

Exploring the Role of the Canadian Athletic Therapist in the Social Support of an Injured Athlete

by

Krista Mullaly Dobbin
BPE, University of New Brunswick, 1996

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of the Requirements for the Degree of

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Abstract

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Rehabilitation of athletic injuries may include both physical and psychological components. When an athlete becomes injured they look to healthcare professionals to help them through their rehabilitation. These professionals are part of the social support network and among them are Canadian certified athletic therapists (CAT(C)). The aims of this qualitative study were to explore the role of a CAT(C) in the social support of an injured athlete by: (a) describing the nature of the therapeutic relationship between the athletic therapist and athletes; (b) exploring the social support provided by athletic therapists; and, (c) exploring how they perceive their preparation for the social support of an injured athlete. Purposive sampling was employed to recruit two male and two female Canadian certified athletic therapists, who had worked in a university setting, and were in good standing with the Canadian Athletic Therapists Association. Data were collected using webcam or telephone interviews. Findings were consistent with previous studies with health care professionals. CAT(C)'s played an integral role in dealing with the social support aspects of injury. Athletic therapists embraced their role in the social support of athletes and reported using strategies to enhance the therapeutic relationship, providing four dimensions of social support (emotional, esteem, informational and tangible) and acting as a communication link with other members of their social support network. CAT(C)'s acknowledged their limitations in the psychological side of injury due to only a small fraction of their educational curriculum preparing them for this aspect of injury. Experience was a key factor, and increased their comfort level.

Key words: certified athletic therapist, rehabilitation, social support

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On a more professional note, I would like to express to my colleagues how indebted I am to them. The integrity they hold for our profession, makes me proud to be an athletic therapist.

On a personal note, I would like to thank my husband for all his support. A huge thanks to my parents, for their true kindness. Your hours of devotion to the kids are priceless. Last but not least my children, for their patience and unconditional love.

Dedication

This thesis is dedicated to my uncle- Steven Blaise Gear. You always asked how my thesis was going, I wish you were here to see the final results.

Chapter 1: Introduction

While participating in any level of activity or sport one of the most concerning and often inescapable misfortunes is injury. According to new data from the Canadian Community Health Survey (CCHS), one in seven or 4.1 million Canadians aged 12 and older suffered an activity-limiting injury in 2009. About 35% of these injuries occurred while taking part in sports or physical exercise, the most common type of injury-causing activity (CCHS, 2010). On average, 17 million sport injuries occur in any given year to US athletes (Heil, 1993). No matter how minor or significant an athletic injury may be, it can present one of the most challenging and emotionally traumatic experiences an athlete may ever go through (Flint, 1998). One aspect of these challenges is injury rehabilitation.

When athletes become injured they require immediate treatment and rehabilitation in order to speed their return to participation in their sport (Cramer and Perna, 2000). The rehabilitation process should address not only the physical injury but the psychological recovery as well (Pargman, 1999). There are always obstacles to overcome but fortunately many athletes find themselves surrounded by people who are willing to help. Among the social support network, are health care professionals who are, at times, the most influential people in the emotional and psychological support of injured athletes (Ford & Gordon, 1997; Hemmings & Povey, 2002; Wiese-Bjornstal & Ray, 1999). Several studies have confirmed that physiotherapists and athletic trainers are acutely aware of the negative psychological impact of injury upon athletes (Ford and Gordon, 1997, Larson et al., 1996). However, despite the recognition of psychological factors playing a key role in the rehabilitation of a physical injury, many physiotherapists and athletic trainers find themselves struggling with their role in dealing with these issues. They do not feel adequately equipped to deal with the psychological aspects of injury (McKenna, Delaney, & Phillips, 2002, Hemmings and Povey, 2002).

There are numerous theoretical frameworks that described social support and the components of that support. Two such models suggested by Anderson and Williams (1988), and Wagman and Kelifah (1996), dealt with stress response and athletic injury

exclusively. Another framework was a six component process tool for enhancing a patient's psychological recovery in relation to burnout, (Pines, Aronson, and Kafry, 1981).

Related to this approach, Richmond, Rosenfeld and Hardy (1993), developed an eight component process tool for enhancing a patient's psychological recovery. The eight components included: listening support, emotional support, emotional challenge, reality confirmation, task appreciation, task challenge, tangible assistance, personal assistance. This eight factor model was used as the basis for the Social Support Survey (Richmond, Rosenfeld, and Hardy, 1993). Rees, Hardy, Ingeldew, and Evans (2000) questioned whether the eight content factors of the SSS sufficiently covered the various types of social support that had been identified. After reviewing all of these theoretical frameworks, Rees and Hardy (2000) developed an alternative 4-dimensional model that aimed to encompass all aspects of social support, and its complex nature. This model incorporated emotional support, esteem support, informational support, and tangible support. These factors were coupled with definitions from Cutrona and Russell (1990).

Although these models and frameworks help us to understand the components of social and psychological support and its complexity it is also important to understand who is involved in the process of providing social support. The medical team is one key component of the social support network (Petipas, 1999, Taylor and Wilson, 2005). Within the medical team, which typically consists of sports medicine doctors, sports psychologists, nutritionists, sports physiotherapists, are the athletic therapists. Athletic therapists are a group of medical team practitioners who have a designation and preparation that is unique to Canada.

To date, very little research has focused on the Canadian certified athletic therapist as a member of the athlete support system, nor has it examined how they perceive their role related to social support of injured athletes. Therefore, the purpose of this study is to target certified athletic therapists and investigate their perceptions of the role they have with providing social support during rehabilitation of an injured athlete. Specifically, the following research questions will be addressed.

1. How do athletic therapists perceive the therapeutic relationship between themselves and the athletes they serve?

2. What types of social support are provided to injured athletes and how do they perceive their role in this support?
3. How do they perceive their role related to psychological aspects of rehabilitation?
4. How do they perceive their preparation for their role in the social and psychological support of injured athletes?

Operational Definitions

The following definitions are provided to ensure uniformity and understanding of these terms throughout the study.

Canadian Certified Athletic Therapist: A Certified Athletic Therapist holds the designation CAT(C). To be certified, the athletic therapist must have successfully completed a number of academic and practical requirements outlined in the Procedures for Certification document of the Canadian Athletic Therapists Association. Certified members have successfully completed a comprehensive theory exam and a subsequent oral/practical exam developed and administered by the certification board of the Canadian Athletic Therapists Association (www.athletictherapy.org).

Emotional Social Support: “The ability to turn to others for comfort and security during times of stress, leading the person to feel that he or she is cared for by others” (Rees and Hardy, 2000, p. 322)

Esteem Social Support: The bolstering of a person’s sense of competence or self-esteem by other people. Giving an individual positive feedback on his or her skills and abilities or expressing a belief that the person is capable of coping with a stressful event are examples of this type of support” (Rees and Hardy, 2000, p.322)

Informational Social Support: “Providing the individual with advice or guidance concerning possible solutions to a problem” (Rees and Hardy. 2000, p.322).

Tangible Social Support: “Concrete instrumental assistance, in which a person in a stressful situation is given the necessary resources (e.g., financial assistance, physical help with tasks) to cope with the stressful event” (p.322)

Assumptions

That the interviewed participants will answer honestly.

That the Canadian certified athletic therapists are members in good standing with the Canadian Athletic Therapy Association.

Delimitations/Limitations

Due to the limited and unique sample used in the study, results may not be generalizable beyond the specific population from which the sample was drawn.

Participants chosen are those athletic therapists who are working or have worked with athletes in a university or college.

Participants were sensitized to the 4- dimensional social support model.

I did not do any memo taking or journal writing as part of a method of reflexivity.

Chapter Two: Review of Literature

One of the most inevitable and ever-present consequences of participating in sport and exercise is injury (Tracey, 2003). Most athletes will suffer some form of injury at some point in their career regardless of sporting experience or ability (Steadman 2003). With injury, comes a variety of unknown variables and challenges. One challenge an athlete will face is rehabilitation. Individuals who work closely with athletes during the rehabilitation process (coaches, athletic trainers, sport psychology consultants) may be called upon to provide mental and emotional support (Gutkind, 2004).

Athletes Dealing With Injury

Dealing with injuries can be very stressful (Danish, 1986) and therefore, there are many emotional and psychological reactions that occur (Green, Scott, and Weinberg, 2001). These reactions are typically based on the individual's perceptions of loss (e.g., mobility, playing time, and career; (McDonald & Hardy, 1990, Smith, Scott, & Weise, 1990). Although some athletes psychologically adapt to injury quite effectively, there appear to be many individuals who experience negative emotional responses after sustaining a sport related injury (Brewer, Linder, & Phelps, 1995, Pearson, & Jones, 1992). In a post injury survey by Pearson and Jones (1992), athletes reported negative emotions such as frustration, depression, tension, fear, anger, and irritability.

Coping methods for these emotions and stresses have been studied for many years. Hans Selye, the "Father of Stress Theory", was the originator of the concept of stress in 1935, (Seyle, 1975) when it was used to describe a non-specific physiological defence reaction in experimental animals (Viner, 1999). More specifically to coping with stress, Kubler-Ross (1969), described a stage model. Kubler-Ross (1969), hypothesized that an injured athlete responds to an injury by sequentially passing through various stages, similar to those of the terminally ill, before positive adjustment occurs. These

stages are denial, anger, bargaining, depression, and acceptance. This has not stood up to empirical scrutiny due to the fact that psychological reactions to injury are more global in nature and varied across individuals than stage models would be able to account for (Brewer, 1993). Lazarus (1966) conceptualized stress and coping as a unique interaction between the individual and the environment and developed a transactional model to incorporate an individual's cognitive appraisal of stressors into the stress response. The four components of the transactional theory are: 1) increased awareness, 2) information processing and appraisal, 3) modified behaviour, 4) peaceful resolution.

With knowledge gained from both Lazarus (1966) and Kubler-Ross (1969) many models have been developed, such as a model by Andersen and Williams (1988). They proposed a model of stress and athletic injury that includes social support as having both buffering and direct effects. They argued that the presence of a well-defined social support system either directly reduces the participant's rate of injury or lessens the debilitating effects of stress, which in turn reduces the probability of injury. More currently with the four components of Lazarus's transactional theory in mind, another model was devised to explain how athletes respond to injury. It is based on how the injury is cognitively appraised by the athlete (Brewer, 1994, Weis- Bjornstal, Smith, Shaffer, & Morrey, 1998).

In this "cognitive appraisal" approach, injury is considered to be a stress process. It suggests that an interaction between personal factors, individual characteristics, and situational factors made up of sport related factors, social aspects, and environmental conditions influence the thought process (Weise-Bjornal & Shaffer, 1999; Williams & Andersen, 1998, Rotella, & Heyman, 1993). Some personal factors involved with injury may include the athlete's investment in the sport, the degree to which self-identity is entwined with the sport, and the athlete's belief in his or her ability to bring about healing (Williams & Anderson, 1998). Gutkind (2004) describes an example as an athlete who has already had the same injury and rehabilitated successfully is likely to be more realistic in appraising the event if it happens again.

Some situational factors include medical prognosis, the recovery progress, the degree to which daily life is affected by the injury, stress, and the social support available. Athletes in a stressful situation may exaggerate the meaning of the injury,

ignoring important aspects, and drawing inaccurate conclusions (Rotella, & Heyman 1993). It is the combination of all of these factors and characteristics that will determine how an individual will react emotionally (e.g., anger, fear, depression, acceptance etc.) and what behavioral outcomes may take place (e.g., use of social support networks, adherence to rehabilitation, use of coping skills etc.) (Andersen & Williams, 1988).

Wagman & Khelifa (1996) thought that even though the cognitive model was one step closer to how individuals respond to injury, it did not address the stress response as an antecedent to injury in any great detail. Wagman and Khelifa (1996) explain that athletes evaluate the demands of a particular situation, their ability to meet those demands, and the consequences of either failing or succeeding in meeting these demands. Furthermore, any perceived imbalance between situational demands and personal response capabilities may result in anxiety reactions susceptible to altering the physiological/attentional aspects of an athlete. For this reason they proposed a modified version of the Andersen and William model, refer to figure1.

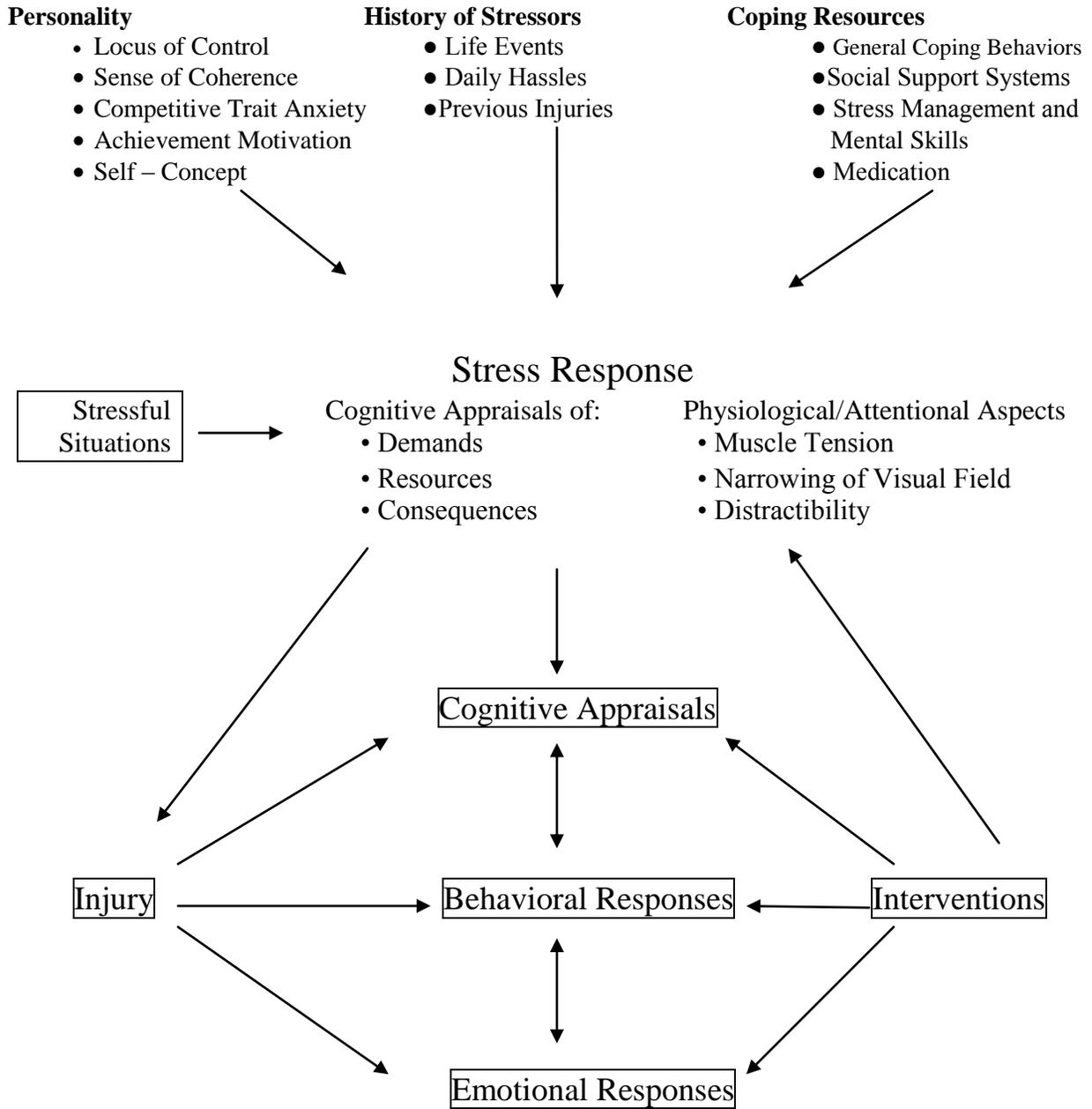


Figure 1: An interactional theoretical model of athletic injury (adapted and modified from Andersen/Williams, 1988)

Grove and Gordon (1991) also recognized that once an athlete is injured, the injury itself is associated with the stress response in a reciprocal manner. The level of stress experienced may be a function of an athlete's personality, history of stressors, coping resources, and stress management interventions.

Hardy, Burke, and Crace (1999) explain that when confronted with the stress of an injury, athletes will attempt to minimize their losses. In order to offset this loss, athletes will employ their personal resources. They also suggest that when an athlete is injured a loss of personal resources can be experienced therefore forcing the athlete to seek the support of others to help them cope with the injury. Injured athletes who utilize social support cope more efficiently with the demands of rehabilitation (Green & Weinberg, 2001). Flint (1998), suggests that having the knowledge of appropriate coping resources, coping strategies, and social supports are all very important for an injured athlete, because these enhance the perception that recovery is possible.

Importance of Social Support

Social support in the broadest sense and related to injury refers to social interactions aimed at inducing positive outcomes following injury (Bianco and Eklund, 2001). It can be provided by various sources. Larson, Starkey and Zaichkowsky (1996), as well as Ford and Gordon (1997), both provide evidence that social support has an important role to play when dealing with the psychological impact of injury, and is valuable in rehabilitation. The benefits of social support are corroborated in numerous studies and according to Komproe, Rijken, Ros, Winnubst, and Hart (1997), so much research has been done on social support that the benefits are claimed to be common knowledge.

Within the health care context, social support has been studied in a large range of areas. For more than twenty years, researchers have consistently reported that social support is beneficial for health and may act as an appropriate buffer against psychological distress induced by disease (Sarason, 1988). Patients recovering from stroke, (McColl and Friedland 1993), heart attack, (Larsson and Fridlund, 1991), and spinal chord injuries

(Kishi et al. 1994), have all been the focus of studies investigating that nature of social support and its effects on individuals and groups (Barefield and McCallister, 1997). Fydrich & Sommer (2003) also showed that social support represented a preventive factor, as well as a resource for coping with stress and disease.

Two conclusions derived from these studies are, firstly, there is a need for social support among individuals suffering from health issues, and secondly, the presence of adequate social support is positively related to improved recovery and decreased stress.

Although social support has been studied for many years and is growing as an area of interest in injury rehabilitation (Bianco and Eklund, 2001), few have yet to focus on its role in helping injured athletes' (Johnston and Carroll, 2000), from a health professional's point of view.

Social Support Process

Understanding the role of social support is important for researchers and practitioners. A solid foundation of theory-led research could help to guide the development of injury- prevention strategies and psychosocial rehabilitation interventions (Bianco and Eklund, 2001).

Research has generated a large pool of social support models, which has created a problem with the analysis of findings (Vaux, 1992). A social support model that was used extensively in studies such as; Bianco, 2001; Bianco & Eklund, 2001; and Johnston & Carroll, 1998, is the multidimensional model derived by Richmond, Rosenfeld and Hardy (1993). The model stems from a six component process tool for enhancing a patient's psychological recovery in relation to burnout, (Pines, Aronson, and Kafry, 1981) and has been expanded to eight factors which included the following social support types: 1) listening support, perceived nonjudgmental listening; 2) emotional support, the perception that the provider is acting in a caring and comforting way; 3) emotional challenge, the perceived challenge to help recipient evaluate his or her attitudes, values, and feelings; 4) reality confirmation, support from someone similar to the recipient that helps him or her by confirming his or her perspective of the situation; 5) task

appreciation, perceived acknowledgement and appreciation of recipient's efforts; 6) task challenge, perceived challenge of the recipient's way of thinking about an activity in order to motivate her or him to greater involvement; 7) tangible assistance, support in the form of financial assistance, products and/or gifts and 8) personal assistances, services or help, such as running errands or driving the recipient somewhere.

The Social Support Survey (SSS) is based on this eight factor model of social support. Richmond et al. (1993) conducted a content analysis of the social support literature, concluding that the eight content factors of the SSS sufficiently covered the various types of social support identified. The SSS has since been examined for its validity and content (Rees, Hardy, Ingledew & Evans, 2000, Rees, Hardy, & Evans, 2007). Rees, Hardy, Ingledew and Evans (2000), tested the structure of the SSS in confirmatory factor analysis with a college athlete sample. The results showed there was insufficient evidence to support the existence of this eight factor model (listening support, task appreciation, task challenge, emotional support, emotional challenge, reality confirmation, tangible assistance, and personal assistance) in a sport setting (Rees, Smith, & Sparkes (2003). Although social support can be broken down into specific dimensions, the dimensions are not usually independent (Cutrona, & Russell, 1990). This leads to many definitions of social support used by researchers. One important issue to consider is that to be an effective coping resource, social support must match the demands posed by the stressor (Cutrona & Russell, 1990). Rees, Smith, & Sparkes (2003) suggested using caution in using this model without careful consideration.

Rees and Hardy (2000) generated an alternative multi-dimensional model of social support through interviews with high level sportspeople. It was in light of concerns over the content validity, structural validity and applied relevance to sport of many social support measures that Rees and Hardy conducted their study (Rees, Evans, & Hardy, 2007). The model is composed of emotional, esteem, informational, and tangible psychosocial factors, and the meaning of the factors were derived from the definitions of social support noted by Cutrona & Russell (1990) and include all aspects of social support (Rees and Hardy, 2000).

The definitions of the four dimensions of the model are as follows. *Emotional Social Support*: "The ability to turn to others for comfort and security during times of

stress, leading the person to feel that he or she is cared for by others” (Rees and Hardy, 2000, p. 322); *Esteem Social Support*: The bolstering of a person’s sense of competence or self-esteem by other people. Giving an individual positive feedback on his or her skills and abilities or expressing a belief that the person is capable of coping with a stressful event are examples of this type of support” (Rees and Hardy, 2000, p.322); *Informational Social Support*: “Providing the individual with advice or guidance concerning possible solutions to a problem” (Rees and Hardy, 2000, p.322); and *Tangible Social Support*: “Concrete instrumental assistance, in which a person in a stressful situation is given the necessary resources (e.g., financial assistance, physical help with tasks) to cope with the stressful event” (Rees and Hardy, 2000, (p.322).

Key Players in Social Support

To help fully understand the complexity of social support and how it plays a part in the recovery of athletic injuries, we need to know who is involved in the process. Depending on the situation, the type of support needed may vary, and, in addition, certain types of support can only be given by specific others, while some types of support can come from anyone (Robbins & Rosenfeld, 2001).

Some researchers believe that there are three key players to the injured athletes’ social support system: 1) the sports team 2) the sports medical team and 3) family and friends (Carson, 2005). Rees and Hardy (2000) believe that support from all three groups is necessary, as no one group can provide all the elements of support needed. They also suggest that social support is best provided by a network of individuals, but that this network needs to be developed and nurtured and it functions best as part of an ongoing program rather than simply a reaction to crisis (Rees and Hardy, 2000). It is clear that social support from the coach, physiotherapist (athletic therapists, and trainers), teammates, friends and family of the injured player can facilitate or inhibit rehabilitation (Eubank & Nichols, 2001).

Teammate Influence

Within the sports team one social factor that appears to be common across many athletes' injury and rehabilitation experiences is teammate influence. Williams, Rotella, and Scherzer (2001) found that the change in their relationships and interactions with teammates can be quite stressful for the athletes. They highlight this discovery with the following quote:

“Too often when athletes are kept away because of injury, they feel their teammates and time have marched on. There are new jokes, new alignments- in essence a new situation that excludes injured athletes and into which they must try to reintegrate themselves” (Williams et al. 2001).

Including athletes in team functions has the potential to heighten the injured athlete's motivation to rehabilitate his or her injury (Wrisberg & Fisher, 2005). There are also some possible downsides to staying involved. In addition to the frustration of seeing a teammate achieve increased playing time at the injured athlete's expense, there is the inevitable comparison of one's own condition with that of healthy teammates, the worry over how much longer it might take to recover one's former level of skill and fitness, and the general sensation of “missing out” (Tracey, 2003).

Coaches

Another component in the social support system is coaches. Eubank and Nichols (2001) studied the importance of coaches once an injury is sustained. Coaches need to have knowledge about the reactions athletes have to injury, and understanding the signs that may help identify poor injury adjustment, which will help with rehabilitation in the long run (Eubank and Nichols, 2001). In a study of severely injured professional footballers, 67% of the sample cited a lack of listening or emotional support from the coach as a major factor that hindered psychological rehabilitation. Players felt that their relationship with the coach changed once they became injured (Eubank & Nichols, 2001).

Gould, Udry, Bridges, and Beck (1997) assessed the value of social support in responding to athletic injury in a study of U.S. ski team athletes. They found that 70% of the female athletes sought after and used social support following their injury, in addition to several other coping mechanisms. Only 19% of the athletes mentioned they had received support from their coaches. In a follow-up study with the same skiers, Udry, Gould, Bridges, and Tuffey (1997) found that two thirds of the skiers perceived that their coaches were distant, insensitive to their injury, provided inappropriate or insufficient rehabilitation guidance, and demonstrated a lack of belief in them. With healthy athletes, coaches typically provide support by acknowledging technical performance, progress toward performance goals, and coping with adversity (Taylor & Wilson, 2005). Often this does not continue during rehabilitation (Robbins & Rosenfeld, 2001).

There are always obstacles for coaches and athletes to overcome during rehabilitation and often athletes seek out those who are willing to help, a social support network. Among them are health care professionals. These individuals are responsible for bridging the communication between athletes and coaches during injury and injury rehabilitation (Robbins & Rosenfeld, 2001). More specifically, using the support of athletic trainers or therapists may be a critical component in returning to sport successfully. Most times an athletic trainer or therapist has control of the physical implications of the sport injury rehabilitation program and as mentioned previously, acts as a link between teammates, coaches, family, and other members of the sports medicine team (Flint, 1998).

Health Care Professionals

There are a variety of health care professionals that rehabilitate injured athletes and help make up the sports medical team. Among them are athletic therapists, athletic trainers, and physiotherapists. Athletic therapy developed initially within US colleges, with a mission to minister to the care of athletes (Theberge, 2009). The National Athletic Trainers Association (NATA) in the United States was formed in 1950, but Walk (2004), provides accounts of athletic therapists working in US colleges as early as 1916. The Canadian Athletic Trainers Association (later renamed the Canadian Athletic Therapy

Association (CATA) was established in 1965 (Theberge, 2009). Deconde (1990) explained that prior to 1965 the occupation had a large presence in Canada. The primary base of practice remains college and university athletic programs, along with professional sports teams, where athletic therapists (or trainers) are the primary providers of site coverage of athletic events, including immediate care for injuries. Many athletic therapists also work in private clinics.

Physiotherapy developed in the early decades of the 20th century, in response to the need to provide rehabilitation to injured soldiers (Theberge, 2009). In 1894, the UK recognized physiotherapy as a specialized branch of nursing regulated by a Chartered Society. In the succeeding two decades, formal physiotherapy programs were established in other countries including New Zealand (1913) and the USA (1914). Physiotherapy has established a firm presence within the system of health professionals (Miles-Tapping, 1989). The profession has expanded from hospitals out to other areas of medical care. Physiotherapists now work also in clinics, nursing homes, private practice and schools.

There are many similarities and differences among the three rehabilitation professions, each of which have a role to play in the social support system of an injured athlete. For the similarities and differences see Appendix 1.

Delivering Social Support

In past research it has been found that athletes may turn to others to minimize their sense of loss following an injury (Udry, 1996). The role or influence of social support may vary among athletes depending on the sources of support that are made available during the rehabilitation process (Taylor & Taylor, 1997). Adherence to rehabilitation during an injury (Fisher, Domm, and Wuest (1998) and Fisher, Mullins, and Frye, 1993) and well-being during rehabilitation (Bricker Bone & Fry, 2006), are factors, along with other aspects of social support, that have already been shown to be affected and influenced by many health professionals.

Bricker Bone, and Fry (2006) found when severely injured athletes perceived that their athletic trainers provided strong social support, they were more likely to believe in

their rehabilitation programs and cope with the injury. Flint (1998) believed that gaining a sense of control and motivation to keep going when the rehabilitation program was long and arduous were particularly important aspects of a psychological approach to injury. The key for sports-medicine practitioners, therefore, is to incorporate these constructive attitudes, approaches, and realistic needs in the rehabilitation protocol for injured athletes.

According to the optimal matching perspective, (Cutrona & Russell, 1990) in order for social support to be perceived as useful it has to be the right type, at the right time, and supplied in the right amount. Johnston (1998) interviewed injured athletes relative to their preferences for social support. Soon after injury they tended to express a preference for esteem/emotional support. Later in the rehabilitation process they expressed preference for informational support. Johnston's findings underscore the importance of remaining alert to changing social support preferences of injured athletes and responding accordingly (Udry, 2002).

In Robbins and Rosenfeld's (2001) study, results indicated a significant difference between the athletes' satisfaction with the three types of providers (coaches, assistant coaches, and athletic trainers) and their impact on the athletes' overall well-being during rehabilitation. Athletic trainers were perceived to provide listening, task appreciation, task challenge, and emotional challenge support more than either the head coach or the assistant coaches. Findings confirm the positive effects of athletic trainers' social support on injured athletes' recovery efforts. In the grounded theory methodological approach study carried out by Jevon and Johnson (2003), participants described a number of factors that influenced the quality of the relationship between the athlete and physiotherapist. Participants reported that successful treatment was based on effective communication with the athlete, adherence by the athlete to treatment and rehabilitation work, and the ability of the physiotherapist to engender confidence in the athlete.

There have been a number of quantitative studies conducted that allowed athletes or performers to talk about their experiences. Munroe-Chandler (2006), express the need for additional studies investigating exercise psychology in particular the role of social support in rehabilitation. A study by Rose and Jevne (1993) used grounded theory methodology with a variety of athletes (amateur, collegiate, and professional) to

document the process of the injury experience. They found a four-phase process: 1) getting injured, 2) acknowledging the injury, 3) dealing with the impact, and 4) achieving a physical and psychosocial outcome. Shelly (1999) found similar results with a study that utilized a phenomenological research design. The results from this study indicated that athletes' perceptions about injury change over the course of an injury process and emphasized the importance of the influential significant others (e.g., coaches and teammates) on the emotional response.

Although there may be many people involved in an athlete's rehabilitation, athletic trainers or therapists are quite often an injured athlete's first and most frequent point of contact. They see the athlete on almost a daily basis from the time the athlete is first injured until he or she returns to competition. As a result of the consistency and frequency of contact between the athlete and athletic trainer, the rapport established between the two individuals can have far-reaching effects (Barefield and McCallister, 1997). With this relationship come many responsibilities of an athletic therapist or trainer.

It has been proposed that the athletic trainer's role in providing psychological support should be as the "frontline" practitioner, with the sport-psychology consultant being brought in to provide selected services such as psychological-skills training (Heaney, 2006). Researchers such as Tuffey, (1991) and Wiese and Weiss (1987) suggested that physiotherapists and athletic trainers were in an ideal situation to inform, educate, and assist with the consequences of injury. Since most universities do not employ a sport psychologist on a fulltime basis or as a consultant, the athletic trainer is often required to fulfill this role (Moulton et al. 1997). In a survey of 482 certified athletic trainers, working primarily in either interscholastic or intercollegiate settings, only 24.5 percent reported having a sport psychologist available to them (Larson, Starkey, & Zaichkowsky, 1996).

As the primary health-care professionals for injured athletes, athletic trainers are in an ideal situation to both identify psychological roadblocks and to handle basic psychological needs of injured athletes during the rehabilitation process (Flint, 1997). The importance of athletic trainers and other sports injury rehabilitation professionals in providing some degree of psychological support to injured athletes is well documented

(Petitpas, 1995). Larson, Starkley, & Zaichkowsky (1996) reported that 90% of athletic trainers, rated psychological support as relatively or very important in the rehabilitation of an injured athlete, with 47% believing that every athlete they treated presented some form of psychological issue as a result of their injury. A key component and perhaps the most significant to social support and injury is the relationship between an athlete and the athletic therapist or trainer. Way (2002) says that many times athletes and coaches rely on the certified athletic trainers to be something of a psychologist during the injury and rehabilitation process. However, athletic trainers should be cautioned when discussing the counselling of athletes because very few go through proper psychological training.

Hardy and Crace (1993) pointed out that while emotional and tangible support could be provided by virtually anyone, it is preferable that providers of informational support have expertise of information relevant to the area of question. In a study by Hinderliter and Cardinal (2007), it was recognized that many athletic trainers had only a limited amount of training in psychology, and therefore may not have felt comfortable addressing the psychological needs of the athlete during rehabilitation.

In a number of studies it has also been shown that physiotherapists do not feel adequately equipped to deal with the psychological impact of the injury (Ford and Gordon 1997, McKenna, Delaney, & Phillips, 2002). Gordon, Millios, & Grove (1991) reported that 84% of sports physiotherapists in New Zealand and Australia expressed limitations in their ability to deal with psychological factors, and 87% would welcome further training in the field. Participating in some form of basic psychological-skills training including communication skills, listening skills, and general counselling skills would be helpful in order for athletic trainers to provide the frontline support role effectively (Petitpas & Danish, 1995). Wiese, Weis, and Yukelson, (1991) surveyed the attitudes and beliefs of athletic trainers regarding the psychological strategies used with injured athletes. The results supported the importance of using a variety of psychological skills and strategies to assist athletes in rehabilitation as well as referring to a sports psychologist if available.

A study by Larson et al. (1996) concluded that 47 percent of athletic trainers believed that every injured athlete encounters psychological trauma, therefore illustrating the need for stress and coping strategies in the rehabilitation setting. Hedgpeth and Sowa

(2001) used the 8 factor multidimensional model to provide a possible paradigm for athletic trainers to incorporate stress management into the rehabilitation process. It is important that athletic trainers be knowledgeable in the psychological aspects of injury as well as the psychological and physical techniques necessary to address them (Hedgpeth and Sowa, 2001). This tool was also used in a study by Barefield and McCallister (1997) to identify the degree to which athletes actually received each of eight types of social support from athletic trainers and student athletic trainers; listening support, emotional support, emotional challenge, reality confirmation, task appreciation, task challenge, tangible assistance, personal assistance. From the results a list of strategies that athletic trainers and educators could employ to help educate student athletic trainers about social support and encourage them to provide that support to athletes was formed (Barefield and McCallister, 1997).

In a study by Granito, Jeffery, Hogan, and Varnum (1995), the Performance Enhancement Group for injured intercollegiate athletes was created in an effort to improve their psychological health. The main focus of the Performance Enhancement group was to provide support to injured athletes by encouraging dialogue with peers in similar situations, allowing athletes to work one on one with individuals trained in sport psychology and learn performance- enhancement techniques that could accelerate the rehabilitation process. The structural implementation of the program was the responsibility of the athletic training staff due to the fact that they were the centre of communication for all those involved. The SCRAPE (social support, confidence, accommodate, psychological skills, and educate) approach was developed for sport practitioners who want to address the psychological aspects of the recovery process (Hinderliter and Cardinal, 2007).

Harris (2003) thought it would be helpful to integrate a psychosocial developmental theory, such as a revised Chickering and Reisser 7 vectors and a psychological stage theory, such as Kubler-Ross's stages of bereavement for challenging an injured collegiate student-athlete's personal development. He also concluded that because athletes utilize athletic trainers as part of the social support for injuries, presenting these theories are beneficial in providing athletic training students and athletic

trainers additional skills to recognize and mediate negative psychological reactions to injury.

It is quite evident from the existing literature that physiotherapists and trainers believe they play an integral part in the psychological components of rehabilitation of an athletic injury. Practitioners providing healthcare to elite athletes are best placed to identify these problems and can often be the most influential people in the emotional support of injured athletes (Ford & Gordon, 1997, Ray & Wiese-Bjornstal, 1999). An athletic trainer may have the role of providing social support and creating an atmosphere for rehabilitation that includes psychological factors underlying successful recovery, such as adherence, motivation, and goal setting (Hemmings & Povey, 2002, Francis, Anderson, & Maley, 2000).

Weiss et al. (1991) surveyed the opinions of athletic trainers in Australia. The study revealed that athletic trainers perceived athletes who coped most successfully with injury to have a willingness to learn about the injury and rehabilitation techniques. The most psychological techniques in facilitating injury recovery were perceived to be good interpersonal communication skills, positive reinforcement, coach support, and keeping the athlete involved with the team. Finally, athletic trainers believed it important to have knowledge about using a positive communication style, have strategies for setting realistic goals, know methods for encouraging positive self- thoughts, and have individual motivation.

From current research it is evident that the area of social support and injury rehabilitation has many possible avenues. Health professionals have been identified as playing an important and integral role in helping injured people cope with the demands of rehabilitating from an injury (Nindek and Kolt, 2000, Robbins & Rossenfeld, 2001, Udry, Gould, bridges, Tuffey, 1997). Physiotherapists and athletic trainers are two health professionals that have been identified in previous studies (Tracey, 2006, Bricker Bone & Fry, 2006). To date there appears to be minimal research examining athletic therapists and their role in the rehabilitation of injured athletes.

Chapter Three: Methods

Research Context

This research studied the role of Canadian certified athletic therapists in the social support of injured athletes. Interest in this research emerged from my experiences and practice. When I began working as an athletic therapist I thought that the main component of my work was dealing with the physical aspect of injury. I remember over time discovering that the physical side of injury was just one of the many layers of the therapy needed during rehabilitation. I always had an interest in sport psychology as well as social support and soon began to realize that these factors were a large part of injury. I began looking at my role and became frustrated at the fact that my educational background had not prepared me more. I felt I played a huge part in the social support of injured athletes and I was curious as to what other athletic therapists perceived their role to be. For this reason I thought this would be a very interesting study. To facilitate this I, the researcher, chose an exploratory study using interviews as the primary source of evidence.

Study Design

I used a qualitative research design with thematic analysis (Creswell, 2003) to explore the issue of the role of athletic therapists in the social and psychological support of injured athletes. More specifically, the interview schedule, based on the purpose of this study and a review of the relevant social support literature explored key social support factors. Rather than testing the social support model, I used the four-dimensional social support model (Cutrona & Russell, 1990; Rees & Hardy, 2000) as a priori orientational framework in designing my interview questions. Patton (2002) refers to this as an orientational qualitative inquiry. Participants' perspectives were elicited which then

guided the development of dimensions and themes. Ethical approval for this study was provided by the University of Victoria Human Research Ethics Board.

Participants and Sampling

Two female and two male Canadian certified athletic therapists, ages 33 to 42, participated in this study. Three of the participants are currently university working athletic therapists and one participant was previously a university athletic therapist that was working with an NHL team. All were in good standing (paid Canadian Athletic Therapist Association fees, paid insurance fees, and collected the appropriate amount of continuing education credits, current first responder certificate) with the Canadian Athletic Therapists Association. Each participant had a minimum of eight years experience.

Participants were recruited using an information note sent out as an e-blast. It was sent out to members of the CATA that had their email publicly available on the CATA website. The e-blast let them know that I was looking for athletic therapists that were interested in participating in the study and met the above criteria. They were also told that they may not receive any follow up if they were not selected to participate and that they had the right to refuse to participate at any time and that this would in no way affect their good standing with the CATA.

After receiving responses to the e-blast I used purposive sampling to recruit two males and two female athletic therapists (Patton, 2002). Purposive sampling strategies are designed to enhance the understanding about selected individuals or groups' experience(s) or for developing theories and concepts (Miles & Huberman, 1994). Patton (2002) explains the logic and power of purposeful sampling lies in selecting information-rich cases whose study will illuminate the questions under study. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research (Patton, 2002). For this reason the sample size of four was adequate. Participants were purposively sampled because they had substantial experience, worked in the university setting which provided a breadth of experience, and represented a variety of geographical areas. I selected the first two females and males that were

readily available for interviewing. I followed up with a telephone call to each participant to set up the details of the interviews.

Data Collection

Semi structured interviews; consisting of open-ended questions were used to explore the self-perceived role that athletic therapists play in providing social support during rehabilitation of an injury. The purpose of semi structured interviews is to provide a setting/atmosphere where the interviewer and interviewee can discuss the topic in detail. The interviewer therefore can make use of cues and prompts to help direct the interviewee into the research area thus being able to gather more in depth and detailed data set (Creswell, 2003, and Patton, 2002).

A set of preliminary questions were developed and piloted with an athletic therapist colleague. The purpose of the questions was to provide structure to help focus the discussion toward the research question. The pilot interview was done to add dependability to the study (Thomas & Nelson, 2001). After the pilot interview, two questions were removed and modifications were made to two questions to improve clarity. For example, I changed the question “Describe how you would provide esteem support to your athlete during rehabilitation” to “How would you describe the esteem support you provide to your athletes during rehabilitation? The revised interview schedule can be found in Appendix 2.

Participants were emailed an information letter as well as a consent form to read over. See Appendix 3 and 4. Once the athletic therapists decided they wanted to be participants in the study they signed the consent form and faxed or emailed back to me. After informed consent was provided, participants were emailed the four-dimensional social support model (Rees and Hardy, 2000) so they could familiarize themselves with the four key social support factors involved and then an interview date was set. The interviews ranged between 30 and 60 minutes and were conducted by the principal investigator. All interviews were completed using either computer or telephone communication. All conversations were recorded digitally.

Data Analysis

There were two steps to the thematic analysis: (1) collating data and cursory review, and, (2) coding data into parent/child nodes or dimensions and identifying relationships to establish themes.

Step 1: Collating Data & Review of Early Data

Interviews

On completion of each interview, recordings were transcribed into a Microsoft word document. As the principal researcher, I undertook transcription of all interviews to enhance accuracy of word and sentences (Bailey, 2007). A copy was sent via email to each participant for checking and member verification; to clarify any mistakes or misconception. Each participant made minor changes and added extra detail to some of their answers. Once the participants were satisfied they all gave permission for the transcription contents to be used in the research. Final versions of the transcripts were then uploaded into NVivo™ software.

Step 2: Coding

Coding was done through a process of breaking down data, comparison and placing into categories (Walker & Myrick, 2006). Similar data were then placed into similar nodes or dimensions, and different data were categorized into new nodes or dimensions. From these dimensions, relationships and themes emerged. There were three key phases that facilitated the process.

Phase one

After the data was analyzed, NVivo™ was used to elicit word count frequency to identify recurring words from the interviews. This analysis provided some initial ideas on coding nodes. I was able to get an idea on what words were being used and to investigate them further for meaning and context. This word count frequency is presented in figure 2.

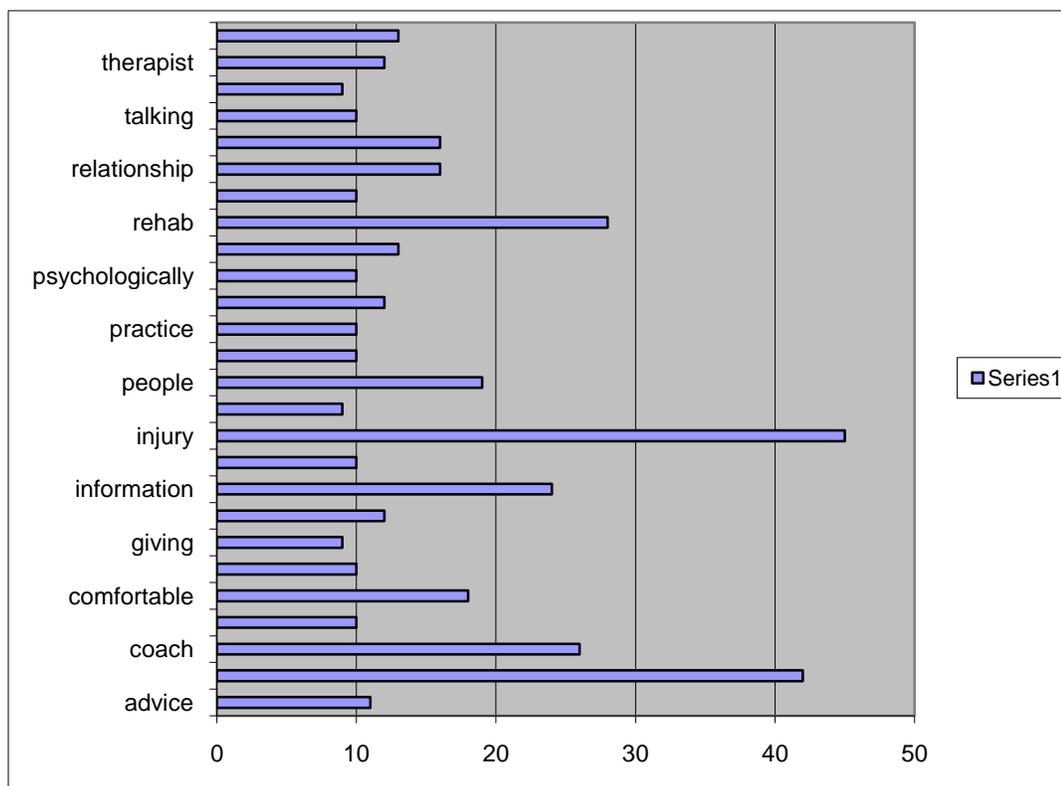


Figure 2: Results of NVivo™ query to identify words frequently used in interviews.

Phase two

After the word count query was performed, a series of codes or headings were generated and the information found was then compared, coded, recoded and interpreted. The modeling feature of NVivo™ was used as a tool for reflection as it captured early iterations of concepts and relationships and allowed for a visual image of the progression

of coding and recoding. An example of the iterative coding process is found in Appendix 5.

Phase three

The final phase of coding was one in which the reference frequency and the sources from which they came from were explored. This helped magnify if dimensions were supported by all or the majority of sources, or if it only came from one source. This was used to enhance the trustworthiness of my research (Patton, 2002)

While collecting data through interviews requires a lot of time to transcribe and analyze, this method helps to provide the research with credibility (Thomas & Nelson, 2001). Having conducted the interviews this provided me with firsthand knowledge of the interview as I transcribed and analyzed the data. My professional involvement, being an athletic therapist myself also contributed to an increased familiarity with the participants. These forms of prolonged engagement strengthened the credibility of the findings (Thomas & Nelson, 2001). Credibility was also enhanced by carefully describing the data collection, analysis and presenting a clear and thorough account of how the data was examined and synthesized, (Goetz & LeCompte, 1984).

Dependability was established through the use of digital recording (Thomas and Nelson, 2001). The modeling feature of NVivo™ enhanced a visual understanding of which codes created, recoded, or eliminated during the course of the analysis and added to the dependability. The use of a semi-structured interview schedule to provide some consistency in eliciting data and the use of extensive quotes and description (Creswell, 2005) added further dependability.

During this phase I utilized two processes for reflection. First I used the modeling feature of NVivo™ and created and reviewed an audit trail that showed the shifts in coding that I made as I progressed. Second, I engaged in peer debriefing. I initiated emails and phone conversations with members of my committee to discuss my views and ideas on the coding I was doing. I also clarified my research bias (Thomas & Nelson, 2001, pg. 36) in the methods and finally I conducted member checks. When the thematic

analysis was complete I emailed the themes to the participants. All were pleased to receive the themes and felt they represented the issue.

Chapter Four: Results

Participants were asked a series of questions and used their experiences to identify a number of perceptions they had about their therapeutic relationship, their role in the social and psychological support of injured athletes and their preparation for providing this support. The context of social support was based on a model devised by Rees and Hardy (2000). These data were coded and a variety of themes emerged. See Table 2 for a summary of the themes to address the research questions.

Table 1: Summary of Themes

<i>Topic area</i>	<i>Themes</i>
Therapeutic Athlete/Therapist Relationship	Professionalism; Being available; Trust
Social Support:Emotional Support	Caring and Comforting; Listening
Social Support: Esteem Support	Positive feedback; Motivate and Encourage; Coping and Goal Setting
Social Support:Informational Support	Advice; Guidance; Visual Aids and Examples
Social Support:Tangible Support	Everyday Assistance; Going above and beyond
Social Support	Communication link; (secondary dimension- Educate)
Psychological Support	Mental aspects of injury; what to look for; Playing the part; Referring
Attaining Comfort Levels	Education; Experience; Assistance

4.1 The Therapist/Athlete Relationship

When investigating the first research question: how athletic therapists perceived the therapeutic relationship between themselves and the athletes they served, there were three themes that emerged from the data. These themes were represented by at least three out of four of the participants. These were: professionalism, being available and trust. See Figure 3 for the thematic display of the themes generated by NVivo™.

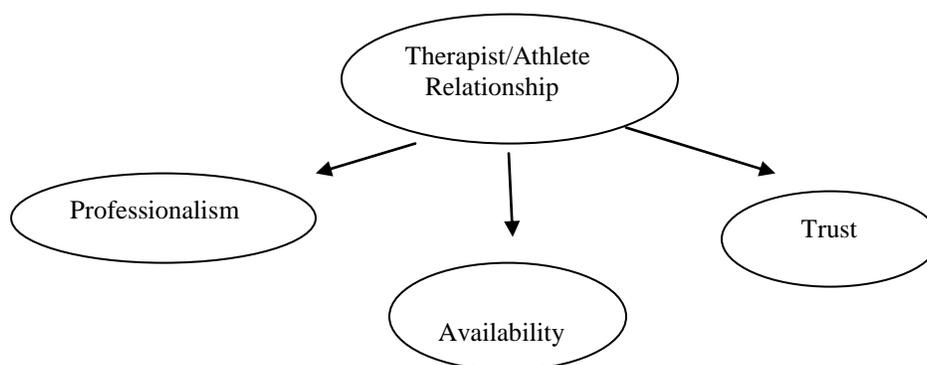


Figure 3: NVivo™ model of therapist/athlete relationship and themes

Participants reported that when working with athletes there are a number of qualities that need to be present in order to facilitate a therapeutic relationship between an athletic therapist and their athletes. The data illustrated that *professionalism* was ‘setting a standard’ for the interaction among therapist and athlete. All participants mentioned professionalism as a feature and saw how important it was in the therapist/athlete relationship. Participants’ reflected this in the following statements: “I also believe you need to have a professional relationship you know to some extent, just so it sets up a standard. It’s great to be able to say ok, I’m taken serious” (AT4, personal communication, June 18, 2010). “I guess that’s how I try and transmit my philosophy into the work with student athletes The whole clinic gets kind of run in a professional, yet relaxed type of manner, so we have a good relationship with the athletes as well” (AT3, personal communication, June 17, 2010). More statements on the relationship are as follows:

So again it’s kind of come in and hang out and do whatever they want, even though that’s kind of not encouraged sometimes, but they are pretty good and I also try and keep all conversations very professional. They’ll talk about what they’re doing maybe in their personal life and stuff like that sometimes. I mean, sometimes things come up, but you try and just talk about very common things that would acceptable to anyone, normally, but nothing to crazy or in excess (AT2).

Well, I really try to maintain a kind of a relaxed relationship with the athletes, I mean, until they feel comfortable in the environment... But it's also very professional at the same time (AT1)

The second theme that emerged from the data was *availability*. When an athletic therapist makes themselves available it fosters a positive relationship with their athletes. It opens the door to communication as shown in this statement: "It's advising them on what services we offer, and that they don't have to just come in to see us if they're injured" (AT1, personal communication, June 9, 2010). Two participants explained availability as follows:

So, basically... just, you know, I kind of make myself as open to them as possible in the sense that... which is very difficult now at times when you're trying to balance like your own life and family life and stuff, as you know. But, you know, if they ever have a question, they can always like text me or e-mail me, and I'll try and get back to them, you know, before our next rehab session, or if they have a concern... you know, depending on the athlete... like I'll give some of them my cell phone number; and, you know, if it's something pertinent that they have to ask me, or something that they're wondering about... like, you know, I make sure that I communicate with them (AT3).

You know, I mean, you know, at any time, you know, they can call you or you have to meet with them, you know, at the rink or at the hotel and, you know, they may want to talk about, you know, what's going on with their injury (AT4).

Complimentary to the discussion on professionalism and availability, confidentiality arose as an additional quality important in a therapist/athlete relationship. This was mentioned by only two of the participants and therefore I incorporated the concept within the theme of '*trust*'.

Trust was commented on the most frequently by all sources. It was seen as something that started the initial relationship and carried over into the rehabilitation. Trust allowed the athlete to offer more information. For example one participant said “I think once you establish that trust with them, they tend to open up to you a lot more and feel more comfortable with you” (AT1, personal communication, June 9, 2010); while another said “Like I don’t withhold any information, and I guess it’s just the way I deliver the information, it’s just different, depending on the person, you know, so...I guess I like to believe the athletes respect what I have to say to them in terms of their rehabilitation (AT3, personal communication, June 17, 2010). Further responses categorized as trust were illustrated as follows:

I guess establishing kind of confidentiality with them, so knowing what they tell us, it stays between us, and I wouldn’t break confidentiality with them unless they gave me permission to go and ask... go and speak with a coach, and go and talk to a doctor for further medical advice (AT1).

Corresponding with the same ideas were these thoughts by one participant:

I really think trust is a big part of my outlook on rehab and how I work with the athletes. Forming a relationship with your athlete through rehabbing, I mean, we’re just like at the beginning of rehab, or at the middle, at the end, and I think if, you know, an athlete that has questions, or if they doubt... if they have any doubts in your mind like what you’re doing with them, then they’re probably not going to respond to treatment, or they’re going to be apprehensive to rehab, or they’re going to look for other places to go to as far as therapy goes, so I think trust is probably the biggest... sort of the key component, you know, when you’re dealing with athletes in their rehabilitation (AT4).

One comment a participant made about trust was that it could affect the information about an injury that an athlete was providing. This was illustrated in the next quotation:

That's something that you can easily do, you know, to help yourself or, you know, making sure that, you know, you're not doing too much. If you are starting back into practice and something set them back, you know, and them being honest with themselves, but also like with me and making sure that they're telling me everything they are and aren't doing. Sometimes it depends on the rapport I have with the athlete on whether or not they tell me everything (AT3).

Trust was also expressed in the rapport a therapist had with the athletes. It's evident from the following quote that if the athletes had that trust they came into the clinic more:

Like I would say that some athletes come in for non-injury related things. From each team there are... some teams more so than others, depending on how well I know the team. You tend to see the basketball players, the soccer players, and the rugby players a little bit more than the x-country runners... even the rowers – like the ones that are in the building with the clinic, physically in, you tend to have a better rapport with them (AT1).

Having a relaxed and comfortable atmosphere in the athletic therapy clinic also established trust. One participant commented by saying:

Well, I really try to maintain a kind of a relaxed relationship with the athletes, I mean, until they feel comfortable in the environment (AT2).

4.2 Social Support

The second research question revolved around the types of social support provided to injured athletes and how CATs perceived their role in this support.

Providing support was perceived by the participants in my study as the most substantial feature of an athletic therapist's role. When asked what types of support was provided within the dimensions of the apriori model a number of themes emerged. These themes are presented following within the dimensions outlined by Hardy & Rees (2000). It is important to note that these themes were intertwined and seemed integral to each other and thus difficult for me to theme. In addition a fifth dimension was identified when I themed the data that went beyond the four dimensions of the social support model. This dimension was related to their support role as a communication link. A secondary dimension within this theme was educating. The themes are illustrated in figure 5 and discussed as follows.

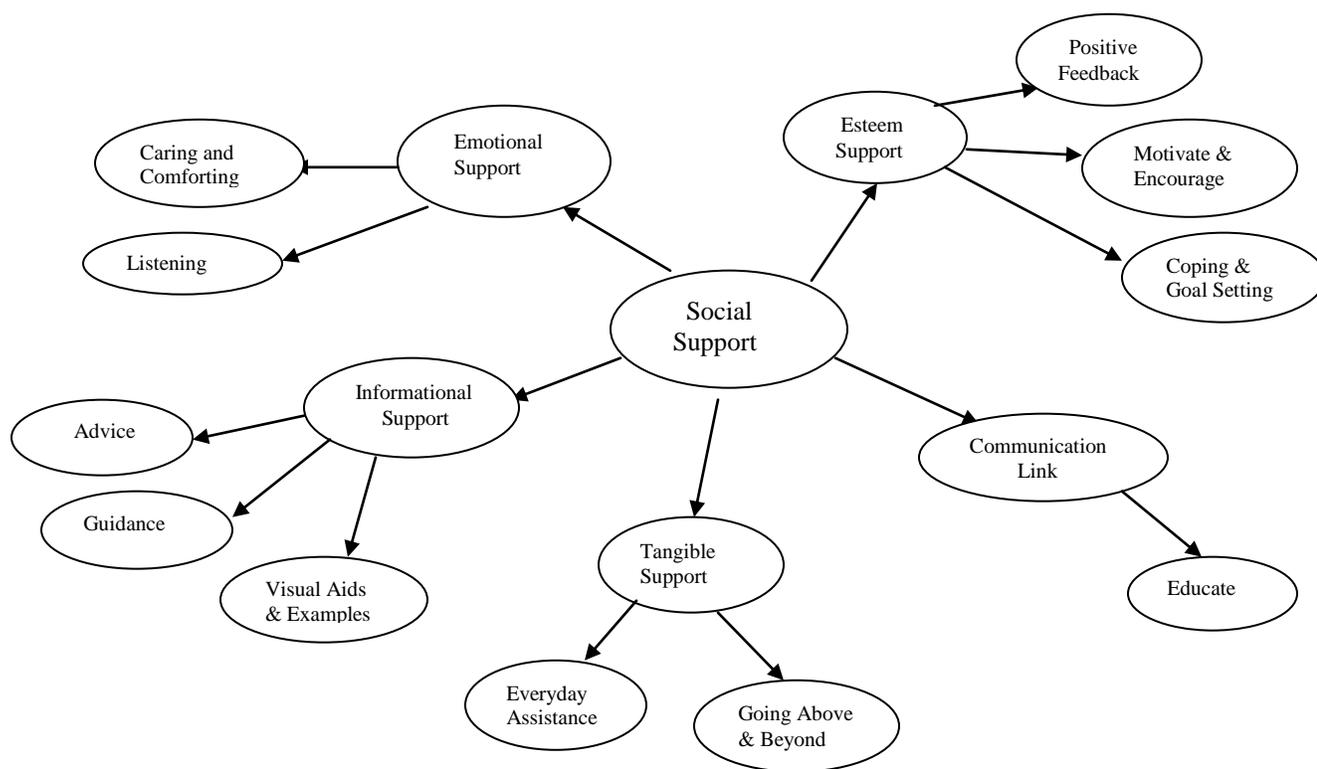


Figure 4: NVivo™ model of social support themes

4.2.1 Emotional Support

Within the model developed by Rees and Hardy (2000), emotional support was operationally defined as “the ability to turn toward others for comfort and security during times of stress, leading the person to feel he or she is cared for by others” (Rees and

Hardy, 2000, p. 322). There were two themes within emotional support that had the voice of a majority. These themes were: caring and comforting; and listening. *Caring and Comforting* was the first theme to emerge from the data. This was highlighted with the next two quotations. “You know, if there’s any questions that, you know... if they have questions about what’s going on with their rehab, then, you know, your answers are very thorough and accurate, they are going to be more comfortable and know I’m there to help them” (AT4, personal communication, June 18, 2010), and also said: “So I think, you know... and especially the ones who are injured... I mean, that... you can pretty much tell that, you know, they’re bothered by what’s going on and, you know, they need some help and support, you know, in that area” (AT4, personal communication, June 18, 2010).

Caring and comforting was deemed important by all sources in the study. This was reflected in the following statement: “It’s my type of personality, you know, like... so, you know, I just... I don’t know... you know, I kind of ask like questions on like “How are you doing,” and, you know, not just, you know, with regards to like “How is your injury doing,” but “How are you doing (AT3, personal communication, June 17, 2010); and, “During the rehab – I guess just talking to them shows them I care” (AT1, personal communication, June 9, 2010). The following statements also refer to the caring aspect of the athletic therapist/athlete relationship:

You know, sometimes you need to help people, you have to make sure that person felt okay, and I’ve been constantly like checking with her to make really sure that everything is going alright (AT2).

Once they start seeing you or the results or they get better or, you know, you really show that you care for them, then, I think that helps then, you know, to foster that relationship as well (AT4).

Using the description of a scenario was one way a participant showed how comforting was part of their role as an athletic therapist:

I can give an example. Well, this year we had... we have one female basketball player, and it was very... complicated. She doesn't even know when to like stop or slow down, but she feels like... if she was hurt, she'd ask if she can practice tomorrow, but she shouldn't even be practicing like for two weeks, so she's very, very intense... that's a very serious and trying person. They always got a question...but... so she had an ankle injury. Now that's kind of how I learned about her through that injury, but then she got a concussion and did not practice after Christmas, and she was very like emotional about the whole thing because she was very... she was very dizzy and quite like, well a second degree, I know that we don't really rate them anymore, but she had a lot of dizziness she had lost a little bit of memory, and so she was very emotionally affected by the symptoms she was experiencing, that they weren't going away very fast, and that affected the type of person she was. I really had to try and calm her, just kind of sit down and talk to her about it... and, you know, that we're really trying to think about her safety and what... you know, had to get into that conversation with her. Instead of saying you can't go back until your symptoms go, it was more trying to comfort her and make sure... and saying that, you know, "You're going to be okay," and I guess that was kind of... go to more of the emotional side of her, rather than just like signs and symptoms and what's going on, in this stage of rehab (AT2).

The second theme was *listening*. It was something that the majority of participants used in providing their athletes with emotional support. Listening was a tool they used to gain important information from the athletes and was highlighted as follows: "I guess you know it's like if you listen to them, really listen to them they tend to tell you more" (AT4). At times listening was said to be more beneficial to those involved than actually giving advice. This was evident from the comments from this participant: "Do you have any questions, like you know, are you getting support from you coach, because, you know, there are some coaches that are really good, and some that are just terrible. You know, do you want to talk about it? Like do you have someone to help you? Like, you

know, it's like getting help from class – like things like that, you know – so I try and... I definitely listen, and I try and listen more than like provide advice” (AT3, personal communication, June 17, 2010). It was also shown in this participant's voice:

You have to listen to what, well like they will need to just talk to you sometimes, and you don't need to offer a lot of advice, they just want someone who is going to listen (AT2).

4.2.2 Esteem Support

The operational definition of esteem support within the Rees and Hardy model (2000) is “The bolstering of a person's sense of competence or self-esteem by other people”. Giving an individual positive feedback on his or her skills and abilities or expressing a belief that the person is capable of coping with a stressful event are examples of this type of support’ (Rees and Hardy, 2000, pg. 322). Within esteem support the themes that emerged were: positive feedback; motivation and encouragement; and coping and goal setting. During the interviews the first theme to arise from the data was *positive feedback*. Throughout the data, participants revealed their belief that positive feedback allowed athletes to feel good about what they were accomplishing, and in turn this boosted confidence: In one participant's voice “Okay, so again just, you know, like trying to gain as much information as possible with how they're feeling so, you know, maybe esteem is like related to confidence or, you know, partially related to confidence (AT2, personal communication, June 14, 2010). Participants didn't always have the same views on positive feedback, as evident in the next two statements:

Here's what... we want to accomplish it and, you know, let's go to it and see how that works; and, you know, as they kind of go through it, you're obviously with them, watching them and letting them know that, You know what, this is looking good, or This is looking better and, you know, so... and they keep going and keep doing it, doing it (AT4).

Yeah, I think a lot of them, if I leave them alone; they know they're doing it properly. If I'm there tweaking body positions, or constantly giving them feedback, it's almost like they take that as a negative because I'm constantly harassing them, so it's almost the opposite where you are... where you can... you know, just say, for example, "That's good," and then I can move on to do something else and leave them to it. They seem to be a bit more comfortable with that, or take it as a more positive thing when they're doing it on their own. I do provide them with a lot of encouragement...like when its needed to get them going or maybe even help motivate them(AT1).

Study participants reported trying to be as involved as possible with the rehabilitation of an injury but also noted, in the following explanation, that some freedom for the athletes was also required to provide positive esteem support: "Most of them I will try and supervise as much as possible at first to ensure that they're actually doing it properly; and then, as I have more confidence in them, I'll tell them they are doing great and give them a bit more freedom to be able to go and work out on their own" (AT1, personal communication, June 9, 2010). Positive feedback was explained in the next statement as well:

I mean, even though that... you know, you could have a worst case scenario. I mean, you always have to kind of try to paint, you know, a brighter picture at the end of the tunnel like, you know, and let them know that they are doing great with their rehab (AT4).

Motivation and encouragement was the next theme that emerged from the data, and as seen in the previous statements, it strongly relates to features of positive feedback. Participants described their role in how they motivated and encouraged their athletes in various interviews. In the context of rehabilitating injured athletes one participant reflected: "I find that giving tangible assessment things like measurements, strength tests and, you know, if you're doing a timing for sprints or whatever, and they're... whatever their time is running and how long they can go on a bike, some teams, like actually

having the results and the progress to keep them motivated and gives them confidence, I guess” (AT2, personal communication, June 14, 2010).

The following comments transpired from the interviews and demonstrate how athletic therapists play a keen role in motivating and encouraging injured athletes. One participant said “I do provide them with a lot of encouragement...like when it’s needed to get them going or maybe even help motivate them (AT1, personal communication, June 9, 2010), while another participants comments were ” You know, maybe I do do a little bit of comparison in a sense. I go so and so was in last week and, you know, they got to this level. Oh, come on, you can work harder (AT3, personal communication, June 17, 2010).

Participants acknowledged on numerous occasions in the interviews, that providing goal setting tactics enhanced an athlete’s ability to cope with injury. *Coping and goal setting* was the third theme within esteem support and one participant acknowledge their use of goal setting as follows: “I use temporary goal setting and orienting” (AT2, personal communication, June 14, 2010) was the comment from one interview.

It was also reported that goal setting and stopping negative thoughts were two methods through which athletic therapists helped their athletes cope with their injuries. The following three quotes exemplified one participant’s perception of their role:

You know, so that means this week we have to be able to do this, okay, and going through like the rehab in stages to what’s expected, you know, and how we determine how they can go into the next kind of, you know, challenging if they’ve entered rehab, so goal setting for sure - as I mentioned, like stopping negative thoughts (AT3).

And trying to provide them with whatever things that they can kind of, you know, stop the negative thought process and, you know, give them two words for things that they can do to kind of put them on track (AT3).

So then when they are in a game situation and they aren’t starting to question, Oh, is my knee really strong enough, or is my shoulder really strong enough, like they

can stop it and then, you know, give a positive thought or get focused on what they need to do kind of thing (AT3)

A third participant had these two comments:

I think as far as like rehab goes, setting paths and certain goals for them that they can progress through and like gain their confidence back after an injury... (AT1)

and like from... you know, just making obtainable goals that they're constantly working towards overcoming, whatever the cause of the injury was; encouraging them as they go through it. That's all I can say (AT1).

4.2.3 Informational Support

Informational support was operationally defined as “providing the individual with advice or guidance concerning possible solutions to a problem” (Rees and Hardy, 2000, pg. 322). Informational support was the third dimension from which three themes surfaced: advice, guidance and visual aids and examples. The first theme to emerge from the data related to this theme was *advice* and it was evidenced in three interviews. Advice can come in many forms. Data showed that not all athletes are looking for advice on the physical aspect of injury. The following statement captured the illustration of advice: “Sometimes they tend to talk about non-injury related things and hope to get my advice” (AT1, personal communication, June 9, 2010). It was also shown in the next two quotations:

My athletes are always asking questions, not you know injury related all the time but I think more like advice. Could be related to the injury and sometimes its not. I try to always provide them with something. What I guess is advice. Some athletes come in the clinic and are just looking for a chat (AT2).

They're just more of a comfortable relationship with them, so those ones... I'll see them walk through the door... come and ask me a question like... you know, some of it could totally be related to their health, or it could completely be... questions for me that are completely off topic, that they're just looking to see if I know anything about it, or if I could at least advise them a direction to go to get help with it (AT1).

As highlighted by this athletic therapist, advice was also delivered in different ways: "Okay, so I try and give them... you know, I mean, obviously, it depends on the type of athlete and how much I know them; but as far as, you know... I mean, if it's something that sees an ending, then, you know, I don't necessarily... I mean, I tell them everything, but the way I tell them is different, depending on the type of person, so..." (AT2, personal communication, June 14, 2010). Similarly:

You know, some guys will retain information, and are very intelligent with... you know, you give them a specific, say, home program or exercises to do at home or on their own or whatever; you know, they have no problem taking that and running with it, but then there's some guys you have to take by the hand they have to lead through it... (AT4).

Continuing with these thoughts this participant said:

I think we do... I do it mostly by... I mean, obviously through... you know, verbally, just to... you know, you almost have to spell it out for some of the guys, you know (AT4).

In addition to advice, the next theme I identified was *guidance*. Throughout the data, it was viewed by participants that guidance was needed to help explain information to a coach. This was the ideas of one participant.

Like, for instance, one of our male teams... you know, so he's big into being mentally tough, you know, so, you know, you may... I may have an athlete that's really struggling, but has made the decision that they're going to try and continue, and even though, you know, I give all the information about what's going on, I don't feel that they're, you know, going to make any worse, but they're certainly not going to make it any better; but, you know, I give the information and that if they need to talk about it or if they say something to, you know, to talk to the coach about it without appearing mentally weak, you know – that, you know, I try and like provide a little bit of feedback to them about how to do it (AT3).

Guidance also took on an alternate meaning when participants were using it to keep athletes up to date and on track through their injury rehabilitation. One participant's words were: "So I think we... you know, you have to constantly follow up with them and monitor them and, you know, support them that way by, you know, saying, Here's our outline for today and, you know, here's what we're going to do" (AT4, personal communication, June 18, 2010). Another athletic therapist quoted: "so I would say like every person that comes in, they're always leaving with some type of guidance as to how they can help themselves" (AT1, personal communication, June 9, 2010). Showing more of the same ideas was this participant's thought:

I always try and keep them informed in regards to what we're doing with their rehab, so as I go along I try and... even though they might not fully understand, I still try to keep them informed of what we're doing, and that's why we're doing it, and what they need to do in terms of exercises and things like that afterward (AT2).

As well as:

They'll never be wondering when they'll return even though they might be longer than they want but, you know, we try and explain to them and keep them up to date. Information is key I think, so that we give them something to hold on to

while being injured (AT2).

One participant explained guidance by facilitating athletes helping athletes. This was evident in the following explanation: “You know, trying to book a rehab with someone who has gone through it, you know, or someone...who is going through it at the same time so they can kind of talk about it, but also like, Oh, where you at, you know. You know, so they have that kind of, you know, have the ability, you know, to share information back and forth” (AT3, personal communication, June 17, 2010).

The final theme for information support was *examples and visual aids*. Providing examples was a method used by the participants to enhance the rehabilitation of the injured athlete. One interview revealed that examples helped to put things into perspective by showing success. For example:

I think, you know, it’s important to let them know that, you know, no matter what it is, you know, the person is... they’re going to get better with whatever injury they have and, you know, you could use examples like of players for whatever like that have had injuries in the league and that, you know, have been out for a bit but then have always gotten back into playing, so I think you have to use examples of, you know, other people, what they’ve gone through (AT4).

Two other participants expressed similar thoughts:

You know, some people are very aware and others you have to kind of... not sugar coat it, but you have to kind of, you know, say, This is what’s going on, I’ve had, you know, athletes that have rehabbed really well, and this is, you know, examples of them kind of, say... you know, say it’s like a ACL tear and they’re, you know, out for a season, but then, you know, the next season they came back, they had the best season ever of their university career (AT3).

I guess having... I don't do it that often, but I guess sometimes providing like studies on different injuries that they might have that shows like success rates in surgery they had to get done, or just like basic rehab of, you know, for shoulder impingement or something. I'm trying to think of an example where I had to do that. I guess that would be one thing referencing different articles or studies, showing them that. I don't know, other than that (AT2).

Participants also identified the need for using examples when explaining information that would give the athletes some guidance when coping with an injury, and were highlighted as follows:

so, you know, for that... you know I'd say... okay, like when you're talking about like potential stress fractures or over-use injuries in the shins, you know, it can be... you know, it's basically based on your pain level, you know, and go from like you know, yellow is the zone you want to be in, and it's almost like, you know, when you're... you know, when you're camping and they can tell you if you can light a fire or not, the yellow... well, green, yellow, orange, and red, and you don't want to be anywhere beside or higher than orange (AT3).

Visual aids was identified as a great way to give an athlete informational support by enhancing an athlete's knowledge about their injury. One participant had this comment: "Concussions even, like taking home the little booklet of concussion information – what concussion is, how to handle it, what's common, what people may experience – giving out concussion stuff" (AT1, personal communication, June 9, 2010). Another participant had similar ideas: "I'm sure... I've used as much visual aids I can to help them because the more they understand about their injury, and what we're trying to do the better off we'll be (AT2, personal communication, June 14, 2010).

4.2.4 Tangible Support

The operational definition of tangible support is “concrete instrumental assistance, in which a person in a stressful situation is given the necessary resources (financial assistance, physical help with tasks) to cope with the stressful event” (Rees and Hardy, 2000, p. 322). Tangible support was the last dimension to be directly associated with the social support model. The two themes that emerged from the data were everyday assistance and going above and beyond. The first theme identified under tangible support was *everyday assistance*. This type of assistance was explained through many examples. Most participants, at one time or another, provided athletes with rehabilitation devices as noted in these next two statements:

You know, obviously, we give them... you know, when they have sustained an injury, I think we give them substantial support, like you said, through... you know, whether it be crutches or braces or splints or taping or, you know, or padding, so I think we do a lot of that too (AT4)

and, you know, we have a system kind of at our university where they can buy ankle braces for really cheap - like they buy them at cost with us – but things like... you know, just like Donjoy® ... not even a Donjoy®, but a body glove like knee brace they may need just for like some extra support. We'll just lend that out (AT3).

One participant's thought when first asked to talk about tangible support was explained in the following quotation:

I would think it's hard to actually find that one in a university setting because it's not a lot of these people... like the athletes that are coming, if they're injured, it's not like we're taking away a huge scholarship from them so they're in financial need, or you don't get as much of the... (AT1)

The more the participants thought about tangible support, the more they came up with ways they demonstrated this type of support. One athletic therapist shared their ideas as follows:

I will help anybody out with braces or crutches or anything like that that I can help them out with so, yeah, if they require crutches... if they can't buy them themselves, we've got them here. We can sign them out. (AT1). The same participant also stated: I'll try my best, you know, for purchasing the big rolls of Theraband and stuff like that, not to charge the athlete for it – just to give it to them to take it home because even five bucks here and there for them at times can be a decent amount of money, so these little things that I try to not financially burden them anymore (AT1).

One participant explained everyday assistance through the following scenario:

I went with her to see a vascular surgeon, and then she just went to see a surgeon in Halifax, and I wrote a letter to send to like ask questions, and then the person... the doctor down there was up on everything (AT2, personal communication, June 14, 2010)

The second theme was *going above and beyond*. Some forms of tangible support were considered “the norm” for an athletic therapy clinic however, all participants explained events in which they went well beyond what was expected of them. The next three quotes captured the participants' ideas on going above and beyond:

This is something that I started doing more so over the years; but, you know, if an athlete doesn't have a ride to a doctor's appointment or whatever, I'll take them. I have in the past, like if they needed something like a med wise – you know, waiting to get paid, like I'll pay for it, and then they'll just reimburse me and, you know, I don't do that with everyone, but ones that I know are really strapped for cash or really, you know, in need, then I'll do it; and, you know, it's not... they always pay back, you know Even kind of going the extra – I don't want to say extra mile – but, you know, when you have someone who is like on crutches and

they're trying to get to and from class, it's like trying to arrange some type of transportation in a sense (AT3). This participant continued explaining "the little extras" with the following statements:

And then... yeah, and, as I said, just making sure that... you know, and there may... at times depending on who it is, obviously – you know, like if they need to run and go get something like for... I don't know whether it be they don't have a ride to go get a new pair of cleats or whatever, I will, you know, take them, or they could still take my car, you know, and it's really... it's not that I provide favouritism but, you know, a little extra (AT3).

As well as... you know, like if an athlete confides in me that they're having difficulties, you know, with exams or, you know, the amount of time they have for exams, like making sure that they have the information to get extra time like through... a centre at the university (AT3).

Two other participants shared the same types of examples:

For myself, I mean, I'm certain... you know, I've done it where lots of times I've had to take an athlete to the doctor so I've, you know, picked them at their hotel, given them a ride to and from, or couriering around to, you know, different appointments, whether it's MRI or x-ray or, you know, seeing specialists. So I think, you know, we support them that way a lot (AT4)

I have on occasion, I try not to make it a habit, but if I know the athlete well, I'll give them a ride to pick up a brace, or a prescription. Its ,well you know like if I didn't have a vehicle when I was a student I'd rather have a ride any day so I didn't have to take the bus (AT1).

It was evident through the data that the participants really didn't consider these tasks to be going "above and beyond". One participant's illustration of this is shown in

the following quotation:

So I do that quite often where I'm going to the hospital, it's no big thing like that, to making sure that like no one is alone, just helping them if they didn't have something, and I was there. I guess I kind of like going the extra bit for my athletes, so maybe I also give the athletes a ride to the clinic or to emerg if, its, well if they need it. I know its something I don't have to do but to me it's important to me (AT2).

4.2.5 Communication Link

Providing a *communication link* was a cohesive theme across all interviews. The secondary dimension from this theme was *educating*. Starting with a focus on communication, participants described the critical nature of the need for sharing information. In order for rehabilitation to be successful athletic therapists must involve all those needed for such a task. One participant described how communication involves the coach by saying: "Well, I guess I always... I give information... I give like injury reports to the coaches. Like the status of them – like each week I'll give like an update on what's going on with them..." (AT2, personal communication, June 14, 2010). It was also expressed in this significant explanation by the same participant:

So I can tell the athletes that, you know, I... I guess I'm... I'm kind of the link between the coach and the players, so I'm going to tell the player that, yeah, I told the coach that and that you're coming back, so they're not... because I find sometimes if you don't do that, they get... that's when a player is... I guess that's when a player will go back too early if they're... you know, they'll try to get back because they think the coach needs them; but, if you don't follow up with the athlete and coach, no one knows exactly what we're doing, they'll think, Oh, well, I'm not going to play. "I'm going to be on the side line– "I'm not going to make the team next year, or the coach is going to think I'm a baby. So that might help on that side....(AT2)

Another key communication factor consistent within all interviews was interacting with other healthcare professionals. Two participants explained this type of communication in the following manner:

We have a really close relationship with one of our sports med doctors, and she's... you know, we're in constant conversation about all our athletes that go to see her so, you know, like making sure that we're communicating enough with the therapist and with her staff (AT3).

And if there's any sort, you know, ambiguity or anything that like is an uncertain area with the injury that... you know, you show them that you can ask, you know, further advice, whether it's through doctors or, you know, another therapist who has, you know, some other experience – you know, whomever that maybe you could seek advice from; but for the most part... like in my case, it would just with... it would be with our team doctors and then, if they couldn't answer it, I would certainly consult with, you know, a specialist in whatever area it was (AT4).

Communication didn't only encompass coaches and healthcare professionals, but parents as well. A single interview included communicating with parents as well, whereas others never mentioned parents as someone they needed to involve: The next two quotations highlighted one participant's thoughts:

And making sure that I'm listening, but also providing the information that they want to themselves and to like parents. Like I've had parents contact me who have had questions, and then like coaches as well. Like we make sure that everybody is on the same page with stuff, so... (AT3).

Do you need me to, you know, talk to them about it" – you know, provide them more information, you know, and then, you know, everything from coach to

parent – the same thing, you know. If they want to talk to me, feel free to come, send me an e-mail, or you can call from a phone or whatever, you know. So we definitely have control of that for sure (AT3).

Educating was the secondary dimension that materialized from the data.

Sometimes it means educating athletes and coaches in order for a rehabilitation to be successful. Many participants educated their coaches to better understand the complexity of injuries, and illuminating this was one participants views:

The other important aspect is dealing with the coach so that they understand the process too, so they can be... some coaches just want their players to play, and they'll push the envelope as much as possible, and we can... they ask if they can keep playing, and help them(the team) or... and they'll try and push them through some discomfort which the athlete might be not so good with but, of course, the coach won't listen to what they say sometimes, so it's important that you play a part... express your concern because even though you're dealing with a coach who thinks its just the physical injury, their words and what they say to the player can psychologically affect them too (AT2).

Another participant had similar thoughts:

I don't know what its like at other universities, but it is very slow with certain coaches, like the whole switch to knowing that the psychological aspect is such a huge part of performing, I guess we need to continue educating them you know (AT3).

Data showed that educating the athletes themselves can open the lanes of communication by constantly relaying information to them. One participant reflected on this with the following thoughts: "I think that each injury is different, but we should always relay information like for every single injury so that the athlete knows... like is educated and knows why it happened, and can work towards not having it reoccur..."

(AT1, personal communication, June 9, 2010). One participant also expressed the necessity of educating athletes by saying:

you're just kind of educating them because it's surprising how many athletes have no idea about their body, or like how they're supposed to feel, or what it feels like to do a stretch, or what it feels like to do too much, you know, you know, so just a lot of education, you know, and what else can I say – yeah, just trying to make them understand (AT3), as well as by : just making sure they understand what stage of healing they are in, what they are doing, are they reaching their goals, why they are only progressing within their pain limits, and why we are progressing as opposed not just resting and then going into a game. Doing all the steps, climbing up a ladder during their rehab you know. Just try and make them understand it's a process (AT3).

4.3 Psychological Support

Based on the literature it was expected that my study participants were also providing some psychological support. When asked how athletic therapists perceived their role related to psychological aspects of injury, the data highlighted four themes: mental aspect of injury; what to look for; playing the part; and referring. See figure 5 for the thematic display of the themes generated by NVivo™.

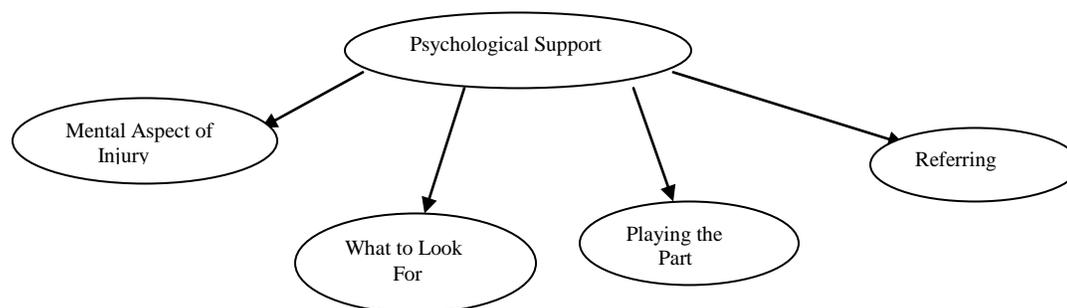


Figure 5: NVivo™ model of psychological support and themes

Data collected under the first theme was *the mental aspect of injury*. All participants agreed that aside from the physical injury itself, athletes were affected psychologically from their injury as well. All four participants expressed their perceptions in the following manner:

Yeah, I would say absolutely they are affected psychologically. Why, because I think that, you know, they realize that, you know, any injury is obviously affecting them obviously physically and emotionally, and that's probably because, I mean, a lot of them are just, you know, so damn competitive that they want to be out there like as much as possible (AT4).

Well, I could answer a very short answer, which would be 100 percent I would think that they are affected psychologically (AT2).

Oh yeah, for sure, yeah – and, I mean, you know, as you know, like you can... you know, when you're coming back from, you know, any type injury whether it's like, you know, a mild injury or severe, you know... you know, you can have the whole you know, the whole Kubler-Ross model of death and dying. You know, it's like... it's related to injury – like acceptance and rehab – you know, like like bargaining, denial... like all that... you know, all those things. So, yes, definitely the athletes are affected psychologically from an injury. Its like everything from, you know, Oh my goodness, my world like, you know, almost like depression to like frustration where I can't believe... like I just started like being on the... you know, on the... you know, being on, you know, the starting line and then this happens, you know, so...(AT3).

Yeah, I do think athletes are affected psychologically from an injury. I think that, depending on the severity of the injury and how traumatic it was or when it actually happened, I think some of them are better than others in coming back from it, it kind of... depending on how well that person is able to cope will kind of determine how quickly they're able to get over their apprehension or their fear when they come back from injury (AT1).

The next theme was *what to look for*. Participants reported a substantial amount of data in terms of what an athletic therapist would look for when they thought an athlete was struggling mentally with their injury. One participant's comments were:

Characteristics, I would say that not responding to treatment is, I think, the biggest thing. I mean, I've seen that a lot where just, you know, you treat like an athlete or a condition, and they don't get better, so you know something is up, and it's like... yeah, I mean, I think a lot of it has to do with kind of their mental status, psychologically speaking, that, you know, whether they're burnt out or, you know, (AT4).

Another had these comments to share:

Okay. I find sometimes an initial... like lack of motivation to get back so they won't be so stringent on their exercises that you would give them. Like they're going, oh yeah, I do them some of the time, compared someone who is very keen to get back, and they would just doing them as much as they can (AT2).

The same participant elaborated further:

They would be very tentative doing like rehab exercises – like new ones especially – if you're giving them a new exercise, you know, they wouldn't do it as fluidly as they should, or they're kind of hesitant, that kind of thing, so like they progress from... like on-the-ground proprioceptive of exercise... you... on a bosu ball or on a, you know, foam pad or something like that where they kind of feel... you know, they need something to hold on to and they would be like that. I guess another one would be... they might be describing they have pain when objectively or clinically you don't feel like there should be any pain. And then once they're returning to competition, if their play is not where they were pre-injury-wise (AT2).

Evidence collected and highlighted in the following quotation showed that at times the signs are purely physical:

I guess the way that they are physically, how they carry themselves... you know, you can look for like... what's it called – like just how like physical cleanliness. Like are they still showering regularly, or their skin – are they breaking out; like black circles under their eyes – like is stress physically showing on them (AT1).

Evidence also pointed towards the actions of individuals changing while they are outside the rehabilitation setting. Participants' voiced this with the following two statements:

I think, you know, if a guy is always mad or he doesn't talk ... you know, he comes in, he's like very emotional around people or, you know, they... you know, they just don't want to talk to anybody (AT4).

Are they going to class; are you skipping class; are they eating regularly – what else – you know, are they still communicating with their teammates, or are they communicating with their coaches. Are they withdrawing – like, I guess, all that stuff is kind of what I try to keep in my mind (AT1).

The third theme was *playing the part*, which emphasized the role an athletic therapist plays in the mental aspect of injuries. One participant made the following comment:

Oh, I think, not only being... you know, being an athletic therapist, I think, you know, we're kind of... we know... obviously, I have all these different hats and stuff; but, I mean, one of them... you know, is definitely like a psychologist to some extent (AT4). Continuing with:

They might want to talk about, you know, How long is it going to be, or what's going to happen now and stuff, so, I mean, you basically... yeah, you have to play the part of, you know, sports psychologist with them too, you know, to help them get through the injury (AT4).

Another participant explained that they were quite comfortable and played a huge role in dealing with mental issues related to injury rehabilitation. This was acknowledged in the following opinion:

Okay. I feel I play a pretty big part in helping the athletes return and feeling comfortable, so in the development of the timeline, returning to light practice, no contact practice, to full practice is important, you don't want to... I mean, that seems really to be kind of elementary to kind of do those things, but it also deals with the psychological part of things (AT2).

The views of one participant, explained in the following quote, revolved around the idea that the stronger the relationship between athlete and athletic therapist, the more they would deal with the mental issues of injury:

I mean, there's certain athletes that, you know, they just... they're just like... you know, you just do their rehab and that's it, and there's other ones that you can actually... like you form a really strong relationship with them, and they are receptive to like ideas of, you know, helping them psychologically. You know, and they ask... I do get... the challenge is that I do get athletes that come and like want to talk to me about, you know, other things that are going on. Like usually it's the coach or things like that, you know, and...I have to tread... not lightly but, you know, make sure that it's not influencing my decision that they return to play (AT3).

In one interview, the participant explained how they sometimes deal with this aspect of injury: "but sometimes if they are dealing with say a break up or financial issues

or family issues and they are like telling me lots of information, I'm thinking...hmmm this could affect the injury itself, so I tend to use the friend/therapist hat (AT1 personal communication, June9, 2010,). Although this participant felt they did provide psychological support, they said they were “on the fence” about it. They elaborated with this statement:

I guess I'm kind of on the fence about it. Like I do want to help in any way I can... I want the athletes to be able to know that they can come to me and talk to me about the problems, whatever it is, and I will do everything I can to help them, whether that means getting on the phone and being like, okay, you got to go talk to this person, or, you know, actually between the two of us coming up with a solution to it (AT1).

Although each participant felt they played a role in the psychological support of an injured athlete, interviews revealed that they were aware of their limits, illustrated by the last statement. This led to the fourth theme, *referring*. This feature was evident in all interviews, with most participants recognizing their limits, as shown here: “You have to know when to refer onto other healthcare professionals or deal with it yourself” (AT2, personal communication, June14, 2010). Three therapists offered their thoughts by the following explanations:

I mean, I've never felt that... you know, where I was uncomfortable, and I didn't think that... you know, what on earth?... and what I was telling them, you know, I wasn't comfortable with. So, I mean, I know if... and if I ever felt that way, if it was, you know, in the sports psychological role or sort of in my role as athletic therapist, if I was uncomfortable, I would certainly, you know, ask for physicians' advice or, you know, sports psychologists' advice, or nutrition advice or, you know, whatever (AT4).

I feel that most of the time, you know, there are... every once in awhile that, you know, an athlete will confide something in me that I definitely recognize that I

cannot deal with, and that they need to seek further, you know... you know, whether it be psychological or counselling or whatever, like I recognize that and, you know, I'm making sure that they get properly referred (AT3).

One participant's view was:

But if I do feel uncomfortable myself, I'll refer down to health services to the... like a further medical support system that we have down there – like talking with our sports medicine Dr. about maybe getting a sports psychologist or a psychiatrist brought onboard for things that I just think are beyond me, or I'm not comfortable (AT1).

This participant continued their description with the following:

It's just more just the way the conversation flows around them. I feel like active listening is important to find out if they are hiding things, or if they're telling me stuff that's beyond me.....and then you get into some of the more specific... like we had a guy come in who was complaining of like... he kept pulling out of our fitness testing with a hamstring strain, and we finally got out of him... I finally got out of him that it wasn't anything to do with his hamstring. He was having a panic attack, which then it was getting into a little bit of his family history. There was a history of depression in his family so I referred him down to the medical clinic. He saw a psychiatrist, they gave him some medications there (AT1).

4.4 Attaining Social and Psychological Support Comfort Levels

When asked about their preparation for supporting the athletes the data exposed information regarding the comfort levels of athletic therapists in their role. Data illustrated three themes: education; experience; and assistance. See figure 6 for the thematic display of the themes generated by NVivo™.

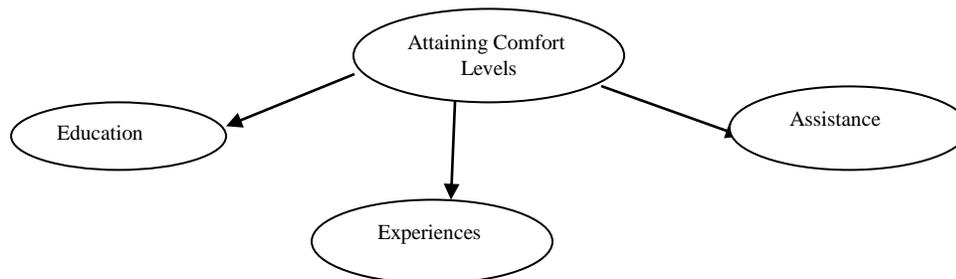


Figure 6: NVivo™ model of themes for attaining psychological support comfort levels

Research data coded under the theme *education*, referred to the way in which the research participants gained their comfort level for providing psychological support. Participants were in agreement when it came to *education*, and what attributes it provided them with when dealing with sports injuries.

One participant had the following thoughts: “I think we’re given, you know... I think we’re given sort of a... just like we’re given a broad picture of sort of what to look for going through it as an athletic therapist” (AT4, personal communication, June 18, 2010). Others elaborated on that thought with these statements:

I kind of... I read this question and I kind of tried to think back to being in school, and if we were kind of taught these things, really, and I didn’t... I answered honestly. I said, No, we were never really taught these aspects of psychology of injuries and returning. I mean, we were taught about how people return and timelines, and acute, and subacute, and chronic injuries, and all this stuff like that, in terms of timelines. I don’t think we were taught what emotions, or what things may be associated with those timelines (AT2). Similar views were shared by the other participants:

I think that... or through the kinesiology background that I had plus the... like the training that we got at the school I attended that... we were introduced to it, so do I specialize in it – absolutely not. I think we have enough of it that we can

recognize flags, and then refer on to others to actually deal with it, who specialize in it more (AT1).

Just going through school, and even, you know, very minimal education that you get as an athletic therapist, like most of the time it's like, okay, you know, in your rehab make you address like psychological aspects when you discharge, or are they psychologically ready to back to play, you know. So, you know, it doesn't really expand more into it (AT3).

However, the last participant had continued their education and pursued a Masters degree that specialized in sports psychology. They had a broader knowledge on psychological issues and offered these statements:

I would say that in school... well, certainly like at the school I went to, the prof... she has her Ph.D in sports psychology. You know, it was always something that was, you know, discussed; and, as a result, I had a keen interest in it. I'm not sure that you know, but I did my Masters in an area of sport psych..... but overall and in like just general athletic therapy, I don't think that... well I think it's something that should be explored a little bit further, you know, and taught a little bit further and unless... because unless if you an interest in it, then you may not learn anymore than when you did (AT3).

The second theme categorized was *experience*. There was a widespread consensus among participants that experience was critical in gaining the knowledge needed to deal with the psychological issues that arise due to injury. This was captured in the following explanation:

yeah, through... yeah, yes, definitely have gotten it through the experiences of actually being in the work place and things like that, you know, and it's certainly like not to... you know, like having to deal with like these things that I'd never thought I'd have to deal with, you know, like... you know, an athlete... I notice that they're a cutter, you know, and I'm like... okay, obviously I'm not going to...

like I'm going to acknowledge because, you know that they have an issue, and I'm going to make sure that... or try and ensure that they're going for like counselling, you know, because they have an issue that I cannot help them with, you know, and, you know... like, you know, just having to deal with those and making sure I know what resources the university can provide, you know (AT3).

Another therapist showed similar views:

but I don't think you really know or understand that... you know, what it actually involves and entails with somebody in their injury until you actually deal with them in the real-life situation, and especially at this level because, I mean, you're dealing with, obviously, high-profile athletes ... I think everything is... it's just, you know, exemplified or, you know, it's compounded like in everything whether it's orthopedics or medical or nutrition or, you know, sports psychology, so I think it's just... I think the biggest thing is, you know, it's a learning thing, and it evolves as you, you know, gain more experience in the field, and it's different with a re-injury and stuff as you will know, no two injuries are alike and nobody is the same, and everybody is going to react differently, so I think it's a learning experience with each person as to how you deal with them. (AT4).

The following paragraph captured in essence, the underpinning of the data coded under experience:

And I think one thing... I think being an athlete, which is... a lot of the time athletic therapists were athletes, so I think they have a knowledge of what it's like to be injured and coming back, but that's not a guarantee, It's not always... you're telling people that that might not have been injured, but I think it's through experiences that helped a lot over... I mean, I've been doing it for * years, you know, I think experience has helped out and working different sports, so there definitely would be... there are definitely sports that I'm more comfortable with, but there's other sports that I would not. To deal with a rugby player might be

totally different than for me dealing with a basketball player ...

...they have a different kind of psyche of what they're going to do, and how much they can work through, or how much you need to like pull the reins on someone who like beats around people on the field. I don't really know what else I can say, I mean, I think it comes from experience in our field not really our education as an athletic therapist (AT2).

The final theme was *assistance*. Although only acknowledged by two participants in this study, it was seen as an important factor regarding comfort levels in the provision of psychological support and was worth highlighting as a theme. The comments from one participant, that illustrate the need for assistance, were as follows:

I think that I do the best that I can. Am I totally comfortable with it, no, but part of it isn't necessarily from lack of like education on it or training. Part of it is more just the way that this university has worked... injury clinic is set up. Like there's a lot of varsity athletes here. We are understaffed and basically, how do we keep an eye and properly support all those athletes, so I guess I'm a little uncomfortable with it, and I do feel like I'm pulled too thinly in too many directions, so I hope that people don't slip through the cracks; but, realistically, they probably do, which is why I tend to refer down to health services so much (AT1).

Similarly:

I find it hard considering the amount of athletes I do have, and I guess, you know, you kind of can only do what you can do (AT2).

Chapter Five: Discussion

This study provides insight into the perceived role of the Canadian certified athletic therapists working in the university setting. To my knowledge, this study is the first of its kind to specifically address the issue of social and psychological support with athletic therapists. Certified athletic therapists are a small population in the health care profession located all across Canada. Within this group of professionals it appears that there are many aspects of social support provided during the rehabilitation of sport injuries. These findings concur with the literature on athletic trainers and physiotherapists to date and emphasize the benefits of social support and that health professionals are among the most important sources of support throughout the rehabilitation process (Robbins and Rosenfeld, 2001, Bricker Bone and Fry, 2000). My study showed that athletic therapists perceive that they play a substantial role in providing social and psychological support throughout an athlete's injury recovery. It is within this context that the key findings are discussed.

Therapeutic Relationship

My research showed that features such as professionalism, availability, and trust, were paramount to the athletic therapists' therapeutic relationship with the injured athlete. All dimensions were described as 'setting the standard of conduct within a therapist/athlete relationship' and allowed the rehabilitation atmosphere to be a positive one. This finding was unique in that other research on physiotherapists or athletic trainers did not highlight this aspect of social support. However, there is a rich body of literature from other fields like counselling psychology that attest to the importance of the relationship and the conditions that foster a therapeutic relationship¹. It appears that this relationship is a condition for or foundation upon which social support can occur rather than a

¹ Readers interested in the therapeutic relationship and its effects on psychotherapy outcome may wish to explore the work of Carl Rogers (1995) and Duncan & Miller et al., (2003).

dimension of social support. Although an in-depth discussion of this literature is outside the scope of this study the importance of this relationship and understanding how to establish a professional and caring relationship that enhances the benefits of the physical injury rehabilitation has been identified. This should be explored further by the field and perhaps enhanced in the educational curriculum for athletic therapists.

Social Support: An Intertwined Relationship

The findings of this research are similar to studies conducted with other health care professionals in respect to the social support they provide throughout the injury rehabilitation process (Tracey, 2003, Bricker Bone and Fry, 2006, Barefield and McCallister, 1997). Although a variety of dimensions and themes were identified from the data, there was always some overlap. It was difficult placing a thought or a feature from one interview into a dimension without recognizing its relationship with another. This study highlighted the complexities of social support and the intertwined relationship between different dimensions. This research found that all aspects of the multidimensional model proposed by Hardy and Rees (2000) were evident in the perceived social and psychological role of athletic therapists.

Hardy and Rees (2000) stated that although it was undoubtedly necessary for a measure of social support to have structural validity, taking a measure directly from the mainstream psychology may not help us to understand the specific experiences of sports people. Hardy and Rees (2000) developed the four dimensions of the social support model with data collected from interviews with high-level sports people.

The four dimensions of the model were emotional support, esteem support, informational support, and tangible support. These dimensions were then referenced with definitions by Cutrona and Russell (1990). These dimensions were confirmed by this. All participants, at some point in their rehabilitation involvement, provided all four forms of social support illustrated in the social support model. Participants knew when to deliver each form of support and saw its value. Ford & Gordon (1997), and Wiese-Bjornstal & Ray (1999) found that practitioners providing healthcare to elite athletes were best placed to identify psychological problems and could often be the most influential people in the

emotional support of injured athletes. These findings aligned with those of this study. One theme of emotional support that was emphasized by the data was listening. It was seen by the participants as substantially important to the process of providing emotional social support. It was the key for finding out information, which again shows a link to communication.

Listening is an integral part of the assessment and the treatment of an injury. Wiese et al (1990) found evidence in support of scheduling longer treatment times suggesting that members of the sports medicine team need to take more time to talk with individual athletes. It was quite evident from the study that the health care professionals interviewed by Wiese and colleagues saw the value in listening to what the athletes had to tell them, as did the athletic therapists in my study.

It was interesting that all of the participants in this study noted that all athletes are different and therefore needed to be addressed differently when esteem support was involved. Positive feedback and goal setting which are two very common dimensions of rehabilitating an injured athlete were mixed with motivating and encouraging and providing confidence. Robbins and Rosenfeld (2001) and Ninedek and Kolt (2000) also found that healthcare professionals provided motivation. There was also evidence that motivation tied together with helping clients set realistic goals could be a huge influence in the provision of a therapeutic environment that enhances healing. This is similar to the findings of Tracey, 2000, Hemmings & Povey (2002), as well as Francis, Anderson, & Maley (2000). These found that athletic trainers provided social support and created an atmosphere for rehabilitation that included psychological factors underlying successful recovery, such as adherence, motivation, and goal setting. Interestingly, in my study, when discussing informational support some participants provided informational support by connecting athletes to other athletes that had a similar injury experience and had rehabilitated successfully. This points to a broader conceptualization of social support – beyond the medical team.

When the participants were asked to describe how they provided tangible support, the first instinct of all participants was to explain that they probably didn't provide that much tangible support but then they described how they did provide taping, braces, crutches and other similar aids. As the discussion continued it was interesting to see that

they all went above and beyond what would be considered a ‘professional contribution’ in the area of tangible support. Included in the list were drives to get prescriptions, or to a doctors appointments, lending out of money to pay for things related to their injury such as prescriptions, lending out of personal vehicle to run errands related to injury, etc. It was also noted that most of the therapists that did the “above and beyond support” explained that it was for athletes they have a strong relationship with because they have spent a lot of time going through rehabilitation in the clinic. This finding of “above and beyond” is a novel finding and may relate to the type of therapeutic relationship established between athlete and athletic therapist. This finding is a key ethical concern for the field of athletic therapy because these extra supports could put the athletic therapist, the athlete, and their employer at risk. In addition, it highlights the “extras” in the role of athletic therapists as compared to other members of the medical team

Acting as a communication link emerged as an important aspect of social support but was not one of the four dimensions of the social support model. Athletic therapists in my study highlighted the importance of being the link or bridge between the athletes, coaches and rarely parents. This is accomplished by building a rapport between all involved. Researchers have previously found strong evidence the importance of communication with clients and the impact effective communication can have on facilitating a helpful therapeutic relationship (Ninedek and Kolt, 2000, Wiese, Weiss and Yukelson, 1987, Ford and Gordon, 1993). As in the study by Tracey (2008), specific roles were identified by the athletic therapists involved. The role of educating coaches, and athletes was also emphasized by the participants. It has been said that in order to be an effective educator, you must know how to communicate (Tracey, 2008). Participants in this study recognized this connection and expressed it on several occasions. Ninedek and Kolt (2000) also showed the critical role various types of healthcare professionals play in communicating with their clients.

My study directly supports existing literature that highlighted the integral role of physiotherapists and trainers in the psychological components of rehab. All athletic therapists in this study felt they provided a form of psychological support, for their injured athletes. They also recognized that they were not specifically qualified to meet the psychological needs of their athletes, but did have the skills to identify when an athlete

needed this form of support. The athletic therapists in this study encouraged athletes to develop and use techniques such as negative thought stopping, goal setting, and coping. Although athletic therapists have no training from a professional counseling perspective, they felt that the athlete/ therapist therapeutic relationship and genuine care they possess for their athletes could have a strong impact on the psychological needs of the athletes. This may be something like working on anxiety and fear, or just helping them cope with everything going on. This form of psychological support can be seen as a type of social support. Athletic therapists in this study didn't have any direct influence as would occur when a health care provider actually engages in inquiry directed as psychological responses to injury or illness and actively intervenes. The athletic therapists felt they made themselves available to talk but didn't actually do any motivational interviewing to seek out or intervene emotional responses to injury or emotionally barriers to recovery.

The athletic therapists in this study felt comfortable with their role and believed they knew when they could deal with an issue and when they needed to refer to another healthcare professional having expertise in the appropriate field. Referring was something that was done when they knew that they were dealing with issues beyond their capabilities. All athletic therapists were well aware that they are not counsellors but believed that they provided a genuine care for the athlete and this in some way helped to meet the athletes needs and may indirectly influence psychological issues.

At times an athletic therapist may feel they are simply trying what they know or are doing the best with what was be available. Although an athletic therapist may be the person who the athlete feels most comfortable with because they have been there since the very beginning, an athletic therapist may not have the training in the area of psychology or counselling and will need to refer onto someone who does. Although the participants' felt comfortable in their role, at times they felt they did not have enough training in the psychological aspects of injury. The results of my study support previous work, such as studies by Ford and Gordon (1997), and McKenna et al.(2002) that found that physiotherapists did not feel adequately equipped to deal with the psychological impact of the injury. The athletic therapists in the study agreed that the athletic therapy education, directed only a small fraction of the curriculum to preparing them for what they actually dealt with in the real world. It was the experiences that they become

involved with as a practicing athletic therapist that helped them attain the comfort level needed to help the athlete recover from their injury both physically and psychologically. In addition, this research highlighted the potential benefit of previous life experiences as an athlete and a need for greater education.

Implications for Practice

There are a few implications arising from this study that would benefit the rehabilitation of an injured athlete. A key message for athletic therapists is that it is imperative that they are a key communication link between athletes, coaches, parents, and perhaps most importantly health care professionals. Sharing information is the cornerstone to a successful rehabilitation. Another key message is that recognizing that social support can take on many forms and providing the right kind, the right amount, at the right time will provide your athlete with a positive experience. Listening was a critical factor in being able to match social support to the athlete and active listening should be incorporated into extended training.

This research highlighted the need for AT curricula to incorporate further training related to social support and the psychological needs of athletes. As an athletic therapist, I feel that at times due to the nature of our job and the closeness we have with our athletes, the types of social support we provide could be misunderstood by onlookers. The participants in this study indicated that the psychological help that the CAT provides is by actively listening, talking, and being supportive. We may encourage psychological techniques such as goal setting, or negative thought stoppage but the moment we know that the athlete needs more than our scope of practice allows, we refer to a healthcare professional with the appropriate training. So although this research has highlighted the need for further training, it is for further training on aspects of social support and psychological support that are already briefly touched on in athletic therapy education and are part of our scope of practice, such as active listening.

There were a number of issues that arose from the data in terms of tangible support and going above and beyond. Such things as providing assistance to pick up braces or lending money to pay for them may have ethical questions beside them. This is

an important area for future work as addressing the ethical issues will provide protection for all involved in the therapeutic relationship.

Future Research

Several opportunities for future research arise from this exploratory study on the perceived role of Canadian certified athletic therapists in the social support of injured athletes. To date, very little research in this area has focused solely on athletic therapists as members of the injured athlete support system, nor how they perceived their role related to social support and the psycho-social aspects of injury. This highlights the need for continued studies on other health care professionals. It would be beneficial for this health care profession to have more evidence to guide decision-making and to share with practitioners.

Through the literature review it is evident that a variety of theories have been used as guidelines for creating and integrating research findings into practical intervention programs for the immediate medical support team following an injury to an athlete. These types of programs may be beneficial for use with certified athletic therapists. Other studies could focus on assessing intervention techniques or developing support protocols for those involved with the injured athlete.

Participants in this study typically worked in university settings. Research investigating the social support role of certified athletic therapists working with recreational athletes is needed. Another interesting theme arising from this research deserves further exploration; that of tangible support –the factors that lead to ‘going above and beyond’. Working in university setting may bring about a different relationship with the athletes since the therapist sees the athlete from day one of injury until they are rehabilitated and back to play. Perhaps this type of environment persuades the athletic therapist into the feeling of needing or the feeling of being obligated to provide tangible support that is above and beyond what a typical healthcare professional would provide.

Bibliography

- Andersen, M., & Williams, J. (1988). A model of stress and athletic injury: Prediction and prevention. *Journal of Sport and Exercise Physiology*, 10, 294-306.
- Bailey, J. (2008). First steps in qualitative data analysis: Transcribing. *Family Practice*, 25(2), 127-131.
- Barefield, S., & McCallister, S. (1997). Social support in the athletic training room: Athletes expectations of staff and student athletic trainers. *Journal of Athletic Training*, 32(4), 333-338.
- Bianco, T. (2001). Social support and recovery from sport injury: elite skiers share their experiences. *Research quarterly for exercise and sport*, 72, 376-388.
- Bianco, T., & Eklund, R. C. (2001) Conceptual considerations for social support research in sport and exercise settings: The case of sport injury. *Journal of Sport & Exercise Psychology*, 23, 85-107
- Bricker Bone, J., & Fry, M. D. (2006). The influence of injured athletes' perceptions of social support from atc's on their beliefs about rehabilitation. *Journal of Sport Rehabilitation*, 15, 156-167.
- Brewer, B. (1993). Self-identity and specific vulnerability to depressed mood. *Journal of Personality*, 61, 343-364.
- Brewer, B. (1994). Review and critique of models of psychological adjustment of athletic injury. *Journal of Applied Sport Psychology*, 6, 87-100.
- Brewer, B., Linder, D., & Phelps, C. (1995). Situational correlates of emotional adjustment to athletic injury. *Clinical Journal of Sport Medicine*, 5(4), 241-245.
- Brewer, B., Van Raalte, J., & Linder, D. (1993). Athletic identity: Hercules' muscle or achilles heel? *International Journal of Sport Psychology*, 24, 237.
- Canadian Community Health Survey. (2010, June 15). Canadian community health survey. The Daily. Retrieved from <http://www.statcan.gc.ca/daily-quotidien/100615/dq100615b-eng.htm>
- Carson, Fraser. "Social support and the long-term injured professional rugby player." Rugby football union lecture. 2005.
- Cramer, Roh JL, Perna, FM. (2000) Psychology/counselling: A universal competency in athletic training. *Journal of Athletic Training*, 35: 458-465.

- Creswell, J.W., 2003. *Research design: Qualitative, quantitative and mixed method approaches*, Thousand Oaks, CA: Sage Publications.
- Cutrona, C. E., & Russell, D. W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In B. Sarason, I. Sarason & G. Peirce (Eds.), *Social support: An interactional view* (pp. 3119-366). Wiley & Sons.
- Danish, S. J. (1986). Psychological aspects in the care and treatment of athletic injuries. In P.F.Vinger & E.F. Hoerner (Eds.), *Sports injuries: The unthwarted epidemic* (pp.343-354). Littleton, MA: PSG Publishing.
- Deconde, C. (1990). The cata- a historical perspective 1965-1990, *Journal of the Canadian Athletic Therapists Association*. Retrieved from www.athletictherapy.org/main.html.
- Denegar, C., & Perrin, D. (2000). Psychological aspects of rehabilitation. *Therapeutic modalities for athletic injuries* (pp. 12-27). Champaign, Ill: Human Kinetics.
- Eubank, M., & Nichols, L. (2001). Psychological aspects of coping with injury. *Psychology*, 4(3), 10-11.
- Fisher, A. C., Domm, N. A., & Wuest, D. A. (1988). Adherence to sports injury rehabilitation programs. *The Physician and Sports Medicine*, 16(7), 47-51.
- Fisher, C. A., Mullins, S. A., & Frye, P. A. (1993). Athletic trainers' attitudes and judgements of injured athletes' rehabilitation adherence. *Journal of Athletic Training* 28(1), 47-51.
- Flint, F. (1997).
- Flint, F. (1998). *Psychology of sport*. Champaign, IL: Human Kinetics Publishers.
- Fontana, A., & Frey, J. (2000). The interview: From structured questions to negotiated text. *Denzin NK, Lincoln YS., editor's handbook of qualitative research*. (pp. 645-672). Thousand Oaks, CA: Sage Publications.
- Ford, I. W., & Gordon, S. (1997). Perspectives of sport physiotherapists on the frequency and significance of psychological factors in professional practice: Implication for curriculum design in professional training. *Australian Journal of Science and Medicine in Sport*, 29, 34-40.
- Ford, I.W., & Gordon, S. (1999). Coping with sport injury: resource loss and the role of social support. *Journal of Personal and Interpersonal Loss*, 4, 243-256.

- Francis, S. R., Anderson, M. ,B., & Maley, P. (2000). Physiotherapists' and male professionals athletes' views on psychological skills for rehabilitation. *Journal of Science and Sports Medicine, 3*, 17-29.
- Gordon, S., Millios, D., & Grove,J.R. ((1991). Psychological aspect of recovery process from sport injury: The perspective of the sport physiotherapist. *Australian Journal of Science and Medicine in Sport, 23*, 53-60.
- Gould, D., Udrey, E., Bridges, D., & Beck, L. (1997). Coping with season ending injuries. *The Sport Psychologist, 11*, 379-399.
- Granito, V. J. (2001). Athletic injury experience: A qualitative focus group approach. *Journal of Sport Behavior, 24*(1), 63-77.
- Granito, V. J., Hogan, J. B., & Varnum, L. K. (1995). The performance enhancement group program: Integrating sport psychology and rehabilitation. *Journal of Athletic Training, 30*(4), 328-331.
- Green, S.L., & Weinberg, R.S. (2001). Relationships among athletic identity, coping skilss, social support, and psychological impact of injury in recreational participants. *Journal of Applied Sports Psychology, 13*, 40-59.
- Grove, J.R, Gordon, A.M.D. (1991). *The psychological aspects of injury in sport*. In J. Bloomfield, P.A. Fricker, and K.D. Fitch (Eds.) Textbook of science and medicine in sport. (pp.176-186). Melbourne: Blackwell Scientific Publications.
- Gutkind, S.M. (2004). Using solution-focused brief counseling to provide injury support. *The Sport Psychologist, 18*, 75-88.
- Hardy, C. J., Crace, R. K. (1993). The dimensions of social support when dealing with sport injuries. In D.Pargman (ed.) psychological bases of sport injuries. (pp. 305-319).Morgantown, WV: Fitness Information
- Hardy, C. J., Crace, R. K., & Burke, K. L. (1999). Social support and injury: A framework for social support-based interventions with injured athletes. In D.Pargman (ed.) psychological bases of sport injuries. (pp. 305-319). Morgantown, WV: Fitness Information Technology.
- Harris, L. (2003). Integrating and analyzing psychosocial and stage theories to challenge the development of the injured collegiate athlete. *Journal of Athletic Training, 38*(1), 75-82.
- Heaney, CA. (2006). Recommendations for successfully integrating sport psychology into athletic therapy. *Athletic Therapy Today, 11*, 60-62.

- Hedgepeth, E. G., & Sowa, C. (1998) Incorporating stress management into athletic injury rehabilitation. *Journal of Athletic Training, 33*(4), 372-374.
- Heil, J. (1993). *Psychology of sport injury*. Champaign, IL, England: Human Kinetics Publishers.
- Hemmings, B., & Povey, L. (2002). Views of chartered physiotherapists on the psychological content of their practice: A preliminary study in the United Kingdom. *British Journal of Sports Medicine, 36*, 61-64.
- Hinderliter, C.J., & Cardinal, B.J. (2007). Psychological rehabilitation for recovery from injury: The scrape approach, *Athletic Therapy Today 12*(6), 36-38.
- Jevon, S. M., & Johnston, L. H. (2003). The perceived knowledge and attitudes of governing body chartered physiotherapists towards psychological aspects of rehabilitation. *Physical Therapy in Sport, 4*(2), 74-81.
- Johnston, L. (1998). The provision of social support to injured athletes: A qualitative analysis. *Journal of Sport Rehabilitation, 7*, 267-284.
- Johnston, L. H., & Carroll, D. (2000). Coping, social support, and injury: Changes over time and the effects of level of sports involvement. *Journal of Sport Rehabilitation, 9*, 290-303.
- Johnston, L. H., & Carroll, D. (1998). The context of emotional responses to athletic injury: A qualitative analysis. *Journal of Sport Rehabilitation, 7*, 206-220.
- Kimproe, I.H., Rijken, M., Ros, W.J.G., Winnubst, J.A.M., & Hart, W.H. (1997). Available support and received support: Different effects under different circumstances. *Journal of social and personal relationships, 14*, 59-77.
- Kubler-Ross E. (1969) *On Death and Dying*. New York, NY: Macmillan.
- Larson, G. A., Starkey, C., & Zaichkowsky, L. D. (1996). Psychological aspects of athletic injuries perceived by athletic trainers. *Sport Psychologist, 5*, 37-47.
- Larsson, P.A., Fridlund, B. (1991). Aspects of life stress after myocardial infarction: Implications for a multifactorial rehabilitation. *Clinical Rehabilitation, 5*, 71-76.
- Lazarus, R.S. (1966) *Psychological stress and coping process*. New York, NY: McGraw Hill.
- Lazarus, R. S., Folkman, S. (1984). *Stress, appraisal and coping*. New York, NY: Springer. 1984, 293-298.

- Martin, S. B. (2005). High school and college athletes' attitudes toward sport psychology consulting. *Journal of Applied Sport Psychology, 17*, 127-139.
- McColl, M.S., Friedland, J. (1993). Community social support intervention: results of a randomized trial, 2nd national rehabilitation: Outcome assessment in rehabilitation. *Canadian journal of Rehabilitation, 7*, 28-38
- McDonald, S., & Hardy, C. (1990) Affective response patterns of the injured athlete: an exploratory analysis. *Sport Psychologist, 4*, 261-274.
- McKenna, J., Delaney, H., & Phillips, S. (2002). Physiotherapists' lived experiences of rehabilitating elite athletes. *Physical Therapy in Sport, 3*, 67-78.
- Miles, M.B., & Heberman, A.M. (1994). *Qualitative data analysis*, (2nd ed.). Thousand Oaks, CA: Sage.
- Miles-Tapping, C. (1989). Sponsorship and sacrifice in the historical development of Canadian physiotherapy', *Physiotherapy Canada, 1*(2), 72-81.
- Moulton, M. A., Molstad, S., & Turner, A. (1997). The role of athletic trainers in counseling collegiate athletes. *Journal of Athletic Training, 32*(2), 148-150.
- Munroe-Chandler, K. (2006). A discussion on qualitative research in physical activity. *Athletic Insight: The Online Journal of Support Psychology, 7*1ss1, 3/16/06 from <http://www.athleticinsight.com>
- Ninedek, A., & Kolt, G.S. (2000) sport physiotherapists' perceptions of psychological strategies in sport injury rehabilitation. *Journal of Sport Rehabilitation, 9*, 191-206.
- Pargman, D. (1999). *Psychological bases of sport injuries*. Morgantown, WV: Fitness Information Technology, Inc.
- Patton, M.Q. 2002. *Qualitative research & evaluation methods*, (3rd ed.). Thousand Oaks, California: Sage Publications Inc.
- Pearson, L., & Jones, G. (1992). Emotional effects of sports injuries: Implications for physiotherapists. *Physiotherapy, 78*, 763-770.
- Petipas, A. (1999). Understanding social support. *Athletic Therapy Today, 4*(4), 61-62
- Petitpas, A., & Danish, S. J. (1995). *Caring for injured athletes*. In Murphy SM. ed., *Sport Psychology Interventions* . (pp. 255-281). Champaign, Ill: Human Kinetics.
- Pines, A.M., Aronson, E., & Kafry, D. (1981). *Burnout: from tedium to personal growth*. The Free Press, New York.

- Rees, T., & Hardy, L. (2000). An investigation of the social support experiences of high level sports performers. *The Sport Psychologist*, 14, 327-347.
- Rees, T., Smith, B., & Sparkes, A.C. (2003). The influence of social support on the lived experiences of spinal cord injured sportsmen. *The Sport Psychologist*, 17, 135-156.
- Richmond J.M., Rosenfeld, L.B., & Hardy, C.J. (1993). The social support survey: An initial evaluation of a clinical measure and practice model of the social support process. *Research on Social Work Practice*, 3, 288-311.
- Robbins, J. E., Rosenfeld, L. B. (2001). Athletes' perceptions of social support provided by their head coach, assistant coach, athletic trainer, pre-injury and during rehabilitation. *Journal of Sport Behaviour*, 24(3), 277-285.
- Rose, J., & Jevne, R. (1993). Psychosocial processes associated with athletic injury. *The Sport Psychologist*, 7, 309-328.
- Rotella, R.J., & Heyman, S.R. (1989). Stress, injury and psychological rehabilitation of athletes. In J.M. Williams (ed.). *Sport psychology: personal growth to peak performance*. Mountain View, Ca: Mayfield
- Sarason, I.G. (1998). *Social support, personality and health*. In M.P. Janisse (Ed.) *Individual differences, stress and health psychology*. (pp. 109-128). New York: Springer-Verlag.
- Selye, H. (1974). *Stress without distress*. New York: Lippincott Company
- Shelly, G. (1999). *Using qualitative case analysis in the study of athletic injuries. A model for implementation*. In D.Pargman (ed.) *psychological bases of sport injuries*. (pp. 305-319). Morgantown, WV: Fitness Information Technology.
- Smith, A.M., Scott, S.G., & Wiese, D.M. (1990). The psychological effects of sports injuries: Coping. *Sports Medicine*, 9, 352-369
- Steadman, J.R. (2003). *A physicians approach to the psychology of injury*. In Heil J(ed), *Psychology of Sport Injury* (pp.31-35). Champaign, IL: Human Kinetics.
- Taylor, J., & Taylor, S. (1997) *Psychological approaches to sports injury rehabilitation*. Aspen, Gaithersburg.
- Taylor, J., & Wilson, G. (2005). *Applying sport psychology: Four perspectives*. 187-206.
- Theberge, N. (2009). We have all the bases covered: Constructions of professional boundaries in sport medicine. *International Review for the Sociology of Sport*, 3, 265-281.

- Thomas, J. R. & Nelson, J. K. (2001). *Research methods in physical activity (4th edition)*. Champaign, Ill: Human Kinetics.
- Tracey, J. (2003). The emotional response to the injury and rehabilitation process. *Journal of sport psychology, 15*, 279-293.
- Tracey, J. (2008). Inside the clinic: Health professionals' role in their clients' psychological rehabilitation. *Journal of Sport Rehabilitation, 17*, 413-431.
- Tuffey, S. (1991). The role of athletic trainers in facilitating psychological review from athletic injury. *Athletic Training, 26*, 346-351.
- Udry, E. (1996) Social support: Exploring its role in the context of athletic injuries. *Journal of Sport Rehabilitation, 5*, 152-163.
- Udry, E. (1997). Coping and social support among injured athletes following surgery. *Sport and Exercise Psychology, 8*, 71-90.
- Udry, E., Gould, D., Bridges, D., Tuffey, S. (1997). People helping people? Examining the social ties of athletes' coping with burnout and injury stress. *Journal of Sport and Exercise Psychology, 19*, 368-395.
- Vaux, A. (1992). Assessment of social supporting H.O.F. Veiel, & U. Baumann (Eds.), *The meaning and measurement of social support* (pp.193-216). New York: Hemisphere.
- Viner, R.(1999). Putting stress in life: Hans Selye and the making of stress theory. *Social Studies of Science, 29*(3), 391-410.
- Wagman, D., & Khelifa, M. (1996). Psychological issues in sport injury rehabilitation: Current knowledge and practice. *Journal of Athletic Training, 31*(3), 257-261.
- Walker, D., & Myrick, F. (2006). Grounded theory: An exploration of process and procedure. *Qualitative Health Research, 16*(4), 547-559.
- Ward, G., Sandstedt, S., Cox, R., & Beck, N. (2005). Athlete-counseling competencies for u.s. psychologists working with athletes. *The Sport Psychologist, 19*(1), 318-334.
- Wasson, C. P. (2003). Varied perceptions of social support among coaches and athletes recovering from injury.
- Way, M. B. (2002). Head case: Understanding the psychology of the healing process. *Sports Medicine Update, 16*(2), 9.

- Wegener, S. T. (1998). *Current concepts and clinical approaches in psychology of rehabilitation. paper presented at the national athletic trainers' association 49th annual meeting and clinical symposia*, Baltimore MD:
- Weiss, M. (2003). Psychological aspects of sport-injury rehabilitation: A developmental perspective. *Journal of Athletic Training*, 38(2), 172-175.
- Wiese, D.M., & Weiss, M.R. (1987). Psychological rehabilitation and physical injury: Implication for the sports medicine team. *The Sport Psychologist*, 1, 318-330.
- Wiese, D.M., & Weiss, M. R., & Yukelson, D. P. (1991). Sport psychology in the training room: A survey of athletic trainers. *The Sport Psychologist*, 5, 15-24.
- Wiese-Bjornstal, D. M., Smith, A. M., Shaffer, S. M., & Morrey, M. A. (1998). An integrated model of response to sports injury: Psychological and sociological dynamics. *Journal of Applied Sport Psychology*, 10, 46-69.
- Wiese-Bjornstal, D. M., Ray, R. (1999). *Counseling in sports medicine*. Champaign, Ill: Human Kinetics.
- Williams, J.M., & Anderson, M.B. (1998). Psychosocial antecedents of sport injury: Review and critique of the stress and injury model. *Journal of Applied Sport Psychology*, 10, 5-25.
- Williams, J. M., Rotella, R. J., & Scherzer, C. B. (2001). Injury risk and rehabilitation: Psychological considerations. *Applied sport psychology* (4th ed.) (pp. 456-479). Mountain View, CA: Mayfield.
- Wrisberg, C. A., & Fisher, L. A. (2005). Saying connected to teammates during rehabilitation. *Athletic Therapy Today*, 10(2), 62-63.

Appendices

Appendix 1: Differences among Physiotherapy, Athletic Therapy, and Athletic Trainers

ATHLETIC THERAPY

Professional Designation- The Canadian designation for certified members of the Canadian Athletic Therapists Association is **CAT(C)**.

Scope of Practice- The Scope of Practice of a Certified Athletic Therapist includes the **prevention, immediate care**, and reconditioning of musculoskeletal injuries. Prevention includes musculoskeletal and postural evaluation, **equipment selection, fitting and repair**, warm-up, conditioning programs, **prophylactic or supportive taping**, and adapting to the activity environment and facilities. The provision of **field immediate care** of athletic injuries by a Certified Athletic Therapist includes: injury assessment, basic emergency life support, recognition and management of acute traumatic neurological dysfunction, provision of first aid, preparation for entrance into appropriate health care delivery systems, or, where appropriate, **utilization of techniques facilitating a safe return to participation**.

Education- The CATA certification process is one of the most stringent in the Canadian health care system. To achieve the status of Certified Athletic Therapist, a candidate must first meet the academic requirements of a CATA approved Athletic Therapy curriculum leading to a bachelor's degree at an accredited post secondary institution. The CATA requires an **internship of at least 1200 hours** of practical experience under supervision of a Certified Athletic Therapist. Once these criteria are met, a candidate is qualified to attempt the comprehensive written exam where a minimum grade of 70 percent is required to pass. The final step is a practical exam covering emergency care, supportive taping/bracing, modalities, injury assessment and rehabilitation. After successful completion of the exam, candidates receive the title **Certified Athletic Therapist**, designated by the letters **CAT(C)** and the privileges associated with this recognition. Maintenance of certification is mandatory by taking continuing education courses.

Treatment Methods- Certified Athletic Therapists are trained in the application of electrical modalities including, but not limited to, ultrasound, TENS, interferential current, electrical muscle stimulation, and laser therapy. A Certified Athletic Therapist assesses injuries and conditions, uses contemporary rehabilitative techniques, therapeutic modalities, soft tissue mobilization, physical reconditioning, and supportive strapping procedures to promote an environment conducive to optimal healing in preparing the individual for safe **reintegration into an active lifestyle**. Many Athletic Therapists obtain other certifications such as massage therapy, muscle energy and osteopathic methods as an adjunct to their rehabilitative techniques.

Insurance Billing- Athletic Therapy is **not a regulated medical profession** at this time but is actively pursuing regulatory status. However, **most major insurance companies provide coverage** for Athletic Therapy. Check your individual insurance plan as many providers offer Athletic Therapy as an option and it may need to be added to your benefits package.

Additional Information- For more information, you can contact the Canadian Athletic Therapists Association at (403) 509-2282 or visit their website at <http://www.athletictherapy.org>

PHYSIOTHERAPY

Professional Designation- The Canadian designation for licensed members of the Canadian Physiotherapy Association is **PT**.

Scope of Practice- Physiotherapists analyze the impact of injury, **disease or disorders** on movement and function. Their unique contribution to health care is to promote, restore and prolong physical independence by enhancing a client's functional capacity. Physiotherapists encourage clients to assume responsibility for their health and participate in team approaches to health service delivery.

Physiotherapy is anchored in movement sciences and concerned with the **function of multiple body systems** and aims to enhance or restore function. Physiotherapy is committed to health, lifestyle and quality of life. This holistic approach incorporates a broad range of physical and physiological therapeutic interventions and aids. To achieve health goals, physiotherapists adopt state of the art diagnostic and assessment procedures and tools in order to plan preventive and therapeutic courses of intervention. Physiotherapists work in private and public settings providing client interventions as well as management, educational, research and consultation services.

Education- Licensed physiotherapists must hold a university degree in physiotherapy. This includes, but is not limited to, the study of anatomy, physiology, pathology, human development, biomechanics and exercise physiology. Many physiotherapists also advance their education after university in areas such as: **cardio respiratory, geriatrics, neurosciences**, orthopaedics, **pediatrics, rheumatology**, sports physiotherapy and women's health. Physiotherapists are required to hold a license or registration to practice from the regulatory board of the College of Physiotherapy in your

province/territory. These regulators set and monitor practice standards. Only registered physiotherapists are eligible to use the terms “**physiotherapist**”, “**physical therapist**” and the professional designation “**PT**”. Only registered physiotherapists are entitled to provide physiotherapy assessment, treatment or evaluation.

Treatment Methods- Physiotherapists are educated in the utilization of electrical modalities including, but not limited to, ultrasound, TENS, interferential current, electrical muscle stimulation, and laser therapy.

Physiotherapists may further their education by attaining certification in a multitude of additional rehabilitative techniques which may include, but are not limited to, **acupuncture**, **manipulative therapy** and various osteopathic techniques

Insurance Billing- Funding of physiotherapy services varies across Canada. Generally, **treatments provided in a hospital setting are covered** by provincial health insurance plans. Funding varies when services are offered outside a hospital. Most insurance policies cover physiotherapy services. All provinces allow physiotherapists in private practice to bill clients directly or to bill third-party payers, such as insurance companies or workers’ compensation boards.

Additional Information-For more information regarding physiotherapy, contact the Canadian Physiotherapy Association at (416) 932-1888 or visit their website at <http://www.physiotherapy.ca>.

ATHLETIC TRAINER

Professional Designation- The American designation for certified members of the National Athletic Trainers’ Association is ATC.

Scope of Practice- Athletic training is practiced by athletic trainers, health care professionals who collaborate with physicians to optimize activity and participation of patients and clients. Athletic training encompasses the prevention, diagnosis, and intervention of emergency, acute, and chronic medical conditions involving impairment, functional limitations, and disabilities.

Education- Students who want to become certified athletic trainers must earn a degree from an accredited athletic training curriculum. Accredited programs include formal instruction in areas such as injury/illness prevention, first aid and emergency care, assessment of injury/illness, human anatomy and physiology, therapeutic modalities, and nutrition. Classroom learning is enhanced through clinical education experiences. More than 70 percent of certified athletic trainers hold at least a master’s degree. Students need to pass the exam administered by the Omaha-based Board of Certification. This is the only way to become a certified athletic trainer. . Maintenance of certification is mandatory by taking continuing education courses.

Treatment Methods- Certified Athletic Trainers are trained in the application of Therapeutic modalities, Evaluation and Assessment of Injury and Athletic-related Illness, Therapeutic Exercise/Rehabilitation of Orthopaedic Injuries. Athletic Trainers obtain other skills and certification through various courses.

Insurance Billing- Athletic Trainers are allied health professionals that are part of the American Medical Associations’ Health Professions Career and Education Directory.

Additional Information- For more information, you can contact the National Trainers’ Association at (214) 637-6282 or visit their website at <http://www.nata.org>

Appendix 2: Interview questions

Interviews will be informal in nature but will be semi- structured around a number of core themes. Participants will be encouraged to use their own words and to take their stories in directions they viewed appropriate. The questions will be used only as a guide. The multidimensional social support model of Rees and Hardy (2000) will be used to focus on 4 theme areas. The participants will be given definitions of the 4 components of this social support model, prior to the interview so they can familiarize themselves with the four types of support we will be discussing.

1. How would you describe a therapist/athlete relationship?
2. How would you describe the emotional support you provide to your athletes during rehabilitation?
3. How would you describe the esteem support you provide to your athletes during rehabilitation?
4. How would you describe the informational support you provide during rehabilitation?
5. How would you describe the tangible support you provide during rehabilitation?
6. Do you feel or believe athletes are affected psychologically from an injury, and if so can you tell me some characteristics that you would look for if you feel some one is affected psychologically from an injury?
7. What is your perspective on the role you play in the psychological rehabilitation of your athletes?
8. Describe your level of comfort with the role you play in the social support and or psychological support of an injured athlete?
9. Do you feel as an athletic therapist, you have been provided the knowledge needed in order to facilitate all aspects of social support during an injured athletes' recovery?

Appendix 3: Interview Letter

Thesis: Exploring the role of a Canadian athletic therapist in the social support of an injured athlete

Information letter for Interview

Dear Certified Athletic Therapists:

This letter is an invitation to participate in a study I am conducting for my Masters research at the University of Victoria. My name is Krista Mullaly Dobbin and I am also a Certified Athletic Therapist. I would like to provide you with more information about this research and what your involvement would entail if you decide to take part.

Volunteer criteria: Age varying males or females who are or have been university working Canadian certified athletic therapists will participate in this study. You will also need to be in good standing (paid Canadian Athletic Therapist Association fees, paid insurance fees, and collected the appropriate amount of continuing education credits, current first responder certificate) with the Canadian Athletic Therapists Association.

Participation in this study is voluntary. If you decline participation, this will not affect your standing with the CATA. Participation will involve an interview of approximately 30- 60 minutes in length to take place through webcam, or telephone at an allocated time. You may decline to answer any of the interview questions if you so wish. Further, you may decide to withdraw from this study at any time by advising the student researcher. After your decision to withdraw, all data collected will not be used in the analysis and will be destroyed.

With your permission, the interview will be recorded to facilitate collection of information, and later transcribed for analysis. It will be given back to you to read and ensure it is in your words and of clear meaning. All information you provide is considered completely confidential. Your name or any other personal identifying information will not appear in the research write-up; however, with your permission anonymous quotations may be used. Participants will be asked to avoid discussing information that could identify their clients and or third parties. Notes and/or audio collected during this study will be retained for 1 year in a secure location and then destroyed. . There are no known or anticipated risks to you as a participant in this study.

I would like to assure you that this study is approved by the University of Victoria Ethics board. If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me by email at kmullaly@uvic.ca . You can also contact my advisor, Professor PJ Naylor at pjnaylor@uvic.ca, or the UVic Research Ethics Board at (250) 472-4545 ethics@uvic.ca I very much look forward to speaking with you and thank you in advance for your assistance in this research project.

Yours Sincerely,

Krista Mullaly Dobbin BPE, Dip.SIM, CAT(C)

Appendix 4: Participant Consent Form

PARTICIPANT CONSENT FORM

I have read the information presented in the information letter about a Thesis study being conducted by Krista Mullaly Dobbin for her Masters of Arts. I have had the opportunity to ask any questions related to this study, to receive satisfactory answers to my questions, and any additional details I wanted.

I understand that there are no risks to participating in this study.

I am aware that I have the option of allowing my interview to be recorded to ensure an accurate recording of my responses. I am also aware that excerpts from the interview may be included in the thesis research paper, with the understanding that the quotations will be anonymous. I understand that I should avoid discussing information that could identify my clients and other parties. I was informed that I may withdraw my consent at any time by advising the student researcher. After your decision to withdraw, all data collected will not be used in the analysis and will be destroyed.

I am aware that the researcher will be presenting the information gained in a thesis form, as well as a possible article publication. To enhance the knowledge of the Athletic Therapy profession and as an appreciation for the participation of the athletic therapists, a written report will go to the CATA to distribute on their website. Individual participants will also receive a copy.

This was reviewed by the Office of Research Ethics at the University of Victoria. I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact the Uvic Research Ethics Board at (250) 472-4545 ethics@uvic.ca. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

YES NO

I agree to have my interviews tape recorded.

YES NO

I agree to the use of anonymous quotations in the thesis research project

YES NO

Participant Name: _____ (Please print)

Participant Signature: _____

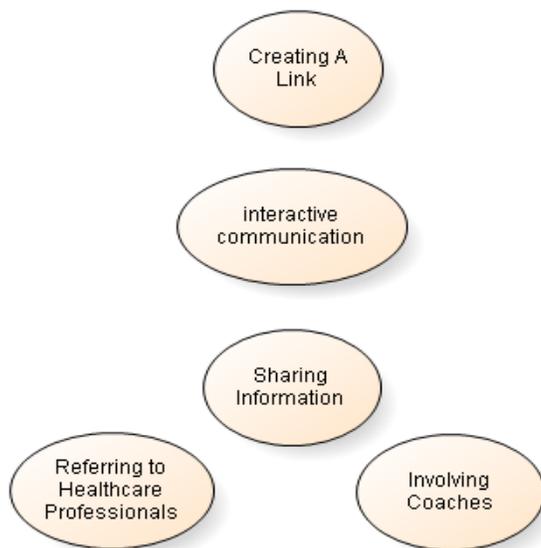
Date: _____

Appendix 5: Sample of Iterative Coding of Theme 2 using NVivo™ Modeling

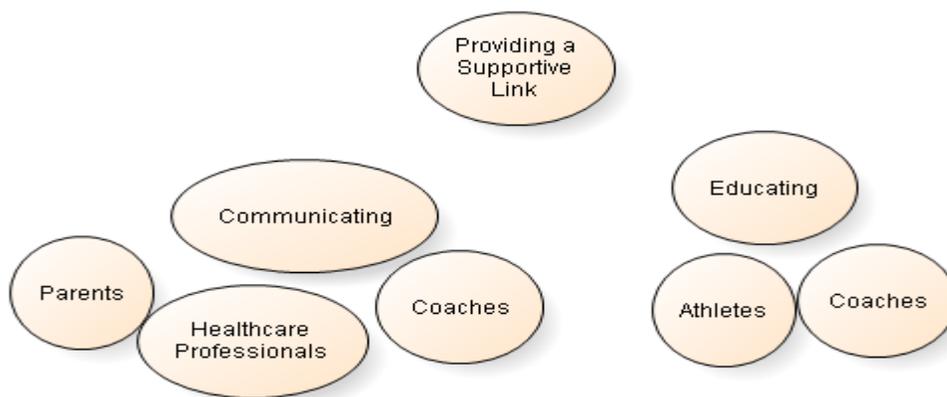
Stage 3 coding



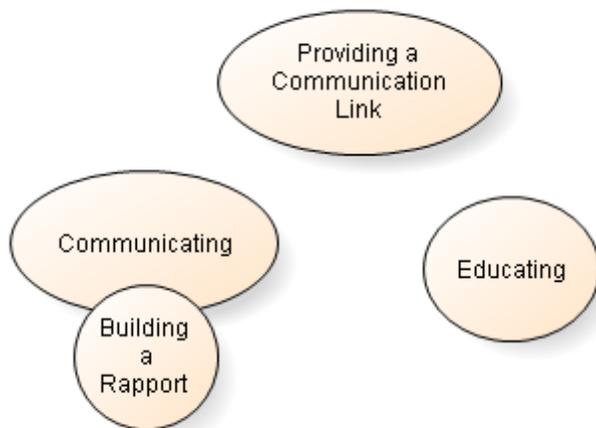
Stage 4 Coding



Stage 5 Coding



Stage 7 Coding



Appendix 6: Definitions of NVivo™ Dimensions

Professionalism: A standard of conduct.

Being Available: Making oneself easily accessible.

Confidentiality: The nondisclosure of information to others.

Trust: A bond created by firm belief in the honesty.

Respect: An attitude shown toward others with high regard.

Relaxed: A calm feeling around others.

Emotional Support: “The ability to turn to others for comfort and security during times of stress, leading the person to feel that he or she is cared for by others” (Rees and Hardy 2000).

Comforting: The act of providing reassurance.

Caring: Exemplifying concern towards others.

Esteem Support: “The bolstering of a person’s sense of competence or self-esteem by other people. Giving an individual positive feedback on his or her skills and abilities or expressing a belief that the person is capable of coping with a stressful event are examples of this type of support” (Rees and Hardy, 2000).

Positive Feedback: Providing feedback that indicates that a task is done well

Motivate: to provide a stimulus that entices a positive behaviour

Encourage: providing a stimulus that inspires behaviour

Informational Support: “Providing the individual with advice or guidance concerning possible solutions to a problem” (Rees and Hardy, 2000).

Advice: providing a recommendation or a suggestion

Guidance: providing direction

Visual Aids: something concrete you use to illustrate

Examples: providing information that may represent or support something

Tangible Support: “Concrete instrumental assistance, in which a person in a stressful situation is given the necessary resources (e.g., financial assistance, physical help with tasks) to cope with the stressful event” (Rees and Hardy, 2000)

Going Above and Beyond: doing more than what is recognized as required

Communicating: Sharing information amongst a group of people.

Parents: Caretaker

Healthcare Professionals: People who deliver the appropriate health care.

Coach: Individual in charge of teaching and training athletes.

Educating: to provide knowledge

Athletes: Those that participate in varsity sport

Appendix 7: Ethics Certificate of Approval



University
of Victoria

Human Research Ethics Board
Office of Research Services
University of Victoria
Administrative Services Building B202
Tel 250-472-4545 Fax 250-721-8960
Email ethics@uvic.ca Web www.research.uvic.ca

Human Research Ethics Board Certificate of Approval

<u>Principal Investigator</u> Krista Mullaly Dobbin Master's Student <u>Co-Investigator(s):</u>	<u>Department/School</u> EPHE	<u>Supervisor</u> PJ Naylor	
<u>Project Title:</u> Exploring the Role of an Athletic Therapist in the social support of an injured athlete			
<u>Protocol No.</u> 10-230	<u>Approval Date</u> 11-Jun-10	<u>Start Date</u> 11-Jun-10	<u>Expiry Date</u> 10-Jun-11
Certification			
This certifies that the UVic Human Research Ethics Board has examined this research protocol and concluded that, in all respects, the proposed research meets the appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Participants.			
This Certificate of Approval is valid for the above term provided there is no change in the protocol. Extensions and/or amendments may be approved with the submission of a "Request for Annual Renewal or Modification" form.			
 Krista Mullaly Dobbin, MEd, PhD, MSc, MA, BA Director, Human Research Ethics Board			

10-230 Mullaly Dobbin, Krista

Appendix 8: Permission to use Figure



HUMAN KINETICS

1607 North Market Street • P.O. Box 5076 • Champaign IL 61825-6076 • (217) 351-5076 • Fax (217) 351-2674

August 25, 2010

Krista Mullaly Dobbin
 Memorial University of Newfoundland Labrador
 Prince Philip Drive
 St. Johns, NL A1B 5A9, Canada

RE: Request to reprint or adapt figure 1 on page 297 of *Journal of Sport & Exercise Psychology* 10(3) [1988] in your Master's thesis [ID #2777]

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