University of Alberta

Figure Skaters' Perceptions of the Social Support Provided by Their Coaches Following an Injury

by

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Abstract

The purpose of this study was to determine figure skaters' perceptions regarding their injury experiences and the support provided by their coaches following their injuries. Eight female, competitive figure skaters were interviewed. The interview questions assessed the injury experience, the coach-athlete relationship, the skaters' perceptions of the support they received, their preferred types of social support, and the differences in social support through the injury phases. The results indicated that skaters did not receive from their coaches the types of support they deemed appropriate nor the quantity of support needed. However, the timing of the support they did receive was reported as appropriate. There were also differences between the type and amount of support received through the different injury phases. It was concluded that in order for skaters to perceive the support they received from their coaches as satisfactory, the correct type, timing and quantity must be provided.

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"It is amazingly empowering to have the support of a strong, motivated, and inspirational group of people"

– Susan Jeffers, *Feel the Fear... And Do It Anyway*

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Introduction

The increase in popularity of sport participation in society today has resulted in a significant accompanying growth in competitive athletic programs. The increasing expectation for high performance and maximal effort comes with the potential for serious consequences and can result in significantly increased injury rates among athletes (Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998). Most sport participants at higher competitive levels of performance are prime candidates for physical injury because of the intense training, high physical effort and an assortment of intense emotions associated with the nature of sports (Pragman, 1999). Figure skating is one of many programs that have shown an increase in popularity and competitiveness.

Competitive figure skating has shown a significant increase in both the technical demands and the physical fitness requirements over the past several years. As a result, there has been an increase in the number and severity of injury occurrences (Smith & Ludington, 1989). Figure skaters, as with athletes from all sports, can be physically and emotionally devastated by an injury. These injuries can bring about pain, distress, frustration, changes in relationship dynamics and debilitation (Hardy & Crace, 1993).

Effectively dealing with the physical pain and emotional distress of an injury may require the support of a "team" of dedicated individuals including medical staff, athletic trainers, coaches, teammates, friends and family. The extent

of support desired, or needed, by an athlete is individualistic and can depend on many factors, including previous experience with injury, personality and the nature of the sport itself (Granito, 2001). Although all support givers are important in an athlete's experience with injury, coaches commonly become central figures in athletes' lives. There are many types of support that coaches can provide to injured athletes. These include listening to their concerns, providing emotional and informational support relating to the injuries, and assisting in both rehabilitation and return to participation (Bianco, 2001). Athletes have often indicated that they are unsatisfied with the social support provided by coaches following injury (Macchi & Crossman, 1996; Udry, Gould, Bridges, & Tuffey, 1997).

My goal is to determine figure skaters' perceptions following an injury of both their injury experiences and the support provided by their coaches, this has a two fold purpose. First, it will help determine the needs of athletes following an injury and, second, will provide coaches with guidelines to working with their injured figure skaters. Hopefully this will create a better experience, both benefiting the athletes' rehabilitation and speeding their return to sport. Since injury experiences are a subjective topic, the scope of this project is to gain a general understanding of the experiences and needs/preferences of figure skaters through individual interviews. The subjects will be selected from Western Canada, specifically Calgary, Edmonton, North Battleford and Winnipeg.

I am personally motivated by this topic as a figure skater and figure skating coach. As a skater, I have seen many comrades and competitors fall victim to injuries. It was highly devastating to many of them. I have wondered about their injury experiences, including the social support mechanisms that were available to them at the time of their injury. I have not been injured as a figure skater; however, I have been injured in other sports and can relate to the injury experience as an athlete. As a coach, I have seen many injuries on the ice, some significant and others superficial. I realize that in both cases, I was considered the immediate support giver and first aider. I am interested in determining what the needs of skaters, both mine and others, could be, in the event that they are injured, and what my role should be as a coach.

Similarly, coaches throughout the figure skating world, and in many other sports could learn from the knowledge gained through this project. Although, most specifically related to coaches of individual, aesthetic sports, the results from this study could assist coaches to better understand athlete injury and the need for coach support in their respective sports.

This document is my Master's thesis and what follows is my study on athletes' perspectives of the social support provided by their coaches following an athletic injury. The first section, Literature Review, is a review of previous research in this topic area. Specific topics include an introduction to figure skating, the athlete's experience with injuries, and the relationship between

coaches, athletes and social support. The second section, Methodology, is a review of literature regarding interviews and an overview of the study. The third section, Results and Discussion, provides insight into how the skaters experienced their injuries, the coach-athlete relationship, how skaters perceived the support they received, the types of support skaters preferred, and how skaters experienced support throughout the phases of injury. The final section, Conclusion, discusses specific results, as well as the implications of injured skaters.

Literature Review

Introduction to Figure Skating

Figure skating has been enjoyed all over the world by women and men of all ages for more than a century. In recent years, the number of competitive figure skaters has increased significantly. During the 2008/2009 season, SkateCanada, the governing body of figure skating in Canada, enrolled 2,444 competitive skaters and 29,072 recreational skaters in 1,253 clubs throughout Canada (SkateCanada, 2009). Of these competitive and recreational skaters, approximately 70% were female.

Competitive figure skating is broken down into four divisions: male and female singles, pairs and ice dancing. Singles skating is a combination of athleticism and artistry performed individually; it combines multi-revolutionary jumps and spins with rapid footwork and graceful field movements. Pairs is skated as a couple with numerous high-risk athletic moves, including overhead lifts and throws, as well as artistry, jumps and spins similar to that found in singles. Ice dancing is a combination of speed, body lean and precise skills with strictly regulated spins and lifts.

There usually tends to be a single coach per skater or team, however some skaters or teams may choose to take a team-coaching approach that involves having two or more coaches to instruct particular disciplines. Skaters and teams

progress through a series of hierarchical skill levels, representing increasing competitive levels which, in turn, lead to increases in training demands.

Skaters are measured against a baseline and each other in a hierarchy of tests and competitions (Kestnbaum, 2003). Skaters must fulfill "the entire package" in order to successfully move through the hierarchy. They are expected to show a balance between technical content and the style and confidence through which the technical content is presented. Complex rules govern each aspect of skating, including amateurism, technical content, program design, music and costumes (Kestnbaum, 2003).

Although there may be several skaters on the ice at one time, single skaters are trained and coached on an individual basis. Pair and ice dance teams would also train individually, two-on-one, with a coach. Instruction from a coach is commonly given during a 15-minute one-on-one lesson, although skaters may receive more than a single 15-minute lesson per day or throughout the week. Recreational skating sessions may last from one to two hours and are usually three or four days a week. Competitive skating sessions may last from two to three hours, have more than one session per day, and are usually five or six days per week.

In 1990, the discipline of figures was eliminated from competitions and, subsequently, practices (Bruening & Richards, 2006). This significant change in the structure of on-ice practice accelerated the shift in training from figures to

freestyle and jumping, which has resulted in rapid growth in the technical and physical demands made on skaters. Competitive skaters today are spending 15 to 30 hours/week in on-ice training and often practice more than 50 jumps per day consistently throughout their career (Bruening & Richards, 2006). This change in demand has increased the duration and intensity of training, which many coaches believe has lead to an increase in the incidence of injuries (Smith & Ludington, 1989). Similarly, the way skaters and their coaches train, using a continual repetition of move after move and jump after jump, has greatly contributed to the chronic overuse injuries that are so prevalent in the sport (Jaworski & Ballatine-Talmadge, 2008). The increase in technical and physical demands on skaters requires assistance from the coaches, administration and health professionals to both manage performance enhancement and prevent and manage injuries (Dubravcic-Simunjak, Pecina, Kuipers, Moran, & Haspl, 2003). Unfortunately, there are still instances when athletes are injured.

Although figure skating is generally considered to have a low injury rate compared to other sports, it is still a problem. There is also a variation in the type of injury within the sport itself. It has been reported that pair skaters are more likely to sustain acute injuries than singles skaters and ice dancers due to the high-risk lifts and throw jumps (Smith & Ludington, 1989). Single skaters more commonly suffer overuse injuries than pair skaters and ice dancers (Dubravcic-Simunjak *et al*., 2003). Brock and Striowski (1986) found that, of the sixty-four

Canadian figure skaters they studied, forty-five percent sustained at least one injury over a one-year period. Kjaer and Larrson (1992) reported that young Danish elite skaters had an incidence rate during competitive skating of 1.4 injuries per 1000 hours of training with forty-four percent of these being chronic injuries. In 2003, Dubravcic-Simunjak, Pecina, Kuipers, Moran, and Haspl surveyed over 500 elite junior figure skaters and found that seventy-three percent of female single skaters suffered from overuse injuries at some point in their career. They further report that female skaters predominately incur injuries of the lower extremities. Ferrara and Hollingsworth (2007) also found in their study of single skaters that frequency and spectrum of overuse injuries has significant increases as these skaters continue to increase the intensity of their training. There are a number of factors that contribute to the injuries, including reduced flexibility, muscle strength and body alignment, inappropriate warm-up or cool-down, and the rigidity of the skating boot and blade (Ferrara & Hollingsworth, 2007). The consensus is that numbers of injuries are increasing. Accordingly, injury prevention should be a priority for skaters and coaches, as well as national associations looking to increase their medal count.

It has been estimated that at least 50% of figure skating injuries are preventable (Smith, 2000). There are a number of alternative approaches to training skaters, and coaches should consider these in hopes of preventing injuries. Although falls are a natural part of figure skating, they can be minimized

as much as possible with proper technique, proper equipment, practice and prevention of fatigue (Bloch, 1999). Building and maintaining general flexibility, endurance and strength is beneficial to all skaters. Flexibility programs can help protect skaters from muscle strains. Continual repetition of skills in figure skating is a common practice and leads to excessive tension in the same body parts. Education regarding the potential increased strain on certain body parts from over-repetition of skills is important for skaters to receive. The stationary bike, because of its use of similar muscle groups to skating and usefulness in exercising for endurance, and slide boards, because of their simulation of the stride, have been recommended to increase muscle strength of the hamstrings, quadriceps, groin and calf muscles (Smith, 1987). Bloch (1999) reported that weak abdominal and trunk musculature contribute to injuries. While hugely problematic, they tend to be overlooked by most coaches and, therefore, need to be addressed with strengthening exercises.

Although prevention of injuries is important, it is not always possible. It is, therefore, vital to look at the effects of injuries on athletes and determine what can be done to effectively support injured athletes through their injuries and rehabilitation.

Athletes and Injuries

Achievement in sport is highly valued by society. Athletes participating in these culturally important events dream of high athletic achievement. Injuries

have the potential to shatter such dreams. However, many athletes are unwilling to quit, continuing to participate in sport regardless of their experience with injuries (Wiese-Bjornstal *et al.*, 1998). Many coaches, teammates, fans and media tend to negatively judge athletes who refuse to play hurt. This tendency likely comes from a sport culture that values achievement and success above the well-being of an athlete. As athletes progress to more competitive levels, it has been noted that they are more likely to endure training and competition with an injury. As a result, athletes tend to hide their emotional responses or avoid their coaches and, ultimately, experience negative feelings and thoughts following an injury (Charlesworth & Young, 2007; Nixon, 1994b; Wiese-Bjornstal *et al*., 1998).

Injuries are categorized as a negative, uncontrollable events that result in 'the loss of or a threat to physical assets, relationships, achievement, and social roles' (Hardy & Crace, 1993, p. 129). Athletes' common reactions to injuries include frustration, fear of others' reactions and the effect it would have on their career, distress, anger, depression, and guilt about being unable to practice (Macchi & Crossman, 1996). A common concern among injured athletes is the physical deconditioning due to the lack of participation. Athletes train for many hours each week, many throughout the entire year, in order to obtain an optimal state of conditioning. This optimal state can be quickly lost with a lack of activity caused by an injury.

Several researchers have mentioned a number of factors that can affect an athlete's response to an injury. These include the personality of the athlete, gender, sport subculture, pain intensity, effect on daily life, the rehabilitation process, and effect on relationships (Curry, 1993; Granito, 2001; Grylls & Spittle, 2008; Wiese-Bjornstal *et al*., 1998). The aforementioned factors can be categorized as either personal or situational. Personal factors refer to the injury and individual differences of the injured athlete (Wiese-Bjornstral, *et al.*, 1998). The history, severity, type, perceived cause and recovery status of an injury will contribute to an athlete's response. Granito (2001) found pain following injury, surgery, and/or rehabilitation to be a theme that all athletes and student trainers who were interviewed spoke about. Smith *et al.* (1993) found that injury severity, based on participation time loss, was a key moderator of post-injury psychological disturbances. More than one injury, Grylls and Spittle (2008) warned could lead to cumulative negative effects. Psychological factors that have been associated with an athlete's response to injury include personality, self-perceptions, motivation, pain tolerance, athletic identity, coping skills, history of stressors and mood states (Granito, 2001). Granito (2001) argued that an athlete's personality could affect their psychological and emotional response to an injury. Self-confidence and self-esteem can be changed by an injury. A female student trainer interviewed by Granito (2001), from an NCAA Division II university, noted that "Some people will be in therapy as much as they can and be positive, and others

will just go through the motions... Different personalities respond to injury differently" (p. 69). Athletes and trainers have also noted that the importance sport has in an athlete's life and his/her role on the team is an important factor in determining how an athlete will experience an injury. For example, a valuable member of the team, or a senior athlete with limited eligibility left, is likely to optimistic about him/herself and an injury would be devastating. An athlete's demographics, including gender, age, ethnicity, socioeconomic status and prior sport experience, may also have significant effect on their response to injury (Wiese-Bjornstal *et al.*, 1998). For example, professional and varsity athletes may perceive benefits of working through injury to maintain salary or scholarships. In general, trainers noted that males tended to pressure teammates to prove their strength and pain tolerance, whereas female teammates tended to be encouraging to each other (Granito, 2001).

Situational factors can also influence an athlete's response to injury. Situational factors refer to the nature of the sport, and the social and environmental aspects of an injury (Wiese-Bjornstal *et al*., 1998). The type of sport, level of competition, time in season and playing status are important factors in determining an athlete's response to injury. In addition, a given sport may have different expectations that mediate how athletes perceive their injuries (Granito, 2001). Some sports may condition athletes to either compete with injuries or think injuries are a sign of weakness. These views impact on how athletes would view

their own injury. For example, a male student trainer, interviewed by Granito (2001), commented that, in wrestling, if an athlete is injured but can still perform, he/she would participate; whereas in soccer if there is a slight doubt in their ability to perform, they stop playing and are cared for immediately. Based on the all-encompassing training of figure skating (such as moving to new cities or opting for home schooling to allow them to make training their first priority), it is likely that many skaters will continue to train through their injuries as best as possible (Porter, Young, Niedfeldt, & Gottschlich, 2007). In addition, it has been noted that, based on skaters' training schedules and travel schedules for competitions, they are likely to neglect illnesses and other medical conditions (Jaworski & Ballantine-Talmadge, 2008).

Positive or negative social interactions with trainers, coaches, teammates, other injured athletes, and family and friends can also affect an athlete's response to injury (Granito, 2001). Curry (1993) found that an injury not only threatens an athlete's immediate participation in sports, but also his/her relationship with significant others. For example, an athlete who is no longer able to achieve success may have difficulty maintaining bonds with teammates and coaches.

The effects of an injury on an athlete's day-to-day life can influence how he/she thinks about his/her injury (Granito, 2001). Injury can lead to daily hassles, such as getting around on crutches, difficulties focusing at school, and avoiding activities that aggravate the injury.

The response time and ease with which athletes are able to receive treatment for their injuries are both important factors. Many varsity athletes have access to an athletic training room on campus that they can use throughout the day; however, this is not the case for many other types of athletes.

Figure skating is an individual or dyad sport, which differs in many ways when compared to team sports. In singles skating, the result of an injury could be the loss of training time for the individual. However in pairs or ice dancing, the result of an injury is the loss of training time and could cost both skaters their season. Although the uninjured skater could still practice his/her individual skills, there would not be the essential unison practice opportunities. In both cases, the injury causes a great deal of worry to the skater(s). Figure skating, including practices, competitions and tests, tends to run throughout the year with only a few short breaks. Significant competitions tend to occur in November and from January to the end of March. These are important months. An injury prior to or during this period could be detrimental to a skater's season.

The relationship between the coach and athlete may also be affected. Coaches tend to have a number of skaters for whom they provide instruction. Skaters, however, tend to have a single coach. Following an injury, there is a cessation of lessons or one-on-one training time. This results in a potential decrease in skill acquisition and performance abilities, as well as a loss of

interaction between the coach and skater. In addition, fewer lessons usually mean a decrease in income for the coach which may cause them increased stress.

Coaches, Athletes, and Social Support

Coaches' perspectives of athletes' injuries.

Coaches are central figures in athletics and, therefore, have influence on athletes' choices about playing with injuries (Nixon, 1994a). Their views on athletes' injuries can contribute to both the support they provide and the athletes' perceptions of that support.

Nixon (1994a) surveyed twenty-six varsity sports coaches to assess their views of risk, pain and injury in sport. One-third of these coaches believed that athletes should push themselves to the limit (53.8%), accept the risks of sport (42.5%), and not worry about pain and injury while participating (30.8%). In addition, coaches expressed much sympathy for athletes who complained about injuries and pain (80.8%), for injured athletes (65.4%) and athletes who played hurt (50%). Thirty-one percent felt that athletes deserve respect when they play hurt. Interestingly, only 38.5% of coaches believed that athletes told the truth when they said they were unable to play hurt. The results of this study reflect what coaches believe, however it does not indicate the actions that coaches take in response to injured athletes.

Nixon (1994b) interviewed American Division I college athletes and found that a significant percentage of these athletes tried to avoid their coaches or

hide their injury because of mixed signals coaches sent. On one hand Nixon (1994b) found that coaches tended to agree with "a cultural belief system explicitly or implicitly highlighting or glorifying risk, pain, and injury themes" (p. 351). On the other hand, they expressed concern for the welfare of their athletes. Athletes may find it difficult to determine which belief their coaches will adopt and may attempt to avoid the situation altogether. Additionally, many athletes have been penalized by their coaches for receiving treatment for their injuries (Nixon, 1994b).

Podlog and Eklund (2007) interviewed fourteen professional coaches from a variety of individual and team sports throughout Western Australia and New Zealand about their actual role in an athlete's injury rehabilitation. They found that coaches tended to "trust" the decision-making abilities of their medical practitioners regarding an athlete's ability, although medical practitioners who were ex-athletes from their sport were considered more beneficial. Coaches also desired direct contact between themselves and the treatment providers because some athletes tended to be either overzealous to return or stretched the truth about their condition and ability. However, injuries can be an area of conflict within a team (Lyle, 2002). In some cases, the severity of an injury is obvious and there is no alternative other than to take the advice of the physician and/or physiotherapist. However, there are many "grey areas" where the severity of the injury is not obvious, or there is conflicting information from the athlete or

medical support staff. In these cases, conflict can arise to "who makes the final decision" regarding injury severity and the athlete's capabilities (Lyle, 2002). This may influence coaches' pressures on athletes' behaviours following an injury.

Coaches are commonly believed to negatively influence athletes' decisions to play by supporting them to hide pain, tolerate injury or return prematurely (Charlesworth & Young, 2007). Charlesworth and Young (2007) argued that the use of power by coaches to promote their personal agenda is irresponsible and unethical. Fry (2007) suggested that it was the coaches' moral responsibility to be "attentive and responsive" to athletes' differences and to work cooperatively with athletes in terms of "what expectations are placed upon the athletes". According to Flint and Weiss (1992), based on coaches' limited medical training and the pressures of their role to make decisions that will allow games to be won, it is considered undesirable that coaches should have decision-making responsibilities where athlete injuries are concerned. As the team's needs and athletes' contributions increase, it becomes more difficult for a coach to be objective in decision-making.

Coaches' decisions regarding athletes' opportunities to play are influenced by a combination of play status and game situation. Flint and Weiss (1992) questioned coaches of high school and university basketball teams regarding their decisions as to whether an injured player should be returned to competition. The

results indicated that coaches were more likely to return starters in close games than games that were already determined, while first substitutes and bench players were more likely to return following an injury when the game was already determined than in a close game. Coaches believed that it was an unreasonable risk for further injury to a starter when the outcome of the game had already been decided (Flint & Weiss, 1992). Similarly, Vergeer and Hogg (1999) found that coaches are more likely to encourage athletes to compete when an injury is less serious, the athlete is older and/or better, and the competition is more important. Although coaches indicated their beliefs in the importance of competing, it is possible that the athlete would still not compete.

Coaches' decisions about athletes playing with injury were not significantly related to coaches' ages, years of coaching experience, gender, certification level, or competition level coached, but were related to either having negative experiences with injury while competing or knowing an athlete who had negative experiences from competing with an injury (Vergeer & Hogg, 1999).

Although returning an athlete immediately to the event is the most desirable, it is not always possible. In such cases there is the question of what to do with the injured athlete. Podlog and Eklund (2007) determined that athletes' abilities to accurately express their limitations and capabilities were important to keeping athletes active post-injury. Coaches believed that keeping athletes involved following an injury was important because it served to prevent feelings

of alienation and isolation and, as well, ensured athletes were up to date on team tactics and plays for their impending return. In contrast, Udry (2001) found that social support deteriorated over time and was especially likely to happen to athletes that have experienced severe injuries. She noted that supportive environments need to be maintained and sustained throughout the course of an injury. Udry (2001) encouraged coaches and/or captains to set up schedules to keep in contact with injured athletes or to create an environment that ensured the injured athletes were not "out of sight". An example of this would be completing their rehabilitation in the presence of teammates during practices. Accordingly, there may be many factors that affect athletes' inclusion, including the relationship between athlete achievement and coach support.

The extent of the relationship between athlete achievement and coach support following an injury is relatively unknown. However, based on positive or negative interactions with the coach, and low- or high-achieving athletes during practice, it is possible to infer similar interactions following an injury. In particular, Pieron, Colomberotto, and Salesse (1986) analyzed this topic in gymnastics. Their results showed that high achieving gymnasts received more frequent feedback which was positive and approving; whereas lower achieving gymnasts received predominately negative feedback. Therefore, it is likely that coaches will provide more support and feedback to higher achieving athletes

following an injury. In this way, injuries can significantly affect the coach-athlete relationship.

Empathetic accuracy.

In sport, coaches and athletes work closely together. Jowett and Ntoumanis (2004) defined the coach-athlete relationship as "the situation in which coaches' and athletes' emotions, thoughts and behaviours are mutually and causally inter-connected" (p. 245). An injury to an athlete disrupts the key element of contact between a coach and athlete because both parties have lost their ability to perform their duties and responsibilities (Roessler, 2006). The coach is impaired from providing training directives and the athlete is no longer able to perform, or can only perform with a limited capacity. The inability to perform at prior levels can lead to disappointment, frustration or indifference between both parties.

In the coach-athlete relationship, there is a high degree of interaction and reliance upon each other (Lormier & Jowett, 2009). Coaches must understand their athletes' needs on a daily basis. Côtè, Young, North, and Duffy (2007) comment that "Coaches should understand and be responsive to athletes' needs in the different environments in which they coach" (p. 6). Coaches' and athletes' abilities to accurately perceive and understand each other are key factors in positive relationships (Lormier & Jowett, 2009). Empathetic accuracy is defined as the capacity to perceive not only the psychological condition of another, but

also the reasoning behind behaviours (Ickes, Stinson, Bissonnette, & Garcia, 1990). The accuracy of interpersonal perceptions has also been linked to the degree of sensitivity of the issue; an injury is considered a sensitive and emotional issue. In addition, the nature of the sport may influence the level of empathetic accuracy that coaches and athletes exhibit (Ickes *et al*., 1990).

The coach-athlete relationship is believed to differ between individual sports, and team sports (Bloom, Durand-Bush, Schinke, & Salmela, 1998; Jowett, Paull, & Pensgaard, 2005). In individual sports, the coach and athlete usually work on a one-on-one basis, and the focus is on individual development and progression. In team sports, the focus is on the dynamic between athletes and the performance of the team; therefore, the group tends to work together, as a whole, and is overseen by the coach. Jowett, Paull, and Pensgaard (2005) found that coaches in individual sports demonstrated higher empathetic accuracy than coaches in team sports, whereas no significant difference was found between individual and team athletes. Bloom, Durand-Bush, Schinke, and Salmela (1998) believed coaches in individual sports likely had greater opportunities to get to know their athletes and, therefore, were better able to understand their thoughts and feelings. In addition, coaches of individual sports tended to be involved in more facets of their athletes' lives. This is not the case in team sports where time available for coaches to spend with their athletes on a one-to-one basis can be more limited.

The duration of coach-athlete relationships and contact time between the two could also be important factors to consider in each person's empathetic accuracy. However, Lormier and Jowett (2009) found that the relationship length in years revealed no association with empathetic accuracy. These results conflicted with previous research that accuracy increased during the initial stages of the relationship, before decreasing in later stages (Jowett & Clark-Carter, 2006; Thomas & Fletcher, 2003). Jowett and Clark-Carter (2006) concluded that athletes in moderately developed relationships have greater reason to observe their coaches closely, in order to get to know them better. Lormier and Jowett (2009) compared athletes and coaches' demonstration of empathetic accuracy regarding the other. They measured contact time by the length of training sessions and determined that longer training sessions were associated with empathetic accuracy for coaches only. Possible explanations for this result would be that shorter training sessions are more focused on the task-at-hand, whereas longer sessions allow for greater amounts of interaction with time to talk, interact and engage in sport and topics outside of sport. Finally, supplementary information from the parents, support staff, and other coaches and athletes may assist the coach and athlete in their empathic accuracy (Stinson & Ickes, 1992).

Gender differences have also been noted as a factor in coach-athlete relationships. While Jowett and Clark-Carter (2006) found no gender differences in empathetic accuracy between coaches and athletes, Tomlinson (1997) found

that female athletes manifested greater empathetic accuracy in order to please their male coaches, who often assumed status, authority and power in the relationship. The subordinate status of female athletes likely motivated them to accurately read their coaches' feelings, thoughts and behaviours to a greater degree than that found with their male counterparts.

The one-on-one nature of figure skating gives coaches and athletes opportunities to accurately perceive the other's feelings and thoughts. However, the short duration of one-on-one sessions does not allow for a great deal of talk, interaction and engagement in topics outside of sport between the coach and athlete. This short lesson duration may also affect a coach's ability to provide support to his/her skater. The coach-athlete relationship may be important in determining the social support provided by coaches to athletes, specifically following an injury.

Social support.

Social support is defined as "an exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient" (Shumaker & Brownell, 1984, p. 13). It is multidimensional and dynamic. Individuals that receive social support are generally mentally and physically healthier than unsupported individuals due to the health-sustaining and stress-reducing functions of social support. Hardy, Richman, and Rosenfeld (1991) believed there were two commonly used

explanations for these effects of social support for individuals. Their buffering hypothesis suggested that "social support moderates or buffers the impact of stress on the individual and thus indirectly affects well-being" (p. 129), whereas direct-effects hypothesis suggested, "The more effective social support an individual receives, the better his or her mental and physical health" (p. 129).

Richman, Rosenfeld, and Hardy (1993) found eight types of social support:

- Listening support (listening without being judgemental or offering an opinion);
- Emotional support (expressing care or comfort to the recipient);
- Emotional support challenge (confronting recipients to help them assess their attitudes, values or feelings);
- Reality confirmation support (people who are or who have experienced the same situation and are able to confirm the recipient's perspective);
- Task appreciation support (acknowledgement and appreciation for the recipient's efforts);
- Task challenge support (challenging the recipient to motive the recipient);
- Tangible support (financial assistance, products or gifts for the recipient);
- Personal assistance (providing the recipient with time, skills, knowledge or expertise to accomplish a task or goal).

The correct type of support, at the correct time, in the correct amount and by the correct person is complex, but essential to guarantee the recipient (athlete) will benefit (Richman, Rosenfeld, & Hardy, 1993). No one type of support is preferred by all individuals. There are a number of factors that determine the type of support that individuals preferred. It is important, therefore, for support providers to attempt to match the type being provided with the needs and preferences of the recipient (Udry, 2001). Problems may occur when the amount of support provided exceeds the recipients' expectations or desires, or when the recipients' expectations or needs exceed the amount of support made available by the provider. Support preferences may also change over time following an injury, therefore, potential support providers must be astute observers and listeners in order to match the type of support being provided with the changes that occur. The wrong type, amount and time of support may lead to frustration for both the recipient and provider. The support provided within these relationships is important to an athlete's physical and mental well-being.

Support provided by coaches.

Prior to an athlete's injury, coaches are responsible for injury prevention by ensuring the safety of their athletes. Research shows that, generally, coaches tend to be untrained in injury prevention and immediate management. This knowledge is a fundamental component of contemporary sports injury prevention programs. Flint and Weiss (1992) found that less than one-third of Canadian

university basketball coaches were currently first aid and CPR certified. While Canadian National Coaching Certification Program does not require professional coaches to be First Aid and CPR certified. This limited knowledge has potentially compromised the development of effective injury prevention programs by coaches and, as well, the ability to deal with an injured athlete. SkateCanada, however, does require this certification for professional figure skating coaches.

Teammates, athletic trainers, and coaches are the major sources of support and influence regarding injury for athletes (Nixon, 1992). Each support provider will play a different role and provide a different type of support. The support a coach provides to an athlete following an injury is situational, and depends significantly on the phase of injury that the athlete is in. According to Bianco (2001), the injury experience spans three separate phases: the injury phase, the rehabilitation phase, and the return to full activity phase. Within each phase, there are distinct social support expectations that athletes have of their coaches. The injury phase marks the period from the occurrence of injury to the beginning of treatment. During the injury phase, coaches are required to assist in overseeing athletes' arrangements, including contacting families and organizing transportation home, and providing emotional comfort, offering encouragement and reassurance, and sharing injury experience or words of wisdom (Bianco, 2001).

The rehabilitation phase marks the period from receiving medical attention to the return to full activity. During the rehabilitation phase, coach support is welcomed and appreciated, but does depend on the coach-athlete relationship (Bianco, 2001). In particular, coaches can provide athletic therapists, physicians and physiotherapists with information for rehabilitation programs regarding sport specific demands, pre-injury condition and the athlete's ability to handle training and obstacles. Coaches, in addition to other social support providers, have been noted as beneficial in the athletes' adherence to rehabilitation programs (Udry, 1996). There tends to be a significant increase in an athlete's support-seeking associated with a coach during the rehabilitation phase, which coincides with a significant decrease in support-seeking associated with family (Hoar & Flint, 2008). Coaches should continue to provide encouragement and reassurance, as well as offer individual training, when possible, and assurance that there is no pressure to perform until ready.

During the return to full activity phase, coaches are also central to ensure that athletes do not return to sport prematurely (Johnston & Carroll, 1998). Coaches should facilitate individual training to progressively move athletes back to pre-injury conditioning and re-introduce athletes into their team and practices. Upon return to activity, coaches should be a source of emotional and informational support to assist athletes deal with setbacks, cope with potential changes in status on the team, set realistic performances goals and overcome fears

of reinjury (Bianco, 2001; Johnston & Carroll, 1998). In addition, Udry (1996) noted that social support can reduce an athlete's risk of injury by deflating the life stress-injury relationship by acting as a buffer or coping mechanism. Coaches have a responsibility to provide social support to athletes throughout the different phases of injury; however, the support may vary depending on the athlete's gender.

Gender differences have also been noted as important in determining an athlete's source of social support. Hoar and Flint (2008) found that females were more likely to seek support from peers, such as a close friend or teammate, when managing stressful events like an athletic injury, whereas males are more likely to seek support from a coach or athletic therapist. This is believed to be a result of females' desire for emotional social support of a more intimate nature, and males' desire for support from expert resources that can solve the problem. An athlete's perception of the support provided to him/her can affect his/her injury experience.

Athletes' perceptions of social support provided by coaches.

Athletes' perceptions of the social support provided by others are important. Sarason, Sarason, and Pierce (1990) noted that the active element of social support is an individual's belief that others care about him/her and are willing to assist if the individual needs support. In addition, athletes who perceive positive support tend to feel that the resources necessary for the attainment of their goals are available to them (Sarason, Sarason, & Pierce, 1990). A number of

studies have investigated athletes' perceptions of the social support they received following an injury. Both athletes' coping and their satisfaction with the social support have been the focus of research and have included teammates, coaches, medical professionals, athletic trainers and family/friends as support givers. Although all of these support givers are important for athletes following an injury, my interest lies specifically with coaches.

There is very limited literature regarding figure skaters' perceptions of social support provided by their coaches. However, there is some literature regarding athletes' perceptions from other individually based sports, such as ballet and skiing. Macchi and Crossman (1996) interviewed twenty-six professional ballet dancers who indicated that, following an injury, half of their teachers' reactions were positive and half-negative; however, the teachers tended to be more negative than their classmates were. The dancers pointed out that they felt that their teacher was getting "fed-up" with injuries and tended to brush injured girls aside. Similarly, Udry, Gould, Bridges, and Tuffey (1997) conducted interviews with twenty-one athletes who experienced season-ending injuries to determine the prevalence of positive or negative interactions with family, teammates and coaches. The results showed that 66.6% of athletes perceived at least some of their interactions with coaches as negative. This included their perceptions that coaches were distant, insensitive to injury, gave inappropriate and insufficient rehabilitation guidance, and lacked belief in the athlete. However, the

results also showed that 57% of athletes perceived at least some of their interactions with coaches as positive. This included athletes staying emotionally connected, feeling supported and encouraged, and consulted with. Overall, injured athletes were more likely to view their interactions with coaches as negative. U.S. Ski Team alpine and freestyle skiers, who suffered season-ending injuries, indicated that coaches' support ranged from taking an interest in their general welfare and rehabilitation to providing special coaching assistance for athletes when they began their return to training (Gould, Udry, Bridges, & Beck, 1997).

Robbins and Rosenfeld (2001) compared athletes' perceptions of support provided by head coaches, assistant coaches and athletic trainers. They found that athletes were more satisfied with the support provided by the athletic trainers who treated them, than their head or assistant coaches. An athlete's satisfaction of the support provided by his/her coach did not differ between the head and assistant coaches.

Athletes' perceptions of the support provided before an injury occurs is an important indicator of the influential support provided during rehabilitation (Robbins & Rosenfeld, 2001). Listening, task appreciation, task challenge, and emotional challenge support from the coach are perceived to be more influential to an athlete's well-being when compared with others. In addition, the more athletes perceive that social support is available from their coach; the more likely they are to be satisfied with it (Corbillon, Crossman, & Jamieson, 2008). An

investigation into psychosocial factors related to rehabilitation adherence and non-adherence determined that those injured athletes who perceived support from coaches, medical staff, and teammates were more likely to adhere to their programs than athletes who perceived less support (Fisher, Domm, & Wuest, 1988).

Significant gender differences have been found in athletes' perceptions of the social support provided following an injury. Rock and Jones (2002) found that listening and emotional support were perceived as more important for their female subjects than male subjects. A female athlete commented that it was "beneficial just to be able to talk to someone at length about your feelings" (p. 296). The gender differences among U.S. Ski Team skiers, noted by Gould, Udry, Bridges, and Beck (1997), indicated that 40% of female athletes pointed out coaches as a facilitating factor in their rehabilitation versus only 9% of male athletes. Overall, more females appeared to perceive social support from their coaches as important, particularly emotional support, whereas males preferred informational support. Regardless of gender, it has been mentioned throughout several studies that athletes are looking for support from their coaches. However, research also indicates that it appears that athlete's perceive this support to be lacking.

Conclusion

The rapid increase in technical and physical demands for competitive skaters has significantly increased the freeskate practice time. This has resulted in an increased injury rate in figure skating. Although the injuries can range from a minor setback to a season or career ending incident, they still significantly affect the coach, athlete and social support network. Wiese-Bjornstal, Smith, Shaffer, and Morrey (1998) argued that injuries have the potential to shatter athletes' dreams of high athletic achievement; however, many athletes are unwilling to give up their dream following an injury. Coaches, teammates and fans have been found to negatively judge athletes unwilling to play while injured, which leads to negative feelings and thoughts from athletes regarding their injury (Charlesworth & Young, 2007; Nixon, 1994b; Wiese-Bjornstal *et al*., 1998). Athletes commonly express any number of negative thoughts and feelings regarding their injury, including frustration, distress, anger, depression and guilt.

A coach's perception of an athlete's injury can significantly influence the athlete's reaction and experiences following an injury. Nixon (1994b) found that while coaches may glorify risk, pain and injury, they may also express sympathy for their injured athletes. These contradictory views from coaches tend to confuse athletes. In addition to providing support, coaches also tend to be responsible for making decisions about an athlete's ability to participate while injured. However, it may be difficult for coaches to be objective in decision making depending on

the situation, their team's need and an athlete's contribution. Maintenance of a strong communication system between a coach and athlete is important following an injury. Roessler (2006) argued that an injury disrupts the key element of contact between a coach and an athlete because neither party is able to perform their duties and responsibilities within the training environment. However, it is expected that coaches will provide their athletes with the necessary support.

The structure of the athletic network will also affect the social support system. The individual nature of figure skating is different from a team sport because it allows for a greater one-on-one relationship between the coach and athlete. Therefore, coaches should be better able to judge athletes' needs following injuries (Jowett *et al.*, 2005). In addition, the training session length and duration of season will influence the coach-athlete support system. Finally, it is important that the type, timing and amount of support match the needs of the recipient to maximize the benefits (Richman *et al.*, 1993; Udry, 2001). Research has been limited in determining the most common or effective type, timing and amount of support for athletes following an injury. However, coaches' abilities to accurately judge athletes' needs will benefit their relationship and the rehabilitation process for the athlete. In addition, the support requirements change throughout the injury phases and will require coaches to adapt.

Interviews with ballet dancers and alpine skiers, researchers concluded that injured athletes tended to be dissatisfied with the support provided by their

coaches (Gould *et al*., 1997; Macchi & Crossman, 1996). However, athletes' perceptions of the support provided by their coach is important because, as Corbillion, Crossman, and Jamieson (2008) noted, the more athletes perceive that positive support from their coach is available, the more likely they will be satisfied with the support. The greater the satisfaction with the support, the more effective the support will be in easing their negative feelings regarding the injury, as well as benefiting them in rehabilitation. The previously reviewed literature has shown that the majority of factors related to social support by coaches following an injury are psychological in nature. However, it is still important to determine first what factors will lead figure skaters, specifically, to feel positively about the social support provided by their coaches and second, the impact these positive feelings will have on that skater's injury experience.

My Study

Following an injury, athletes look to their social network for support. Although research has shown that athletes believe coaches are an important potential source of social support, it has also been noted that coaches seem reluctant to provide athletes with the necessary support following an injury. To date, the limited numbers of qualitative studies concerning athletes' perceptions of the social support provided by their coaches following an injury have agreed in their conclusions that social support plays an important role in athletes'

experiences with their injuries and the rehabilitation process; however, there is a lack of research in this area for figure skaters.

The research question shaping this thesis is "How do figure skaters perceive the social support that they received from their coaches following an injury?" Ultimately, I would like to identify what coaches understand and know about the social support requirements of figure skaters following an injury. In particular, I would like to draw upon the idea that defines social support as an exchange of resources between recipients and providers (Udry, 1996). People tend to have pre-determined notions about the appropriate timing, method and amount of support that they should be providing. Although, the exact timing, type and amount of support has not been determined, and it may differ from individual to individual, it is still important to understand the athletes' ideas about the support. Because support is an exchange between people, incongruencies may exist between the needs of recipients and giving of the providers. Incongruencies may cause a negative response leading to increased misery or support provided when a recipient feels it unnecessary (Udry, 1996). When coaches and athletes, have different ideas about how and when support should be provided, recipients are likely to feel dissatisfied (Udry, 1996). Urdy *et al.*, (1997) noted that social support provided or available may not always be positive, it may also be absent or negative. Absent or negative social support experiences may result in a sense of isolation and frustration (Thoits, 1995).

In addition to types and quantity of support, the social support needs of athletes will likely change depending on the injury phase they are in (Bianco, 2001). Shelley (1999) found that athletes' perceptions both about the injury and the importance of significant others change throughout each phase of injury. There are different characteristics in each of the three distinct phases that lead to changes in the support needs and wants of athletes. A coach's ability to understand and adapt to the needs of his/her athlete will be beneficial to the satisfaction of both parties.

Methodology

Qualitative Method

In order to understand athletes' perceptions about their injury experience it is advantageous to use a qualitative methodology. Thoits (1995) argued that qualitative methods are useful when studying the complexities of social support as an exchange of resources between recipients and providers. Similarly, Brown and Harris (1989) argued that detailed qualitative data is crucial for understanding the meaning of stressful experiences, such as an athletic injury. Qualitative studies have also been effective in determining that there should be a match between support needed/wanted and given support between couples (Gottlieb & Wagner, 1991). Thoits (1995) has been able to reveal the conditions when support has been considered "non-beneficial or at worst harmful" (p. 67). Qualitative methods are also effective for investigating athletes' experiences and perceptions.

The emphasis of this study is the understanding of athletes' perceptions of the support from their coach following a sport injury. This is important because athletes' perceptions will help determine their needs following an injury and provide coaches with guidelines to working with their athletes to create a better experience, benefit athletes' rehabilitation, and expedite the athletes' return to participation. Bianco (2001) argues that qualitative investigations are particularly well-suited for identifying athletes' perceptions. Similarly, Granito (2001) argued that qualitative methodologies might be more successful in explaining athletes'

experiences with injuries than quantitative methodologies because each athlete has a different response with a number of factors contributing to the overall experience. The use of qualitative methodology is useful because it allows participants to identify a broad range of perceptions and issues related to social support. As shown previously in the reviewed literature, an effective and commonly used method within this subject area is the use of interviews to answer the research questions.

Interviews

Interviews were chosen as the best method for acquiring data because it allows for the understanding of several individuals' experiences of a phenomenon (Creswell, 2007), in this case, an athletic injury. Prior to conducting interviews, it was important to understand more about the interview process and interview questions. The purpose of interviews is to allow outsiders to enter into the other individual's meaningful, knowable and precise perspective (Patton, 2002). Interviews have been noted as one of the most powerful ways used to understand our fellow humans (Fontana & Frey, 2000). Patton (2002) suggests that there are three basic approaches to collecting qualitative data through interviews: "the informal conversational interview"; "the general interview guide approach"; and "the standardized open-ended interview". The interview approaches differ in their preparation, approach and instrumentation.

Informal conversational interview.

The informal conversational interview, or unstructured interview, is based on the spontaneous generation of questions within the natural flow of an interaction (Patton, 2002). This interview style allows maximum flexibility to pursue information in any direction depending on topics and ideas that emerge from the particular conversation or setting. It also accesses a person's perspective without any preconceived ideas stemmed from leading questions (Amis, 2005). There are no predetermined questions for such fieldwork and the data gathered will be different for each individual interviewed.

Patton (2002) noted that informal conversation interviews are particularly effective when a researcher can stay in an environment for some period because it provides the opportunity to both interview the same person on a different occasion with additional questions and/or to revisit and deepen a previous response. One important benefit to this interview approach is that the questions are built on and elaborated on with each new interview. Patton (2002) considered the flexibility, responsiveness and personalization of the informal conversational interview to be its strengths.

However, an unstructured setting can present a few difficulties. Gaining access to the setting of the potential interviewees may pose difficulties such as at a nude beach or on the streets. Once access is gained, how the interviewer presents herself may also cause difficulties; an interviewer must determine in

advance the impression that they would like to leave with the interviewee(s), whether it is as a researcher or member of the group (Patton, 2002). As well, depending on the setting or interview topic, an interviewer may have difficulty gaining and maintaining trust and rapport with an individual or group. Further weaknesses of the informal conversational interview are a greater time requirement, the ease of interaction between the interviewer and interviewee, and the difficulty pulling data together and analyzing it.

General interview guide.

The general interview guide, also known as the semi-structured interview, is a more standardized interview. An interview guide, listing the questions or issues to be explored, is prepared to ensure that each person covers the same topics (Patton, 2002). Similar to the informal conversational interview, an interviewer is free to build on a conversation within certain themes and to spontaneously word questions in no particular order (Patton, 2002); there is also the flexibility to develop questions as new themes emerge throughout the interview (Amis, 2005).

A strength of the general interview guide approach is the ability to use limited time available (Patton, 2002). The interview guide helps to focus the interviewee on particular issues, but still allows an opportunity to pursue some information in greater depth (Amis, 2005; Patton, 2002). Another benefit to the

spontaneous development of questions is the ability to adapt the language of the questions to be most suitable for the participant (Amis, 2005).

Standardized open-ended interview.

The standardized open-ended interview is a set of carefully worded questions arranged in a particular sequence for all respondents (Patton, 2002). A great deal of detail is put into creating the interview questions and probes is an attempt to ensure that the respondents are asked the same questions, in the same way, and in the same order. However, the nature of the response to each question is left up to the interviewee (Amis, 2005). Through the structure of this approach, the interviewer controls the pace of the interview by reading it as if it were a theatrical script to be followed in a standardized and straightforward manner (Fontana & Frey, 2000), while providing the interviewee the flexibility to provide the most appropriate response (Amis, 2005). Patton (2002) argued that the standardized approach is the best way to guard against variations and is beneficial for novice, students and non-social scientists or professional evaluators.

Patton (2002) summarized four major reasons for using standardized open-ended interviews. They include an exact instrument that is available for inspection by the interviewer, a minimization of variation between interviews, a highly focused for efficient time use, and an analysis facilitated from well-organized responses. Unfortunately, it has been noted that a structured interview provides only limited opportunity to discuss topics outside the standardized

questions and may reduce the extent of individual differences and circumstances understood (Patton, 2002). The interviewer must establish a "balanced rapport" with the interviewee, meaning he/she "must be casual and friendly on one hand, and directive and impersonal on the other" (Fontana & Frey, 2000, p. 650).

Based on the above information, I have chosen to use the standardized open-ended interview approach. In order to effectively conduct the standardized open-ended interview, a number of considerations much be taken into account when creating the questions.

Questions

The standardized open-ended interview approach is a series of carefully worded questions. In order to focus questions and help interviewees to respond appropriately, it is important to distinguish the types of questions. Patton (2002) noted six types of questions: experience and behaviour questions, opinion and values questions, feeling questions, knowledge questions, sensory questions and background/demographic questions. Experience and behaviour questions ask a person about what they do, or have done, to elicit "behaviours, experiences, actions, and activities" (Patton, 2002, p. 348). Opinion and values questions ask a person about their opinions, judgements, and values in order to understand their cognitive and interpretive processes. Feeling questions ask a person about their emotional response to an experience or thought (Patton, 2002). Knowledge questions ask a person about what information they know, but not about their

feelings or opinions towards that information. Sensory questions ask a person about "what is seen, heard, touched, tasted, and smelled" (Patton, 2002, p. 350). Background or demographic questions ask a person to identify personal information or characteristics. It is possible to ask any of these types of questions in an interview.

Depending on the type of interview, the sequencing and importance of question wording may differ. For standardized open-ended interviews, the sequencing is important to establish a structured format. Patton (2002) argued that his preferred sequence begins with noncontroversial behaviours, activities, and experiences, where interviewees are encouraged to respond descriptively; however, Amis (2005) prefers to begin an interview with contextual questions that locate the individual within a group or event. Next, opinions, feelings and sensory are solicited to build on their behaviours or experiences. This is also a good opportunity to ask knowledge questions, as some rapport and trust has been established. Background questions should be strategically and unobtrusively asked throughout the interview. Appropriate sequencing of interview questions can develop rapport and increase the helpfulness of an interviewee's response. The wording of the questions is also important to elicit a helpful response.

Since a question is a stimulus aimed at eliciting a response, it is important to be "good". Payne (1951), as cited in Patton (2002, p. 353), argued that a "good" interview question should be "open-ended, neutral, singular and clear".

An open-ended question should not presuppose a dimension of opinion or feeling for the interviewee, but allow them to select a response from their full repertoire. Patton (2002) noted that a truly open-ended question allows, "Those being interviewed to take whatever direction and use whatever words they want" (p. 354).

Another important factor in question wording is singularity. It is necessary to ensure that each question contains no more than one idea. Multiple questions and ideas create tension and confusion because the interviewee may not understand what is being asked of them. Clear questions are important for establishing rapport with an interviewee (Patton, 2002). Several factors can ensure clarity, including the use of singular ideas, knowing common technical terms within that area or group, understanding the language participants use among themselves and avoiding labels. Becker and Geer (1970) argued that it is essential to learn the differences in expression of language used by the particular group being interviewed. As an individual involved in the sport of figure skater, I have an understanding of the technical language used; however, since I have not been an athlete for several years, I may have to do some research before interpreting some skaters' statements.

My Study

In order to answer my research goal of understanding figure skaters' perceptions of the social support provided by their coach following an athletic injury, I have opted to obtain the view of figure skaters through standardized open-ended interviews. The interview will be a one-to-one setting, in which I will ask an individual a range of questions related to this issue. It will be taken into consideration the skaters' retrospective views, as they will be looking at an experience in their recent past.

As a novice research I chose this method because it will help guard against any variations that might occur, be highly focused and allow for efficient use of time, and the analysis should be more efficient because responses will be well organized for comparison. In order to maximize efficiency of the standardized open-ended interview and elicit the best responses from interviewees, questions related to experience, opinion, feeling and background/demographic will be asked.

Participants.

Eight amateur, competitive figure skaters were interviewed for the study. All participants were females and with an average age of twenty years. The skaters included competitive singles skaters whose levels ranged from Novice to Junior. All of the skaters did compete regularly and none competed at a national/elite level. Their competitive years of experience ranged from three to

twelve years. On average, the skaters performed on-ice training for fifteen hours per week and had four hours per week of off-ice training. Each participant sustained a different injury. These included a complete ACL tear, lower back stress fracture, an ankle stress fracture, a sprained ankle, a Lis Frank fracture, a hamstring strain, a concussion and a wrist fracture. In terms of injuries, four of the skaters suffered acute injuries during practice, three suffered chronic injuries during practices, and one was injured during an off-ice skating activity.

Participant recruitment posed much difficulty as several skating clubs throughout Alberta and Saskatchewan did not respond to the initial or subsequent contact attempts. Information clips were also posted in provincial skate newsletters for British Columbia, Alberta, Saskatchewan and Manitoba without response. Participants were recruited with the assistance of coaches from the Battlefords Skating Club and friends who were involved in skating throughout Alberta, Saskatchewan and Manitoba. They provided contact details of athletes who had sustained at least moderate sport injuries while participating in a figure skating activity. Several individuals that were contacted indicated that they were unable or unwilling to make the one hour time commitment for various reasons.

Injuries were classified by level of severity. Petrie (1992) categorized injuries as either minor (interruption of one to seven days of practice/competition due to injury), moderate (interruption of eight to twenty-one days due to injury), or severe (interruption more than twenty-one days due to injury). The skaters in

this study suffered at least moderate injuries, interrupting their skating for a minimum of eight days. The range of injuries may be considered a potential limitation to the conclusions drawn because the type or severity of the injury might result in different answers.

Characteristics of participating figure skaters.

Each skater brought her own uniqueness to the interview. The uniqueness varied from time in the sport, type of injury, time with coach and/or level of skating competition. To maintain the anonymity of the participants, they have been identified as Skater 1-8 (S1-8) and here is a brief overview of their stories.

S1 was a sixteen year old, Novice competitive skater who had been training for eight years. She had been with her present coach for four years. The injury S1 suffered was a concussion, which left her unable to train for two weeks. The classification of S1's injury was moderate.

S2 was a Junior competitive skater with ten years of training experience. She was twenty years old. She had recently made a coach transition and had been with her current coach for 3 months. S2 suffered an ACL tear and was unable to return to competitive skating. The classification of injury was severe. After an ACL reconstruction and several months of rehabilitation she was able to return to the ice recreationally.

S3 has been training for 13 years and was competing in Juniors. She was nineteen years old and had been with her coach for close to 10 years. S3 suffered

a ligament tear in her ankle and did not take any time off skating, although her training was decreased to reflect her abilities. She still wears a brace for support.

S4 was a Novice competitive skater with nine years of training experience. She had been with her coach for seven years. S4 was sixteen years old. The injury S4 suffered was a Lis Franc sprain, which left her unable to train to 2 months. The classification of her injury was severe.

S5 was a Junior competitive skater with thirteen years of training experience. She was twenty and had been with her coach for two years. The injury S5 suffered was a fibular stress fracture. She did not take any time off, until the injury got progressively worse and she was unable to continue skating permanently. The classification of injury was severe. She retired from the sport.

S6 had been training for twenty years and was a Junior competitive skater. S6 was thirty-eight years old. She had been with her coach for six years. S6 suffered a hamstring strain and was unable to train to her full potential for approximately 6 months. The classification of injury was severe.

S7 was a Novice competitive skater with six years of training experience. She was seventeen and had been with her coach for all six of those years. The injury S7 suffered was a fractured 2nd metacarpal and she was required to take four weeks off. The classification of injury was severe.

S8 was a Novice competitive skater with seven years training experience. She had been with her coach for five years. She was eighteen years old. S8

suffered from a stress fracture in her lower back and was unable to skate to her full potential for approximately two years. The classification of the injury was severe.

Procedure.

The research proposal was reviewed and approved by the University of Alberta Health Research Ethics Board prior to participant recruitment and interviews.

Pilot study.

A pilot study was conducted with two female skaters to reveal deficiencies and improve interview questions, and to test the duration of the interview session. Changes to the pilot interview guide included the addition of several questions, and changes in the word use, grammar and tense of questions. An example of an added question would be "When in the competitive season did your injury occur?"

Interviews.

Each potential interviewee was contacted and their participation was requested. Once interviewees agreed to their participation, times and locations for the interviews were established. These were chosen to ensure that the skaters were willing and able to devote their attention to my questions with little or no distraction (Amis, 2005). The researcher conducted all interviews. At the start of each interview, the figure skaters were given an information sheet (see Appendix

A) outlining the study purposes, details of their involvement and their rights as a study participant. Each skater agreed to be interviewed and signed a consent form (see Appendix A), or their parent/guardian approved their participation.

A hard copy of the questions was on hand and notes were taken throughout each interview for key phrases, major points, key terms and to note any nonverbal features of communication, such as pace of speech, length of silence and body movements or postures (Fontana & Frey, 2000). The questions were used to draw out information related to the athlete's injury experience and guard against shaping of responses. All sessions were digitally recorded using an IPod Nano and lasted between thirty-five and sixty-five minutes. Field notes taken during the interview were used to modify the interview guide after each interview, and before the next one. On a few occasions, interviewees requested a change in the wording of a questions, and this was changed in the interview guide prior to the next interview to ensure consistency through interviews.

Interview guide.

An interview guide was used to standardize all interviews and minimize bias. There are several important principles that should be followed when developing an interview guide (Amis, 2005). The interviewer needs to have up-to-date knowledge of the relevant literature in the field under study (social support), which is discussed in the previous chapter, The Literature Review. This ensures that theoretical themes are used to form each question. In addition, the language

that will be used throughout the interview is based on technical language and slang terms that will be used by the interviewees (Amis, 2005). Each question developed for the interview is neutral and singular to allow the interviewee to answer on her own terms without either confusion or suggestions on how to respond (Amis, 2005). Following the concepts of a standardized, open-ended interview, each question, clarification and probe was written out in advance exactly the way it was to be asked during the interview.

The interview guide was developed to elicit information regarding the participants': (a) background information, (b) experiences being injured and interactions with their coaches, (c) the social support provided by their coaches and the feelings associated with that support. In the social support section of the interview guide, skaters were provided with a list of the eight types of support and their description discussed in the Literature Review, by Hardy and Crace (1993). This was done to ensure skaters were able to provide an exact term for the support they received and would desire, including support they may not have been aware of. The interview guide is provided in Appendix B.

Data analysis.

Content analysis was used for the qualitative data obtained through the interviews, as it allows for large amounts of data to be organized by coding the information into categories that reflect similar themes. The researcher transcribed the digital recordings verbatim. The transcript, which included verbal and non-

verbal cues (Amis, 2005), yielded 88-pages of double spaced text. Once the transcript of each interview was reviewed by myself, each participant was requested to check the content of her transcript to ensure it was an accurate reflection of what was said (Amis, 2005). Three participants checked the content of the transcript in person, four did so through an emailed copy of the interview, and one was unable to complete the review. Most of the information was deemed accurate and appropriate by the participants, with the exception of one athlete who changed her injury timeline.

The transcripts and raw field data were analyzed following the procedure presented by Creswell (2007) and Patton (2002). The first step is the development of a manageable classification or coding scheme. After the coding scheme was developed, the researcher read through the transcripts and made comments or notes in the margins or highlighted significant phrases or sentences that pertained to an understanding of how skaters experienced their injuries and support from their coaches (Creswell, 2007). A shorthand version of the coding scheme was written directly on the data passages (Patton, 2002). Several readings were required until the interviews were completely indexed and coded. Next, the researcher developed clusters of similar meaning units or themes from the significant statements into categories. This was done by looking for recurring regularities in the data (Creswell, 2007; Patton, 2002). It was also important to build on the information gained in the Literature Review, making connections

among different information and proposing new information to fit (Patton, 2002). This step was considered complete when new information leads to repetition, followed by the removal of these statements.

Due to the subjective nature of qualitative research, findings are judged by their substantive significance. Patton (2002) recommended a variety of questions be addressed to determine the results' substantive significance: (1) How solid, coherent, and consistent is the evidence in support of these findings?, (2) To what extent and in what ways do the findings increase the understanding of the phenomenon studied?, (3) To what extent are the findings consistent with other knowledge?, and (4) To what extent are the findings useful for some intended purpose? The significant statements and supporting themes were then used to write a specific description of what the skaters experienced, the context that influenced how the participants experienced their injuries, and the skaters' perceptions of the social support provided by their coach. Finally, a general description was formed through comparison of specific descriptions without the particulars. The final analysis and discussion were created to tell others what had been learned and how it was learned (Patton, 2002). The report, Results and Discussion, included descriptions and direct quotations, as well as sufficient analysis and interpretation results to provide the reader with an interesting and readable account.

Results and Discussion

The purpose of this study was to determine how figure skaters perceived the social support they received from their coaches following an injury. Each skater was interviewed in four categories, including Injury Experience, Coach-Athlete Relationship, Types of Support, and Injury Phases. In the first interview section, Injury Experience, skaters provided background information and context for their injury experience.

Injury Experience

There were two categories of injury effects for skaters: (1) skaters who were completely incapacitated and required to take time off from skating, and (2) skaters who were skating with a limited capacity and/or with extreme pain. There were three skaters with limited capacity or in extreme pain, and five unable to skate for a period of time.

S5 explained:

> I was supposed to [take time off] but I didn't when it occurred… I would still go and do what I was doing before, but I was being carried off the ice by the end because I couldn't walk.

The length of time that athletes were disabled and off the ice or skated with limited capacity also varied significantly. Of these respondents, four answered 2 weeks to 3 months, one said 3 to 6 months, one said almost 2 years

and two answered permanently. S8 explained, “I had to drop out [of Regionals]. I had to stop competing for almost two years.” S3 said, “[I took off] the rest of the day (laugh). I had a lesson at 7:50 the next morning.”

S1 explained:

> It was two weeks; it really should have been probably a month to three weeks, but considering the competition coming up was a run-off, we tried to speed it up as quickly as we could.

There were four different periods of the season when the skaters occurred. Of these respondents, one had her injury occur at the start of training, two were injured after the competitive season, four said they were injured at the beginning of the competitive season and the remaining one had their injury occur in the middle of the competitive season. S5 explained, “I guess it started at the beginning of the season when I started trying to complete for provincials…” S7 mentioned, “This injury occurred… in the winter, it was after the most important competition but before some others.”

S3 explained:

> It would be the beginning of July, that’s start of summer school. So that’s when you would start your training for November, for the rest of the year. So it would have been in the beginning of July sometime, before I even got training.

Major competition and playoffs are seen as an important time because winning becomes paramount, pre-season is seen as an opportunity to regain physical strength and conditioning prior to mid-season and mid-season may be seen as least important because games/events are seen as relatively unimportant (Gayman & Crossman, 2003). As noted, skaters experienced injuries during several periods of their season. Similarly, skaters injured in the pre-season or prior to/during major competitions expressed greater concern for their timing and injury than those injured in the mid-season. In addition to experiencing injuries at different times throughout the season, skaters also experience different emotions following their injury.

Gayman and Crossman (2003) found that the terms athletes used to describe their feelings about their injury included "'frustrating', 'upset', 'emotionally hard' and 'terrible'" (p. 263). Similarly, quotes from skaters, in this study, regarding their reactions to their injuries included "upset", "I didn't want it to be there", "disbelief… disappointment" and "surprised". S3 explained, "I was terrified… So it was scary, is probably the best feeling to describe it. Very, very scary." Many of the skaters mentioned they were unable to believe the injury had actually occurred and that they would be forced to decrease training or stay off the ice for a given period. S2 mentioned, "It was hard [be]cause skating was basically my life. That is where I spent half my day, at the rink, and my biggest goals were in skating…" Shelley and Henschen (1995) found similar results, as athlete

disbelief stems from them not believing that an injury could happen to them because they tend to be consumed by "invincibility" in their sport. Similarly, Granito (2001) also found that athletic identity was an important factor in determining an athlete's reaction. Fear from these skaters was based on their beliefs that their injury was very serious or that they were not going to be able to return to skating.

The skaters were also asked how they felt emotionally following the injury. They spoke of shared both positive and/or negative emotional feelings. Five responded with negative emotional feelings; whereas four responded with positive emotional feelings. S1 explained, "It was kind of stressful and I just tried not to think about not being at the rink". S3, who was injured in the pre-season, stated, "Scary and nervous that I wasn't training. Stressed out, got stressed out [be]cause I wasn't training as hard as I could be." Gayman and Crossman (2003) found a similar result, noting that athletes injured in the pre-season were likely to be upset because they were missing the initial stages of training. S2 expressed that she "got to spend more time with my friends and expand on other things, just kinda had more time for myself". S7 explained, "Fine, I got to play with my friends and stuff, so it wasn't really that bad." Of these skaters, two expressed both positive and negative emotional feeling. Initial negative emotional responses, including fatigue, anger and general mood disturbances, during the first two weeks of injury have been linked to the removal from activity, and not only the

injury itself (Hutchison, Mainwaring, Comper, Richards, & Bisschop, 2009). This is illustrated by the skaters below.

S4 explained:

> We went to my family's resort in Ontario for a little bit, so I just kept my mind away from skating. But when I was living here a few weeks after the injury first happened, I was pretty upset with it.

S6 explained:

> I was tired, you know like I said that kind of caused the problem. I was really tired. Um, and because I was so tired and because I couldn't skate I think I ended up feeling a bit better because I was able to sleep. So emotionally, I think better. I mean obviously I was disappointed that I hurt myself… I was more disappointed because I knew I couldn't keep up the level of skating, like I enjoyed that level, so I knew that would be compromised for a while.

Common negative feelings expressed included disappointment about the injury and not being able to keep up the level of skating, nervous and stressed from an inability to train and anger. As with the results from Granito (2001), many skaters mentioned one of the most difficult aspects of dealing with an injury

was their loss of physical conditioning. Granito (2001) also noted that frustration, anger and fear were commonly associated with injuries.

Common positive feelings skaters expressed were an emotional improvement with the break and an opportunity to have a nice break and spend time with friends. It is noteworthy that none of the skaters mentioned depression as an emotional response to their injury experience. This result is similar to that of Brewer, Linder, and Phelps (1995), who indicated only a small percentage [4.8%] of acutely injured athletes indicated their response to injury fell within the clinical depression ranges.

Many skaters also had upcoming skating tests and competitions that contributed to their emotional feelings. Five skaters had upcoming competitions or tests and three were not registered or expecting to compete in the near future. Skaters that were registered to compete expressed many negative feelings regarding an injury occurring prior to these upcoming events. S1 explained, "So upset [knowing that competition was coming up], I knew I just had to do it, no choice, its happening. It was mostly just stressful." S3 explained, "I would think about it [upcoming Sectionals competition] all the time… Sectionals was probably the most important competition of the year". Of the five skaters expecting to compete, three skaters were required to drop-out of their competitions or tests. S5 explained, "I was going to defend my title at one of the ones in [province]… [not being able to compete made me feel] angry and I guess

frustrated too because there should have been a way to heal it and then I could have competed."

S2 explained:

> Well my Junior test, that was probably more disappointing because I was so close to getting it. My double axel was, I was landing sometimes and I had tried my test twice before and missed it by half a point or something like that, so I knew that I would get it eventually but it was just a matter of time almost, so to not have a chance to do that again, that was hard. It kind of felt like there was unfinished business.

S8 explained:

> I was completely devastated [to drop-out of Regionals]. I was totally ready for it and I did my program because on Wednesdays we would have these simulations. So I did my program and I did a perfect program, but [my coach] basically told me I was skating slower than a Granny and even though I had landed the jumps, it wasn't clean jumps, so it wasn't really with pushing myself through it, so I took his advice and didn't compete. I kind of wished I did compete, but the pain at the time wasn't bearable, but I just wonder what things would have been like had I competed.

Gayman and Crossman (2003) interviewed basketball players who indicated that if they were injured and unable to play in games and the playoffs in particular, they would feel 'disappointed' and 'devastated'. This result was similar to the feelings noted by the skaters. The skaters indicated having feelings of stress and frustration about an upcoming competition because of the importance of the competition and the fact they were not training to their maximum capacity. The skaters' feelings of anger, disappointment and devastation with dropping out of competition came from the feeling of "unfinished business"; that they were not going to be able to compete again. Gayman and Crossman (2003) indicated that veteran athletes in their final year of eligibility should participate because it is their final opportunity to win. Unfortunately for S2, S5 and S8, this was not a possibility due to the severity of their injuries at the time of competition. The basketball players discussed much struggle with the possibility of letting their team down, if they were injured for a game or unable to compete because of injury; however, this was not mentioned by the skaters, who participate in an individual sport.

Coach-Athlete Relationship

Prior to injury, each skater expressed her relationship with her coach differently; however, a few common themes were predominant. S3 explained, "…we had a good relationship, she was tough on me, but at the end of the day it was good because I knew she was a good coach but had our, we bickered every so

often." S4 explained, "It was mostly just with skating, like he didn't really look after anything besides when I was on the ice and technique…" S5 mentioned, "It was great. She pushed me and I was mad at her for pushing me. That constructive criticism I didn't like, but I guess it worked because I won provincials that year." S6 explained, "My relationship would be, hmmm, it was comfortable…" S7 explained, "It was good… it was positive. Sometimes lessons weren't always focused on what I wanted but that's normal."

S2 explained:

> I actually just switched coaches, so I had only been with this coach for like three months… We still respected each other and I admired him and all that kind of stuff, so we had a pretty good relationship despite the short amount of time."

Two skaters mentioned that there were the odd disagreements between themselves and their coaches, which both skaters felt were normal. S7 explained, "We had the odd disagreement or argument, but I think that is normal when you see somebody so often."

Disagreeing and arguments between coaches and athletes has been considered a relationship maintenance strategy called conflict management, and therefore an important aspect of the coach-athlete relationship (Rhind & Jowett, 2010). One of the common relationship strategies that Rhind and Jowett (2010) found, that was in contrast to the skaters, involved interactions and socialization

that took place away from the track, field or court. None of the skaters mentioned a relationship with their coach outside of the rink, and some even mentioned their desire to not having a relationship outside the arena. Specifically, half of these skaters mentioned that their coaches were only involved in their lives at the rink. This is also in contrast to research by Bloom *et al*. (1998), who found that coaches of individual sports tended to be involved in more aspects of their athletes' lives.

Before injury, the skaters had several expectations that they believed were important for their coach-athlete relationship. S6 expected, "… a certain level of friendship… communication, really open communication. Meaning you agree on what my goals would be for the year or season and I would expect them to be supportive and to offer guidance and suggestions. Be really active in what I was deciding to do for that year." Lormier and Jowett (2009) found that a coach's and athlete's ability to accurately understand each other was a key factor in a positive relationship. With the exception of one skater, all skaters mentioned that it was important for their coaches to be their friends and that they expected their coaches to be very active or involved in all aspects of their skating performance and improvement. Other important expectations of their relationship would be open communication, trust, professionalism, supportive and mutual respect. Similarly, five female Olympic athletes, interviewed by Werthner (2009), spoke about their expectations in relationships, including the importance of communication and trust, mutual respect, open-mindedness from their coaches, their coaches'

willingness to listening and being cared for as individuals, not just as athletes. As Émilie Heymans, Canadian Olympic diver, explained, "What was important for me was that she [Coach Yi Hua Li] listened to me… She really listened, tried to understand what I was feeling, what I needed" (Werthner, 2009, p. 4). If a provider's support was perceived as significant before an injury, it is also likely to be perceived as important following an injury (Robbins & Rosenfeld, 2002).

Relationship following the injury.

Following her injury, the way in which skaters expressed their relationship was influenced by whether they maintained some level of skating or not. Those who continued to skate all believed that their relationship with their coach did not change. S5 mentioned, 'She was as frustrated as I…' For the injured skaters who were unable to skate, they all believed that their relationships were terminated. S4 explained, "I didn't really have any contact with him for two and a half months, and when I got back everything was kind of just back to normal." S7 mentioned, "It kind of terminates, I guess. Your coach might call and check up on you, but normally it's your parents filling them in… You just don't have that regular attraction anymore." Similarly, Roessler (2006) found that an injury to an athlete disrupted the key element of contact and therefore, both parties lost their abilities to perform duties and responsibilities. Additionally, Shelley and Henschen (1995) noted that many coaches believe the injury experience is the athlete's responsibility and are unlikely to attend to any physical or mental needs. Skaters

felt they didn't communicate with their coach because the skater was not at the rink or that the coach expected they would just return when they could. S6 explained, "I think they could have checked in on me to see where I was at with my injury, but actually I don't remember them ever doing that. Maybe they were just expecting me to come back when I was ready; well I'm sure that's what they were expecting." In contrast, Podlog and Eklund (2007) found that maintaining communication with their athletes was a priority of the professional coaches they interviewed because it kept the athletes involved and prevented feelings of alienation. The lack of communication is unfortunate because it has been noted that a relationship with a coach is an important factor in an athlete's injury recovery (Podlog & Eklund, 2007). In addition, Lormier (2009) found that athletes who perceived their coaches as providing sufficient guidance experience, more trust and respect for their coach. For many skaters their relationship following an injury was unsatisfactory and, therefore, they believe alterations to their relationship would improve the injury experience.

Of the skaters whose relationships terminated, one skater would have not made any changes to her relationship following the injury; whereas four did mention changes they would have liked to see. These changes included a change in training to train to their ability, the maintenance of pre-injury relationship with open communication, and planning to keep other aspects of their training on track. S5 explained, "Well I don't think I would have quit if it hadn't got as bad, so

maybe to have slowed down a bit, cut me some slack and train to my ability at the time and not where I was before." S2 said, "I think he thought this is it for her and she won't be back, so I don't need to make sure she is doing her rehab and that kind of stuff. I was just on my own basically…"

Following their injuries, skaters believed that coaches should play an important role. Aspects of this role commonly mentioned by skaters would include providing support, communicating and creating a plan for recovery. Other important aspects were flexibility, encouragement and honesty. Only one skater believed that coaches do not necessarily have a role during off-ice recovery, with the exception of checking in once and a while. S5 believed the role of her coach, following an injury is "to be supportive and help get them through the injury without further injuring them or making the injury worse." S4 believed her coach should "[figure out] what's best for the injury and me." S8 mentioned, "To be honest… The coach needs to be equipped enough in the knowledge of injuries to make an assessment that there is actually something wrong and that you need to see someone else, a specialist." S7 said, "I think it's a minimal role unless they are actually assisting in the rehabilitation… Providing questions to ask the health care providers and make sure they understand the extent of the injury."

S3 explained:

> … support and encouragement, but also without being harsh, still kind of pushing because it's easy to get discouraged, so

> just making a plan even that we are only going to do technique today… This is the plan for the rest of the week and we will see what we are doing next week, we'll see how your ankle is and then maybe do single axels instead or work on something else. So, I wouldn't have thought of that.

Similar to S3's experience with her coach, Podlog and Dionigi (2010) found that the coaches they interviewed believed that athletes become fixated on results, and in order to assist with a return from injury, it is important to work with athletes to help them focus on the step-by-step process.

S6 said:

> … to make sure that the athlete is, whatever their needs are met, you know, so they so see the appropriate professionals. Make sure they are communicating with the athlete and maybe the athlete will have different needs at that time, maybe they will have more emotional needs that need to be met.

As mentioned by this skater, Werthner (2009) found three important factors in an effective coach-athlete relationship, including listening to the athletes and understanding their needs, open-mindedness and willingness to seek help from others, and clear communication back to their athletes. Many of these

factors were also mentioned by the other skaters as important attributes their coaches should possess.

S2 explained:

> To support you and help, help you get through it like providing ideas… they should know what's going on and they should help you through that and just talk to you, give you that emotional support, ask how you are doing in other areas of your life now that skating is missing.

Similarly, Yang, Peek-Asa, Lowe, Heiden, and Foster (2010) found that coach support is crucial following an injury. They found that an increased number of athletes turn to coaches after they become injured, and that these injured athletes express greater satisfaction with their support they receive from coaches. Bianco (2001) also noted that coaches should be an important source of support throughout an injury and their empathy, concern and willingness to help would be perceived as satisfactory.

Coaches' reactions, understanding and views.

Coaches' reactions to their skaters' injuries according to the skaters ranged from calm and active to frustrated and disappointed. Examples of the skaters' expressions of their coaches reactions included "I don't think he necessarily believed me, but obviously felt bad for me" (S2), "I can't say that she gave up on me but in a sense she kind of did" (S5), and "she remained very calm and just

went on, figured out what we were going to do with that lesson [the day following her injury]" (S3). Similarly, ballet dancers found the reaction of their coaches to be half positive and half negative (Macchi & Crossman, 1996). One dancer indicated her teacher was getting fed-up, another felt brushed aside; whereas another indicated her coach showed concern and understanding.

All skaters, except one, believed that their coach understood their injury. S4, who believed her coach did not understand her injury, mentioned that she did not think her coach 'really tried to understand the injury'. Skaters believed that their coach understood their rehabilitation requirements, whether they were involved in the process or not. Most skaters had similar comments to S2, who stated, "He understood the injury and knew that I was getting rehab, but he didn't know exactly what I was doing for my rehab or follow it particularly, like I said I was basically on my own." The preference for the coaches is to have direct contact with the treatment providers, as they believe the information is sufficient and accurate (Podlog & Eklund, 2007); however, none of the skaters indicated their coaches were in direct contact with their treatment provider or expressed interest in such. In this case, skaters did receive some contact information for their medical professional from their coach, and sometimes kept their coach informed personally or through their parents, but their coaches did not have any direct contact with the medical support team.

Coaches' views regarding their feelings about athletes' injuries may impact the social support they provide and their openness to communicate regarding the injury. Of the skaters, five skaters had coaches express views regarding their feelings about athletes' injuries. Of those five skaters, one skater's coach expressed negative views about doubting many injuries, and four skaters' coaches expressed views regarding the severity and treatment of injuries. For example, skaters said, "Views as far as that injuries need to be treated seriously" (S7) and "She is kind of black and white in that sense… If you wanted to be there, that's what she expected" (S3). Three skaters did not believe their coaches had ever expressed views regarding their feelings about athletes' injuries. The views that a coach may have regarding an injury may make an athlete more or less likely to communicate with their coach about their needs following an injury. Effective communication regarding the support an athlete requires can be very beneficial for the physical and mental state of an athlete.

Types of Support

Skaters were provided with a list of the eight types of support identified by Hardy and Crace (1993). They were asked to review the list and respond to several questions based on the types of support provided them following their injury. The types of support and the description provided were:

- Listening support (listening without being judgmental or offering an opinion);

- Emotional support (expressing care or comfort to you, the athlete);
- Emotional support challenge (confronting you, the athlete, to help them assess their attitudes, values or feelings);
- Reality confirmation support (people who are or who have experienced the same situation and are able to test or confirm the your perspective);
- Task appreciation support (acknowledgement and appreciation for your efforts);
- Task challenge support (challenging the recipient to motivate you, the athlete);
- Tangible support (rides, financial assistance, products or gifts for you, the athlete);
- Personal assistance (providing you, the athlete, with time, skills, knowledge or expertise to accomplish a task or goal).

The skaters received a variety of support from their coaches. Of the skaters, five received listening support, four received emotional support and task appreciation support, three received emotional support challenge and reality confirmation, two received task challenge support and tangible support, and six received personal assistance. The type of support coach skaters received in provided in Table 1. S6 said, "Reality confirmation support and that would be initially, like right when I was injured. I mean they experienced it themselves when they were athletes and have had other athletes. That would be about it." S8

mentioned, “Listening support, not emotional support [laugh], emotional support challenge, reality confirmation, task challenge support and personal assistance.” S1 explained, “I guess emotional support. Emotional once it happened and then once I got back, it was more task appreciation and personal assistance.” S3 said, “… personal assistance because she didn’t give me much sympathy.”

Podlog and Eklund (2007) found that effective forms of support were emotional [emotional support, emotional challenge and listening], tangible [material assistance and personal assistance] and informational [task appreciation, task challenge and reality confirmation]. For these skaters, emotional support, listening and personal assistance were the most frequently mentioned; however, tangible [material assistance] support was one of the least received. The importance of emotional support was also echoed in the results of studies by Bianco (2001) and Yang *et al.* (2010). Similarly, Corbillon, Crossman, and Jamieson (2008) found that listening support was the most available type of support and the least available was tangible [material assistance] support.

When asked what would be the most important types of support following an injury, the responses differed among the skaters.

S8 mentioned:

> I think the most important one is the personal assistance so providing the time, skills and expertise to accomplish a goal. Also, reality confirmation support because it helps you

> assess your own situation. Maybe you are, like, I guess it's not so bad, maybe things need to be fixed. Listening support, as well. And then the two that kind of depend on the type of athlete you are, are task appreciation support and task challenge support because too much support when it is not deserved will just make you lazy and too much challenge when you are actually trying will make you depressed.

The results of this research indicate that task appreciation (six responses), personal assistance and listening support (four responses) were the most desired types of support for skaters. Six desired task appreciation; four desired personal assistance and listening support; three desired task challenge support; two desired reality confirmation support, emotional support, emotional support challenge and tangible support. These types of support that each skater believed were most important are provided in Table 1. Podlog and Eklund (2007) noted that individual training [personal assistance], keeping athletes involved in sport, and providing emotional, tangible and informational support were important. Corbillon *et al.* (2008) found that the types of support that contributed the most to an athlete's overall well-being were task appreciation and task challenge. Tangible and emotional challenge were seen as least important. As with the present subjects, task appreciation was a highly desired type of support, whereas

tangible and emotional support challenge were not. In contrast to the results of this study, task challenge was not a highly desired type of support when injured.

Only one of the skaters interviewed received all of her desired types of support from her coach; whereas the remaining skaters did not receive the types of support that were most important to them. In all cases, however, skaters did receive other types of support from their coach. For example, S7's most important types of support were "personal assistance and task appreciation support"; whereas she received "listening support, emotional support, emotional support challenge, task appreciation support and some tangible support" from her coach. In this situation, the coach was not in sync with needs of his skater, providing only one of her desired types of support and several less important types. Bianco (2001) noted that a coach's awareness that certain types of support are more appropriate than others, and his/her ability to recognize that certain types of support are not always necessary or welcome, is crucial.

S4's most important types of support were "listening support, emotional support challenge, reality confirmation support, task appreciation support, task challenge support and personal assistance". She received all but emotional support challenge and task challenge support. In this situation, the types of support the coach provided the skater with were mostly "in sync" with her needs.

Timing of support.

The timing of the support skaters received from their coach differed amongst the skater as well. Of the skaters, one received support only when she returned to skating, four of the skaters received support during their injury while they were skating, one received support while they were off-ice with their injury and one received support when their injury initially occurred and after she returned from her injury. The majority of skaters, six, were satisfied with the timing of the support they received from their coach, whereas two were not satisfied with the timing. S5 was not satisfied with the timing of support received from her coach, stating, "I think it could have come sooner, when it first started happening… they thought I was being a baby at first, they didn't believe me. It could have come beforehand." S3 said just that, "I mean just after I guess it would just be listening and emotional… then personal, where we thought of something – a goal". Yang *et al.* (2010) found that athletes preferred emotional support shortly after an injury, followed by informational support once they come to understand the nature and extent of the injury. S1 received appropriately timed support from her coach, "Emotional once it happened then once I got back, it was more task appreciation and personal assistance."

Amount of support.

In contrast to the satisfaction with timing of support, the majority of skaters, five, were not satisfied with the quantity of support they received from their coach. S2 explained, "No [the support was not enough], but at the same time

it was kind of understandable because, like, we had only been together for a short period of time." S2's understanding about the lack of support from her coach based on the duration of her relationship contrasted with the conclusions of Lormier and Jowett (2009), who indicated that the length of a relationship was not associated with the ability to judge needs. S3 said, "I didn't think there was enough because I got so frustrated with, like, what do we do next, but she was very, like, we'll do what we can today…" S6 explained, "Yes, that [reality confirmation support] was fine, it was acknowledged. Yes, you are injured. However, the quantity of the other supports, no."

The results support the findings of Richman *et al.* (1993), that no one type of support is preferred. The results also highlight the importance for the support provider to work to match his or her type, timing and quantity of support with the receiver's preferences (Udry, 2001). Udry (2002) found that when athletes received either more or less support than they required or expected, it lead to feelings of smothering or isolation. Although no skaters in the study used the terms smothering or isolation, the skaters did report similar feelings. For example, S1 mentioned, "Yah, it [quantity of support] wasn't like over the top, so it was good" and S4 said, "Maybe I could have wanted a bit more support from him, just to call and see how I was doing from time to time."

Lormier (2009) found that athletes who perceived their coaches as providing sufficient guidance, experienced more trust and respect for their

coaches. Athletes also looked to other people for support following an injury. Of the skaters, five received support from their families, three received support from the medical community and four received support from friends. Surprisingly, and in contrast to much of the literature, none of the skaters mentioned their teammates as a source of support for them. Possible explanations for this would be the individual nature of the sport and the skaters being away from the training facility. Podlog and Eklund (2007) noted that continued involvement with teammates and training partners prevented feelings of alienation and isolation. Bianco (2001) found that the treatment network, ski team network, including coaches and teammates, and home network all contributed to the social support system of the interviewed skiers.

In most cases, skaters sought other sources of support, including parents, medical staff and friends. S4 explained, "Tangible support my parents gave me. I got personal assistance from the physio[therapist] and the podiatrist." S3 said, "My coach and my mother were probably the most important that I had gotten any of them from." Podlog and Smith (2009) found that the parents of the athletes they studied were able to recognize the emotional effects of the injury and provided their injured athletes/children with many types of support.

Injury Phases

The injury experience spans three phases and is important because the phase of injury will impact a skater's social support needs. The final area of

questions for skaters was related to the three phases of injury, which are (1) injury phase (from occurrence to beginning of treatment), (2) rehabilitation phase (from seeking medical attention to return to activity), and (3) return to full activity phase (once you are back practicing fully again) (Bianco, 2001).

Rehabilitation phase.

Of the skaters, five noticed differences between the phases of injury and three did not notice any differences. The three skaters that did not notice any difference were all skaters who maintained their on-ice relationship throughout the injury period. Of the skaters that did notice a difference, each one mentioned either a lack of support or desire for more support during the rehabilitation, or second, phase. S7 explained, "The most support was for the first and third phase and then the second phase was more non-existent." Shelley and Henschen (1995) found that many coaches perceived the rehabilitation process as a concern of the athletic training staff or the athlete's sole responsibility. Similarly, Bianco (2001) found the coach contact during the recovery [second] phase to be limited. She noted that most skiers understood the infrequent contact was a result of the coach's job to produce winners and not tend to injured athletes. Two skaters mentioned similar concepts, indicating that they did not believe it was their coaches' jobs to tend to them while they were off-ice with injuries. However, the skiers also believed that the coach was responsible to maintain some contact through this period because losing touch could be detrimental to the coach-athlete

relationship. Overall, Bianco (2001) found that coach support during the rehabilitation phase was "welcome and appreciated… it reassured them they would get better, encouraged them not to give up" (pg. 382).

These findings were explained by S2:

> I guess I could have preferred more [during the rehabilitation phase], but at the same time, I don't think it's really his job to see me through like all the rehab, that's the physio's job. But it would have been nice if he had shown some sort of concern or care along the way. So maybe just a little more interest.

Udry (1996) found that the rehabilitation phase is an important time for coaches to ensure athletes' adherence to their rehabilitation programs. Similarly, Podlog and Dionigi (2010) noted that, as influential members of the athletes' lives, coaches should have ongoing contact with their athletes as this show of interest can positively influence rehabilitation behaviours. The three skaters who did not notice a difference in phases were the three skaters that did not require time off for their injury and maintained an on-ice relationship with their coach throughout all three phases. S3 commented, "She didn't change at all. The only thing she would have changed is if I decided I couldn't do something, then she would go back to do walk-thrus…" In contrast, the skaters who did not maintain a relationship in the rehabilitation phase and, therefore, lacked communication with

their coach were more likely to be unsatisfied with their relationship and desired change.

S2 explained:

> If he would have just shown some sort of faith in be beyond, like seeing a future in me after the injury, I think that would have helped me, but I kind of felt like he thought, okay, she's injured, I'll just move on to the next skater.

Return to full activity phase.

The return to full activity phase can be a unique time for athletes and having a coach's support during this phase can be hugely important for those who are returning to the ice and, also, those who have continued to maintain some skating ability throughout the injury. The skaters who returned to the ice, after recovery expressed trust for their coaches would develop a transition program, and found them to be motivating. For example, S7 explained, "Lots of support and encouragement to take it easy and not to rush back into things before I was ready. Definitely no pressure to get to a level I wasn't physically able to be at yet." Both S8 and S3, who maintained on-ice relationships with their coaches, indicated that their coaches were supportive and challenged them every step of the way to full recovery. Only one skater, S6 expressed negative feelings regarding her coach's support upon returning to the ice. She said, "I could have used a little more listening or emotional, but I mean what I did receive… was technological

counselling and support. So, that's always the priority and I could have used more time to communicate." S2, who was unable to maintain a competitive skating level following her injury, but returned recreationally without a coach, mentioned, "Some structure to my rehabilitation on-ice would have helped me." Bianco (2001) found that coaches provide key support to returning athletes, including "holding the skiers back and helping them set realistic performance goals, rebuild their confidence, overcome fears of re-injury, and believe in full recovery" (p. 383). As with the majority of skaters with this study Bianco's skiers were generally satisfied with the support they received from their coaches during this phase.

Summary

Overall, each skater experienced her injury differently. The injury, itself, brought a variety of negative and positive reactions, including fear, frustration, and an opportunity to rest. The injury also brought a change in the coach-athlete relationship due to a lack of contact and communication following the skaters' injuries. This was particularly true for those skaters who unable to skate during their recovery. However, all skaters believed that their coaches should play an important role following an injury and most expressed desire for changes to the types of support provided.

The types of support received from their coaches varied for each of the skaters. The most desired types of support were task appreciation, personal

assistance and listening support. In general, the type and quantity of support from their coaches did not coordinate with the skaters' needs; whereas the timing of the support did. Finally, throughout the different phases of injury, the skaters experienced support differently from their coaches. During the rehabilitation phase there was an overall lack of support for the skaters, especially for those unable to skate through that period. As skaters returned to the ice, the skaters noted that their relationship returned to pre-injury quality.

Several results of this research have produced a notable opportunity to further our understanding about the unsatisfied social support needs of injured figure skaters. These results will be further discussed in the Conclusion, with regards to their importance and implications for the skating community.

Conclusion

Findings from the research are notable in that they show some unrecognized social support needs of injured figure skaters. In this section, specific results will be discussed in light of their implications for coaches. Suggestions for further research will also be discussed.

Determining the correct type, timing and quantity of support that injured skaters should receive from their coaches can be complex; however, it is essential in order to guarantee the athlete will benefit (Richman *et al.*, 1993). The skaters in this study desired different types of support. Six skaters expected acknowledgement and appreciation for their effort [task appreciation support]. Four skaters desired skills, knowledge and expertise to accomplish their goals [personal assistance], and listening without being judgmental. Three skaters would prefer a challenge to motivate them [task challenge support]. Two skaters wanted confirmation of their perspective on the situation from someone that had experienced a similar situation [reality confirmation support], expression of care or concern [emotional support], assistance in assessing their attitudes or feelings [emotional support challenge] and financial assistance, rides or gifts [tangible support]. No single type of support was preferred by all skaters; however, all skaters had expectations that they would receive their desired type(s) of support.

The individual nature of figure skating provides skaters and coaches the one-on-one time that should allow skaters to express their needs for support and

for coaches to accurately meet these needs without it appearing as favouritism among teammates. Bloom *et al.* (1998) believed that sports with an individual nature allow coaches greater time to get to know and understand their athletes' thoughts and feelings. In this study, only one skater received all of her desired types of support from her coach. S4 received confirmation of her perspective on the situation, acknowledgement of her efforts through rehabilitation, expertise to accomplish a goal and a non-judgmental ear. The four types of support that S4 received were types of support she preferred, and therefore, S4 was satisfied with the types of support she received following her injury. However, this was not the case for the remaining skaters.

There was a large gap between the types of support received and that which was desired by skaters following an injury. Although, all coaches did provide their skaters with some of their desired types of support, it can be concluded that the majority of the skaters' coaches were not completely in touch with the support needs of their skaters. For example, S7 received support that included listening without being judgmental, expression of concern, assistance to determine her feelings following the injury, acknowledgement for her efforts and injury support equipment [tangible support] from her coach; whereas she would have preferred the expertise to help her reach her goals and acknowledgement of her efforts. S7 indicated that she had to look to other members of her support team for her desired support, including her parents, friends and medical team.

Similarly, S5's coach helped her assess her feelings following the injury, motivated her with a challenge and provided her with the knowledge to accomplish her goals; whereas, S5 would have preferred appreciation for her efforts, listening without being judgmental and expressions of concern. S5 also indicating that she would prefer more support with better timing from her coach. Receiving just any type of support was unsatisfactory to the skaters; each had her own preferences for types of support.

The lack of preferred types of support has also been indicated in previous literature (Richman *et al.*, 1993). Trends in this study indicated there are preferred types of support for the figure skaters, including personal assistance, reality confirmation support, task appreciation support and listening support. The importance of these types of support point out that skaters are looking for support that is active and not judgmental, confirms their perspectives regarding the situation, acknowledges their efforts through the injury and rehabilitation, and show a willingness on the part of the coach to work with them to accomplish the goal of recovery. The importance of these types of support to the athletes can be shown by the effects such support can have. Listening to the concerns of an athlete shows an individual that you are taking a personal interest in him/her, and can contribute to a continued positive coach-athlete relationship (Podlog & Eklund, 2007). The opportunity to set a realistic goal and have a vision of where things are headed with the injury experience can help an athlete focus on their

recovery, and the willingness of a coach to provide his/her skills and knowledge to an athlete can dramatically enhance the likelihood of accomplishment. The desire for information, through reality confirmation and task appreciation, gives athletes a better understanding of their situation, a feeling of control over their experience, an understanding about where they are at in their recovery and positive motivation (Podlog & Eklund, 2007).

The importance of these preferred types of support was also expressed by the skaters in this study. As S6 explained, listening support was most informative to her because "I would have enjoyed talking when I was off the ice, being able to phone them and say this is what's going on." S1 believed that task appreciation support was important to assist her "just get me back into it and that I can do this."

S8 explained:

> I think the most important one is the personal assistance, so providing the time, skills and expertise to accomplish a goal… Also, the reality confirmation support because it helps you assess your own situation. Maybe you are, like, I guess it's not so bad, or it's really bad and maybe things need to be fixed.

Although these trends do not define all skaters' needs, they can be used to show coaches that there is need for changes in the current support system, and can

be further developed to include general guidelines as to the types of support needed by their injured skaters through a larger sample. Skaters and coaches should use open communication to establish an effective support system.

Communication has been indicated throughout much previous literature as an important feature in a coach-athlete relationship (Podlog & Eklund, 2007; Roessler, 2006; Werthner, 2009), and the results of this study support that. Open communication would allow the skaters to express their needs and for coaches to be receptive to those expressing that. S7 indicated, "It's important to feel like you can tell them [your coach] anything." S6 also commented, "I expect… communication, really open communication. Meaning you know they will be supportive and offer guidance and suggestions." Similarly, S1 explained, "I think a coach needs to be understanding of some things and have really good communication skills [be]cause there are some people who handle things differently." As Podlog and Dionigi (2010) indicated, open communication, especially during a time of injury, allows for a coach to ensure his/her athlete knows that he/she is cared about, to keep updated that the rehabilitation protocol is being followed and to assure the athlete that the coach is available for individualized training or to attend rehabilitation specialist appointments. The same would apply for the skaters and coaches of this study. Effective communication regarding the support an athlete requires can be very beneficial for the physical and mental state of an athlete.

Skaters were generally satisfied with the timing of support they received from their coach. This contrasts with the skaters' who reported lack of support during the rehabilitation phase and beliefs that it would be an appropriate time for support. A possible explanation for this would be that the skaters were responding to the timing of the support they had received; whereas, when prompted about the lack of support during a different time, they were unsatisfied. S1 was satisfied with the timing of the support she received from her coach and believed it was appropriately timed, "Emotional once it happened then once I got back, it was more task appreciation and personal assistance." Note that there was no indication of support during her rehabilitation.

In contrast, skaters were generally dissatisfied with the quantity of support. There were no cases in this study of skaters receiving more support than they desired; however, there were several cases of skaters desiring more support. In many cases, there were phases of the injury during when skaters did not receive any support, and they expressed that even a small gesture, such as a phone call, would have gone a long way. As S4 explained, "I would have wanted a bit more support from him [coach], just to call and see how I was doing from time to time." Overall, it can be noted that coaches need to match the type, timing and quantity of support they are providing to the needs of their skaters.

S6 explained:

> Yes that [reality confirmation support] was fine, it was acknowledged, yes you are injured. However, the quantity of the other supports, no… I think I could have used a little more listening or emotional, but I mean what I did receive was only within the context of my lessons or coaching sessions, which was technological counselling and support. So that's always the priority so I could have used more time to communicate.

The phases of injury also brought forth interesting conclusions. Those skaters who maintained an on-ice relationship with their coach during the rehabilitation phase of their injury, received social support from their coach during all phases. In contrast, the majority of skaters who were not able to maintain an on-ice relationship with their coach, did not receive support from their coach during the rehabilitation phase.

The results indicate that once athletes are no longer in their coaches' physical presence and, likely, paying for their services, coaches are either unable or unwilling to support their athletes. It is possible that this can occur because, in terms of finances and scheduling, the coach is able to fill the space with another skater that is requiring or desiring their time. Other possibilities would be that the coach blames herself for the injury, or that the coach does not believe it is her role

to support her athlete when she is not present at the arena. Two skaters believed that it was not their coaches' responsibility to provide support when they were off-ice with an injury; however, the remaining skaters believed that this was an appropriate time for coaches to provide them with support. The support that skaters expected from their coaches would be considered reasonable. In some cases skaters were looking for support as simple as a phone call, in other cases skaters were looking for help in developing a plan to return to the ice. Several coaches had told their skaters to return when they were ready.

This lack of support throughout the rehabilitation phase can be devastating to an athlete's recovery. The support during the rehabilitation phase is crucial to a full recovery, both physically and mentally. A coach's support can ensure that rehabilitation instructions are followed, and that training plans are created to safely return an athlete to activity. This time could also be used to help an athlete deal with the fear of re-injury and for the upcoming challenges she/he will face (Bianco, 2001; Johnston & Carroll, 1998; Udry, 1996). Effective preparation during the rehabilitation phase can lead to a faster recovery and satisfactory return to full activity.

Once skaters returned to the ice and were re-established in the relationship with the coach, many skaters explained that their relationship returned to a pre-injury state with challenge, support and motivation from their coaches. As S1 explained, "I pretty must trust her that she was doing what she knew how to do

and she knew how to handle things, but it just seemed normal." S7 also commented, "Good [experience], lots of support and encouragement to take it easy and not to rush back into things before I was ready."

This difference between support not provided during the rehabilitation phase and support provided during the return to full activity phase may provide an indication on the type of role that coaches tend to be in. In the majority of cases, coaches were able to provide support and knowledge during the return to full activity phase. This would indicate that coaches tend to perform a technical and sport-related role only. Further research and interviews with coaches would enable a greater understanding of both the coaches perceived role as a coach and in terms of dealing with skaters' injuries and rehabilitation.

The social support for skaters provided by coaches following an injury can be two fold. Firstly, skaters' needs for type, timing and quantity of social support are required. This study was an initial step in that direction, and has determined there is a need for further development of this aspect. Secondly, coaches' believes on both the needs of skaters and their role following an injury must be determined. Coaches tend to maintain a very strong technical role in the sport of figure skating and therefore, may have limited desire or experience in providing social support unrelated to the development of skills and performance. Future studies must develop this aspect to provide a thorough picture of the situation.

One surprising conclusion that was noticed, but not directly investigated, was the lack of support these female skaters mentioned from their teammates, peers, or clubmates. Almost all previous literature on the social support needs of athletes has mentioned the need of athletes to have support from their teammates. Many of those studies have looked at team sports; however, Macchi and Crossman (1996) and Bianco (2001) both looked at individual sports, ballet and skiing respectively, and found similar needs for their athletes. Bianco (2001) explained that even though teammates were competitive, they generally pushed and encouraged each other. Similarly, Macchi and Crossman (1996) found that the injured dancers' classmates were one of the best sources of support. This result is truly surprising to me because, as a skater in a smaller sized club, my clubmates would have been some of my closest confidants and would certainly be a source of support during a time of injury. It is possible that in larger clubs there may be a more competitive and less social atmosphere. Another possibility could be that the injured skaters had some negative feelings or jealousy towards their clubmates who were still skating and training successfully. Finally, skaters who were unable to attend on-ice sessions may not have had the opportunity to communicate with their clubmates away from the arena. This theory is supported by Granito (2001), who found that athletes who are unable to achieve success may have difficulty maintaining bonds with teammates. With that being said, the individual nature of skating should not deter skaters from needing and/or

receiving support from their clubmates. In figure skating, there are some team aspects such as training together, spending many hours a week together for most months of the year, sharing the same coaches and coming together in the spirit of competition for many events.

Another unexpected result was the positives feelings associated with the injury experience. Several skaters expressed a positive injury experience including a freedom from skating and the ability to spend time with friends. This finding was unusual as positive feelings about their injury experience had not been noted in any previous literature. However, as noted by Porter, Young, Niedfeldt, and Gottsclich (2007), the intensity and stressful training can take an emotional toll on figure skaters leading to problems such as burnout and eating disorders. The nature of skating involves skaters spending several hours a day, most days of the week at the rink or off-ice facilities. Skaters can have limited time for other activities and social lives. With that being said, this result can be considered a positive finding as skaters were able to take advantage of their difficult situation and use it to develop both relationships and experiences outside of skating.

Research Implications

The conclusions developed from this study and future research projects can be shared with skaters, coaches and the skating community through many outlets. One well-used source of communication could include the national,

provincial and club websites. These are updated regularly and provide a wealth of information to the skating community. The information should also be included in the many coaching courses offered to coaches, some required before they are eligible to coach for SkateCanada. The current courses offer minimal information that could provide coaches with important coach-athlete relationship, injury experience and skater's support needs knowledge that they should have. As a professional coach, I have browsed through the many manuals that I have and none of them possess any information related to injury and support needs. One chapter did discuss mental preparation; however, that was in regards to being prepared for the stress of training and competition. This is an opportunity for coaches to acquire the knowledge and ability to understand the needs of their skaters following an injury.

Additionally, many skating clubs attempt to provide skaters and coaches with mental and emotional support in the form of goal setting/strategizing, teambuilding and sport psychology information. The information provided through this study indicates a need for coaches' awareness and skaters' needs. Although no one wants to be injured, it has become so commonplace that both skaters and coaches should be equipped with information to deal with the injury, rehabilitation and the support needs through the experience.

This was also expressed by S8, who said:

> The coach needs to be equipped with enough in knowledge of injuries to make an assessment that there is actually something wrong and that you need to see someone else, a specialist. And if the person is not able to do that, the person should not be a coach.

A coach's awareness of his/her athlete's needs is crucial, as the results of this, and previous studies have shown. When an athlete feels supported she is more likely to adhere to her rehabilitation instructions, stay positive and involved in the activity or team, and feel less pressure to return before healing. Following rehabilitation instructions and putting effort into returning is central to an athlete's full recovery and return to activity (Bianco, 2001; Podlog & Dionigi, 2010 ; Udry, 1996). Several skaters noted their desire for communication and support during their rehabilitation to motivate them to continue improving and working towards a full recovery.

Strengths and Limitations

This study has strengths and limitations. To the best of my knowledge, this study is the first to look at the social support needs for competitive figure skaters. The results of this study provide information with regard to skaters' perceptions of the social support they received, and what they expect from their coaches in terms of support. Additionally, this research can be used as a starting point for many future research directions. One limitation would be the small number of

participants obtained for the study (which was previously discussed in the Methodology). A second limitation would be the standardized interview style that was used, which resulted in minimal variation from the scripted questions and limited the opportunity for further understanding of answers given by the skaters. As an amateur researcher, this was an excellent model to establish order to the discussion and ensure all topics were covered, however, in the future it would be beneficial to use a less structured interview style that would allow for increased discussion regarding particular topics. Thirdly, giving the skaters a list of the possible types of support may be considered a limitation as it does have the position to lead them. In the future, it may be recommended to elicit this information with the skater providing examples of the support they received and drawing relationships between the examples and the types of support.

The information received was one sided from the skaters. The results of this study indicate that skaters perceive their coaches believe that injuries should be taken seriously and skaters need to be given support following an injury; however, based on the support received by the skaters, the coaches are not the ones providing the necessary support. Coaches also appear to be very willing to support skaters upon their return to the arena and it is unclear how coaches feel they should be involved in the periods that skaters are not on the ice and under the coaches' instruction. Therefore, in the future studies, interviewing coaches could

be beneficial to learn what they are doing and how they perceive their role as the coach.

One further limitation is related to the skaters' ages. Although the ages of the skaters in this study are common ages for skaters to be participating in competitive sport, there were differences between people within this age grouping. This was noted in regard to the strength of opinion of the skaters. For example, the two youngest skaters believed that their coach-skater relationship did not require any changes and were less likely to provide an opinion on several questions. They tended to use "Yes" and "No" responses to the questions. In contrast, the older skaters tended to be more opinionated and expressive in their responses. In the future, it would be wise to limit the ages even further based on general maturity, such as adolescent, young adult and adult. Despite these limitations, this study provides preliminary data suggesting that further study of social support needs of figure skaters is warranted.

Future Research Directions

This study is the first step to examining the social support needs of injured figure skaters. Given the promising results of this investigation, it invites many areas of future research. Future directions in this area include examining figure skaters' perception following an injury with regard to the following: (a) additional factors that could contribute to other perceptions of support (e.g. situational or personal factors), (b) the impact of different groups of social support providers

(e.g. family, friends, skating community, medical community), and (c) the types of injuries (e.g. chronic versus acute).

As Smith and Ludington (1989) explained there has been a significant increase in the injury rates for figure skaters with the increased physical and technical demands made on skaters. What has not been determined, and would be a direction for future research, is whether or not the possibility of injuries have become commonplace for figure skaters and their coaches. Understanding of this concept may assist in further understanding of social support as it can provide insight into both the skaters' needs and the coaches' willingness to support. This would be beneficial for the figure skating community in development of skater and coach knowledge.

The achievement of an athlete has shown significant impact on the support that coaches provide their skaters (Pieron, Colomberotto, & Salesse, 1986), however, the skaters in this study were of a similar level (competitive, but not elite) and did not ask question with regards to their competitive success. Therefore, this study did not elicit results in terms of achievement. Future studies could look at the how the success of figure skaters may change the type, time and amount of support they receive from their coach. As well future studies using different theoretical models in terms of relationship and communication, and/or types of support are suggested. This could be useful in further understanding these

important concepts for application to the skating community, and athletics as a whole.

There is also a strong need for determining professional figure skating coaches' perceptions of both the injury and the social support needs of their athletes. These studies will help determine what coaches are thinking and doing, what they believe their roles to be, and what they feel their athletes' needs are. Ultimately, this will provide a baseline to begin directing coaches to where skaters need them to be.

Summary

Figure skaters have unique social support requirements following an injury. While they experience the many difficult and varying emotions of a devastating event, they look for support from many different sources, in particular their coaches. Skaters turn to their coaches for much needed support, and have found that they are not receiving the appropriate type, timing and quantity of support that would enable them to progress through an injury experience and return to full activity in the most prompt manner. These results are an excellent starting point for providing coaches with information to stimulate them to consider how and when they can best provide support for their skaters.

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Appendix A: Information Sheet

Figure Skaters' Perceptions of the Social Support Provided by Their Coach Following an Injury.

Principal Investigator: Meghan Kennedy **Phone Number: 306-386-7454**
Supervisor: Jim Denison Phone Number: 780-492-6824

You have experienced an overuse injury while figure skating. I would like to discuss with you about the experience that you had following your injury and the support that you received. Five figure skaters with an injury experience will also take part in this study.

What will you have to do? If you agree to take part, I will ask you to meet at a convenient location, such as the arena that you skate at, for approximately one hour. I will ask you to answer a series of questions that inquire about your experience and the support you received. Each participant will be asked the same series of questions and the interviews will be digitally recorded. Participants can request that the digitally recorder be shut off at any time. I will type out our conversation, based on the recording, and will ask you to read the document. This will give you a chance to ensure that you said what you meant and I understood it correctly.

What are the benefits? There are no direct personal benefits for participating in this study.

What are the risks? There are no direct personal risks for participating in this study.

Can you quit? You don't have to take part in the study at all, and you can quit at any time. No one will be mad at you, if you decide you don't want to do this or if you decide to stop part way through.

Who will know? No one except the Principal Investigator will know you're taking part in the study unless you want to tell them. Your name and personal information will not be seen by anyone except the Principal Investigator. The data from this project will be stored in a password protected safe with the Principal Investigator for a minimum of 5 years. All identifying information will be removed prior to storage.

Your signature: I would like you to sign this form to show that you agree to take part. Your parents will be asked to sign another form agreeing for you to take part in the study.

Do you have any more questions? You can ask the Principal Investigator, Meghan Kennedy (306-386-7454), about anything you don't understand.

This research has been approved by the PER-ALES NS Research Ethics Board at the University of Alberta. If you have any concerns about the conduct of this study can you contact the Chair of this Research Ethics Board, Dr. Kelvin Jones, at 780-492-0302. Dr. Jones has no direct involvement with the project.

Consent Form

	Yes	No
1. Do you understand that you have been asked to participate in a research study?	□	□
2. Have you read and received a copy of the attached information letter?	□	□
3. Have you had an opportunity to ask questions and discuss the study?	□	□
4. Do you understand that you are free to withdraw from the study at any time, without having to give a reason?	□	□
5. Has the issue of confidentiality been explained to you?	□	□
6. Do you understand who will have access to the information you provide?	□	□

I agree to take part in this study: YES □ NO □

Signature of Participant _____ Date _____

(Printed Name) _____

Signature of Witness _____ Date _____

Signature of Investigator _____ Date _____

THE INFORMATION SHEET MUST BE ATTACHED TO THIS CONSENT FORM AND A COPY GIVEN TO THE RESEARCH SUBJECT

Appendix B: Interview Guide

This interview is being conducted to help me gain an understanding about your injury experiences so that I can work with coaches to improve their understanding of athletes' social support needs following an injury. You have received a consent form to sign, which indicates your consent to this interview. The interview will be tape-recorded. I assure you complete confidentiality and anonymity of your remarks. Feel free to express both positive and negative experiences. There are no right or wrong answers. If you feel uncomfortable answering any question you can opt-out by saying, "no comment". Following the interview, I will write out our discussion and would like to meet with you one more time to have you review the document. It will give you an opportunity to check that you said what you meant to say and that my interpretation is accurate.

Injury Experience:

Please tell me about your most recent experience with an injury that you sustained and dealt with while skating.

When in the season did your injury occur?

When in your competitive season was this?

What was your training schedule like at the point of injury?

How did the injury occur?

What was the injury diagnosed as?

What were your rehabilitation instructions?

How much time off was required? Was your activity restricted? Were you able to skate?

How long ago was your recovery?

Immediately following your injury, what were your reactions to your injury?

In the weeks following your injury, how did you feel physically? How did you feel emotionally?

Did you have any upcoming competitions/tests? How did that make you feel?

Other than this most recent serious injury, what previous experience do you have with injuries?

Coach-athlete Relationship:

Before you sustained any injuries, describe the relationship that you had with your coach.

What kind of relationship do you expect to have with a coach?

If you could make improvements, what changes would you make to your relationship with your coach?

Following your injury, describe the relationship that you had with your coach.

What kind of relationship do you expect to have with a coach?

If you could make improvements, what changes would you make to your relationship with your coach?

Coach Support:

What is the role of a coach when their athlete is injured?

Following your injury, how did your coach react?

How did your coach relationship and lessons change during your injury?

How did your coach relationship and lessons change during your recovery?

Did your coach understand your injury?

Did they understand your rehabilitation requirements?

Has your coach ever expressed any views regarding their feelings about athletes' injuries, whether it's your or another athletes?

I have a list of type of support here that I would like to review with you. After we go over them, I would like to ask you a few questions related to them. You can keep the piece of paper and look back at it to help you answer the questions.

Types of Support:

- Listening support (listening without being judgemental or offering an opinion);
- Emotional support (expressing care or comfort to you, the athlete);
- Emotional support challenge (confronting you, the athlete, to help them assess their attitudes, values or feelings);
- Reality confirmation support (people who are or who have experienced the same situation and are able to test or confirm the your perspective);
- Task appreciation support (acknowledgement and appreciation for your efforts);

- Task challenge support (challenging the recipient to motivate you, the athlete);
- Tangible support (rides, financial assistance, products or gifts for you, the athlete);
- Personal assistance (providing you, the athlete, with time, skills, knowledge or expertise to accomplish a task or goal).

How did you feel about the type(s) support your coach provided you with?

What type(s) of support did your coach provide you with?

When did they provide support type 1? Support type 2? Support type 3? Etc.

Were you satisfied with the timing of the support?

Were you satisfied with the quantity of support?

Following your injury, what type(s) of support were most important to you? Who did this support come from?

Were there people other than your coach that provided you with support? Who?

How did they provide you with support?

How did you feel about the support these other people provided you with?

What type(s) support do you expect from your coach following an injury?

Injury Phases:

There are three phases of injury: the injury phase (which is from the occurrence to the beginning of treatment), the rehabilitation phase (which is from seeking

medical attention to return to activity) and the return to full activity phase (which is once you are back fully practicing again).

Please describe the rehabilitation requirements and experience that you had.

Did you notice any differences between phases in the support provided by your coach?

Where did your rehabilitation occur?

Did you have any contact with your coach during the rehabilitation phase?

How did you feel about the support provided by your coach during rehabilitation?

What was your experience when you were able to return to skating? What kind of support did you receive from your coach?

How did you feel about the support provided by your coach during your return to activity?

Demographic

What is your age? Level? Years of experience?

What is your typical training schedule each week?

How long have you been with your coach? How much time do you spend with them each week on-ice during one-on-one lesson time? On-ice group lesson time? Off-ice lesson time?

This concludes the interview. Thank you very much for your time.

Table 1

Types of Support Important to the Skaters and Received from Coaches

Skater	Type of Support							
	Listening	Emotional	Emotional Challenge	Reality Confirmation	Task Appreciation	Task Challenge	Tangible	Personal Assistance
S1		√			Ø , √	Ø		√
S2	Ø						Ø	Ø, √
S3	√	Ø , √			Ø			√
S4	Ø, √		Ø	Ø, √	Ø, √	Ø		Ø, √
S5	√	Ø	√		Ø	√		√
S6	Ø			√				
S7	√	√	√		Ø , √		√	Ø
S8	Ø , √		√	Ø , √	Ø	Ø , √		Ø , √

Note. Ø = Important to skaters; √ = Received from coach.