcare provider. During an injury rehabilitation that takes an athlete away from their sport for an extended period, daily activity in rehabilitation would seem like less of an emergency and more of a sustained effort. This may lead to an assessment of moderate risk and moderate control which would align with the need for athletes to trust their physiotherapist. Alternatively, if the length and intensity of rehabilitation resulted in properly adhering to the rehabilitation plan and consistently hitting progress goals throughout rehabilitation, there may even be a point of confidence for the athlete where their healing becomes very predictable and thus is assessed as low risk and high control. An athlete may settle into one of these categories, work through them from dependency to trust to confidence, or may fluctuate between all three at different times in the rehabilitation plan.

Figure 1
Theorized Dependency, Trust, Confidence Spectrum.

Dependency	Trust	Confidence
High Risk, Low Control	Moderate Risk, Moderate Control	Low Risk, High Control

As previously discussed, confidence in one's self is a factor in an athlete's successful return to play (Forsdyke et al., 2015) but this type of self-confidence may also be linked to Meyer and Ward's (2013) definition of confidence. Meyer and Ward (2013) contextualize confidence as it relates to have confidence in another person or system. Although Forsdyke and colleagues (2015) reference a different application of confidence (i.e., confidence in self) it is noted that this confidence arises from an established trust in their rehabilitation provider. The confidence that Forsdyke and colleagues (2015) refers to then, may not just be confidence in self, but confidence in the rehabilitation that the athlete has undergone. These two concepts of confidence may be very connected and support the trajectory of athlete's hitting a point in rehabilitation where confidence is possible.

Summary

Sport injury is commonplace and creates a population of vulnerable athletes who may experience a negative emotional impact while being away from training and competition in their sport during rehabilitation (Clement et al., 2015; David & Hitchcock, 2018; Frank & Hsu, 2013; Forsdyke et al. 2015; Zakrajsek et al., 2017). Having and maintaining trust may play an important role in an athlete's ability to engage in their rehabilitation. Trust can be complex and contains both cognitive and affective subcategories, which may be related to the desire for both medical information and social support from their physiotherapists. Current research has shown that the athlete-rehabilitation provider relationship is important in rehabilitation (Alexander & Douglas, 2016; Arvinen-Barrow et al., 2009, Clement et al., 2013; Driver et al., 2017) but has not examined how trust is developed and maintained as part of this relationship. Trust has

been an important part of medical research (Bernhardsson et al., 2017; Lee & Lin, 2010; Manderson & Warren, 2010) and therefore may extend to the medical context of sport injury rehabilitation. However, with trust-like actors of confidence and dependency (Manderson & Warren, 2010) and pressure to return to play (Clement et al., 2015; Hildingsson et al., 2018) there may be unique development and maintenance qualities of trust in the athlete-physiotherapists relationship that has not yet been explored. The current study has explored how trust is developed and maintained as well as the impact of trust subjective rehabilitation outcomes. A qualitative approach was chosen for the current study to explore the lived experiences of those athletes who had a sport injury that led to sport incapacity and rehabilitation with a physiotherapist. The qualitative methodology of the current study will be discussed in the next chapter.

Chapter 3: Methods

Methodology and Study Design

The research study used the qualitative approach of phenomenology to explore how athletes develop trust in their physiotherapists. The phenomenological approach has been defined as a way to “explore, describe, and analyze the meaning of individual lived experience” (Marshall & Rossman, 2016, p.17). The idea of shared lived experiences in this methodology does not denote a group of people experiencing one moment in time together (as you might see in a case study) but a single phenomenon that has taken place in several people’s lives. These individuals do not need to be connected in any way but they all must be conscious of the phenomena that they have experienced. This is a key point in the philosophical underpinnings of phenomenology.

Husserl first introduced phenomenology in his work *Logical Investigations* in 1900. This philosophy was seen as a radical departure from the traditional ways of acquiring knowledge. Phenomenology challenged the Cartesian system that worked on the notion that a research concept exists outside of the self and can be studied objectively (Moran, 2002). The philosophy of phenomenology asserts that to get to the essence of a phenomenon we must consider it as it exists within a conscious experience. Phenomenology rejects the notion that we can examine a phenomenon beyond the human experience of it (Moran, 2002; Smith, 2005; Wilson, 2014). Through examining a collection of different conscious experiences of the phenomena, phenomenology gets to the truth of a concept by finding the generalities in the shared experiences of the participants (Marshall & Rossman, 2016; Moran, 2002; Smith, 2005). Husserl’s efforts indicate that phenomenology is not greatly concerned with individual differences or deep

individual reflection (as one may see in an ethnographic approach) but is concerned with the similarities in the shared conscious experience of those who have interacted with the phenomena (Smith, 2005). In this research study, the phenomena, or research concept, is trust in the athlete-physiotherapist relationship. Phenomenology was chosen for the current study for two main reasons. First, the understanding of how trust is developed and maintained is under-researched in the athlete-physiotherapist relationship. As discussed in the literature review, trust is often examined as a means to study positive outcomes when it is present but not necessarily how it is developed or maintained. An exploratory study that can capture different peoples lived experiences with trust can increase our understanding of how trust is developed and maintained and drive deeper into both the emotional and logical subcategories of trust. Second, the emotional vulnerability that often accompanies sport injury for athletes can be captured in a more holistic lens with the use of phenomenology. Phenomenology recognizes how an individual's life context can shape their interactions with a phenomenon. For example, an athlete who is severely injured and experiencing trust in their relationship with their physiotherapist will be inherently different than someone who is injured at work. An athlete may experience pressure to return to play, confounding stress from losing fitness or skill, and general feelings of grief from the dramatic change in lifestyle and athletic identity that have been discussed in the literature review (Cieslak, 2014; Clement et al., 2013; Hildingsson et al., 2018; Podlog et al., 2010; Zakrajsek et al., 2017).

Husserl's contributions, however, were expanded upon and challenged heavily by his followers, resulting in many differing methods to the practice of phenomenology (Moran, 2002). For the purpose of the current research, Heidegger's approach to

phenomenology will be utilized. Heidegger followed the teachings of Husserl but began to break away from the methods Husserl ascribed. Heidegger challenged Husserl's ideas of bracketing one's own experience as a researcher from the research that is conducted (Moran, 2002; Wilson, 2014). Bracketing refers to the ability for a researcher to disregard and set aside their personal beliefs, values, and life experiences to remain an objective vessel for which the analyses of qualitative data can take place.

The idea of being able to bracket one's self could be a waste of possible resources as a researcher's past experiences usually align with their research and give them a unique perspective on how they interact with the data. In the context of qualitative research, when analysis so heavily relies on the researcher's ability to use both inductive and deductive reasoning (Creswell, 2018) it would be, as Heidegger postulates, nearly impossible to separate the two, and would inherently lessen the quality of the work (Moran, 2002). The researcher of the current study has been a rugby player for ten years, she has gone through injury herself and witnessed many teammates also incur injuries. This type of lived experience has not been held above empirical knowledge but was used as an asset in the research. It has helped shape how research methods and interview questions were developed, how meaning was assigned to participant data, and how reoccurring codes translated into themes.

Heidegger's concept of *dasein* is the centerpiece of his philosophical principals. *Dasein* (or 'being there') is the concept that people are in a constant state of interpreting and questioning their own world. They develop a working picture of themselves as part a meaningful whole to contextualize their lives (Wilson, 2014). In terms of the current study, the athlete can see their injury and rehabilitation in a unique way. Their injury has

consequences for themselves, their coach, their physiotherapist, teammates, and other people in their world. Phenomenology asserts that the perspective on injury would be different for someone who is injured during work, or after an accident. Injury in other contexts would present different interpretations of that injury and subsequent rehabilitation because of the differences in their perception of their world and the people within it. It is these inherent differences in the way people exist as part of their own meaningful whole that can drastically change how they use language and assign meaning. The hermeneutical approach to phenomenology (the term of Heidegger's approach to phenomenology) further recognizes the need to understand trust in an athlete-physiotherapist relationship because the sport context may provide a unique worldview for the participants.

An emphasis on language plays a major role within this approach and was also expanded upon by Gadamer, a student of Heidegger. Gadamer expanded the hermeneutic approach to not only focus on what words are being used, but also how they are being spoken (Sloan & Bowe, 2013). Attention on what kind of language the participants used such as adjectives that denote fear, hopelessness, or anger revealed important emotional undertones to the behaviour they were exhibiting. The tone of their voice and body language may have also alluded to the importance of what they were saying or how they felt at the time. The researcher has attempted to capture voice changes in the transcript and as part of the rich, thick description found in Appendix G.

In previous use of grounded theory, David and Hitchcock (2018) looked at the topic of trust in the athlete-athletic trainer relationship. Grounded theory uses very little background literature and therefore this approach lacked incorporation of the major

defining factors of trust. Participants had trouble defining trust and therefore data collection may have lacked depth. By using a phenomenological methodological lens, the researcher of the current study can make more informed choices in interview questions. For example, with the understanding of affective trust, the interviewer asked, ‘What types of conversations did you have with your physiotherapist?’ Although this is not directly about trust, the researcher is able to see if the participant had affective trust in their physiotherapist. From existing knowledge, the researcher knew that affective trust was indicated when a participant talked about sharing their personal life with their physiotherapist. Asking research informed questions had the added benefit of not relying on the participant to have prior knowledge of the differing components of trust. The interview guide (Appendix D) was constructed to address the different points of research discussed in the literature review. The guide has seven blocks and a total of thirty-one questions. The blocks address background demographics about the participant’s injury, the mental toll of their injury, their cognitive trust in their physiotherapist, their affective trust in their physiotherapist, direct questions about their thoughts on trust, possible trust-like actors within the relationship, and an overview of their thoughts about their rehabilitation experience. These questions were formulated to get a full picture of how their injury happened, their feelings towards their injury, and what trust in the athlete-physiotherapist relationship looked like for them from both a research perspective and from the participant’s understanding of trust. The use of phenomenology meant that existing literature informed the interview guide so that the findings of this study have built upon past research. From having a research informed approach, the findings can add

additional information to the understanding of trust and the athlete-physiotherapist relationship.

Participants

The participants in the research study met the following criteria: (1) above the age of 18; (2) had been part of an elite competitive sport (team or individual) in the past 12 months; and (3) had an injury that removed them from their sport (training and competition) and required rehabilitation with a physiotherapist within the past 12 months. An elite athlete constituted any athlete who played at a USport competitive level or higher (e.g., national team athlete, national development team athlete, etc.). Following the definition set by Horvath and colleagues (2007), rehabilitation of participant injuries occurred for a period of five or more weeks. Athletes who experience brain injuries (i.e., concussions) were not eligible to participate because of the well documented memory loss that occurs after head trauma (Echemedia, et al., 2017), which may have led to compromised interview answers. Both acute and chronic injuries were eligible for this study, but chronic or acute injuries that did not result in the participant being pulled from play were not eligible.

As per the traditional qualitative approach, the study included a broad range of potential participants across injury, time in rehabilitation, frequency of rehabilitation sessions, and demographics such as age and sport division. Moser and Korstjens (2018) described the qualitative sampling process as purposefully inclusive to a wide range of possible participants as a way to welcome a variety of perspectives that could enrich the data. The inherent nature of an exploratory study allowed for instances of negative or extreme cases to emerge and challenged the researcher to reconcile their theoretical

framework around the many different perspectives within the sample. As previously stated, the methodology of phenomenology is not concerned with individual differences and instead focuses on the shared lived experience of the participants. Therefore, diversity within the participants only strengthened the thematic analysis. Moser and Korstjens go on to state that sampling methods should be determined only by the ability of those participants to give insight into the phenomena that is being researched. As long as the participants were able to speak to a substantial time (five weeks or more) in rehabilitation with a physiotherapist, and met all other participant criteria, they were sufficient to provide data for the study.

Participants were recruited through several methods. Convenience sampling was the primary means of obtaining participants for the study. The majority of the participants were found through the use of existing sport contacts of the researcher and her supervisor. Recruitment also occurred through the social media sites of Facebook and Instagram. The researcher and her supervisor posted Dalhousie Ethics approved recruitment materials. Posters were put up in the Dalplex, local physiotherapy clinics around Halifax, Nova Scotia, and training centers (such as the Canadian Sport Centre Atlantic) where athletes could see the recruitment information. Recruitment materials can be found in Appendix A (recruitment email), Appendix B (social media post), and Appendix C (recruitment poster). The use of snowball sampling from all sources was also approved from Dalhousie Ethics but was not actively pursued by the researcher or her advisor.

Although ideal sample sizing can vary greatly within the scope of qualitative research it is generally agreed upon that the researchers must aim for a size that reaches

saturation. This means that no new information is being given by participants that would change the themes that are already emerging (Trotter, 2012). During the coding process labels are made to capture similar experiences between participants. When a data set approaches saturation the pre-existing codebook would be able to label the experiences of a new participant without needing additional codes (Moser & Korstjens, 2018). When a data set can reach saturation then the sample size is enough to conclude the data collection period. The concept of saturation will be discussed in more detail in the data analysis section. To obtain saturation, the phenomenological methodology of the study suggested a sample size of 2-25 people (Alase, 2017). Considering the time restraint of a Master's program and general feasibility of recruitment, 8-12 participants was the recruitment goal. The data collection phase ended with 11 participants. The eleven participants that contributed to the study were diverse in several areas. Both men's and women's sport were represented with five participants competing in a men's division and six competing in a women's division. The participant pool included six different sport types: two hockey players, three rugby players, two skiers, one snowboarder, one gymnast, and two ultimate frisbee players. There were seven different injuries represented in the study: one shoulder injury, one wrist injury, two ankle injuries, four ACL injuries, one Achilles injury, one back injury, and one foot injury. Finally, three levels of competition were represented in the sample: four USport athletes, four national team athletes, and three club team athletes who competed internationally. Table 1 provides a summary of the participants.

Table 1
Participant Descriptions

Pseudonym	Injury	Brief description of trust in physiotherapist
Andrew	ACL	High trust in physiotherapist
Anna	Ankle	High trust in physiotherapist
Dan	Achilles	High trust in physiotherapist
Haley	ACL	High trust in physiotherapist
James	Ankle	Switched physiotherapists because of low trust
Jane	Shoulder	Switched physiotherapists because of low trust
Matt	ACL	High trust in physiotherapist
Rebecca	Foot	Rational prediction (virtually absent emotionality, high rationality)
Sarah	Wrist	Rational prediction (virtually absent emotionality, high rationality)
Stephanie	ACL	High trust in physiotherapist
Tanner	Back	High trust in physiotherapist

Materials

A semi-structured interview style was employed. This style of data collection was chosen to retrieve comparable data from the participant pool by asking the same questions in all interviews while still allowing for the participant answers to guide the interview. Additional information was collected from participants by asking follow-up questions on information the interviewee brought forward. As Marshall and Rossman (2016) stated “the richness of an interview is heavily dependent on these follow up questions (often called, quite infelicitously, ‘probes’)” (p.150). Moser and Korstjens (2018) supported this in describing interview-based data collection as a dialogue between two people as opposed to a strict question and answer format. The semi-structured interview allows space for both interviewer and interviewee to become comfortable with one another in the hope of increasing participant disclosure on the relevant topics.

The pre-determined questions were developed for the interview guide under the supervision of Dr. Lori Dithurbide and informed by the current trust and athlete-

rehabilitation provider relationship research as previously discussed. Following the proposal of this research study, further edits were made to the interview guide following recommendations from the researcher's committee to add or move certain questions and to improve consistency in language. Participant interviews lasted, on average, 46 minutes and covered a variety of experiences regarding their injury, rehabilitation, and trust with their physiotherapist.

This study has focused on the perspective of the athlete and interviewed athletes who had experienced sport injury and undergone rehabilitation with a physiotherapist to capture this perspective. The interviews focused on how trust was developed and maintained in rehabilitation as well as the subjective health outcomes of trust in rehabilitation. The interviews were audio recorded and then transcribed, verbatim, to create the data pool for analysis, which will be detailed in the data analysis section.

Procedure

Initial steps of the study were the implementation of recruitment strategies (emailing relevant contacts, putting up posters, and posting on social media) and scheduling phone and in-person interviews. It was the intention of the researcher to conduct the majority of the participant interviews in person. Recruitment challenges caused the researcher to use phone interviews for 8/11 of the participants to accommodate logistical issues in scheduling and location. If a participant had interest in taking part in the research study, they were sent a consent form over email from the researcher's Dalhousie email address. The consent form included information on the study, risks involved, interview timeframe, and basic information about the researchers and can be found in Appendix E.

For in person interviews, participants arrived at the Dalplex and the researcher met them in the lobby and led them to the lab (as the lab can be difficult to find). They were asked if they had time to read the consent form and if they had any questions regarding the study. Once any and all questions and concerns were addressed the participant was asked to sign the consent form. If the interview was conducted over the phone the same procedures were taken but the participant was asked to give recorded verbal consent. If the participant consented to being in the study the researcher began the interview process. On average, the interviews lasted approximately 46 minutes. After the interview, the participant was debriefed, provided with the contact information of the researchers, and informed that they could withdraw or change their data within the next two weeks, after which point it was de-identified. Following this debrief the participant received their \$25.00 compensation for participation in the study thus concluding their participation.

Ethical Considerations

This research study was approved by the Dalhousie University Health Sciences Research Ethics Board on September 3rd, 2019. After experiencing an extended period of time without successful recruitment the researcher requested an amendment to add a \$25.00 compensation for participants. The \$25.00 compensation acted as an additional recruitment strategy in obtaining enough participants for the study. The amendment to include compensation was approved by the Dalhousie University Health Sciences Research Ethics Board on January 22nd, 2020. The study was conducted but the timeline of the research surpassed the original expiry set by Health Sciences Research Ethics Board in their approval letter of September 3rd, 2020. The researcher then received

approval for an annual renewal of the ethical agreement between the researcher and Dalhousie University. All three letters from Health Sciences Research Ethics Board can be found in Appendix F.

Data Analysis

When beginning to organize the data, the audio recordings of the interviews were transcribed verbatim. The initial exposure to the data took place during the interview process, furthermore the process of transcription offered the opportunity for the researcher to become immersed in the data through the slow and meticulous process of accurately capturing the information provided by the participants (Moser & Korstjens, 2018). The researcher transcribed all interviews herself to ensure that this initial exposure was part of the data analysis procedure. During interviews and while coding the researcher paid particular attention to linguistic patterns (pauses, voice changes, etc.) along with the language that was used by the participants. The transcriptions were transferred to NVivo Software ® for analysis. Data were de-identified with a randomized participant number after two weeks. The findings chapter will refer to participants by pseudonyms given by the researcher to further preserve their anonymity. The participant pseudonyms used were Andrew, Anna, Dan, Haley, James, Jane, Matt, Rebecca, Sarah, Stephanie, and Tanner. These pseudonyms are attached to a specific participant and will represent that particular participant any time they are mentioned.

This research study employed a template analysis. Template analysis has been used so that the researchers could integrate existing knowledge about the development of trust while remaining open to revisions and new interpretations that arose in the data analysis because of the unique application of trust in the athlete –physiotherapist

relationship (Marshall & Rossman, 2016). Template analysis was accomplished by coding the first three interviews through the use of a-priori codes, which were theorized before the data analysis. The codes theorized were found to be too broad in the initial coding of the first three interviews. Examples of these codes were affective trust, cognitive trust, and emotions toward physiotherapist. These codes did not serve the data well so the researcher developed more specific a-priori codes such as ‘social connection before rehabilitation’, ‘contact outside of regular appointments’, ‘physio inquired about social life’, and ‘physio talked about education’ as a few examples. After developing 28 possible codes all interviews were recoded using a-priori and a-posteriori codes. A-posteriori codes are codes that emerge from the data and add new knowledge that was not previously captured by existing codes. The data were completely coded, line by line, with relevant codes attached to participant answers. The final number of codes used totalled 90 to properly capture the nuance of each interview.

When entering the data analysis phase, particular attention was paid to noting if/when saturation was reached with the data. Saturation was determined by the coding used. If the existing codebook had enough codes to label all of the experiences the participant discussed in their interview, then this would be considered a saturated data set. For example, multiple participants talked about how they knew their physiotherapist from a previous social context. These participants each had unique ways they knew their physiotherapists, but all of these experiences could be coded with the code ‘social connection before rehabilitation’ which was then part of the development of the baseline trust theme that will be discussed in the findings chapter. However, if a participant talked about an experience that could not be coded for then a new code was created to label their

experience. If new codes were added, then saturation was not present. After coding the ninth participant, no additional codes were added to describe the data from participants ten and eleven. The lack of new codes meant that the participants were no longer adding new information and that the data pool had reached saturation.

After the coding process was complete and saturation was reached, the codes were then transformed into larger themes and subthemes. Codes were grouped by similar concepts multiple times until 15 possible themes were selected. The researcher and her advisor then had a meeting to further reduce the possible themes into the four major themes that will be discussed in the findings chapter.

The themes of the data analysis are often spoken about in terms of how subthemes increased or decreased trust. This is related to the theorized model by Lewis and Wiegert (1985) which recognized that trust can be high, low, or virtually absent. The researcher assigned meaning to what subthemes increased or decreased trust based on the language used by the participants in their interview. Focusing on language to discern meaning is an accepted method in Heideggerian phenomenology (Sloan & Bowe, 2013). Specific questions were asked in the interview process to understand what level of trust the participant had in their physiotherapist. These questions were direct in nature at times such as question 20 ‘How much did you trust your physiotherapist?’ and question 24 ‘What types of situations made you trust your physiotherapist more?’. If a participant used language to describe a high level of trust in their physiotherapist such as ‘I would trust them with my life’ or ‘I trust them 100%’ then the answers the participant gave in the rest of the interview in terms of what behaviours had produced that high level of trust were attributed by the researcher as subthemes that increased trust. This language was

seen as an indicator of high trust when the participant spoke in certainties with minimal/no use of caveats. For example, the participant who answered ‘I would trust them with my life’ is using direct and overarching language, which signified to the researcher a resolute mindset of high trust. Alternatively, another participant used the language ‘I wouldn’t say complete trust’ followed by caveats and judgements of their physiotherapist’s abilities. This answer signified to the researcher that there was doubt present in their trust and therefore they had lower trust. When the participant indicated low trust the answers that they gave in the rest of the interview in terms of what behaviours had produced the low level of trust were attributed by the researcher as barriers that decreased trust.

Some questions also had probes that had the potential to reveal if the participant had attributed a certain behaviour with an increase in trust such as question 10 which asked ‘How much information did your physiotherapist give you about your injury during rehabilitation?’ which was followed by the probe ‘How did you feel about getting this information?’. This probe left room for the participant to tell the researcher that getting certain information from their physiotherapist made them feel more trust if that was the case. In instances when a participant talked about linking a particular behaviour or outcome with a feeling of trust without a direct mention of trust in the question, the researcher attributed that behaviour or outcome as a subtheme that increased trust. If a participant talked about linking a particular behaviour that led to them questioning their trust the researcher attributed that behaviour or outcome to a decrease in trust.

Validity and Reliability

Validity and reliability were found through specific strategies and procedures in qualitative research. Creswell and Creswell (2018) identified many different validity strategies that a qualitative researcher could implement to ensure the findings of their study are valid. Of the strategies Creswell and Creswell (2018) suggest, four were used in the current study. First, the strategy of rich, thick descriptions was used (Appendix G). The original intent was to include descriptions of setting, body language, and other specific detail to enhance the data. When most interviews were done over the phone these types of descriptions were not able to be captured. Instead, rich, thick description was achieved by giving contextual information about the participants in the study (without compromising anonymity).

Second, the strategy of discrepant information was used, meaning that the study presented findings that may contradict the major themes to ensure transparency. Third, the strategy of peer debriefing was used where a peer reviewed the data and the themes that the study discovered to provide constructive feedback and validate the results. This was achieved through the meeting between Tessa O'Donnell and Dr. Lori Dithurbide. Lastly, the external auditor strategy was implemented wherein an outside person who was unfamiliar with the researcher or their work read through the findings and provided insight into the logical narrative of the study. This was achieved through receiving email feedback from Dr. Matthew Numer.

Creswell and Creswell (2018) also identify reliability procedures that were followed by this research study. The researcher checked the transcripts for obvious mistakes and made sure that definitions of the codes used remain consistent throughout

data analysis. Codes were determined by the researcher and discussed with her supervisor to ensure the logical jumps were valid.

Summary

The qualitative lens of phenomenology was chosen for this research study as it was concerned with the shared lived experiences of the participants (Marshall & Rossman, 2016). This exploratory study was needed in the context of trust because of conflicting literature on how trust is developed and maintained, and because of the unique participant pool of athletes. Semi-structured interviews were used to dive deeply into the lived experiences of injured athletes in regard to trust in their physiotherapists. The findings from this study can provide a depth and breath of knowledge that can contribute to our understanding of trust because of the methodology chosen.

Chapter 4: Findings

Considerations

The goal of this research was to explore how athletes develop and maintain trust in their physiotherapists during sport injury rehabilitation and to explore the impact trust has on subjective recovery outcomes for athletes. Although the purpose of the research has been defined, the methodology chosen for this research also impacts the interpretation of the data. As previously discussed, qualitative researchers do not enter the data collection process with pre-conceived hypotheses. The data itself should ultimately guide the research. When considering the results of this study, it is important to keep in mind that the purpose and methods of this research acted as a gateway to engage the participants on the topic of trust in the athlete-physiotherapist relationship. The data that has come from the interviews is the true focus of research and may not provide all answers to the initial purpose if clear answers to the purpose of the study did not exist within the interviews.

Furthermore, centering the researcher before exploring the data is important to the hermeneutic approach that was employed in this research study. The researcher was not a blank slate in which interview data was received. The researcher was an additional interpretive lens that affected how questions were asked and how they were assigned meaning in the data analysis phase. The researcher is an ex-varsity athlete of a sport with a very high injury rate. She has a background in psychology and a limited understanding of the academic or practical approaches of physiotherapy. When interviewing athletes, the researcher was often interested in the emotional investment of athletes. The researcher was concerned with the role of trust as a factor of relationship building and not

of physiotherapy practicality. The interpretive lens of a researcher who centered the athlete's experience of trust over practicality of physiotherapy can be seen in the findings. This has been intentionally done to preserve the participant's perspective of trust beyond the confines of ethical considerations in the physiotherapy profession. It has also been done unintentionally as a result of the accepted theoretical principle that a researcher cannot bracket themselves from their data when taking a hermeneutic phenomenological approach. The researcher is inherently part of the findings of the study. This is considered a strength of the research as opposed to a weakness. The researcher's familiarity with psychological principals and personal lived experience with sport injury brings additional knowledge to the study as opposed to taking away validity. The findings of this study should be read with these considerations in mind.

Thematic analysis

This section discusses the thematic findings of the data collected from participant interviews in the research study. Table 2 outlines the major themes and subthemes found within the data. Much like Clement and colleagues (2015), the data from participants seemed to focus on rehabilitation as a journey of differing stages. The influence of time has been captured in the thematic analysis of trust in this study through three of the major themes: baseline trust, trust development, and trust maintenance. When interpreting the data, it seemed that trust formation and maintenance could not be untangled from the concept of time. Participants needed differing trust strategies during different stages of rehabilitation. The main themes of the study have been defined through the 'stages of trust' to reflect the differing trust needs of the participants over their rehabilitation.

The three major themes that connect with the stages of trust lead to the last major theme of the study, an outcome-based theme of partnership. The theme of partnership found in the fourth row of Table 2. This theme can be seen as addressing the subjective outcomes of trust from the original purpose of the research. When interviewing participants who enjoyed their time with their physiotherapist, it was clear that there was an equality to the relationship. The participants felt that they were part of a team with their physiotherapist and that the trust that was built and maintained was fueling this feeling. The fourth row in Table 2 outlines the subjective outcomes when a participant had experienced high trust at baseline, which was strengthened with high trust development, and was maintained at a high level. Each of the four major themes of the study have accompanying subthemes and possible barriers. Themes, subthemes, and barriers can be found in Table 2. Themes and subthemes will be discussed in detail in this chapter to provide an overview of the findings of the research study.

Table 2
Thematic Analysis of Participant Interviews

Themes	Subordinate themes	Barriers
Baseline Trust	Social familiarity Contextual knowledge Past success	Logistical issues
Trust Development	Rapport Attention Honesty Patient-oriented communication Shared knowledge	Equipment use
Trust Maintenance	Emotional management Rehabilitation progress Solution-focus	Lack of progress
Partnership	Shared success and failure Positive rehabilitation experience Rehabilitation as a safe place Loyalty	N/A

Note: The first three themes of baseline trust, trust development, and trust maintenance are related to the outcome of the theme partnership.

Three stages of trust have been identified in the thematic analysis. These stages are defined as baseline trust, trust development, and trust maintenance. The stages have been identified to reflect when the participants changed their description of what was present or not present in their experience with trust. When analyzing these changes, the stages of trust described became clear indicators of why the changes in language occurred. Each stage will be briefly described and the subthemes that characterize the stage will be discussed.

Baseline Trust

The temporal dimension of baseline trust has been chosen to represent the participant's expression of trust that existed before they began treatment with their physiotherapist. The baseline trust experienced by the participants had both emotional and logical components and has subthemes of social familiarity, contextual knowledge, and past success. Barriers to baseline trust will also be discussed.

Social Familiarity. Most participants expressed a feeling of comfort with their physiotherapist before they engaged in treatment. The subtheme of social familiarity discussed by the participants can be defined as a pre-existing connection to the physiotherapist. This connection increased comfortability with the physiotherapist and created the expectation that characteristics they deemed important to a trusting relationship would be established with ease when rehabilitation began. A feeling of social familiarity primarily came in two ways (1) presence within their team and (2) overlapping community connections.

A few participants had interacted socially with their physiotherapist during training and competition. These athletes had not done rehabilitation with their physiotherapists before their injury, but still felt a closeness before engaging in treatment. The participants found it beneficial to have this relationship before rehabilitation. Tanner spoke about this type of pre-existing relationship during his interview:

The big thing too is that we're lucky that I had a relationship before I was injured... she's someone who is always traveling and works with us year-round, um so you're- you're friends with that person and have that level of trust. And I think also, she does a good job of like- it's two-way like when we interact. It's like, how are you?... and she'll ask, you know, how I'm doing... you feel like she is someone that cares. Um, so, I don't know, I think it's just- a relationship is so important in times like that so you can just- you can just trust them.

This quote from Tanner illustrates the establishment of comfortable communication. The importance of communication is a repeated subtheme in all three trust stages in differing forms (see Table 2; patient-oriented communication, honesty, rapport, emotional management). The establishment of comfortable communication at baseline may translate to the expectation of good communication throughout rehabilitation.

The existence of social familiarity seemed to also increase the feeling that the physiotherapist would understand the contextual influence of their lifestyle. James noted in his interview that “you can build that relationship with them um, and because they're kind of present... they kind of see firsthand, um, the ins-and-outs of your training schedule... they're able to cater to your needs in that sense”. The belief that a physiotherapist would understand the athlete's needs before entering treatment seemed to

increase their baseline trust. The physiotherapist was seen as understanding the meaning they assigned to their life as an athlete. The participant felt more comfortable and confident in their expectations of rehabilitation because they felt their physiotherapist had a holistic understanding of not only their injury but of their life. A physiotherapist may be able to establish a higher level of trust if they are able to combine care for the participant's injury and care for the participant's personal life.

Social familiarity can also be established through overlapping communities. Some participants discussed knowing their physiotherapist through a mutual friend. These participants did not have an established relationship with their physiotherapist but were aware of the physiotherapist's connection with their community. This, again, seemed to increase comfort and the expectation that their needs or goals would be integrated into the care they received. This can be exemplified by Matt "I knew a few people that worked at the desk... I had a relationship with the clinic in general- I knew some people there, so I had some confidence in the- in the center already."

The existence of the mutual friend seems to act as a trust-transfer for the participant. That is, 'I trust the person I know, and they trust the physiotherapist, therefore I trust the physiotherapist'. This could also be seen in Haley's interview:

It's a girl on my team and it's her husband. I was like, okay, he knows the sport like she's always played a high level... he knows all the girls like he's seen me play, like, he knows like everything so I felt a lot more confident like going in.

The sense that the physiotherapist was related to their community seemed to increase trust at baseline. This may suggest, again, that social familiarity aids in the perception that the physiotherapist will have additional knowledge about their lifestyle as an athlete

which was seen as valuable additional knowledge. It also introduces the concept of trust as an extendable resource. Once trust has been established in a community member, this trust can be extended to another person through recommendation. The extendibility of trust will also be mirrored in the subtheme of loyalty when partnership is established.

Social familiarity contributes to baseline trust in the physiotherapist because it seems to establish a closer bond with the participant. Participants who experienced social familiarity before treatment saw it as having a positive effect on their trust in the physiotherapist. Furthermore, they valued having this trust before treatment so they could feel more confident in their choice of physiotherapist. The influence of personal awareness and time in the sub-theme of social familiarity can be seen as unique to the stage of baseline trust.

Contextual Knowledge. Participants expressed an added element of trust when their physiotherapist had additional contextual knowledge or experience on their specific injury or sport. The sub-theme of contextual knowledge serves to capture an increase in trust that their physiotherapist has the capabilities to execute a successful rehabilitation protocol before treatment began. Sport specific knowledge increasing trust and injury experience increasing trust were mentioned by participants in their interviews.

A physiotherapist having existing knowledge of the participant's sport was seen as increasing the physiotherapists ability to rehabilitate their injury. As James explained "She's kind of able to apply her physiotherapy knowledge with her [sport] knowledge to kind of have this holistic, um, view on, kind of, the mechanics of the body and the mechanics of the sport." This quote exemplifies the perception that sport knowledge was

seen as a valuable additional resource that aided in the participant's belief that their physiotherapist would be able to help them achieve their rehabilitation goals.

The lack of sport knowledge also seemed to have the opposite effect of lowering the perception of a physiotherapist being able to help the participant. A few participants attributed issues in rehabilitation with past physiotherapists to the physiotherapist's lack of sport knowledge. James stated "my first physiotherapist did try her best to to kind of understand the mechanics of the sport to the best of her ability... but I think, kind of, ultimately it came down to just, um, yeah that exposure to just knowing the sport a little bit better" in reference to his decision to switch physiotherapists to one that was affiliated with his team. Sport specific knowledge seems to be an asset to a physiotherapist gaining participant's baseline trust. Adversely, the lack of sport knowledge may also be an exacerbating factor when an athlete is questioning their trust in the rehabilitation process.

Sarah found an increase in trust from sport specific knowledge but also mentioned injury experience as another possible factor in increasing trust "my physiotherapist was, um, specialized in, um, in hockey and gy- um, gymnasts. So, I already had that little trust saying 'oh, he knows a lot about like those injuries'- wrist injuries... that trust kind of came easily". This quote shows the value of experience with an injury to increase baseline trust through the perception that experience with an injury is a sign that the physiotherapist will be able to help them rehabilitate their injury. The physiotherapist having personal experience with the injury may also further increase trust as see in Tanner's interview "it was nice to start working with [physiotherapist's name] right away and she had actually had back issues herself um, throughout her life". A physiotherapist expressing a lack of experience with an injury was also discussed as having the reverse

effect, making the participant question their baseline trust. Dan spoke to this in his interview:

On the first day that I saw her where she said that she hadn't seen someone with a torn Achilles in a while... it's a little bit of worry that they don't have that knowledge or maybe that they've forgotten things from school or they don't have a lot of experience with your injury.

A physiotherapist having knowledge of the participants sport or experience with their injury seems to increase the amount of trust the participant will have going into treatment. It also harkens back to the value in a physiotherapist treating the person as well as their injury as discussed in the social familiarity subtheme. The sub-theme of contextual knowledge continues to benefit athlete-physiotherapist trust through rehabilitation. Yet, it seems to be particularly impactful when an athlete is making a choice in what physiotherapist to see because of the increase it has in baseline trust.

Past Success. When a participant experienced past rehabilitation success, their physiotherapist had an established social bond and demonstrated their ability to successfully rehabilitate an injury. Few participants had the experience of going back to a physiotherapist with whom they previous had rehabilitation success with. Most of the participants had not previously rehabilitated an injury with the physiotherapist they discussed in their interview. However, this subtheme was very impactful to those participants and will connect with themes of partnership that will be discussed as a result of positive rehabilitation experiences.

When participants had experienced past success that encompassed both mental and physical recovery, they reported having a high level of trust and loyalty to that

physiotherapist. Jane, for example, talked about the high trust she had in her physiotherapist back home “I have a physiotherapist at home that I would trust with my life. Uh, out here it’s a lot different, uh, just because the physio that I get at home is- is different... So, I don’t really go to physio anymore.” Anna shared similar feelings about the physiotherapist that she had previous success with “I have complete trust in- in her abilities and what she's doing and what she tells me to do”. The language used is direct and generalizes all of the behaviours and skills of the physiotherapists without any language that would indicate doubt. From this language the researcher has inferred that these participants felt very high trust in their physiotherapists because of past success and thus seemed to have the highest level of baseline trust out of the participant pool based on the direct and general language they used to describe their trust at baseline.

Barriers to Baseline Trust. The logistical factors of attending rehabilitation acted as a barrier to some participants in choosing a physiotherapist in which they had higher baseline trust. Most participants had motivation to choose a physiotherapist in which they had the most baseline trust. The subtheme of logistical issues created a barrier for choosing a trusted physiotherapist. A few participants talked about their experience in choosing or almost choosing a physiotherapist with less baseline trust. The logistical factors that can compete with choosing higher baseline trust are convenience in location or scheduling, and financial strain. Dan ultimately chose a physiotherapist with the highest baseline trust but demonstrated the issues of location and financial considerations in his interview:

I was thinking about- okay where do I want to go for physio. Um, I had kind of three different options in my mind. One was this clinic where I had been before

and uh, like I knew people that work there. I had a good relationship with them, and my team had a relationship with them as well. Um, so yeah so that's obviously why I ended up going there but there was also a physiotherapy clinic in or right next to the building that I work in. Um, which was hugely appealing because I was on crutches for so long, um, like getting around was so difficult so I don't know, that was a place considered as well. Um, and then the other person I considered was, uh, was the athletic therapist that was there when I actually hurt myself. Um, just because she made me feel like pretty comfortable when like like immediately after my injury. Um, but she works out of the suburbs it was kind of far from everything and like I said earlier like I had coverage for a physio but not athletic therapy so I sort of would have had to pay out of pocket for that as well.

This quote shows the decision-making process that can have aspects of baseline trust and logistical considerations. Social familiarity seemed to play a role as Dan notes that he and his team had a previous relationship with the clinic. Logistics played a role in Dan considering a clinic next to his work to help with how easily he could access his rehabilitation. Lastly, financial considerations also seemed to play a role as Dan stated he considered going to an athletic therapist, but this was not covered under his insurance and he did not want to take on the additional financial strain. In this case, Dan chose the clinic with whom he had social familiarity which is a subtheme of baseline trust. This may suggest a preference for going to a physiotherapist where baseline trust is most high when deciding where to attend rehabilitation. It also exemplifies the competing logistical and financial factors that can challenge an athlete to pursuing rehabilitation with a physiotherapist whom they have low baseline trust with. Sport injury is something that

affects participants in all areas of their life. The participants of the study were often motivated to see a physiotherapist quickly and consistently. Sometimes choosing these factors over the factor of trust. Haley expressed regret in seeing a physiotherapist who she had less baseline trust in for a previous injury and noted:

...why did I just pick this other girl? And it was mostly just because I was impatient and I was like oh, well he has a like three-week wait list or something. But this girl is free right now so might as well just get into her and get checked out and then I stayed with her because it was easier.

Competing interests may dissuade participants from choosing a physiotherapist that they trust the most at baseline. The choice to go with someone who they had less trust in was a regret from the participants who experienced it. Although, participants who chose logistics over trust also experienced less agreeable rehabilitation outcomes, which they may have attributed to a lack of baseline trust even though these may not actually be related. When participants are looking at the relationship in hindsight, the negative outcomes they experienced could have led them to the conclusion that lower baseline trust was a contributing factor but would not have made this connection if their outcomes had been positive. Nevertheless, their perception seems to be that lower baseline trust factors were related to issues in rehabilitation. While it is difficult to conclude that choosing logistical factors over trust is inherently bad for rehabilitation, from this specific participant pool it does seem to play at least a partial role in the athlete's perception of the reason for rehabilitation issues.

Trust Development

The temporal theme of trust development is defined by the early stages of rehabilitation where baseline trust can develop further or regress. As previously discussed, frustration was generally high at this stage with improvements in mood when progress in rehabilitation was experienced. The trust development experienced by the participants had both emotional and rational components and has subthemes of rapport, attention, honesty, patient-oriented communication, and shared knowledge. Barriers to trust development will also be discussed.

Rapport. Rapport has been defined as “a perception of connection with another individual based on respect, acceptance, empathy, and a mutual commitment to the relationship” and can be established through “expressing interest in another's views, discussing shared goals and interests, and responding to emotions” (Epstein & Street, 2007, p.19). Rapport between participant and physiotherapist contributed to an increase in trust in most of the participants. Those who engaged in building strong rapport valued being able to talk about their personal life and learn about their physiotherapist’s personal life. Matt talked about how this rapport increase his trust during his interview:

it’s very good after like a hard day at work, I can talk to her about my work, my boss, my friends anything.... I think, uh, it just builds into the trust with the physio that I’m able to have these kinds of conversations with her. I- the things that she’s telling me and the exercises she’s giving me, I’m going to do them because I trust her fully.

Matt enjoyed being able to unload his personal life to his physiotherapist and related this to a feeling of high trust. Others found it beneficial to learn about their physiotherapist.

Dan provides an example of this:

I'd say I'm probably a lot less talkative of a person than she is... so you know, her talking about her boyfriend, um, makes me feel relaxed and then I'm comfortable to ask okay well, um, you know is it okay if I'm walking outside with the snow and ice? Um, so even- even though they're not really related topics, um, her making me feel more comfortable is useful in kind of the recovery aspect of the physio.

Rapport helping to increase participant communication shows a link between rapport and being able to speak their mind about issues or questions surrounding their injury. This may suggest the impact of trust on rehabilitation success. If rapport aids in the feeling of high trust and has practical implications for constructive rehabilitation communications, then trust seems to have an impact on rehabilitation behaviour.

Anna had a strong social bond with her physiotherapist and discussed how her rapport with her physiotherapist helped in the physical aspects of rehabilitation as well:

we like conversate... when I first get there. So, like it puts me at ease, it puts my body at ease so then I'm ready to, like, do, like, what I need to do in there and then get whatever exercises I need from her.

The influence of rapport on physical rehabilitation can also expand what the participant was willing to try in terms of treatment. Matt discussed how his fear of needles was mitigated while his physiotherapist was performing a dry needling treatment:

...the way she was needling and how she'd always kind of be asking me question to trying to keep my mind off the needles, that helped a lot... before I feel like it would just take me a lot longer to relax, if that makes sense, with the needle thing.

The participants' positive reflection of rapport seems to align with the general idea of good communication and the feeling that their physiotherapist cared about them as an individual which are known aspects of affective trust. Tanner exemplified this link in his interview:

I think it probably helps to not feel like you're just this like object. Because that's just the way sports are a lot of times, I think. Just like you're this robot that's here to be able to lift a lot of weight and ski fast and do what you're told. But when you can like remove yourself from that aspect and like just be a person with those same people that expect you to be this like a robot. It's like- it makes everyone um, respect each other a bit more and I think just be happier.

Feeling 'like a person' in the context of rapport seems to be related to feeling like the physiotherapist cares about the participant and their life aside from their sport injury. Being able to achieve strong rapport between participant and physiotherapist led to a strong emotional bond and high trust. The influence of rapport to relax and make the participant more receptive to treatment seemed to have implications not only for the mental recovery of injury but their physical recovery as well.

As part of the validity measure to explore discrepant information, it should be noted that rapport was not always highly valued. Two participants felt that their external support was strong enough that they did not need an emotional bond with their physiotherapist. Sarah noted "We did what we needed to do to get to the next step, and

then I go on my way do my stuff on my own.... I already had good emotional support.” Rebecca shared similar feelings and noted that “It takes me a while to get comfortable with... other people” and that she mostly turned to her friends for emotional stability. Participant-physiotherapist relationships where emotional support was not highly regarded seemed more transactional in nature. They received their treatment plan and did not discuss their lives, or their physiotherapists lives beyond polite ‘small talk’. The lack of concern with the emotional side of injury did not seem to lower their overall trust, it was simply not a factor of their relationship with their physiotherapist.

Attention. Attention was another subtheme in the trust development stage. Participants valued undivided attention from their physiotherapists in session and felt dismissed when this was not given. Receiving attention may add to feelings of reciprocated care and having a mutual goal. Sarah expressed this in her interview:

... just that like he really pays attention to like... he would watch how I would do it and then he would be like okay this is good for you or it's not good for you or let's make this change for you because this is how you're doing it. When I would see other physios, they would be like this is the ACL protocol, let's just go through it and they would be like go do this and then they wouldn't even like pay attention... I found he paid a lot of like individualized attention, made a lot of adjustments... to fit what I needed...

Similarly, about half of the participants spoke about preferring a hands-on approach to their treatment that may be linked to the added attention they received.

Haley's interview provides an example of this:

my physio like never used machines. It's always like let's get hands on, let's do this and like I think that's like definitely a better approach to it than them just taking a bunch of patients and then like putting a machine on you for 20 mins while they go do something with three other ones.

Trust seems to be increased through attention by the participant feeling that there has been an additional investment of thought or observation made by the physiotherapist. The more attention the participant received, the more effort they felt their physiotherapist was putting into their treatment. Attention paid to the participant outside of their rehabilitation sessions was particularly appreciated. Seven participants noted that the availability of their physiotherapist to communicate outside of their session increase their perception of the physiotherapist effort for their rehabilitation. This can range from finding additional times to see the participant like Anna described:

She makes herself so available. Like she says if you need to come in and I need to take you, I'll take you... it gives me peace of mind to know that I have that support for my body... whenever I need it.

Or more extreme cases like Matt described:

She's available at pretty much any hour. Text, email, call if I need anything. Like, I called her from the hill in New Zealand at night, middle of the night in Canada, to tell her what happened. So, she's there for you if you're in her treating room or around the world, which is really really good.

Again, availability seemed to increase the perception of investment in rehabilitation by the physiotherapist. When participants felt unrestricted support, they, in turn, felt more trust in their physiotherapist. Not only could they rely on their physiotherapist to care

about their progress in session, but also to support them any time they needed. This added to the perception that the physiotherapist did not just care about implementing an injury protocol but had an investment in their health at any time.

Honesty. The feeling of trust was greater in participants when the physiotherapist is perceived as being honest. Nine participants talked about a desire for honesty from their physiotherapist. They wanted their physiotherapists to tell them the truth about their rehabilitation status (i.e. if it was going well or not). This included disciplining the participant if it was warranted. Sarah spoke about her physiotherapist using honesty to discipline her adherence issues:

... he told the intern oh you have to write this down because if the surgery doesn't take you know that it's because she didn't listen to you. So, during- during the whole hour he would kind of get little quips coming in saying oh well if you listened to me maybe it wouldn't hurt and stuff like that. I mean it worked a lot in terms of I listened to him after.

The perception of honesty was brought up many times in the participants definitions of trust. For example, Anna stated "she's like honest and she's up front and direct and she's like no BS and I like- that's trust to me", which was also echoed by other participants.

Participants also appreciated when their physiotherapists acknowledged the limits of their knowledge. Dan explained that his physiotherapist being honest about the gaps in her knowledge actually increased his cognitive trust in her:

I don't think I would want to be seeing someone just kind of pretended like they knew what they were doing... if she doesn't know something... she's willing to

kind of tell me that. Yeah, that definitely gives me some confidence. You know, I'm not going to do something that's going to hurt myself because of her.

The quotes from Dan shows the validation check that honesty can provide. If a participant felt that their physiotherapists would be honest about the limits of their knowledge, they could be more certain that the knowledge the physiotherapist did have was valid and would most likely produce positive results. Discussing the limits of the physiotherapist's knowledge also helped some participants feel more included in their rehabilitation process. They found that when they could help the physiotherapist figure out the solution to an issue, they were more able to share in that triumph. Haley discussed this in her interview:

I feel like it definitely like helped me trusting him instead of like coming in very confidently and and then not being able to answer questions... he was really good at like following up on things that he didn't know um and I like really appreciated that. And, like, he'd bring in other physios at the clinic... discuss it in front of me and it wasn't like this side conversation that I didn't get to hear... I just felt like I was a part of my physio every step of the way... I was also learning so it felt like I could trust everything they were saying a lot more

When a physiotherapist is perceived as being honest with their client about how their rehabilitation is going, and the limits of their knowledge, the client has a better understanding and trust in the knowledge they possess. If the physiotherapist attempts to fake their knowledge, then all other knowledge may be called into question. Therefore, creating a perception of honesty with the client may act to affirm the knowledge that the physiotherapist does possess.

Patient-Oriented Communication. All participants in the study discussed valuing medical information about their injury. The subtheme of patient-oriented communication attempts to capture the trust that came when a physiotherapist was able to explain medical concepts in a way that the participant could understand and engage with. When medical information was given to the participant in a way that seemed tailored to their level of knowledge, they felt a better understanding of their injury. During Haley's interview she showed the dynamic factors of patient-oriented communication:

my biggest highlight that trust is built from them being able to like to explain it to me so like I feel like they know what they're talking about. And then they make me feel like I know what's going on. Because I just feel like this is the first time, I've been to a physio that has done it and I'm like wow this experience has been so much better because of it.

Haley felt that since her physiotherapist could explain the medical side of her injury in a way she could understand that she had more reason to trust him. Not only was he exemplifying his own knowledge and competence, but also cared enough to make sure the participant was equally as informed.

How participants received medical information was at times seen as a way to evaluate trust. If the physiotherapist was able to provide medical information in an understandable way, the participant had more confidence in their abilities and their intentions. Dan noted how patient-oriented communication helped him evaluate the knowledge his physiotherapist had, "you can kind of judge based on that a little bit like you know does it make sense did she explain that well?... those discussions give you a lot of confidence. She she does have that knowledge". This showcases that patient-oriented

communication not only helps with the athlete understanding their injury and rehabilitation but also provides validation for the athlete in terms of trusting their physiotherapist's knowledge. The discussion by participants of the effect patient-oriented communication had on their ability to trust their physiotherapist was important in the development stage of trust. The beginning of rehabilitation was when participants wanted the most information and had the most questions surrounding their injury. Having a physiotherapist exhibit patient-oriented communication helped them build trust. They were able to see the physiotherapist being knowledgeable and helping the participant fully understand their own injury.

Shared Knowledge. Creating a pool of shared knowledge was also important to most of the participants. The participants valued getting a lot of medical information, as previously discussed, but also valued their physiotherapist having a lot of information about their body. Eight participants discussed the perception that their physiotherapist has a holistic view of their body, not just their injury. Andrew discussed the benefit of having shared knowledge of his body:

She knows that I'm a generally a pretty tight person... I don't really have to fill her in on anything... she also knows that I'm a very dull person, like I don't really feel much... if I didn't have that connection with her, a lot of things might get missed because she knows to kind of take a deeper look at me.

Andrew's quote seems to suggest the increase in treatment capabilities of his physiotherapists because of the extra knowledge of his body. He also links this to the 'connection' he has with physiotherapist, which may hint at an emotional comfort as well. Four participants noted that going to a new physiotherapist was frustrating because

they did not want to explain all of their medical history to a new person. This may be because of the emotional toll injury has on athletes. It seems to be a lot to unload for the participant to explain all of the specific details of their body. If the physiotherapist knows their body beyond just their injury this could show an increase in investment in the participant by the physiotherapist. Jane's interview shows an example of this:

Here, with a new injury, like everything has to be assessed I- and I just feel like [my past physiotherapist] understood my body just because I worked with him for so long. Whereas, like, now I'm meeting someone who doesn't- who doesn't know me and doesn't know how I respond to certain questions... it was really frustrating.

Here we can see that a physiotherapist understanding the participant's body also means understand their personality. Knowledge of the participant's communication style and body exemplified the dynamic nature of shared knowledge. It was valued by the participants to have all of the medical information they need and to give all of the bodily information they feel is important. It is a two-way investment between physiotherapist and participant to increase the participant's perception that the physiotherapist is capable and that they care which led to participants feeling high trust.

Barriers to Trust Development. When a physiotherapist introduces rehabilitation tools or machines (e.g., electrical stimulation machine) too early in the trust development stage this can cause the participant to question or lose trust. The findings of the study have already shown both the preference for a hands-on approach and the idea that feeling comfortable can help a participant be more open to novel rehabilitation treatments. The barrier of tool/machine use is distinct to the trust development stage as

the hands-on approach and social factors like attention and rapport seem to need time to increase trust before the introduction of machines or tools. This conclusion was made through comparing the difference in participant perception of these tools/machines. Jane, for example, who ended up leaving her physiotherapist's care, expressed her dislike of the stimulation machine "I come see him or like- like when I booked my time to see him and I got just put on stim, I felt very dismissed, definitely". This showed a lack of attention and a feeling of neglect. To contrast this, Anna, who was also put on a similar machine felt it was a positive trust building experience:

... she had to put like machines on me... she had control over them and then like I would say that was where most of my trust was developed because it's not hurting her at all but she was like nice enough to... talk to me through it and like ask me... how it was feeling... I think when you get more invasive with your physiotherapy, for me, that's where I was like I've got trust in her.

Machine or tool use does not seem to be inherently good or bad when comparing the participants' perceptions. However, it can become a barrier to achieving trust when reciprocated care is not felt. From Jane's quote we see that she lacked attention and felt her time was being wasted. This can be linked to a feeling that the physiotherapists have not invested enough care in her treatment. A small majority of participants noted not liking machine or tool use in their rehabilitation. Yet, of those participants, half noted feeling dismissed or left alone during the use of machines/tools which led to their dislike. The other half who did not like machines/tools noted that the trust their physiotherapist helped them overcome their dislike and trust the merit of the machine/tool used. The experience of the latter participants can be seen with Anna. She felt cared for through the

attention and check-ins her physiotherapist gave during machine use. This approach made her see the experience with the machine as increasing her trust. The development of trust is a delicate time and if the participant's emotions are not considered this can cause fractures in the overall trust the participant had with the physiotherapist.

Trust Maintenance

After trust has been established through the trust development stage it is not stagnant. Trust must be maintained by reaffirming trustworthy behaviour. Maintenance of trust as a theme generally indicates the latter half of the rehabilitation process when the participant and the physiotherapist have established their relationship. The physiotherapist working to maintain trust is important to achieving an overall positive rehabilitation experience.

Emotional Management. The sub-theme of emotional management can be understood as approaches that the physiotherapist can implement to keep the athlete mentally stable. Emotional management is based in how the physiotherapist reacts to negative feelings from the participant. Physiotherapists who can implement strategies to combat negative feelings seem to have a closer emotional bond with the participant. When a participant began to feel impatient with their rehabilitation, the reaction of their physiotherapist could influence the maintenance of trust. A small majority of participants talked about how their physiotherapist validated their frustration and brought perspective to their progress as a way to mitigate their impatient feeling. This can be exemplified by Haley discussing an emotional day at during rehabilitation:

I just broke down... he just like shut the curtain and whatever and we just like sat there and he just let me like bawl... I was just like it just doesn't work and he was

like... I know it sucks but like you need to fail... think about it... halfway through we could like feel something, like, start to, like, turn on so, like, we needed to do it. Like it worked and I know like your frustrated... in the end I was like you're right.

This was a highly emotional time for Haley, and she thought her physiotherapist reacted with care and knowledge. She felt that her physiotherapist let her express her emotions and then provided perspective on what she had accomplished during rehabilitation that day. Haley was able to regain emotional stability and have more realistic expectations of the difficulty of rehabilitation partially due to the reaction of her physiotherapist during her emotional state.

Reminding the participant of the progress they have made could also be done before an emotional breaking point to keep positivity in recovery. Tanner discussed his physiotherapist's habit of pointing out his progress:

... she would kind of remind me like remember like two days ago when you were all bummed out when you couldn't- you couldn't do that thing? Like now you can do this, like we're getting somewhere... it was like acknowledging as you were- as you were accomplishing things. That helped.

Reminders of progress seemed to be very comforting to the participants. This may be because of the length of rehabilitation is particularly concerning for athletes. Some participants talked about how the length of their injury was difficult to come to terms with. For example, Dan said "I knew it was going to be like a significant amount of time... it was just kind of like frustration and maybe like a little bit of fear... I knew it was going to be kind of a tough journey". The length of injury may also increase the need

for emotional management as Haley stated later in her interview “you're in it for the long haul and if you don't trust them then there's like no point in going because a huge part of physio is the emotional side”.

Emotional management was important to participants who valued comfort from their physiotherapists in times of emotional hardship. Once again, it is important to note that two participants, Rebecca, and Sarah, did not seem to value this emotional aspect of trust as much. These participants had a shorter recovery time and perceived their athlete-physiotherapist relationship as transactional. Trust in the physiotherapist's capabilities was important to them, but they felt their emotional needs were being met through their friends and family.

Rehabilitation Progress. The subtheme of rehabilitation progress was found to help maintain trust. The main purpose of the participant-physiotherapist rehabilitation relationship for the physiotherapist to aid in the rehabilitation process. Initially, participants needed to make a leap in logic to trust their physiotherapist's abilities. At the trust maintenance stage, the participant needed to affirm this trust through seeing progress in their rehabilitation. If progress was happening, this helped the participant maintain trust. All of the participants talked about feeling good about rehabilitation when they saw progress. The faster progress was seen, the more confident the participant felt in their ability to get through rehabilitation. For example, Tanner said:

I think like within like a week or so when I was already seeing like ‘oh I can do this’ ... So, I think once I was just able to start accomplishing little things, I was like yeah, I'll be I'll be fine. I don't know exactly when but it's going to be fine.

This point was echoed by Sarah, “When I started to be able to do more stuff than I had the week before and I had you know, improvement every week that’s when I was like okay I can do this”.

Rehabilitation progress seemed to be fundamental to the maintenance of trust. When rehabilitation progress happened, it validated the trust that has already been established. When rehabilitation progress did not happen, trust was questioned. Lack of progress will be discussed in the barriers to trust maintenance section. If the characteristics of the previously discussed subthemes were not present, participants were willing to stay with their physiotherapist but had a less favorable experience. However, when there was a lack of progress, participants opted to leave their physiotherapist.

Solution-Focused. When the physiotherapist is perceived as actively pursuing alternative measures to overcome issues with adherence and progress, trust was high. Being solution focused helped maintain trust as it reflected the physiotherapist’s competence in finding a solution and re-affirmed that both the participant and the physiotherapist were dedicated to achieving their rehabilitation goals. Most participants referenced their physiotherapist taking time to find a specific solution for their needs that was not present in their existing protocol. James gives an example of trust being influenced by solution-focused thinking when his physiotherapist personalized his exercise regimen:

she would kind of take that time to maybe formulate exercises 4 ways we could try and mimic those positions maybe not as forcefully, um, but just to try and kind of like load the ankle just enough so that it kind of becomes like acclimatize to certain positions, um, so I think it was just that effort in terms of understanding

okay, um, kind of what position is the ankle kind of going through here how can we kind of mimic this.

The physiotherapist is able to uphold the perception of being capable by providing novel ideas for the protocol and the perception of having a mutual goal by considering the participant's specific needs. The physiotherapist having a solution focus can also be helpful when addressing the participant's questions. Anna spoke about her physiotherapist disclosing extra effort to find her answers, "she's done research on her own time to uh make sure that she has like the best exercise... because there's just some exercises that I can't do because I'm not- I don't have very much mobility." When a physiotherapist talks to the participant about the time or the resources, they had put into finding solutions, the participant trust was maintained. Stephanie spoke to this in her interview, "he's always telling me about things that he's done outside of the time that I've seen him and um. So that sort of solidifies that I know that he's working like hard towards... getting better basically." Making the participant aware of the extra effort to find solutions again helps their perception that both they and their physiotherapist are putting in the same amount of work and have the same vested interest in success.

Barriers to Trust Maintenance. Much like the discussion of rehabilitation progress, the lack of progress has the opposite effect and can lead to diminishing trust. Three participants talked about stalls in progress leading to their questioning of trust. Of these three, two opted to leave their physiotherapist because the physiotherapist was perceived as incapable of finding a solution. Jane spoke about the emotional distress this caused:

I was going to physio and like nothing was changing like in the same kind of discomfort and then yeah it was just a lot of frustration and calls to my mom like I can't. Like I'm going to physio and nothing, nothing is getting better.

The perception of a non-solution focused physiotherapist was clear from James as well:

I think it's just a lack of results. I- I mean I had we had spoken with her too about maybe trying like if there were any not even a different approach but any other protocols or any other exercises that I could do and... she just didn't think that they would be as beneficial as what we had been working on... I had felt like I had kind of tried out that protocol long enough to determine whether or not it was working for me.

In both Jane and James' case they left their physiotherapist to seek a new approach.

However, these participants also talked about how they would still see the physiotherapist they left for more minor injuries. This may be because of the personal relationship they had cultivated with their physiotherapist. Both participants talked about how they liked their physiotherapist as a person but had lost trust in their ability to treat their major injury. It could be possible that athletes consider low trust more valuable than starting over with a physiotherapist they have not established any trust in. With only two participants who chose to seek a new physiotherapist it is difficult to assign meaning to this notion but could be an interesting future direction of this research.

Partnership

In considering the trust stages and the sub-themes, trust seems to be a vehicle for participants to feel they are in a partnership with their physiotherapist. The theme of partnership can be found in the fourth row of Table 2 and is a product of the formation of

trust using the subthemes from the first three rows of the table. The participants want to feel that they are in equal cooperation with their physiotherapist to reach their rehabilitation goals and that both the physiotherapist and the participant are putting in an equal amount of effort and share an equal investment in the result of rehabilitation. When the participant's trust is high and the subthemes presented are helping trust at each stage, the feeling of partnership is present. When partnership was present, four additional subthemes were discussed by participants as positive outcomes.

Shared Success and Failure. Participants appreciated the feeling that their physiotherapist shared in their joy when things went well and their disappointment when things went wrong. When the physiotherapist's emotions matched the participants in times of success or failure the participants felt their partnership validated. An example of shared success and the validation felt came from Dan:

So, it was actually the week that she was away... I started walking again... she said oh I'm going to text the physio you're going to be seeing instead of me to see how it goes because she really wanted to be there to see kind of the steps that I would be taking. Um, so that was kind of sweet and nice to know that, you know, she really cared, and she wanted to see my progress I guess as like a sign that I was getting better.

An example of shared failure came from Anna when her injury regressed after returning to her military job "she was equally as shocked as I was... because it was such a major setback... like I was swearing a lot uh like not at her but with her like she was equally upset". When this idea of shared success and failure is present it can also act as a buffer to possible trust barriers. As previously discussed, lack of progress can be detrimental to

trust maintenance but when partnership has been established through trust, participants seemed more willing to take personal responsibility. Haley spoke to this in her interview:

I feel like it's almost like in the end if something happens it falls back on both of us. Like, if I start to fail at something, like, I feel like it's not just my fault like I feel like he also takes some like ownership for it... were both on the same page with everything the whole time like just like a mutual understanding, I guess.

What could have the potential to be blamed on the physiotherapist's approach is now a shared failure and a shared responsibility to overcome. When partnership is present, shared success and failure are positive outcomes as it may lessen the burden of effective rehabilitation from the physiotherapist and empower the athlete.

Positive rehabilitation experience. Participants who felt they were in a partnership with their physiotherapist felt satisfied with the treatment they received. The vast majority of participants in the study were happy with the care their physiotherapist provided. Some discussed feelings of pride towards their rehabilitation, some expressed feeling like they were a more capable athlete because of their rehabilitation, and some felt it transformed the way they valued trust in rehabilitation. Haley had this to say about trust in rehabilitation after experiencing partnership with her physiotherapist:

In the past I would've said yes trust is important, because I like thought I had trust in my physio but didn't really... I think now, especially with like a big injury... like you're in it for the long haul and if you don't trust them then there's like no point in going.

Additionally, some participants talked about enjoying acquiring new skills from their physiotherapists to prevent future injury. Tanner provides an example of how a positive rehabilitation experience can help beyond rehabilitation:

The one thing that has been really good was that um... the way I treat my body kind of every day... I'm doing a much better job preparing myself... like my warmup has gotten a lot better um, being able to judge my fatigue levels and when I might need a rest has gone better. Um, so I think those habits should be a good thing in the long run. Um, I mean I wish I didn't get hurt obviously but it was major enough that I think there are a lot of positives as well.

Partnership in rehabilitation aids in the feeling of a positive outlook on subjective health outcomes and can motivate participants to continue implementing their new knowledge in the future.

Rehabilitation as a Safe Space. Participants discussed the emotional toll of injury and the negative impact it had on their day-to-day lives. When partnership existed between the participant and the physiotherapist, rehabilitation was seen as a place to go where they could be honest, vulnerable, and relaxed. As previously stated, rapport and social bonding was important to the majority of the participants. They wanted to feel comfortable and cared for in the physiotherapist environment. When a physiotherapist can provide a safe place for participants to feel mentally and physically relaxed this can be a welcome escape from the burden of injury. Dan spoke to this feeling of solace:

I think for me at least when I was in recovery for this injury you don't have a lot of calmness in your life. Everything is a little bit more tense or frustrating or

annoying. I don't know so being able to relax and you know just feel kind of comfortable while you're recovering. It's a good thing.

Loyalty. The loyalty that participants felt when they had a partnership with their physiotherapist was high. More than half of the participants spoke directly to the idea of loyalty. This loyalty was spoken about in three contexts. First, that they would want to see that physiotherapist again if they had another injury. For example, Stephanie said “I definitely do feel like some sort of loyalty to him so I think at this point I would never go look elsewhere”. Second, that they would trust a referral that their physiotherapist gave them. For example, Tanner said:

I was away from her and then she said ‘hey go see [a new physiotherapist], I think she’s awesome, you'll like her. And I had enough trust in [my main physiotherapist] that I... just trusted [the new physiotherapist] right away because well [my main physiotherapist] thinks she’s great so she must be great.

Third, they trusted their physiotherapist over their doctor (three participants noted this).

For example, Haley shared her opinion of getting advice from her surgeon:

[My physiotherapist said] we should probably check if it's okay with the surgeon if it's okay to... [get] rid of the cane and I was like why? Like he's not a part of this like... I just felt like surgeons are so like in their own spot that, like, now I don't really care what he has to say... [I] focus on exactly what my physio is thinking the whole time because like he's been with me the whole journey

Loyalty can be a powerful outcome of established partnership as it can affect future rehabilitation, trust transfer, and trust in medical advice. Physiotherapists should be aware

of the loyalty that comes with the creation of partnership as high trust can lead to more importance being put on the things they say.

Summary

The findings of the research study have provided a comprehensive account of how the researcher has understood how trust is developed and maintained in the athlete-physiotherapist relationship and what subjective outcomes could come from trust. The trust stages encompassed three major milestones of trust that were present in the participant interviews: baseline trust (trust before treatment began), trust development (in the early stages of rehabilitation), and trust maintenance (after the trust level had been established). Trust in the context of this study acted as a means to form an equal rehabilitation partnership. When partnership was established, participants reported feeling that success and failure were shared, positivity about their physiotherapy experience, seeing rehabilitation as a safe space, and having loyalty to their physiotherapist.

The findings of this study are specific to the participants that were interviewed and reflect both their lived experience and the researcher's interpretation of the data. From these findings we can see how the participants assigned meaning to trust in their physiotherapists and how that effected their perceptions of rehabbing their sport injury. In the discussion chapter these findings will be compared to existing research to further understand the implications of the research.

Chapter 5: Discussion

The purpose of the research study was to explore how athletes develop and maintain trust in their physiotherapist during injury rehabilitation and explore the impact trust has on subjective recovery outcomes for athletes. Through the findings chapter, major themes and subthemes were reviewed. The discussion chapter provides context to position the findings within existing literature, examine novel findings more closely, and consider the implications of the study as a whole. There were four major themes of the study, three to address how trust was developed and maintained and one to address the subjective outcomes when trust was present. Themes that involved the stages of trust were baseline trust, trust development and trust maintenance. The theme that involved outcomes of trust was partnership. Under each of these themes were 3-4 subthemes that further characterized the major theme. This chapter will expand on the themes and subthemes of the findings through discussing overarching concepts found in multiple themes as well as how specific themes fit within our current understanding of the literature. The chapter will cover the interaction between emotion and trust, exploring cognitive and affective trust, and the impact of practitioner-client trust. Following this discussion, strengths and limitations, future directions, and practical implications will be discussed. The goal of the discussion chapter is to review and contextualize the findings of the study and provide insight into its academic merit.

Interaction between emotion and trust

Throughout this document the concept of the athlete's mental state in connection to their injury and their rehabilitation has been discussed. The researcher proposed that the meaning an athlete assigned to their injury produced a host of negative emotions that

were comparable to the grief experienced from the death of a loved one as referenced by Zakrajsek and colleagues (2017). Further, the mental recovery from injury was noted as an important part of the athlete's rehabilitation as a whole in work from Podlog and colleagues (2014). The aspect of emotion was considered a means by which trust was needed. An emotional athlete may need to trust a physiotherapist because a trusting relationship may contribute to the athlete's ability to regulate their emotions.

When considering the findings, emotion seemed to play a role in trust during the rehabilitation process. Participants expressed a range of emotions during their interviews. From frustration with their injury and frustration with their physiotherapist, to happiness with their physiotherapist, and pride in their recovery. The emotional aspect of trust seemed particularly prevalent within the subthemes of social familiarly, rapport, attention, and emotional management, patient-oriented communication and rehabilitation progress (Table 2). Emotions toward the physiotherapist seemed to be more positive as their personal relationship grew and as progress was seen. The innate connection that was seen between positive emotions and increasing trust factors was also seen in the partnership theme. The subthemes of having a positive rehabilitation experience and feeling physiotherapy is a safe space were both connected to positive emotions toward rehabilitation.

With the aspect of emotion prevalent withing many subthemes of the study, a further look into the literature between trust and emotion was warranted. Dunn and Schweitzer (2005) provided an overview of five studies they conducted on the relationship between trust and emotion. They found 120 participants from a local train station to participate in differing surveys in exchange for a candy bar. In their first study

they found that happy participants were found to be more trusting than sad participants and sad participants were more trusting than angry participants. In the context the findings from this research study, this seems partially true. Those whose negative emotion towards their recovery lasted longer had more trouble trusting their physiotherapist as seen with participants Jane and James who ultimately left the care of their physiotherapists. Those with positive emotions toward their recovery seemed to develop trust more quickly as seen with the majority of the participant pool. However, the negative and positive emotions did seem to be heavily linked to the recovery status of the participant.

Most participants experienced negative emotions toward their injury before rehabilitation started and grew more positive as progress was seen. This may be contextualized by the third study from Dunn and Schweitzer (2005). This study accounted for the perspective of control on the emotional impact of trust. The participants were grouped by either the feeling of having control or the feeling that another person had the control. When the participant perceived the other person as having control, trust was influenced by emotion (negative emotion decreasing trust, positive emotion increasing trust) more than when there was a perception of personal control. Within the findings of this research study, the feeling of control seemed to increase when rehabilitation progress was seen. Specifically, as quoted in the findings, Tanner and Sarah remembered thinking “I can do this” when they started seeing progress. Feeling that what they were doing was positively impacting their rehabilitation was empowering to the participants. This increase in the perception of control could be linked to an increase in mood and ultimately an increase in trust. When progress was seen, emotional impact was

less likely to influence trust as the participant felt more in control of their personal recovery through the establishment of partnership.

In contrast, participants felt a lack of control in their injury at the beginning of rehabilitation. The negative emotional state may have made baseline trust important for them to obtain as a way to regulate their own emotions. The perception of control was not as present with Jane and James' interviews where negative emotion and lack of control may have made it harder for them to maintain trust in their physiotherapist. Again, in referencing the findings, Jane stated that there was "negativity all around" in her last rehabilitation experience. This could be related to the Dunn and Schweitzer (2005) findings that when there is a perception of other-person control (in this case the physiotherapist being in control) then their negative emotion could also influence the lower trust they felt toward their physiotherapist.

Dunn and Schweitzer (2005) defined the negative emotions in their study as anger and guilt. In a more recent study by Myers and Tingley (2016), they refute that anger and guilt are linked to a decrease in trust and instead found that anxiety may be the negative emotion that influences trust decrease. Myers and Tingley (2016) defined anxiety as the negative state influencing trust when the participant experienced a lack of control. The negative emotion of anxiety may also be present within the current study's findings. Lack of progress as a barrier to trust would most likely illicit anxiety in the rehabilitation timeline and may be why both Jane and James felt increasing frustration and impatience with their rehabilitation. Furthering the possibility that negative emotions could be linked to a decrease in trust when control is perceived as low. Regardless of the dispute in the research between Dunn and Schweitzer (2005) and Myers and Tingley (2016), there does

seem to be evidence to suggest that control appraisal and emotion have some influence on trust. The influence of control appraisal and emotion were also present in the subtheme of rehabilitation progress, which was a vital part of trust maintenance.

We can also consider that trust may be influencing emotion instead of emotion influencing trust. Belli and Broncano (2017) explore trust as a ‘meta-emotion’ in a philosophical context. They define meta-emotions as underpinning structures that can produce and influence more commonly accepted emotions such as happiness and frustration. Trust was seen as a meta-emotion when relationships needed to be sustained. They noted that having trust would give rise to positive emotions and that having distrust would give rise to negative emotions. In the context of this study, the ties between trust and an emotion seems to provide a paradox in some ways. Do the emotional states throughout rehabilitation foster trust, or does the development of trust foster positive emotion?

It could be argued that emotion and trust work dynamically. Baseline trust was important to participants because of the emotional impact of their injury. The majority of participants felt negative emotions at the beginning of their injury and thus sought a physiotherapist with social familiarity, contextual knowledge, or past success. The participants wanted someone that they could establish baseline trust within an attempt to feel better about their rehabilitation prospects. If the participant was able to gain a greater perception of control by experiencing rehabilitation progress, their emotions seemed to have less impact on the trust they had in their physiotherapist. Instead, there was a shift to a shared failure and success mindset where although participants could still feel negative and positive emotions, these were perceived as shared experiences with shared responsibility. The perception of sharing the emotional side of injury seemed to negate

the emotions themselves having an influence on trust. Alternatively, it seemed to be more difficult for the participants to gain a sense of control over their rehabilitation if they felt their physiotherapist was not solution focused. These participants felt stuck in their negative emotions (whether anger or anxiety) because they did not feel a solution could be reached in their current athlete-physiotherapist dynamic. The lack of solution focus leading to a perception of a lack of control over their rehabilitation may have been an exacerbating factor in decreased trust. The physiotherapist's reaction to the emotions of their patient could also play a role in the ties between trust and emotion in terms of the context of affective trust.

Affective Trust

As previously discussed, affective trust has been characterized by establishing good communication, having a mutual goal, and feeling reciprocated care (McAllister, 1995). The factors of affective trust can be seen in some of the subthemes previously discussed. Table 3 outlines the subthemes of social familiarity, rapport, attention, emotional management as being directly tied to affective trust. Participants talked about overcoming fear when rapport was established, feeling cared for when their physiotherapist gave them attention, feeling more mentally stable when their physiotherapist gave them perspective.

Particularly, the response from physiotherapists to give the participant perspective on their recovery when participants felt negatively about their recovery seems to link to the goal setting research by Avinen-Barrow and colleagues (2009). Physiotherapists felt that it was important to provide positive feedback about how close an athlete came to their goal when a goal was missed. This was mirrored by the participants in this study

and captured in the subtheme of emotional management. In times of emotional instability, participants talked about the comfort they felt from their physiotherapist discussing how far they had come since they started rehabilitation. Reminders of progress was noted as important to creating a positive rehabilitation experience in both the Avinen-Barrow and colleagues study and this study. The agreement from both the physiotherapist perspective and the athlete perspective that reminders of progress helps the emotional state of the athlete is promising in terms of practical implications of this comfort strategy.

Attributes from the Therapeutic Alliance also seemed to align well with the findings of this study in several areas. In terms of affective trust, the attributes of ‘seeing the person’ and ‘communication’ (Søndenå et al., 2020) that were compared to affective trust are similar to the Trust Development theme of this study. Rapport and attention align well with self-disclosure and seeing the person beyond the pathology that was used to describe ‘seeing the person’. While attention, patient-centered communication, and honesty all align with the ‘communication’ attribute which was described as using the patient’s background and active listening to achieve good communication. This also expands on the Therapeutic Alliance described by Søndenå and colleagues. For example, the findings from baseline trust was a major theme of this study. If the athlete was able to feel a personal connection to the physiotherapist or felt that the physiotherapist understood their world this could illicit a similar feeling of being seen as a person beyond their pathology (in this case their injury) as seen in the Therapeutic Alliance. From framing trust as a temporal concept through the major themes of this study it also suggests that some of the attributes from the Alliance may be more important at certain stages and that overall, the Therapeutic Alliance may be based in the patient seeking to

develop and maintain trust in their physiotherapist. If building trust is important to the participants of this study, then it may need to be more heavily incorporated into our current understanding of the Therapeutic Alliance. Understanding the patient's perspective on how certain points of the Therapeutic Alliance increase their trust can contextualize why these attributes are important to patients and may help with implementing them.

Social support was also discussed in the literature review as something athletes needed during recovery. Receiving social support from rehabilitation providers had been linked to athlete satisfaction, adherence, and motivation (Forsdyke et al., 2015; Hildingsson et al., 2018; Podlog et al., 2010). In considering the subthemes that seem to align with our understanding of affective trust (Table 3) these are also present in our understanding of social support. The subthemes of rapport and attention are both aspects of social support. Feeling that the participant had someone to turn to (i.e., someone to give attention to their needs) who was invested in their lives (i.e., established rapport) was valuable in the development of affective trust. From this specific participant pool, the characteristics that would lead to feelings of social support from their physiotherapist seemed to double as a means to establish affective trust. The findings from this study can contextualize why having social support leads to positive subjective health outcomes as social support seems to be a byproduct of the development and maintenance of affective trust.

Finally, the lack of emotional connection in two of the participants goes against the general ties between emotion and trust and the need for affective trust in obtaining an ideological level of trust. For these two participants, emotions were rarely discussed with

their physiotherapist and they did not feel they needed the physiotherapist to provide emotional support. Both participants claimed that the support from friends and family was enough for them to be able to appropriately manage their emotions through rehabilitation. Other participants in the study discussed their personal support but still valued emotional support from their physiotherapist as it seemed to help with affective trust. There was not enough data to draw the conclusion that the two participants who did not need emotional support had greater personal support than the other participants. When trying to contextualize this finding, looking back on the theoretical model from Lewis and Wiegert (1985) may give some explanation as it compared differing levels of emotionality and rationality. The experiences of these two participants would fall under the category of virtually absent emotionality and high rationality which was no longer labeled as trust but was instead labeled as rational prediction. These participants both considered trust as an important factor of their rehabilitation but from an academic standpoint may not have actually experienced the concept of trust but instead engaged in a rational perfection of a positive outcome because of the perception that their physiotherapist was capable of helping them. This is a finding which contradicts the existence of trust in the athlete-physiotherapist relationship and may need to be explored further in future studies.

Table 3***The Categorization of Subthemes into Existing Factors of Trust.***

Stages of Trust	Factors of Trust		
	Affective Trust	Cognitive Trust	Dynamic Trust ^a
Baseline Trust	Social familiarity	Contextual knowledge	Past success
Trust Development	Rapport Attention	Honesty	Patient-oriented communication Shared knowledge
Trust Maintenance	Emotional management	Rehabilitation progress	Solution-focus

^aDynamic trust refers to subthemes of trust which encompass aspects of affective and cognitive trust that seem to work together to produce an increase or decrease in trust.

Cognitive trust

Cognitive trust is the perception that another person or thing has the capabilities to help you achieve a goal you otherwise could not (Lewis & Wiegert, 1985). Cognitive trust seems to align well with the three subthemes of contextual knowledge, honesty, and rehabilitation progress (Table 3). The participants generally assumed that their physiotherapist would have the skills required to rehabilitate them. The faith in professional knowledge seemed to be an accepted part of baseline trust which was not discussed in any depth in the interviews. It seemed as though participants felt that seeing a physiotherapist for their sport injury was a natural step in their healing. Consequently, the subthemes that seem to link to cognitive trust create the perception of additional knowledge (contextual knowledge), or additional affirmation (honesty and rehabilitation progress) on top of what was already assumed.

Contextual knowledge of the participant's injury and sport was reviewed in the findings. Experience with injury seemed to not only validate the perception of the physiotherapist's knowledge, but also mobilized it. The participants felt higher baseline trust when their physiotherapist not only had the knowledge to rehabilitate their injury, but also had experience in applying this knowledge. This may mirror the findings of Newman and colleagues (2011) who specified that consistency was an important part of trust. When a physiotherapist had shown a consistent track record of rehabilitation success with an injury, even if it was not the participant's own injury, cognitive trust was increased.

The idea of sport specific knowledge increasing cognitive trust is more specific to the athlete context of the study. This may be a result of the concept of athletic identity (Cieslak, 2014). If the physiotherapist can show they are knowledgeable about the participant's sport it could also signal to the athlete that they will understand the athlete's identity and priorities if they have a high athletic identity. Sport specific knowledge was seen by the participants as an additional and meaningful source of knowledge. However, this may not be inherently true. Knowledge of a sport does not automatically assume a greater capability in treating that injury, but this perception was prevalent in the participants. The role of athletic identity building the perception that part of an athlete's selfhood is tied to their sport can contextualize why this knowledge may affect their cognitive trust. If a participant felt that their identity was based in their sport, they may feel the need to have their rehabilitation based in their sport as well, or at least see it as an added benefit.

Whether or not the objective outcomes of the participants with a physiotherapist who had sport specific knowledge was actually greater cannot be obtained by the methodology of this study. However, the perception that sport specific knowledge helped in recovery was found in the participant interviews, therefore objective reasoning such as athletic identity can be discussed as a possible justification. This also links to the importance of capturing the lived experiences of the participants through the current methodology. Sport was a meaningful part of their life and thus had implications on their experience with trust. When a physiotherapist was able to exhibit care that encompassed injury knowledge and knowledge of what the participant found to be a meaningful part of their life, cognitive trust was increased.

The subtheme of honesty for the physiotherapist is an interesting finding for the current study. The conventional understanding of cognitive trust is having the knowledge to help someone achieve their goal (Lewis & Wiegert, 1985). A physiotherapist's honesty about the limitations of their knowledge would logically decrease cognitive trust as it presents a gap in overall capabilities, but the opposite was true in this study. Being honest about knowledge limits increased cognitive trust. Participants discussed their appreciation for a physiotherapist who admitted the limits of their knowledge. Some also mentioned that they would not want someone who 'faked' their knowledge. In this sense, acknowledging the limits of knowledge and capabilities validates the knowledge and capabilities that do exist. It would validate the cognitive trust by creating a perception that the physiotherapist would not perform an action or answer a question that they were not confident would help the participant. Having examples of the physiotherapist being honest about the limits of their knowledge creates security in trusting their treatment.

This is not a completely novel finding. Manderson and Warren (2010) found a similar concept with physicians' disclosure limits of knowledge as part of trust building. Participants saw this disclosure as a facet of honesty to reaffirm that their physician was not withholding information from them. The findings for this study suggest that knowing the limits of physiotherapist's knowledge increases cognitive trust which is why this behaviour would be associated with positive physiotherapy outcomes. Having agreement across trust factors in medical contexts may support a practical application for practitioners to engage their patients.

Finally, seeing rehabilitation progress was noted as a major subtheme of cognitive trust. This subtheme acted to maintain cognitive trust as participants felt that seeing progress was a good predictor of future progress. This subtheme seems the most closely related to the original definition of cognitive trust as a trust factor characterized by believing the capabilities of someone being able to help you (Lewis & Wiegert, 1985). The physiotherapist being able to help the participant reach their goal was affirmed when the participant was able to feel physical progress towards their rehabilitation goal.

Dynamic Trust

The literature review discussed the varied support on whether affective trust and cognitive trust work as separate entities (Lee & Lin, 2010; Manderson & Warren, 2009) or dynamically to achieve overall trust (Hannawaa et al., 2015; Klaber & Richardson, 1997; White et al., 2011). When considering the findings of the current study, both streams of research seem to have merit. The subthemes that have been linked to in the affective and cognitive categories thus far in the discussion seem to have distinct antecedences and consequences as initially described by McAllister (1995). The

remaining subthemes in trust development and maintenance are more closely aligned with a dynamic perspective that encompasses factors of both cognitive and affective trust working together. These subthemes are past success, patient-oriented communication, shared knowledge, and solution-focus (Table 3).

Dynamic processes have been discussed by Klaber and Richardson (1997) and found that reassurance produced positive outcomes for physiotherapy patients if it was also accompanied with medical information. In exploring the subtheme of patient-oriented communication a similar structure was found as participants felt higher trust when their physiotherapist was able to communicate medical information in a way that was easily digestible for that particular participant. It seems that knowledge is not enough to develop trust and the positive outcomes of trust if it did not consider the participant who was receiving it. Conversely, a personal relationship with the physiotherapist is not enough to maintain trust if there seems to be a lack of knowledge (as seen in the lack of progress trust barrier). Klaber and Richardson (1997) did not attribute the positive outcomes of medically informed re-assurance to the underlying motivation of trust. Through considering this research study's findings, participants wanted this duality in communication to further deepen their trust, which further contextualizes the findings of previous studies.

Impact of Trust in the Client-Practitioner Relationship

The findings of this research indicated the theme of partnership as a means to address subjective outcomes of trust. The purpose of this study included the examination of subjective recovery outcomes. Not all participants in the study had fully recovered from their injury at the time of interview. Some participants were still in rehabilitation,

and some predicted that they would have been fully recovered by the time of their interview, but the COVID-19 pandemic had prevented them from finishing their rehabilitation plan. As stated in the considerations section of the findings, if the purpose did not align with the data collected, then it would not be fulfilled. Discussion of the subjective relationship outcomes that came from trust was more prevalent in the interviews and therefore the theme of partnership was noted as a major finding.

Overall, the subthemes of the partnership theme align closely with the attributes of the Therapeutic Alliance described by Søndena and colleagues (2020). Particularly, the subtheme of rehabilitation as a safe space is reminiscent of the ‘therapeutic space’ attribute and the shared success and failure subtheme is reminiscent of the ‘sharing the journey’ attribute. Both the rehabilitation as a safe space and therapeutic space reference the value that patients feel in associating their physiotherapy space with comfort and safety. Both also link this feeling to an ability for the patient to be more prepared to engage with their treatment both physically and mentally. Shared success and failure and sharing the journey reference the value patients have in feeling that their physiotherapist is equally as invested in their recovery as they are. The shared journey, however, centers on the physiotherapist helping the patient find independence and validating their experiences whereas the shared success and failure for this study centers around sharing the mental load of injury. This may showcase differences between taking the perspective of the patient or the physiotherapist. Sharing the journey may be based in helping the patient become independent but to the patient, it may be more about feeling that the physiotherapist is sharing the responsibility of recovery. This may also be because of the study population. Athletes have unique pressure on their rehabilitation in terms of their

sport status and thus sharing the journey in this context may also mean sharing the pressure of return, which would present a unique way to validate their experience.

When comparing the Therapeutic Alliance to the current study, the overlap of both trust themes and the partnership theme is an interesting comparison. Research into the Therapeutic Alliance was conducted after the findings were reported so to find such close alignment further validates the Therapeutic Alliance as a beneficial lens through which to view physiotherapists. It also expands the understanding of the Therapeutic Alliance as a means by which to develop and maintain trust, which was seen as an important factor of rehabilitation for the participants of this study. Partnership was an outcome of trust in this study, however this distinction between attributes that may be outcomes of other attributes has not been discussed in the review of the Therapeutic Alliance. Therefore, this research could strengthen our understand of the Therapeutic Alliance by suggesting the motive of trust as an underpinning concept to the attributes of the Alliance as well as framing parts of the Alliance on a temporal scale, which has trust antecedence and partnership outcomes. Knowledge of what motivates the Therapeutic Alliance for patients and how baseline, development, and maintenance stages may produce some of the attributes of the alliance can help with physiotherapists implementing these behaviours in a sport rehabilitation setting. Exploring the subthemes of partnership will aid in understanding the impact of trust in the client-practitioner relationship

Shared Success and Failure

The subtheme of shared success and failure captured the participants' willingness to accept responsibility in issues with rehabilitation as well as the perception of equal

investment in their goal. The shared responsibility of failure seems related to the buffering effect of affective trust that was examined in the literature review. Both White and colleagues (2011) and Hannawaa and colleagues (2015) referenced aspects of affective trust as a means to maintain overall trust when a medical mistake was made. Hannawaa and colleagues outlined attentiveness and interest and conversational turn taking as some of the physician behaviours linked to increase patient forgiveness. Attentiveness was a direct subtheme of this study, conversational turn taking could be seen in relation to rapport or patient-oriented communication. The physician behaviours noted by Hannawaa and colleagues were specific to the moment of a physician giving news of a mistake to the patient and was done through a simulation.

In terms of this research study, this concept can be further expanded upon. When trust was maintained over a period of time the data from participants in the study explained the possibility of a buffering effect of affective trust. Their established partnership did not necessarily buffer from rehabilitation issues. Participants who experience partnership seemed to shift the blame of rehabilitation issues to a shared experience and not a one-sided mistake needing forgiveness. This could be from the longer trust exposure, the influence of environmental validity over a simulated experience, or the contextual difference between a physician working with a patient versus a physiotherapist working with an athlete.

Positive Rehabilitation Experience

A positive rehabilitation experience was found in relation to goal setting and social support from the rehabilitation provider in existing literature (Hildingsson et al., 2018; Yang et al., 2010). Surprisingly, the majority of the participants within the research

study did not find goal setting as a significant part of their rehabilitation. Some noted feeling as though goals may have hindered their positivity toward rehabilitation as not reaching a goal would have been hard to overcome mentally. This is not to say that goal setting was not present, a general goal of recovery or return to sport was noted by the participants but an active goal setting process was only noted by one participant.

Instead, the theme of rehabilitation progress seemed to replace the need of goals and helped create a positive rehabilitation experience. Participants noted that smaller goals were not explicitly stated, but that once they mastered certain exercises (their perception of seeing rehabilitation progress) they would move on to the next stage of their rehabilitation plan. It could be possible that the physiotherapist had a set goal setting structure that they either chose not to share or was perceived as unimportant by the participants. The subtheme of rehabilitation progress did have similar outcomes of motivation and adherence as noted in goal setting research (Avinen-Barrow et al., 2009) and could be seen as a type of stand-in for the influence of goal setting in this research study.

Social support was present in the participant data but was broken down to more specific trust-related factors. Rapport, attention, emotional management, and patient-oriented communication all related to the concept of social support from their physiotherapist. Social support broken down into more behaviour focused aspects could increase the practical implications that can be derived from this research. Breaking down these factors also provides a clearer link to how trust may be motivating the increasing of social support as seen from Yang and colleagues (2010). Literature has demonstrated that social support may be linked to satisfaction, motivation, and adherence, which can be

seen as contributing to a positive rehabilitation experience (Forsdyke et al., 2015; Hildingsson et al., 2018; Podlog et al., 2010). The current study related a positive rehabilitation experience to the establishment and maintenance of trust, which encompasses aspects of social support in relation to affective and dynamic trust building (Table 3).

Rehabilitation as a Safe Space

The perception of rehabilitation as a safe space is a novel finding for the current research study. Previous work by Clement and colleague (2015) briefly mentioned how some participants looked forward to their rehabilitation sessions and found it as a space to receive social support. For participants in the current study, feeling that physiotherapy was a safe space for socialization, challenging protocol, and pushing one's self was prevalent. The establishment and maintenance of high trust meant that participants could feel safe in using their voice and pushing their body. They trusted the physiotherapist would be open to hearing concerns and work towards solutions. They trusted that their physiotherapist had the knowledge to properly manage their expectations of pain and difficulty when faced with new rehabilitation challenges. Most participants enjoyed chatting about their own life and hearing about their physiotherapists life as a way to feel comfortable and relaxed during their session.

The lack of existing knowledge on the perspective of a rehabilitative safe space may be because most rehabilitation literature focuses on patient emotions in terms of satisfaction with their experience or comes from the rehabilitation providers perspective. A simple measure of satisfaction or a conversation about enjoyment of rehabilitation, however, may not capture the feeling of solace that participants in this study valued

during rehabilitation. The feeling that their physiotherapist was one of the few people in their life that fully understood their injury and their experience with that injury was a major contributing factor to the feeling of being safe and comfortable in the rehabilitation space.

Loyalty

The subtheme of loyalty to a physiotherapist who was able to develop and maintain high trust was found in the current study. An attachment to return to the physiotherapist with whom they had high trust was noted in several interviews. This finding seemed somewhat pronounced at times with three participants noting a preference for taking their physiotherapist's opinion over a physician's opinion. The strong ties that were created through the rehabilitation process when coupled with seeing positive results made participants feel that their physiotherapist was best suited to help them in the future.

Research on patient loyalty in emergency room services by Liu and colleagues (2010) found that caring behaviours significantly increased loyalty. These behaviours were making sure that the patient is aware of care-related details, working with a caring touch, and making the treatment procedure clearly understood by the patient. Although the context of loyalty is much different in an emergency department, the feelings of reciprocate care, attention, and patient-oriented communication led to an increase in loyalty in both medical contexts. Loyalty research is more prevalent in countries with private healthcare systems where patients returning to a provider has impacts on medical business models. In an integrated review from Beijing, China, Zhou and colleagues (2017) found trust directly related to increased loyalty to a healthcare provider over a review of 13 studies.

Loyalty to a physiotherapist could be described as either good or bad. From the participant's perspective having a physiotherapist they deeply trust to support their sport (and in turn injury) endeavors was seen as a major positive outcome. However, the formation of trust in medical advice that may be beyond the scope of a physiotherapy practice could have negative effects on health outcomes in the future. Prioritizing sport knowledge and personal relationship in the context of medical outcomes could continue to produce stable and successful rehabilitation protocols as the athlete needs over a sport career. Alternatively, a misdiagnosis could cost an athlete time and additional mental strain if a physiotherapist's approximation of diagnosis is wrong and has been trusted by the patient without further consultation with other medical professionals.

Dependency/Trust/Confidence

In the literature review, the researcher proposed a spectrum in which trust, and trust-like concepts of dependency and confidence were defined by differing levels of control. The proposed spectrum can be found in Figure 1 where dependency represents low control and high risk, trust represents moderate control and moderate risk, and confidence represents high control and low risk. The researcher speculated that an athlete's experience with trust in their physiotherapist may fluctuate to these trust-like actors depending in which stage of rehabilitation they were. When considering the data from the study, there is some evidence to both support and oppose the idea of the proposed spectrum (Figure 1).

Dependency

Dependency was speculated as occurring if an athlete felt their injury was high risk and had the perception of little choice in their physiotherapist, possibly from the

physiotherapist being team affiliated. When considering the findings of the study, the subtheme of social familiarity seemed to have the opposite effect. Participants valued having a physiotherapist who was affiliated with their team or had ties to their community as it seemed to aid in the formation of baseline trust. When specifically asked about their thoughts on having a team affiliated physiotherapist or a private practice physiotherapist, participants who liked their team affiliated physiotherapist noted that they felt they had a choice but had not considered any other option because going to the team affiliated physiotherapist simply made the most sense to them. The marriage of logistical convenience and baseline trust did not seem to produce the feeling of dependency but instead the feeling of comfortability and increase knowledge of their lifestyle as an athlete, which was considered an asset. Further, the participant pool contained two injured athletes who made the conscious choice to leave their physiotherapist after a period of not seeing rehabilitation progress. The ability to leave a physiotherapist also suggests that the concept of dependency is not present. From the example Mayer and Ward (2007) provided of dependency during an emergency cardiac event where participants voiced feeling no alternative but to let the physician help them, we can see the difference in risk and control. The participants in this study felt enough control over their injured state to actively choose to leave or stay with their physiotherapist. The risk involved in the injuries presented in the participant pool were not high enough to elicit a dependency on the physiotherapists.

Trust

Trust was recognized throughout the interviews as a concept present in the athlete-physiotherapist relationship. As the main focus of the study was the concept of

trust, this section of the spectrum will not be as deeply explored. Trust from moderate risk and moderate control seemed to best suit the participants of the study. They viewed their injury as a negative setback but none of the participants expressed feeling that they were in an emergency state thus they seem to have the perception of moderate risk. They also asserted control over their rehabilitation through behaviours like actively choosing their physiotherapist and voicing preferences in treatment style. The participants felt control, but still recognized their limits of their knowledge and the value of a physiotherapist implementing their rehabilitation plan. Thus, there was a perception of moderate control as they still relied on the physiotherapist to guide their rehabilitation. The perception of control, however, seemed to change over time as ‘the interactions between emotion and trust’ section of the discussion chapter explored, which may have led to the formation of the trust-like actor of confidence.

Confidence

The shift from trust to confidence may have been present in the participant data. It was difficult for the researcher to understand if the participants had recognized the potential shift from trust to confidence during rehabilitation or if the participants were using the term confidence to describe trust. No participant explicitly explained that their trust had turned to confidence, rather, confidence seemed to be a term frequently used as a synonym for ideological trust in the physiotherapist. For example, Dan talked about his confidence in his physiotherapist multiple times during his interview, but when asked if there was ever a time he felt completely confident in his rehabilitation, he said he had not. This creates an interesting dichotomy between the trust or confidence a participant may feel towards a physiotherapist and how they feel towards their rehabilitation. From the

researcher's perspective, trust and confidence as academic concepts need to be related to the perceived outcome. As Borum (2010) states in the definition of trust, there is a "confident expectations that another person's future actions will produce some positive result" (p.9). Dan describing a feeling of confidence in his physiotherapist but a skepticism in rehabilitation outcome would fit the concept of high trust more than the concept of pure confidence. The outcome of rehabilitation was not perceived as guaranteed, which fits a moderate risk category (needed for trust) over a low risk category (needed for confidence).

The other piece of this spectrum is the perception of control. When revisiting the idea of participants feeling an increase in control when they saw major rehabilitation progress this could be the evidence of a shift to confidence in their physiotherapist instead of trust. When reflecting on all of the answers to the interview question of confidence in rehabilitation, the participants were split. Five participants responded that they did not have complete confidence in their rehabilitation, which would suggest they remained in the category of trust on the spectrum in Figure 1. Six participants talked about feeling completely confident in their rehabilitation and noted the high trust they had in their physiotherapist and the progress they had seen as reasons for why they felt this confidence. The two participants (Sarah and Tanner), who were noted earlier in the discussion chapter saying, "I can do this", were speaking in response to the question about feeling complete confidence. They attributed the confidence they felt in rehabilitation to an increased perception of control over their rehabilitation. The increased feeling of control, therefore, seems to be supported by the existence of high trust, and

resulted in the participant shifting to the right of the spectrum to a feeling of confidence in their rehabilitation.

The proposed spectrum of dependency-trust-confidence from the literature review produced mixed results in terms of the research data. Dependency did not seem to be a factor for the participants in the study. In instances where a team affiliated physiotherapist may have induced a feeling of limited control, it was instead seen as an asset as noted in the subtheme of social familiarity. Trust was prevalent in all participants and for six of the participants, trust was further transformed into confidence. Confidence was found in participants that had both ideological trust and increased control from seeing rehabilitation progress. When both ideological trust and control were high this produced the perception of low risk and high control, which is the basis for a feeling of confidence in rehabilitation.

Summary

The findings of this research study can be contextualized within existing trust research and medical research as well as providing novel insight into the specific athlete-physiotherapist rehabilitation context. Emotion, trust factors, and the impact of the client-practitioner relationship were discussed to situate the findings of the current study within trust, sport, and medical research. The differing viewpoints of emotion's influence on trust was linked to the participants journey with emotion through rehabilitation. The subthemes of the stages of trust were defined by the type of trust factor they influenced in terms of affective, cognitive, and dynamic aspects of overall trust (Table 3). Finally, the subthemes within the larger theme of partnership were compared to the health-related outcomes found in existing literature. Overall, the findings of this research study suggest

that trust may be the motivating factor behind the relationships we currently find in the literature. The information found in this study could bridge the gap in understanding of why the medical behaviours discussed have been linked to positive health outcomes. If these behaviours can be linked to the development and maintenance of trust, then more informed research can be conducted in future studies.

Strength, Limitations and Delimitations

Strengths

The phenomenological approach affords an in depth look at individuals who have experienced a specific phenomenon (Moran, 2002). In the case of this research, the phenomenon examined was trust in the athlete-physiotherapist relationship during injury rehabilitation. In picking a phenomenological approach, the research was able to capture the lived experiences of the participants who have experienced sport injury and undergone rehabilitation with a physiotherapist. The use of a phenomenological approach gives an exploratory look at a novel context of trust development. Exploratory research is important in grasping a general sense of a concept before developing quantitative measures. Particularly, a phenomenological methodology affords the researcher the ability to capture this unique context while still considering relevant literature and considering multiple perspectives on the phenomenon (Moran, 2002; Smith, 2005; Wilson, 2014). The strength of this approach was particularly seen in the novel findings related to baseline trust and in the subjective outcome of partnership which may not have been captured in traditional measurements of trust.

The context of sport injury was important to the researcher as someone who has experienced the lifestyle of an athlete and as experienced sport injury. The unique

emotional turmoil that comes when removal from sport happens leads to the need for not only emotional recovery but psychological recovery Forsdyke and colleagues (2015). With a phenomenological approach, the recognition of contextual factors influencing how a participant would interact with a phenomenon is recognized and considered an important part of capturing lived experience. Participants in this study were asked about how they got injured, how they felt, how it affected their sport status, and how they interacted with their physiotherapist. Although these questions may not seem directly related to trust, they give the researcher an ability to provide rich, thick description that can be found in Appendix G. The added benefit of rich, thick description gives the reader more context for the type of people and experiences within the participant pool. The context of the participants lives shaped how they answer the interview questions and ultimately the findings of thematic analysis. The data in this research study is specific to the participant pool and selecting a methodology that compliments the unique pool of participants strengthens the findings.

As stated in the methodology, phenomenology is strongest when themes can be found across a diverse participant pool (Smith, 2005). Of the 11 participants who took part in this research study there was diversity in team type (six in women's sport, five in men's sport), sport type (two hockey players, three rugby players, two skiers, one snowboarder, one gymnast, two ultimate frisbee players), injury type (one shoulder injury, one wrist injury, two ankle injuries, four ACL injuries, one Achilles injury, one back injury, one foot injury), and level of competition (four USport athletes, four national team athletes, and three club team athletes who compete internationally). To have rich

diversity within the data helps to give the major themes a robustness reliability and may increase the possibility of generalization in future studies.

Validity and reliability measures were taken to help the strength of the research study. Rich, thick description, discrepant information, peer debriefing and the use of an external audio helped enrich the data and increase the validity of the findings. Reliability measures were achieved by the researcher interviewing all participants and transcribing all the data. As well, logical jumps from coding to themes were discussed with the researcher's advisor.

Limitations and Delimitations

As the methodology chosen for the study was qualitative, the results lack generalizability and rely on the participants truthful account of their experience. Not having generalizable findings limits the direct impact the research can have on recommendations for rehabilitation interventions. When data is specific to the participants who took part in the study, variation across different experiences outside of the pool could be possible. The ability for the themes of this data to reach saturation bodes well for future research to find similar conclusions. Yet, the findings cannot assume any links at this time. The data analysis used a blend of inductive and deductive thought by the researcher and therefore logical jumps heavily relied on how the researcher assigned meaning to the language the participants used. For example, the assignment of high or low trust was the researcher's interpretation of direct and general language from the participant but another researcher may not have made these types of conclusions. There was a validity check with two outside sources that challenged and validated the researcher's logic to try to limit this delimitation, but this study is still

ultimately tied to the researcher who conducted it which furthers the non-generalizability. Similarly, this unique pool of participants was also mostly highly trusting of their physiotherapists. This means that the data analysis and findings have a heavy skew towards what behaviours illicit high trust rather than a deep exploration into threats or barriers to trust. Some barriers were found and reported as subthemes, but the area of mistrust could not be fully explored because of this particular participant pool.

There is a chance that some participants were confused on the qualifications of their rehabilitation provider. University sport medicine for USport athletes can range from physiotherapists to athletic therapists and without specifically inquiring about their title, participants may have assumed someone was a physiotherapist when they were not. Phenomenological methodology dictates that participants should be believed in the lived experiences they share and thus additional inquiring in the interview or external measures to validate the profession of their rehabilitation provider goes against accepted methodology. Pursuing a validation of the clinician's title also causes an ethical issue of seeking out additional information about a participant's life. Although, with the researcher's personal experience with one of the universities represented in the study, this seems likely with at least one participant.

The addition of monetary compensation may have skewed the participant pool to those who wanted the money from participating rather than having a pure interest in the study. The researcher believes that giving participants compensation for their time was important to lessen the burden on the participants as interviews were, on average, 46 minutes long. Participants of this study should not be discredited for accepting compensation for their time. It should be noted, however, that receiving compensation for

this study may have made participants more agreeable and willing to share what they believed the researcher may have wanted to hear. The interview guide was crafted to limit leading questions as much as possible. Further, the consent form that participants received outlined clearly that a participant could stop or refuse to answer a question at any time and still receive compensation. These actions were in place to limit the possibility of participants feeling pressure to answer what they felt the researcher would want to hear, but the participants may have been more willing to challenge the research if they were not receiving compensation.

Lastly, some of the subthemes found in the data may be problematic to the ethical considerations of the physiotherapy profession. For example, allowing an injured athlete to contact a physiotherapist at all times is not necessarily something that should be adopted at an organizational level. Although certain behaviours may be valued by an injured athlete this does not automatically insist that they should be implemented. Those who find themselves in helping professions should be empowered to create healthy boundaries between themselves and their clients. The researcher is not suggesting that all of the subthemes found in the data are practical. They are simply a representation of the participant pool. Practicality in the themes was sacrificed in some cases to properly represent the major findings from the interview data.

Future Directions

The research conducted for this study was exploratory in nature. Therefore, there are many future directions that could stem from the findings. This can be broken into improvements in methods and advancing the findings.

Improvements in methods

As discussed, the trouble in recruitment caused the research to sacrifice rich, thick description in terms of body language and setting descriptions. Including this information from the use of field notes could further contextualize the data. Specifically, body language could improve our understanding of emotion in sport injury and its impact on trust in the athlete-physiotherapist dynamic.

Advancing the findings

During the researcher's time immersed in the data, three points of interest for future studies emerged. First, three participants who competed at the USport level felt that their needs were not met by their university affiliated physiotherapist. They felt that the university physiotherapists were outnumbered by the number of athletes they saw and could not provide them the individualized care they needed to see improvement. A deeper look into how the university could better support both these physiotherapists and their athletes could be helpful in improving the quality of care.

Second, the interaction between physiotherapy equipment used and trust was interesting for the researcher to consider. Those who had lower trust and felt dismissed when put on electrical stimulation machines did not like the use of physiotherapy equipment. Those with high trust throughout rehabilitation seemed more willing to experiment with novel treatments that their physiotherapist suggested to them. This change in perception towards physiotherapy equipment would be interesting to explore in a further trust in rehabilitation study.

Third, the impractical subthemes that suggested participants value their physiotherapist putting in additional time outside of their working hours and being

available to contact them at any time was interesting to note. A further study on how physiotherapist create healthy boundaries or deal with their personal work/life balance in sport medicine would be interesting in giving the current study's findings more practicality for a physiotherapist to implement.

Lastly, a natural progression from qualitative exploration to quantitative generalizability would propel the findings of the study. If qualitative measures could find similar conclusions, then interventional research or knowledge transfer projects could be utilized to help physiotherapists further understand and cultivate trust with their patients.

Summary

This discussion hopes to have provided additional insight into the findings of the study. This chapter looked into the interaction between emotion and trust, exploring cognitive and affective trust, and the impact of practitioner-client trust to contextualize the findings of the study and provide insight into its academic merit. The strengths and limitations of phenomenology and the methods implemented in the research study were explored. Following this, future directions for improved methods and advancement in the findings were discussed. The original purpose of the research study was to explore how athletes develop and maintain trust in their physiotherapist during rehabilitation and examine the impact trust has on subjective recovery. Through discussing the themes and subthemes of participant data this purpose was realized.

The overall insight that can be taken from this research study is that trust was strongest between the athlete and the physiotherapist when the participant felt that their physiotherapist cared about their injury, their personal identity, and their sport. Participants felt that these three criteria were established through specific subthemes

spanning the participant's time in rehabilitation. The subthemes can be categorized further into the existing constructs of affective and cognitive trust while also exhibiting more dynamic factors of trust.

Trust in the rehabilitation process has major implication on the lives of those who experience sport injury. The unique context of sport injury presents a unique system with which trust was developed and maintained. The findings of this study are not generalizable, but they do deeply explore the lives of the participant pool in a way that can bring nuance to the data in ways that other methodology may miss. This study represents a diverse participant pool and their experiences with trust in the athlete-physiotherapists relationship. In reviewing the findings future studies may be able to expand the existing concepts of how trust is developed and maintained as well as improve the care of injured athletes. When physiotherapists understand how trust may underpin the positive results of certain behaviours a more targeted and informed execution of these behaviours can be achieved. When developing and maintaining trust is part of the rehabilitation process this could have both subjective and objective implications on rehabilitation.

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Appendix A – Recruitment Email

SUBJECT: Exploring the Development of Trust During Athletic Injury Rehabilitation

Hello _____,

My name is Tessa O'Donnell, I am a master's student at Dalhousie University. As part of my program, I am conducting a study to understand how athletes develop trust in their physiotherapists during injury rehabilitation. I am reach out to you today to see if you would be willing to participate in my study.

To be eligible for the study you must be over the age of 18 and have:

- Participated in elite sport over the past 12 months. An elite athlete will constitute any athlete who plays at a USport competitive level or higher (e.g., national team athlete, national development team athlete, etc.).
- Had an injury (that was not head trauma related) that stopped your participation in sport in the past 12 months
- Attended rehabilitation with a physiotherapist for a period of 5 weeks or more

If you are interested in taking part in the study, you will be interviewed for approximately 60-90 minutes. The interview will discuss your feelings about your physiotherapy experience, the development of trust between you and your physiotherapist and your injury recovery. You will be compensated for your time with \$25.00 CAD if you choose to take part in the study.

Please reply to this email (ts650844@dal.ca) if you choose to participate and I will schedule your interview.

This interview is being conducted by Tessa O'Donnell as partial fulfillment of the Master of Science Degree in Kinesiology under the supervision of Dr. Lori Dithurbide at Dalhousie University in Nova Scotia, Canada. The aim of this study is to understand how trust is developed during rehabilitation and what role it plays in how athletes feel about their recovery.

For more information about this study, or to voice concerns or questions you may have regarding this research please contact one of the researchers at:

Tessa O'Donnell
Department of Kinesiology
Dalhousie University
(902) 969-1913
ts650844@dal.ca

Dr. Lori Dithurbide
Department of Kinesiology
Dalhousie University
lori.dithurbide@dal.ca

Appendix B – Social Media Post



ATHLETES WANTED FOR RESEARCH PARTICIPATION!

Participants needed in study aimed at understanding how trust is developed between injured athletes and their physiotherapists during rehabilitation. Eligible participants will be interviewed about their past experiences during rehabilitation and how they felt about their recovery. The interview will take approximately 60-90 minutes to complete.

You will be compensated for your time with \$25.00 CAD if you choose to take part in the study.

We are looking for athletes (over the age of 18) who have participated in elite sport over the past 12 months and have incurred an injury that resulted in attending rehabilitation with a physiotherapist for a period of 5 weeks or more. Injury must not be head trauma related (e.g., concussion). An elite athlete will constitute any athlete who plays at a USport competitive level or higher (e.g., national team athlete, national development team athlete, etc.).

Please contact Tessa O'Donnell through email if you choose to participate at ts650844@dal.ca to schedule your interview.

This interview is being conducted by Tessa O'Donnell as partial fulfillment of the Masters of Science Degree in Kinesiology under the supervision of Dr. Lori Dithurbide at Dalhousie University in Nova Scotia, Canada. The aim of this study is to understand how trust is developed during rehabilitation and what role it may play in how athletes feel about their recovery.

Let me know if you have any questions, I would be happy to answer! Thank you for your time!

Appendix C – Poster



ATHLETES WANTED FOR RESEARCH STUDY!

Participants needed in study aimed at understanding how trust is developed between injured athletes and their physiotherapists during rehabilitation. Eligible participants will be interviewed about their past experiences during rehabilitation and how they felt about their recovery. The interview will take approximately 60-90 minutes to complete.

You will be compensated for your participation with \$25.00 CAD.

We are looking for athletes (over the age of 18) who have experienced injury as a result of participation in elite sport. The injury must have resulted in rehabilitation with a physiotherapist and must not be head trauma related. Rehabilitation must have occurred for 5 weeks or more. The interview will take approximately 60-90 minutes to complete.

An elite athlete will constitute any athlete who plays at a USport competitive level or higher (e.g., national team athlete, national development team athlete, professional athlete, semi-professional athlete, etc.).

Please contact Tessa O'Donnell if you choose to participate at ts650844@dal.ca or call **902-969-1913** to schedule your interview or to answer any questions you may have.

This interview is being conducted by Tessa O'Donnell as partial fulfillment of the Master of Science Degree in Kinesiology under the supervision of Dr. Lori Dithurbide at Dalhousie University in Nova Scotia, Canada. The aim of this study is to understand how trust is developed during rehabilitation and what role it plays in how athletes feel about their recovery.

Appendix D – Interview Guide

Exploring the Development of Trust in the Athlete-Physiotherapist Relationship

REB File 2019-4863

Tessa O'Donnell, Dr. Lori Dithurbide, Dalhousie University, Halifax

Intro: Thanks for coming in today. In our current project we are interested in learning more about your relationship with your physiotherapist while you were in rehab. We would like to hear about some of your personal experiences along these lines today.

Block 1: Rapport Building/Background

Block 1 Intro: To start, I'm going to ask you a few logistical questions about you and your injury.

Q1: Can you tell me about the team you were on when you got injured?

Probe: What sport does this team play?

Q2: Roughly how long had you been playing that sport at the time you got injured?

Q3: Can you take me back to when you initially got injured and tell me about how it happened?

Probe: Did this injury happen in after one incident? Or did you have any previous issues with that area before you had to start rehabilitation?

Q4: Roughly how long you were in rehabilitation?

Probe: Are you still in rehabilitation now? If so, how long have you been in rehabilitation? How long do you think you have left in rehabilitation?

Q14: How many physiotherapists did you see over the course of your rehabilitation?

If more than one:

Probe: Why did you see more than one?

Probe: How did you split your time between these physiotherapists?

Q5: Were you able to fully return to your sport after rehabilitation?

Probe: How did you feel when you first got back to training?

Block 2: Athlete appraisal of injury and mental impact

Block 2 Intro: Now we are going to move on to a few questions about how your injury made your feel.

Q6: What kind of thoughts and emotions came to mind at the time you were injured?

Probe: What things concerned you the most about your injury when it first happened?

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Q7: How did you feel when your injury was diagnosed?

Q8: Did your feelings change over the course of rehabilitation, if so how? If not, why do you think they remained consistent?

Q9: What was your mood like while you were recovering?

Block 3: Cognitive trust in physiotherapist

Block 3 Intro: These next questions will center around how much information you had about your physiotherapist and your injury.

Q10: How much information did your physiotherapist give you about your injury during rehabilitation?

Probe: Can you give an example of a time you were given medical information about your injury?

Probe: How did you feel about getting this information?

Q11: What did you notice during your visits that would indicate that your physiotherapist was knowledgeable in their field?

Probe: Can you give an example of something that indicated your physiotherapist was knowledgeable

Q12: Have you worked with that physiotherapist before?

Probe: How did that effect your view of their ability to help you?

Q13: Can you describe a time when you felt like your rehabilitation wasn't going well?

Probe: What specifically about this time made you feel that way?

Probe: How did your physiotherapist address this?

Block 4: Affective Trust in physiotherapist

Block 4 Intro: For the next few questions I would like to talk about your more personal experiences with your physiotherapist.

Q15: How soon after your injury did you start seeing your physiotherapist?

Q16: What goals did your physiotherapist have for your rehabilitation?

Probe: How did you feel about these goals?

Q17: How was your relationship with your physiotherapist?

Probe: Can you give an example of something they did that made you like/dislike them?

Probe: How much do you think your physiotherapist knew about you?

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Probe: Would you have liked them to get to know you more than they did? What would that have looked like?

Q 18: If I were to ask your physiotherapist about how you were as a client, what do you think they would say about you?

Q18: What types of conversations did you have with your physiotherapist?

Probe: Were they all related to your injury?

Q19: How much effort do you think your physiotherapist put into your rehabilitation?

Probe: What types of interactions made you think that way?

Block 5: Direct trust questions

Block 5 & 6 Intro: Now I'm going to ask you some questions about trust.

Q20: How much did you trust your physiotherapist?

Q21: How do you define trust?

Probe: Why did your physiotherapist fit this definition or why didn't they fit this definition?

Q22: At what point did you feel you could trust your physiotherapist?

Probe: Why was this moment the turning point in you developing trust in them?

Q23: Were there ever times when you questioned your trust in your physiotherapist? Why?

Probe: How did this affect your behaviour in rehabilitation?

Q24: What types of situations made you trust your physiotherapist more?

Probe: How did this affect your behaviour in rehabilitation?

Q25: How did your physiotherapist regain your trust after a rehabilitation set back?

Block 6: Trust-like actors

Q26: Was your physiotherapist affiliated with your team?

Probe: How did you feel about going to a team physiotherapist OR a private practice physiotherapist?

Q27: Do you have an example of a time that you felt completely confident that you would make a full rehabilitation?

Probe: How did your physiotherapist contribute to this feeling?

Block 7: Wrap up and final thoughts

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Block 7 Intro: I just have a few final questions to wrap up the interview and get some overall thoughts on your rehabilitation experiences.

Q28: How did you feel at the end of your rehabilitation?

Q29: What personal rehabilitation goals were you able to meet?

Probe: Were there any you didn't meet?

Q30: How important do you think trust in your physiotherapist was on your ability to recover from your injury?

Q31: Overall, looking back at your time in rehabilitation, what was it about your physiotherapist that was the most important to you?

Outro: *Okay, that finishes up the main questions for our study, thank you for your views and your time. Do you feel like there is anything else related to your relationship with your physiotherapist that was important to your rehabilitation that we did not touch on?*

Appendix E - Consent Form

Project title: Exploring the Development of Trust in the Athlete-Physiotherapist Relationship

Lead researcher: Tessa O'Donnell, Dalhousie University, ts650844@dal.ca, 902 969-1913

Supervisor: Dr. Lori Dithurbide, PhD Dalhousie University, lori.dithurbide@dal.ca, 902 266-3763

Introduction

We invite you to take part in a research study being conducted by Tessa O'Donnell, a graduate student under the supervision of Dr. Lori Dithurbide at Dalhousie University. Choosing whether or not to take part in this research is entirely your choice. There will be no impact on your status, or associations in sport if you decide not to participate in the research. The information below tells you about what is involved in the research, what you will be asked to do and about any benefit, risk, inconvenience, or discomfort that you might experience.

You should discuss any questions you have about this study with the researcher, Tessa O'Donnell, please ask as many questions as you like now or later.

Purpose and Outline of the Research Study

The purpose of the current study is to examine *trust* between injured athletes and their physiotherapists during rehabilitation. This study will be used to further understand the role of trust in the relationship between an injured athlete and a physiotherapist during rehabilitation. Your data will cover topics related to your injury, rehabilitation, and relationship with your physiotherapist

Who Can Take Part in the Research Study

You may participate in this study if you (1) are above the age of 18; (2) have been part of an elite competitive sport (team or individual) in the past 12 months; and (3) have had an injury that removed you from their sport (training and competition) and (4) required physiotherapy for at least 5 weeks within the past 12 months. An elite athlete will constitute any athlete who plays at a USport competitive level or higher (e.g., national team athlete, national development team athlete, professional athlete, semi-professional athlete, etc.).

What You Will Be Asked to Do

You will be interviewed for 60-90 mins in a lab room at the Dalplex on the Dalhousie University Halifax campus or at another quiet location that is most convenient to you, or over the phone. If a location outside the Dalplex is chosen, the research team can no

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longer guarantee complete confidentiality or privacy as others may see you being interviewed. There will be multiple questions for you to answer and your answers will be audio recorded.

Possible Benefits, Risks and Discomforts

Participating in the study might not benefit you directly, but your contribution to the current study may help our understanding of how trust functions in the athlete physiotherapist relationship. Participants may find it beneficial to recall this time in their life if they have positive emotions associated with their recovery or find it helpful to discussed possible negative emotions associated with their rehabilitation. Additionally, you will receive \$25.00 CAD as a thank you for your participation.

The risks associated with this study are minimal. There are no known risks for participating in this research beyond the possible stressful or emotional impact of recalling this time in your life. If recalling this time period is or becomes overwhelming, you are free to stop the interview at any time and/or seek professional help from mental health services.

If you experienced any adverse effects from this study regarding trust during rehabilitation, please contact a medical professional. Information on your nearest Canadian walk-in clinic can be found at <https://skipthewaitingroom.com/>. If you have experienced any emotional distress, information on mental health services in Nova Scotia can be found at <https://novascotia.ca/dhw/mental-health/>.

How your information will be protected:

The initial interview will take place in a lab, with the door closed, or a location chosen by you, the participant, where you feel comfortable, or over the phone. If a location outside the Dalplex is chosen, research team can no longer guarantee complete confidentiality or privacy as others may see you being interviewed. If the Dalplex is chosen, no one will be present except the researcher conducting the interview and you the participant. The audio recording of the interview will be placed on a password protected computer as soon as the interview ends. Audio recordings are saved on encrypted files and are deleted as soon as they are transcribed. Your data will only be kept on a password protected computer and only used toward the purposes of this study. You will have two weeks to revoke your interview, after which point your data will be completely anonymized without name, or other identifying information, and will be kept with the other interview data as a numerical file without the ability to be traced back to your information. If you are quoted within the study, you will be given a pseudonym.

Information that you provide to us will be kept private. Only the research team at Dalhousie University will have access to this information. We will describe and share our findings through presentations, and journal articles. We will be very careful to only talk

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about group results so that no one will be identified. This means that *you will not be identified in any way in our reports*. The people who work with us have an obligation to keep all research information private. Also, we will use a participant number (not your name) in our written and computer records so that the information we have about you contains no names. All your identifying information will be securely stored. All electronic records will be kept secure in an encrypted file on the researcher's password-protected computer.

If You Decide to Stop Participating

You are free to stop the interview at any time. If you decide to stop participating at any point in the interview, you can also decide whether you want any of the information that you have contributed up to that point to be removed or if you will allow us to use that information. You can also decide for up to two weeks if you want us to remove your data. After that time, it will become impossible for us to remove it because it will already be anonymized. If you decide to stop participating, you will still be compensated with the \$25.00 CAD for your time.

How to Obtain Results

No individual results will be provided. You can obtain the results of the study by contacting Tessa O'Donnell through email at ts650844@dal.ca or contacting Dr. Lori Dithurbide through email at lori.dithurbide@dal.ca.

Questions

We are happy to talk with you about any questions or concerns you may have about your participation in this research study. Please contact Tessa O'Donnell (at 902 969-1913, ts650844@dal.ca) at any time with questions, comments, or concerns about the research study (if you are calling long distance, please call collect). We will also tell you if any new information comes up that could affect your decision to participate.

If you have any ethical concerns about your participation in this research, you may also contact Research Ethics, Dalhousie University at (902) 494-1462, or email: ethics@dal.ca (and reference REB file # 2019-4863).

Signature Page

Project title: Exploring the Development of Trust in the Athlete-Physiotherapist Relationship

Lead researcher: Tessa O'Donnell, Dalhousie University, ts650844@dal.ca, 902 969-1913

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Supervisor: Dr. Lori Dithurbide, PhD Dalhousie University, lori.dithurbide@dal.ca, 902 266-3763

I have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I understand that I have been asked to take part in an interview that will occur at the Dalplex on the Studley Campus at Dalhousie University Halifax or at a location of my choosing, and that my interview will be recorded. I understand direct quotes of things I say may be used without identifying me. I agree to take part in this study. My participation is voluntary, and I understand that I am free to withdraw from the study at any time, until two weeks after my interview is completed.

Name

Signature

Date

Appendix F – Ethical Review Letters

Health Sciences Research Ethics Board Letter of Approval

September 03, 2019

Tessa O'Donnell
Health\School of Health and Human Performance

Dear Tessa,

REB #: 2019-4863
Project Title: Exploring the Development of Trust in the Athlete-Physiotherapist Relationship

Effective Date: September 03, 2019
Expiry Date: September 03, 2020

The Health Sciences Research Ethics Board has reviewed your application for research involving humans and found the proposed research to be in accordance with the Tri-Council Policy Statement on *Ethical Conduct for Research Involving Humans*. This approval will be in effect for 12 months as indicated above. This approval is subject to the conditions listed below which constitute your on-going responsibilities with respect to the ethical conduct of this research.

Sincerely,

Dr. Lori Weeks, Chair

Appendix F (cntd)

**Health Sciences Research Ethics Board
Amendment Approval**

January 22, 2020

Tessa O Donnell
Health\School of Health and Human Performance

Dear Tessa,

REB #: 2019-4863
Project Title: Exploring the Development of Trust in the Athlete-Physiotherapist Relationship

The Health Sciences Research Ethics Board has reviewed your amendment request and has approved this amendment request effective today, January 22, 2020.

Sincerely,

Dr. Lori Weeks, Chair

Appendix F (cntd)

Health Sciences Research Ethics Board Annual Renewal - Letter of Approval

September 10, 2020

Tessa O'Donnell
Health\School of Health and Human Performance

Dear Tessa,

REB #: 2019-4863
Project Title: Exploring the Development of Trust in the Athlete-Physiotherapist Relationship

Expiry Date: September 03, 2021

The Health Sciences Research Ethics Board has reviewed your annual report and has approved continuing approval of this project up to the expiry date (above).

REB approval is effective for up to 12 months (as per TCPS article 6.14) after which the research requires additional review and approval for a subsequent period of up to 12 months. Prior to the expiry of this approval, you are responsible for submitting an annual report to further renew REB approval. When your project is complete and no longer requires REB approval, please complete a Final Report to close your file in good standing. Forms are available on the Research Ethics website.

I am also including a reminder (below) of your other on-going research ethics responsibilities with respect to this research.

Effective March 16, 2020: Notwithstanding this approval, any research conducted during the COVID-19 public health emergency must comply with federal and provincial public health advice as well as directives issued by Dalhousie University (or other facilities where the research will occur) regarding preventing the spread of COVID-19.

Sincerely,

Dr. Lori Weeks, Chair

Appendix G – Rich, Thick Description

As previously stated, the use of rich, thick description has been utilized in this research study to increase the validity of the study. As such, the researcher proposed to discuss setting, body language and tone of voice as descriptive additives for the findings. However, due to the difficulty in recruitment, only 3 of the 11 participant interviews took place in person while the rest were conducted over the phone. The addition of setting and body language from 27% of the participant pool did not seem appropriate to add to the existing data. Instead, the researcher has chosen to provide rich, thick description of the context in which the participant experienced rehabilitation (without compromising anonymity). This section will discuss the emotions of the participants, the participant definitions of trust, the number of physiotherapists they saw over their rehabilitation, and an overview of their voice patterns. The inclusion of this participant context will increase the understanding of the participant pool, as well as contextualizing the thematic analysis.

Emotions

The overall sentiment of the participants was that injury is frustrating. Most participants mentioned some form of the root word ‘frustrate’. Within these interviews, the root word ‘frustrate’ came up 71 times. This was surprising to the researcher as the literature review seemed to indicate a tendency towards sadness or depression in the wake of injury. Instead, frustration and anger seemed to be more prevalent among participants. This frustration was presented generally in two ways. The first was frustration from the lack of control and the second from the length of injury. Haley exemplified this frustration during our interview:

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I'm frustrated because of like- like this just sucks. Like this whole thing sucks. I'm done with it. Like I've been here for like... it was like 8-10 weeks, I don't know, but it was still like such a long time to like not be in control of walking and stuff and I was just like I can't do it anymore and I was just like at my breaking point.

These injuries not only impacted the participants athletic status but also their lives as a whole. Dan shared similar frustration to Haley during his interview:

It definitely got kind of more frustrating as things went on especially- like especially with the crutches. Um, just because it makes like day-to-day living so so difficult... by the time 2 months goes by and you've been on crutches for 2 months it's like- it's just- you're tired of it and like there was nothing else I really wanted to do but get off of them. Um, so yeah it got worse and like just more like frustrating as time went on.

Frustration can also be exacerbated when there are stalls in rehabilitation progress. These delays can add to time in rehabilitation which increases the frustration with recovery length. Jane brought this up while discussing her lack of results from rehabilitation:

I had exercises to follow and stuff but I'm not going to lie, uh, frustration this season has hit with my- with not seeing results. Like I- I go and do the same exercises, try to strengthen? it, and then my shoulder pops out. So, it's just really frustr- so it's really frustrating. This year I have been taking a step back from it just because, like I said, doing the same things all the time and not seeing results gets really, really frustrating.

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If participants were able to see improvements and general recovery, this often indicated an increase in positive emotion. There seemed to be a tipping point in mood among participants when they were able to get back to more regular activities and see progress from their rehabilitation plan. This tipping point was noted in most interviews and can be seen later in Jane's interview, "for the first time in a long time it felt good to not have to adjust a workout because I couldn't do an exercise. Like it felt- yeah it just felt really good." If rehabilitation came without any delays, the participant's mood was elevated further. As noted during Andrew's interview "I was running consistently about a month ahead of schedule, um, without any real fall behinds there... honestly could not have been a more ideal recovery for me, like I'm extremely, extremely happy with like both her and my recovery."

Generally, participants felt that their mood went from low to high in regard to recovery with more 'rollercoaster' like emotions when there were instances of delay, misdiagnosis, or major competitions missed. These types of rehabilitation issues were common with most participants mentioning at least one. Emotional changes can add to our understanding of how the different stages of trust interact with the emotional stability of the athlete. Having a brief description of the emotional states of the athletes also improves the understanding of the mental recovery of injury and how that may affect the trusting relationship (or lack thereof) between athlete and physiotherapists as they progress through rehabilitation.

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Participant Definitions of Trust

The definition of trust provided by Borum (2010) as “a willingness to accept vulnerability and risk based on confident expectations that another person’s future actions will produce some positive result” (p.9) gave the academic understanding of trust for this research study. Trust is a concept that exists beyond the scope of research and therefore the participants’ definitions of trust were conceptualized in different ways. To gauge the participants’ conceptualization of trust the researcher specifically asked participants how they defined trust during their interviews (see Appendix D, question 21). In reviewing the answers from the participants on their definition of trust the following three categories seemed to be present: knowledge, care, and honesty. Some participant definitions focused on one of these categories, while most combined two or three in their definition. Each of these categories will be discussed in the following paragraphs in this section.

The idea of knowledge was noted as part of the participants’ definitions of trust. Knowledge was a defining feature of trust because of the link that participants had made between a physiotherapist being knowledgeable and a physiotherapist being able to help the participant reach a positive outcome. The definition of trust Sarah gave was rooted in the idea of physiotherapy knowledge “I don’t know everything that’s going on but he’s taking charge of it and I trust him to not mess up. That’s mostly it. It’s mostly knowing that I do not know everything and that he knows more”. This quote shows the participant acknowledging the limits of their personal knowledge and valuing the additional knowledge the physiotherapist brought to rehabilitation. Sarah’s quote also shows the link in the perceived knowledge of the physiotherapist and a perceived limiting of

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potentially negative rehabilitation outcomes (i.e., “I trust him to not mess up”). When a participant was talking about the value of ‘knowledge’ it seemed to specifically reference the knowledge a physiotherapist would have about the rehabilitation process. When asked how her physiotherapist fit the definition Sarah provided, she responded “He had it planned already. Um, he explained to me everything he was doing. Um, he, um, told me what the next steps would be very easily.” From this follow up question, we can more clearly see how a physiotherapist’s actions could induce the perception of knowledge. This knowledge, in turn, seemed to be linked with the participant’s perception that the physiotherapist would be able to help them achieve their goal. When a physiotherapist can show forethought in their treatment and clarity in their communication this can contribute to the perception of the physiotherapist being knowledgeable. When a physiotherapist was perceived as knowledgeable, it was considered a factor of trust for participants.

The feeling of being cared for was noted in the participant definitions of trust. Care seemed to be included in the definition of trust to represent a way to measure the investment that another person was putting into their goals. Tanner’s definition spoke about care “I think if you have a relationship with someone where you know they’re going to care about your interests um, that’s when you can just trust someone”. This quote shows the idea that a trustee caring would result in an investment in the specific outcome that the participant wanted. Although Tanner used the word ‘interests’ in his definition, the overall message seems to be that having a caring relationship would equal an investment in his personal opinion. Tanner went on to say that “she was finding the

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time being fully invested in me when we were working together” when asked how his physiotherapist fit this definition. The logical jump Tanner made between a caring relationship and an investment in his rehabilitation may explain why participants included care in their definition of trust. If care represents perceived investment in their rehabilitation, then feeling cared for would produce the feeling of trust.

Honesty was noted in the participant definitions of trust. When someone was transparent

about the information they did or did not have this was seen as an identifying factor of trust. Jane’s definition of trust relied on honest “complete transparency... tell me how it is, tell me what I need to do to get better, tell me what you're thinking... honesty is the best policy type of thing”. This quote shows the participant valuing honesty in three different contexts. Jane values honesty about what is happening currently, what could happen in the future, and the thought process involved. Honesty may be seen as part of trust as it limits the amount of unknown information. Haley talked about this in her interview “like the unknown unknowns freak me out more than like the known unknowns”. The idea of ‘unknown unknowns’ can be understood as a relationship where the potential trust-er is not sure about the validity of what is being said by the potential trustee or that the trustee is withholding information. Both cases of ‘unknown unknowns’ would be from a lack of honesty. Alternatively, the ‘known unknowns’ can be understood as being aware of what the potential trustee knows and does not know. Participants seem fairly understanding of gaps in their physiotherapist knowledge, but they wanted to be aware of these gaps. Honesty as part of the participant definition of trust may contribute

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to feeling that what the trustee is saying is valid and that they are not withholding information that may be important to the trust-er. Honesty was also found as a subtheme in the thematic analysis, which will be discussed later in the findings section.

In comparing the participant definitions of trust to the academic understanding of trust there are clear differences. The definition provided by Borum (2010) is focused on the trust-er and what the utility of trust would be for them. Borum states that trust happens when there is “a willingness to accept vulnerability and risk” (p.9) which provides the state that a trust-er would have to be in to elicit the need for trust. Borum continues this definition with stating that the trust-er would have a “confident expectations that another person’s future actions will produce some positive result” (p.9) which provides the utility of trust for the trust-er. The participant definitions seem to focus more on the trustee and what makes a person trustworthy in their opinion. Trust was seen as something given if the person showed they had appropriate knowledge, cared, and were honest. The participants focused on trust as it related to the trustee being worthy of their trust whereas the academic definition focused on the trust-er and the utility of trust for the trust-er. This seems to suggest that the participants felt trust was a verb, something to be given or taken away based on the behaviours within the relationship. The academic study of trust sees trust as a noun, as a concept that exists when certain conditions are present. Both understandings of trust were attempted to be represented in the thematic analysis. Trust was understood through behaviours that could make the perception of trust high or low, which fits more with the participants’ understanding of trust. Trust was also understood through the subjective outcomes high

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trust seemed to produce, which fits with the academic definition of trust serving a certain utility.

The purpose of this study was to explore how trust was developed and maintained and the impact of trust on subjective rehabilitation outcomes. The definitions of trust given by the participants contributes to the rich, thick description by providing a further understanding of how the participants viewed the subject matter of the study. What the participants perceived as the definition of trust informs how they answered all other trust related questions in the study. Participant definitions of trust provide context for the themes found and how they might diverge from the current literature as the participant definitions of trust would affect how these participants assigned meaning to their experiences with trust in the athlete-physiotherapist relationship.

Number of Physiotherapists Seen

All participants interviewed had a unique journey with the physiotherapists they saw during injury. None of the participants interviewed saw a single physiotherapist for the entirety of their rehabilitation. They were exposed to at least a few sessions with a different physiotherapist. The introduction of a new physiotherapist meant a new perspective on physiotherapy and potentially their rehabilitation plan. These exposures caused some participants to change their view of their rehabilitation or their physiotherapist. For example, Jane saw a university physiotherapist and was not satisfied with the treatment she received “I just stopped like yeah, I couldn’t- I couldn’t do it anymore like I’m- I’m- I just feel like I'm just going nowhere... Yeah, just negativity all

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around.” She was waiting until she moved back home to resume her rehabilitation with a physiotherapist in whom she trusted.

Dissatisfaction with a university physiotherapist was seen with participants Sarah and Anna. In fact, of the four varsity athletes that were interviewed in this study, only one was satisfied with their university rehabilitation experience. The participant who was satisfied, Rebecca, had a more transactional nature to her rehabilitation. She did not seem to value the affective side of trust as much as the other participants within this study. . She saw her rehabilitation as an exchange of physiotherapy services and guidance for payment that she could implement to achieve her rehabilitation goals. There seemed to be no emotional relationship building with her physiotherapist during her rehabilitation experience, thus making her interactions more transactional in nature and solely based on cognitive trust.

Haley was very happy with her physiotherapist but experienced a different physiotherapist filling in when her main physiotherapist was away. This ‘fill-in physiotherapist’ altered the course of her rehabilitation with her main physiotherapist:

When I got back [the main physiotherapist] said ‘oh, I heard you did this with [the fill-in physiotherapist]’ and then I was doing it with him. And I feel like since then he's definitely changed, like, the approach and was like ‘oh, maybe we can go a little more aggressive with it.’

The occasional ‘fill-in physiotherapist’ also happened with Dan, Andrew, Matt, Stephanie, and Rebecca but they did not discuss this effecting the approach of their

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physiotherapist as it did with Jane. However, Rebecca and Stephanie spoke about how having a different perspective on their injury was confusing for them. Stephanie stated:

... it sort of puts me in this position where I'm like 'this is what I was doing with this other physio' and he's like 'well don't do that do this.' And it sort of makes it- sort of confusing. Like I don't know and like can I trust other physios? Like I don't know, you know?

For all of the participants who experienced a fill-in physiotherapist during rehab, they still stayed with their main physiotherapist until rehabilitation was complete.

Some participants made the choice to leave a physiotherapist (James, Jane, and Tanner). James left one physiotherapist for another because of a lack of rehabilitation progress. Jane, as previously discussed, also left her physiotherapist, and planned to return to a trusted physiotherapist at the time of the interview. The third participant, Tanner, switched physiotherapists because his initial physiotherapist had to travel with his team, and then later switched back to the initial physiotherapist because his replacement physiotherapist went on parental leave.

The information about how many physiotherapists the participant was exposed to adds to the rich, thick description of the participants within the study. This context can exemplify the lived experiences of these athletes as they progressed through rehabilitation and give additional insight into how many physiotherapist experiences they have had. A participant making the choice to stay with or leave a physiotherapist when exposed to different treatment styles or approaches further deepens the understanding of trust. Without being exposed to different options or styles, participants may have

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devolved trust into dependency on their physiotherapist as discuss in previous literature. However, with all of the participants having been exposed to multiple physiotherapists, the risk of the dependency trust-like actor interfering with validity may be somewhat lowered.

Voice Patterns

The researcher conducted and transcribed all interviews in this study. As such, she was exposed to the vocal patterns of each participant. Additionally, the researcher re-listened to each audio recording and coded for changes in vocal tone. Initially, after conducting and transcribing the interviews, the researcher grouped voice patterns into four general categories of (1) excited, (2) calm, (3) reserved, and (4) strained. Those in the first category (Excited) seemed excited to talk about their rehabilitation and their physiotherapist. They generally had very positive experiences. These participants healed quickly and/or genuinely enjoyed the company of their physiotherapist and seemed to enjoy talking about them. The participants in this category were Anna, Andrew, and Matt.

Those in the second category (Calm) seemed at to be at peace with their rehabilitation; with a generally calm demeanor. They wished they had not been injured but were happy with the care they received and liked their physiotherapist. This category encompassed the majority of the participants and included Sarah, Haley, Dan, and Tanner.

Those in the third category (Reserved) seemed shy and needed a lot of additional prompting during their interviews. This could be attributed to personality traits like

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introversion, but it is also worth noting that these two participants both had very confusing misdiagnosis experiences at the start of their rehabilitation. They noted feeling confused by the medical information they received at times. This confusion may be a possible reason for withdrawing emotionally from the interview experience. These participants were Rebecca and Stephanie.

Finally, those in the last category (Strained) were noticeably upset by the initial treatment they received and ultimately left their physiotherapists. Their voices were strained when talking about the delays and plateaus they experienced with their physiotherapists. They had clear emotional turmoil that their rehabilitation had not gone well. However, they did not want to portray that they disliked their physiotherapist as a person. They both took time in the interview to make it clear that their physiotherapist did the best they could, but they did not see enough progress to continue rehabilitation with that physiotherapist. These participants were Jane and James.

These initial groupings are subjective to the researcher's interpretation of the participants voice patterns and could have been heavily influenced by the context participants were providing. In an attempt to triangulate the data, the researcher re-listened to the audio and coded for changes in tone. The researcher attempted to disregard context as much as she could. From coding for audio, eight codes emerged: confusing inflection, lengthening word(s), raising voice, repeating a word, laughing, pausing, sighing, and stuttering. These codes, however, did not seem to signify anything in particular about the participants who used them. This could be because people use certain tones for multiple reasons. For example, the two participants who raised their voice the

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most during their interview were Matt, who was categorized as excited, and James, who was categorized as strained. Although these were opposite ends of the spectrum in terms of emotion, both could use raising their voice to express these emotions.

It is difficult to conclude if these voice patterns add to the research findings in any significant way. The researcher may be ill-equipped to assign meaning to voice patterns in regard to emotion or how the participant felt toward their physiotherapist. A further exploration into the significance of voice patterns may be beneficial to future research.

However, the inclusion of this information in terms of rich, thick description has qualitative merit. It affords the reader a further understanding of the researcher's interpretive lens. If the researcher interpreted that these participants were excited, calm, reserved, or strained then that may have affected how meaning was assigned in the data analysis phase. A participant interpreted to be speaking excitedly about their physiotherapist may hold more meaning than a participant who was interpreted as being reserved. Recognizing this possible bias allowed the researcher to attempt to limit the impact of vocal patterns when assigning meaning. However, the researcher is part of the research. If meaning has been assigned partially due to the vocal pattern of the participant, then that is representative of both the participant and their emotional interpretation of trust and the researcher's interpretation of the final results.