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Exploring Psychological Reactions to Injury in the Australian Football League (AFL)

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This study explored Australian rules footballers' psychological responses to injury. This exploratory study was the first in a series of studies planned to examine the injury-related experiences of professional Australian football players. Forty-three professional AFL players from the one team participated in semi-structured interviews. Results provided a detailed account recalled by AFL footballers of their past injury experiences. Specifically, AFL players discussed their initial emotional reactions to injury, which were dependant on the severity of the injury, the extent of isolation during injury, the repetitive nature of the rehabilitation process, and the influence of social support on their reactions.

The four football codes played in Australia (Australian Football League, Soccer, Rugby League, and Rugby Union), have the highest rates of injury occurrence in Australia (Medibank Private, 2006; Timpka, Lindqvist, Ekstrand, & Karlsson, 2005). The Australian Football League (AFL), which is regarded as one of the highest-profile sports in Australia (Norton, Schwerdt, & Lange, 2001), is associated with the highest number of injuries presenting to emergency departments (Timpka, Lindqvist, Ekstrand, & Karlsson, 2005). Specifically, it is the unique combination of body contact, running, marking, tackling, and constant physical competition for the ball at high speed that results in high rates of injury in the AFL (Baquie & Brukner, 1997; Norton, Schwerdt, & Lange, 2001).

There has been a substantial amount of research on the physical factors associated with sport injury and the strategies to improve rehabilitation outcomes (e.g., Brewer, 1999; Scherzer, Brewer, Cornelius, Van Raalte, Petitpas, Sklar, & Pohlman, 2001). However, over the past two decades, there has been increased interest in examining the psychological impact of sport injury (e.g., Heil, 2000). As noted by Walker et al. (2007), a comprehensive understanding of how athletes respond to injury may potentially assist rehabilitation personnel in order to improve the rehabilitation experience and outcomes for athletes.

Early research in this area reported higher levels of tension, hostility, depression, tiredness and confusion in injured athletes compared with non-injured athletes (see Chan & Crossman, 1988; Smith, Scott, O'Fallon, & Young, 1990). It was suggested that an injury may deprive an athlete of stress management benefits and that excessively motivated athletes may persist with exercise and sport regardless of their injury (Chan & Crossman, 1988). More recently, a number of quantitative measures have been used to examine the emotional response to sport

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injury (e.g., Mainwaring, Bisschop, Green, Antoniazzi, Comper, Kristman et al., 2004; Smith et al., 1990). These studies have revealed an increase in negative mood states following the injury that included tension, depression, and confusion as well as an increase in positive mood states as the rehabilitation progressed. Researchers such as Johnston and Carroll (2000), however, have suggested that these investigations have not provided a reliable comprehensive account of the athletic injury experience. Indeed, it has been suggested that such an approach may produce a fragmented representation of this experience (Hagger, Chatzisarantis, Griffin, & Thatcher, 2005; Quinn & Fallon, 1999). Many injury researchers have argued for greater use of qualitative methods when attempting to improve our understanding of the injury experience (e.g., Granito, 2002).

In the last decade there has been an increased use of qualitative methodologies to examine psychological responses to injury, and the facilitation of psychological adjustment following injury occurrence (e.g., Thatcher, Kerr, Amies, & Day, 2007). Findings from qualitative investigations have identified predominantly negative emotions following an injury, such as depression (e.g., Macchi & Crossman, 1996; Tracey, 2003), anger (e.g., Macchi & Crossman, 1996; Udry, Gould, Bridges & Beck, 1997a), shock and disbelief (e.g., Johnston & Carroll, 1998) and frustration (e.g., Gayman & Crossman, 2003; Vergeer, 2006). These negative emotions have been reported by athletes in sports such as ballet, skiing, basketball, and rugby.

Qualitative research has also identified general dimensions associated with the psychological response to injury. For instance, in four investigations of professional skiers (see Gould, Udry, Bridges, & Beck, 1997a, 1997b; Udry et al., 1997a; Udry, Gould, Bridges, & Tuffy, 1997b) psychological reactions, perceived benefits of the injury, the rehabilitation process, relationship with others and coping strategies were identified as being salient to 21 professional skiers with season-ending injuries. In particular, Udry et al. (1997a) found that recognizing the negative impact and consequences of that particular injury forced the athletes to contemplate their short and long-term futures. In addition, 76% of the skiers described themselves as being emotionally agitated following the injury and reported feelings of anger, worry and panic that resulted in behaviors of acting out and crying.

Although findings from both quantitative and qualitative research provides some indication of the type of psychological reactions that athletes may experience following sport injuries, several methodological issues suggest that further research is warranted. First, it has frequently been difficult to generalize or apply findings (i.e., qualitative research) because samples from previous research studies have incorporated athletes from a variety of sports and competing at different levels. For example, studies have often not differentiated between competitive athletes and recreational athletes (e.g., Daly, Brewer, Van Raalte, Petitpas, & Sklar, 1995; Quackenbush & Crossman, 1994); amateur, semi-professional and professional athletes (e.g., Rose & Jevne, 1993); current athletes and retired athletes (Bianco, Malo, & Orlick, 1999); Olympic athletes and state-level competitors (Quinn & Fallon, 1999); and participants more involved in sport compared with participants less involved in sport (e.g., Johnston & Carroll, 2000). This has created difficulties when interpreting data. For instance, injured athletes who are more involved in their sport participation may have a more significant emotional reaction to an injury because of their previous investment of resources into that sport (Johnston & Carroll, 2000). Conversely, it is possible that recreational athletes may display less intense emotional reactions to injury because their injury is not seen to impact their livelihood or threaten their career. Thus, the combination of professional and recreational athletes, for example in the one study, could both prevent a clear interpretation of the reactions to injury in the athlete and impact on the generalizability of findings. As pointed out by investigators such as Udry et al. (1997a), these problems can be overcome by sampling athletes at the same level of participation.

It has also been difficult to generalize and transfer findings from research that has incorporated injured athletes from a variety of sports (e.g., Bianco et al., 1999; Bone & Fry, 2006; Johnston & Carroll, 1998, 2000; Quinn & Fallon, 1999; Thatcher et al., 2007; Tracey, 2003). For example, data from athletes in individual sports, team sports, contact sports, ball sports, endurance sports and agility sports have been analyzed together in the one study (e.g., Granito, 2002; Quinn & Fallon, 1999). To overcome this limitation and to enhance the reliability of future studies it would appear that programs of research using same-sport participants should be more frequently developed (e.g., Macchi & Crossman, 1996; Udry et al., 1997a).

Although data has emerged regarding emotional and other psychological reactions to injury in athletes competing at multiple levels within a wide range of sports, research has yet to provide a detailed examination of these types of reactions in professional Australian rules footballers. Noblet and Gifford (2002) identified injury as a major source of stress for 32 professional Australian footballers who were concerned about not being part of the team and not being involved in the group structure during injury periods. However, as this study was focused more broadly on sources of stress it did not provide an in-depth account of players' reactions to their injuries. Therefore, the aim of this study was to explore AFL footballers' experiences of their past injuries to gain a further understanding of their psychological responses to injury. To achieve this, a qualitative methodology was employed as it was anticipated that such an approach would provide football players with the best opportunity to provide a holistic account of their experiences and emotions surrounding their injury. This study was planned as the first in a series of studies to explore and enhance the interpretability of the injury experiences reported by professional Australian football players.

METHODOLOGY

Participants

Over the course of four months, 43 professional male Australian football players from one of the 16 AFL national clubs voluntarily participated in the study. Players represented the entire team list of that AFL club. All 43 players agreed to take part; thus, the response rate was 100%.

The players ranged in age from 18 to 36 years, and had been playing AFL at the elite level from 3 months to 17 years, with an average of 3.6 years. The number of games played by each player ranged from 0 to 267 games ($M = 51.5$). All 43 team members were invited to take part and provide feedback to the researchers. Players were volunteers and no payment or incentive was offered.

Procedure

Following ethics approval from the La Trobe University Ethics Committee, the AFL football club was contacted via telephone with an invitation to participate in the study. The club provided written approval to approach the players and conduct the study throughout the football season. The research project was also supported by the AFL Players' Association. An initial information session was conducted in a conference room following a recovery session, where all players were in attendance. Players were briefed about the nature of the research and the interview process that would take place throughout the season. The players were informed about the confidentiality of the research, and were informed that they were under no obligation to take part in the research.

The interviews were to be conducted at a convenient time for each player, in the medical room at the football club. All interviews were conducted by the first author and interviews typically lasted between 40 and 60 min. No other staff member or player was present during the interview process. At the commencement of the interviews players were reminded of the nature of the study and also that information was strictly confidential and that their responses would be reported as group data only.

The definition of an injury was read to each player at the commencement of the interview. An injury was described as "... any physical damage sustained by sports participation which required medical attention, resulting in the absence from training or a game" (Australian Football League & Australian Football League Players' Association, 2004, p. 24). Participants were initially asked to provide some background information on their football career. The format included questions relating to their involvement at AFL level, training commitments, and games played at AFL level. The rationale for including this information in the study was to provide the researcher with an understanding of each player's background and previous injury history. Also, if the researcher had a basic understanding of each player's background it was hoped that this would then assist in the development of conversation and help establish a rapport with the players.

Players were asked to describe a football-related injury that they had experienced in the last 12 months. Open-ended questions regarding the players' injury experience were posed. Although an interview schedule was devised based on the sport injury literature, the sequence of interview questions could change to accommodate the player's response. This provided flexibility in the interview process suitable for in-depth responses. Previously, these questions were pilot tested with another sample of AFL footballers from one team, and minor revisions were made to ensure clarity and understanding of the interview questions.

Interview Schedule

Semi-structured interviews were designed by the researchers. Key parameters from the integrated model of response to sport injury and rehabilitation (Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998) were used to both guide research questions and as the basis for the interview guide. The integrated model of response to sport injury and rehabilitation (Wiese-Bjornstal et al., 1998) is the most evolved and well-developed model that integrates the psychological response to sport injury with the rehabilitation process (Walker, Thatcher, & Lavallee, 2007). The rationale for utilizing the key parameters from the model was because it provides a clear means of explaining the post-injury, emotional and behavioral response of athletes. In particular, the model illustrates how the appraisal of an injury subsequently affects both the emotional response to the injury and the behavioral response to the injury (Brewer, 2001). The semi-structured interview guide addressed the following core areas: the interpretation of the injury (e.g., can you please describe your most recent football injury?), the emotional response to the injury (e.g., how were you feeling emotionally in relation to that injury?), the rehabilitation process (e.g., can you tell me about the rehabilitation process during your injury period?), and the behavioral response and the recovery outcome (e.g., can you tell me about any changes in your behavior during your injury period?). In accordance with the research questions, interview questions primarily related to the post-injury period. Players were given the opportunity to discuss their injury in football-related terminology, before addressing questions specifically related to the research topic.

As this was an exploratory study, players were encouraged to elaborate, explore and share their experience regarding their injury. In many cases the researcher just let the players go with the flow within the flexible confines of the core interview topics.

Data Analysis

Each interview was tape recorded and transcribed verbatim by the principal investigator. The transcripts of the interview material were repeatedly read to enhance familiarity. The interview material was then analyzed via thematic analysis utilizing the guidelines recommended by Braun and Clark (2006). Thematic analysis is a widely used form of qualitative analytic method that identifies, analyzes, and reports patterns (themes) within data (e.g., Braun & Clark, 2006; Boyatzis, 1998; Roulston, 2001). The approach taken by thematic analysis is a flexible and useful research tool that can provide a rich and detailed, yet complex account of data (Braun & Clark, 2006). Although there is no one ideal theoretical framework for conducting qualitative research, it is important that the framework and methods "... match what the researcher wants to know, and that they [sic] acknowledge these decisions, and recognize them as decisions" (Braun & Clark, 2006, p. 80). By reporting the experiences, the meanings, and the reality of participants, thematic analysis can be a constructionist method, whereby individuals make meaning of their experiences (Braun & Clark, 2006).

To enhance the credibility of the data, a subset of interviews was analyzed via thematic analysis by an independent researcher, using the procedures recommended by Braun and Clark (2006). The material was then reviewed by both researchers for any discrepancies and inconsistencies (Braun & Clark, 2006). There was one discrepancy between the researcher and the independent researcher with respect to the name of the first theme. Both the researcher and independent researcher re-immersed themselves in the data, and following this acknowledged that the main theme that had emerged was with respect to the severity of the injury and how this influenced the psychological response. The two compared notes and discussed the outcomes. By devoting additional time to this particular theme, both the principal researcher and independent researcher identified that they had established common codes. These codes were further discussed and analyzed and both the principal researcher and independent researcher came to an agreement on the name of the previously discrepant theme. As a result, "all part of the game: but severity matters" was the name of the first theme.

To ascertain the accuracy of transcription, one quarter of the sample was randomly selected and sent copies of the transcriptions to review to ensure that the interviews had reflected what they had indeed said. Forty-three players on the list were interviewed, and although it is possible that the data analysis may have reached saturation somewhere between 12 and 15 interviews, responses from participants in early interviews suggested that it was important for all players to share their experience. Given this research was the first opportunity that each AFL player from the participating club had to disclose information about their personal injury experience, this process potentially enhanced the catalytic validity of the data by re-orientating, focusing, and energizing the participants (Kvale, 1983). Specifically, comments of players suggested that being able to share their experiences was an enriching and empowering experience (Kvale, 1983).

RESULTS

The results from the analysis of the players' reports of the injury experience are presented in five distinct themes: (a) all part of the game: but severity matters, (b) diversity of emotional reactions to injury, (c) severity of the injury and its impact on involvement, (d) the isolation and repetitive nature of the rehabilitation process, and (e) the influence of social support.

All Part of the Game: but Severity Matters

Players discussed the nature of Australian football and the body contact that was involved. They further described that the intensity of the game often resulted in a substantial amount

of injuries. Of the 43 players who were interviewed, 39 of them described the differences between minor injuries and severe/long-term injuries. Players described that the impact of a severe or long-term injury that were potentially performance or career-threatening, resulted in more extensive negative reactions compared with a minor injury that would not necessarily threaten their reliable performance. Players further stated that the nature of the injury and the duration of the injury period impacted on their response to the injury. Injuries were frequently reported as just part of the game. Players described how they had to put their body on the line each week. More specifically, most players reported that it was very rare to go into a weekly game situation without being injured. For example,

Ninety percent of the time a player will play with a niggling injury. It's very rare for a player to go into a game one hundred percent fit. Most of the time the public have no idea that we are carrying an injury—even if it is minor.

Players further described that when they had, what would be classified as a minor injury, they did not always react negatively to the injury. Knowing that they would return to competition in a short period of time, the majority of players who sustained minor injuries stated that they would use the time off to freshen up and prepare for their next game.

Players reported that a severe or long-term injury was distinctly different and more challenging than a minor injury. Players commented on the difficulty associated with the rehabilitation process of a long-term injury. Being isolated from the main group and rehabilitating on their own was described as a difficult process and this process was accompanied with primarily negative emotions that were ongoing throughout the rehabilitation period. Many players reported on their struggle with being sidelined from the game for an extended period. This has been highlighted in the following quote:

I did my knee and was out for the year. There weren't any other long-term injured guys at the time so I had to go through rehab [rehabilitation] on my own. It was devastating and it took me a while to get my head right. There were times when I didn't want to be here and didn't feel part of the team. Looking back now, I would describe the process as an emotional rollercoaster ride! There were so many ups and downs!

Although the majority of players reflected on more serious injuries, some players reflected on their most recent minor injury. In particular, one player commented on his injury experience following repeated minor injuries from the year. He described the process as character building. The quote below illustrates how this player wanted to reflect on his year:

By the end of the year, I wanted to be able to look back on what's been a good year, and I think to play with injuries—not the serious ones, I think it is character building and something I'm quite proud of.

It was interesting to note that players described how they would continue to play with on-going niggling injuries. Players reported that early in each week there were a large number of them in the rehabilitation group. Players highlighted that the general public were usually unaware of how many injuries were caused during the game and were actually carried into the game the following week. As one player illustrated,

The Monday and Tuesday rehab [rehabilitation] group is really big. It gives those guys a chance to recover from a niggling injury. You do feel for the guys that have more serious

injuries though. The rehab group is really tough and you work probably twice as hard than if you were playing. That being said, I'm happy to play with a minor injury.

Diversity of Emotional Reactions to Injury

Players reported how a range of distinct emotions emerged during their injury period, and how emotions changed over time. A common factor described by players, regardless of the severity of injury, was the initial negative reaction to the injury. These included shock, anger, disappointment, and the sense of feeling flat. For instance, one player noted, "It's so disappointing; you just don't understand what it's like. It sort of affects you, your family and friends, just like the people who are with you all the time cause they know how much you put in."

The negative implications of the injury were identified as players recalled that they could foresee missing games and missing out on the team structure. This was a common element reported by players and was described as a particularly challenging aspect of the injury. Common emotions and descriptive words during this period of no play were anxiety, depression, and mood swings. As one player commented, "I was devastated. Knowing that I wouldn't be able to play for the rest of the season . . . The more games I missed, the more anxious and moody I became." The emotional response to a severe or long-term injury, while predominantly negative, was unpredictable and inconsistent. Players reported how moods would go up and down in the space of a few days. Furthermore, when describing a serious or long-term injury, players highlighted that the emotional response to an injury was an ongoing process.

Some players described how there were still emotional implications from the injury experience even after a player had returned to training and in the lead up to returning to competition. Players recalled how they were concerned about their level of fitness, their competitive ability and their lack of ball skills. This is illustrated in the following comment: "I knew I was going to be pretty rusty out on the field. I was lacking match fitness and it didn't seem like my skill level was as good as it used to be."

Severity of the Injury and its Impact on Involvement

This theme captured the diversity of player responses in relation to engagement in club and outside activities. Players recalled a variety of changes in behavioral patterns during the injury period. Some players described how they liked to remain involved in club activities, while other players chose to distance themselves from all activities. Again, there were differences between minor injuries and long-term injuries with respect to the level of involvement. Players who recalled more serious or long-term injuries reported that it was beneficial to have alternate activities to fall back on during this time of injury rehabilitation. Players stated that having school commitments and work commitments were an ideal way to take your mind off the injury. In addition, those players who were reflecting on long-term injuries commented how an injury gave them the opportunity to get away from the football environment and focus on other aspects of life. Some players described how their injury was out of their control, but, by having the opportunity to control another situation (e.g., their study/work commitments), this then gave the player the opportunity for a balanced lifestyle:

When I knew the verdict of my injury I just wanted to get away from football for a while and focus on my work and family. If I didn't have them as a distraction it would have been even harder to deal with.

Players who were reporting on minor injuries were generally consistent in their thoughts regarding club involvement. These players stated that by remaining involved in the club

and team environment this assisted in their rehabilitation and challenged them to rise to the occasion. Players reported that it was essential to contribute at training even if you were restricted by a minor injury. As stated by one player, "If you weren't there [at training], the coach wouldn't know you were up for it [the game] and you wouldn't get selected to play that week."

The level of club involvement during an injury period was dictated by the position that a player held at the club. Older players and those players who were in the leadership group acknowledged that it was easier to stay involved in team activities during injury periods.

I'm in the leadership group and that has made it a lot easier and you're always still a part of it and you're still involved with it and still involved on match day and around the traps. So it's a lot easier to stay involved than it is to stay involved if you were a younger player injured and out.

Some younger team members found it difficult to stay involved at the club during a long-term injury and described how they were easily forgotten when they were in the rehabilitation group for extended periods. This is illustrated in the following comment: "Unless you are one of the senior players who is highly regarded at the club, you can quite easily get forgotten about during a long-injury."

The Isolation and Repetitive Nature of the Rehabilitation Process

The fourth theme referred to the repetitive nature of the rehabilitation process and the isolation that accompanied the rehabilitation. Players reported that the rehabilitation was lonely and isolating. The majority of players reported that the rehabilitation period, especially for serious injuries, was a lonely experience. Players stated how there were distinct differences during the rehabilitation period with minor injuries that sidelined them for one or two weeks, compared with injuries that were serious or long-term. It was reported that an injury in general resulted in players getting down on themselves. In particular it was reported that when players knew the length of time they would be out of the game, and were informed about the extensive nature of the rehabilitation process, they recalled how this was the most depressing time of all. It was common for players to feel isolated from the group. Players described how sometimes it seemed that no one cared about their injury or how they were progressing through the rehabilitation. Instead, it was reported that the only areas of concern were a player's on-field performance:

You don't feel a part of it as much. You're not in the match-day things, and that's probably what you miss, you just feel a little bit weird, especially for the first couple of weeks when you're not training with the main group and you're doing your own thing and yeah doing rehab all the time, it is a bit of a lonely experience.

In accordance with this, players reflected on the repetitive nature of the rehabilitation programs. Players described how this repetition became boring and monotonous and a number of players illustrated the difficulty in keeping themselves motivated during this period. Players reported that they felt they were being left behind from the team and the group, and how they were frustrated with not being out on the track training with their team-mates.

It's sort of hard to motivate you when you've got all the rehab [rehabilitation] work and a whole another year ahead of you. All the boys are out on the track and you are constantly in the pool or in the weights room. Each rehab [rehabilitation] session seems to be the same and you sort of think what's the point?

The majority of players recalled the rehabilitation period as being associated with predominantly negative emotions and cognitions and these were generally associated with long-term injuries. Players also reported changes in emotions during the rehabilitation period following a long-term injury. Comments were made in reference to the emergence of more positive emotions as the rehabilitation from the injury progressed as well as seeing improvements from their rehabilitation:

I got back feeling positive. I was feeling a little flat probably the first few days when I was in hospital, and in the weeks following. But then I could see that I could do the majority of things and my rehab [rehabilitation] was coming along well, so I found the positives out of it.

The Influence of Social Support

The importance of support networks and relationships with others emerged as the final theme. It was reported that medical staff, other players and family networks provided informational and emotional support throughout the injury period. This support was regarded as an extremely important factor during all injury periods, and was consistent across all 43 players. Specifically during serious injury periods, emotional and information support were described by many players as a significant factor that enhanced rehabilitation and recovery.

My family has always been there to provide me with support, even if I wasn't a footballer player, they will always be there no matter what. The medical staff were great when I was injured. They were constantly keeping me up to speed on how my injury was progressing and always asking how I was doing.

This was further supported by a player who made reference to the support from the medical staff during a serious injury: "... the medical staff were very supportive. They were honest and up-front about my injury from the start. Even during the rehab [rehabilitation] process I could count on the doc [doctor] for a chat and some words of wisdom." More specifically, players recalled how it was beneficial to talk to someone who could provide them with support during the injury period. Particularly throughout a serious injury, players demonstrated the need to talk to somebody, to discuss, and to take out their anger on somebody as they progressed through the injury rehabilitation.

Players who had been seriously injured reported support from other injured players or players who had been in the same injury situation who could relate to how they were feeling and understand the processes that they were going through. "When you're seriously injured with others, they go through the same sort of thing, so we can sit and bitch about it together and drown our sorrows or whatever."

The support from the family and/or partners was repeatedly mentioned as being significant by players during injury periods. Although players recalled that family members found it difficult to understand exactly what an injured player was going through, their continued support was reported to be a major factor that contributed to a successful rehabilitation.

My parents have always been there. We are a pretty close-knit family and they are very supportive to me and they just try to tell me what the future holds and to keep on track of things and try not to worry about a little injury or whether it be big or not, but just to keep focused on the major goals. So their support helps me re-focus on what I'm doing.

Although support from others was reported by players as being a significant contributing factor to a successful rehabilitation and recovery, the majority of players mentioned the lack

of support from the coaching staff. Furthermore, most of the players stated that they would have accepted and appreciated more interactions with the coaching staff during their injury period if it was provided to them. Some players further described how positive feedback from the coaches may have assisted in their recovery following a serious injury,

It would have been good to get more feedback from the coaches. You don't really know what they [the coaches] are thinking, or what they are thinking about you. Sometimes I think they look at me and think . . . Oh he's injured again! But if they knew where I was at and how I was travelling . . . or if they asked me more questions or pumped me up every now and then, it may be a different story.

Some other players further reported that coaches were quite pushy during an injury period. These players described how the major emphasis was placed on playing instead of rehabilitating, and that they felt the pressure to recover as quickly as possible. Several players stated how there was the pressure to perform and that if you were injured you had to work twice as hard, firstly to rehabilitate and recover and secondly to prove that you were worthy of being selected in the team to play. One player described his interactions with the coach during his long-term injury period as follows:

He [the coach] would ask me how I was going and when I would be returning to the main training group, but he didn't ask me how my rehab [rehabilitation] was actually going and if I was happy with my progression and where I was at.

In contrast a minority of players understood the position of coaches and noted that it was difficult for coaches to support you in times of injury. These players described how it was the job of the coach to win games and therefore, if you were injured and unavailable to play you were not considered in the equation:

I think it's quite hard for coaches to support you in times of injury, obviously the medical and rehab [rehabilitation] staff, there is a lot of support there, but from a football side of things, well then you're out of the equation. So that's just how it is, that's the nature of the game, and you're not in the equation of that game, so you don't sort of come into their calculations, so there's not a whole lot of support there. They [the coaching staff] have got a job to do, so they go off and do that.

DISCUSSION

This study was the first to explore the emotional and behavioral response to injuries suffered by professional Australian football players. This study, of all players from one AFL club, was exploratory in nature and was designed to gain an overview of the injury experience, in order to guide future research into sports performance and rehabilitation within the AFL.

Some of the psychological reactions to injury described by professional Australian football players in this study were comparable to responses that have been identified in other qualitative and quantitative investigations with athletes in sports such as skiing, basketball, and rugby. Consistent with previous research, shortly after the occurrence of the injury, players reported predominantly negative emotions of depression (e.g., Macchi & Crossman, 1996; Tracey, 2003), of anger (e.g., Udry et al., 1997a) of shock and disbelief (e.g., Johnston & Carroll, 1998) and of frustration (e.g., Gayman & Crossman, 2003; Vergeer, 2006). Interestingly, findings from this study were also consistent with non-elite samples that identified greater mood disturbance

following an injury, for example, intercollegiate athletes (Tracey, 2003) and recreational participants (Gayman & Crossman, 2003; Smith et al., 1990). In conjunction with earlier research, this indicates that negative emotions have been reported by both recreational and elite athletes.

However, beyond confirming some previously reported psychological reactions to injury, the findings from these elite Australian football players indicated that the severity of the injury moderated the psychological response to the injury. Thirty-nine of the 43 players described the distinct emotional variations between minor injuries and more severe or long-term injuries. Minor injuries such as muscle strains resulted in players being more positive and optimistic about their injury outcome because the injury implied no foreseeable limitation to their playing future. In addition, players welcomed the opportunity to have a week off to refresh before returning to competition. However, players reported that the emotional response to a long-term injury such as a knee reconstruction was more negative, inconsistent and very challenging. For example, players described that as the injury period progressed, the emotional implications of the injury became more intense. More specifically, players reported how there was a high level of anxiety and frustration with their injury even after they had returned to training. In addition, results indicated that the injury severity moderated most psychological reactions. For example, the importance of social support was moderated by the severity of injury in which players reported that emotional and informational support was a significant factor that enhanced rehabilitation and recovery during a long-term injury. However, social support was reported to be not as important with minor injuries.

Interestingly, the findings in the present study pertaining to the impact of severity of injury on the emotional response were not consistent with previous research. Previous research has indicated that as the rehabilitation period progresses the negative emotional reactions of the injury diminish and more positive emotions are evident (e.g., Johnston & Carroll, 2000; Macchi & Crossman, 1996; Quackenbush & Crossman, 1994). However, this was not evident in the current study. One potential explanation for the inconsistencies with minor and severe injuries between previous research and the results from the current investigation may pertain to the sample. Previous research has relied heavily on collegiate athletes (e.g., Leddy, Lambert, & Ogles, 1994; Tracey, 2003) and recreational and competitive athletes (e.g., Gayman & Crossman, 2003; Hagger et al., 2005). Although some previous research has investigated the emotional response to injury in professional athletes (e.g., Bianco et al., 1999; Macchi & Crossman, 1996; Udry et al., 1997a), these investigations have not examined differences between minor and long-term injuries.

An important finding to emerge from the present study was how players conceptualized injuries. This study identified that players accepted injuries as being part of the game. Indeed it was noted by one player that "ninety percent of the time a player would play with an injury." This may potentially be a unique aspect to Australian football. The combination of body contact, running, marking, tackling and constant physical competition for the ball at high speeds has resulted in AFL recording one of the highest rates of injury occurrence in Australia (Baquie & Brukner, 1997; Norton, Schwerdt, & Lang, 2001).

Results from the present study regarding feelings of isolation and the desire to remain engaged in the sport, have in part been supported by previous qualitative research. For example, Gayman and Crossman (2003) examined 20 recreational and varsity basketball players and findings indicated that players were distraught and upset about missing out on the team-orientated nature of the game. The team-oriented nature of Australian football, with its emphasis on team unity and the camaraderie, may have contributed to players' concerns about not being part of the team and not being involved in the group structure. Being involved in a sport that relies on 43 athletes (the number of players on an AFL list) to succeed may potentially influence an injured athlete's reactions to injury. Team sport participants may be more

concerned about the impact their injury has on the team when compared with athletes who are involved in individual sports and rely primarily on themselves for a successful outcome. Being part of the group and staying connected to the team appear to be important reasons for athletes to rehabilitate effectively from injury and return to competition (see Podlog & Eklund, 2006). Consistent with this finding, a previous study of 32 professional AFL footballers reported that one of the major sources of stress in AFL was not feeling a part of the group (Noblet & Gifford, 2002). It is therefore not surprising that when an AFL player incurs a long-term injury that requires a lengthy period of rehabilitation, they may feel isolated, bored and unmotivated.

Reconnecting with teammates and the receipt of support of team-mates, as well as support from family members, has been recognized as an important facet of an athlete's psychological rehabilitation and recovery (e.g., Bianco & Eklund, 2001; Macchi & Crossman, 1996, Podlog & Eklund, 2006). Consistent with findings from previous research, this study identified the importance of support from others, including medical staff, other players and family networks. Previous research (e.g., Johnston & Carroll, 1998) has demonstrated that coaches can have a significant positive impact upon the quality of rehabilitation and recovery of injured athletes. It has further been suggested that the interest taken by the coaches could facilitate the injury rehabilitation and recovery process (Gould et al., 1997a). Nevertheless, findings from this study indicated that although coaches were potentially an important player resource, they were not utilized in an effective manner to assist with injury recovery. The majority of players in the present study reported a lack of support from coaching staff when injured. It was further reported by players that the coaches did not communicate and interact with the injured players. One explanation for lack of support from the coach may be due to the nature of Australian football. Considering the number of players in an AFL team (43) and the relatively small number of coaches in a team (4 to 5), footballers may experience less direct one-on-one contact with their coaches resulting in players feeling forgotten or left out (Noblet & Gifford, 2002). Potentially, this may have resulted in players seeking the advice and support from other injured players who could relate to how they were feeling. Consequently, this may have been a contributing factor as to why players reported on the need to talk to a support provider about how they were progressing with their injury. Interestingly, results from the current study further indicated that an injured player would have accepted and appreciated more interaction, support and communication with the coaching staff during their injury period if it was provided to them.

LIMITATIONS AND FUTURE RESEARCH

This study used in-depth interviews to encourage football players to share their experiences and emotions surrounding their injury. The present study was designed as the first in a series of studies to explore the experiences portrayed by professional Australian football players.

There are, however, several limitations to the present study. First, the interview material relied on the recall of players' injury experiences. The players' recollection of how they were feeling and their emotions at the time of their injury may have been distorted as a result of the time lapse between the occurrence of their injury and the conduct of the interview (e.g., Bianco et al., 1999; Granito, 2002). Sparkes and Smith (2008) have further suggested that memories are "... the retelling of the past from the experience of the present" (p. 681), and therefore memories are an experience which may not necessarily be the truth. In the current study, some players were recalling information from a few weeks earlier while other players were describing their injury experience from up to one year prior to the interview. Therefore, some players may have found it difficult to accurately differentiate between emotions at different stages of their injury. The limitations of retrospective studies have been recognized and investigators have

recommended the use of a longitudinal study conducted over different stages of the injury period to provide an accurate representation of the injury experience (e.g., Bianco et al., 1999; Gould, Udry, Bridges, & Beck, 1997b; Macchi & Crossman, 1996). This approach would enable AFL players to describe the injury experience as it unfolded. A longitudinal examination of the emotional implication of injuries suffered by Australian football players seems well justified.

A second limitation of the study derives from the characteristics of the sample. The sample was based from one AFL club. Potentially, the influence of a club culture, whereby all team members may be in tune to the climate of the club, may systematically influence results. The findings from the study may therefore be applicable only to this single club. At the time of data collection, there were 16 clubs in the AFL national competition and it would be of benefit for future studies to examine players from a variety of AFL clubs to obtain a cross-section of information which could be more applicable to the population of AFL players.

Third, some literature has suggested the use of psychometric measures as a potential tool for triangulation of data (e.g., Sapsford & Jupp, 2002). Triangulation would allow the researcher to have greater confidence in the research findings as compared with findings derived from the use of a single (interview) methodology (Clark, 1999). However, given the highly exploratory nature of the present investigation with accompanied lack of preconceived notions that the footballers might report, the use of psychometric measurements were not considered for the present investigation.

The findings from this study have important implications for future research. Conducting prospective qualitative research with elite AFL players may provide a more accurate account of the injury rehabilitation process. It is also suggested that future research examine injuries that are comparable in severity and duration to gain an accurate report of the emotional reaction to injuries. Obtaining such information would be integral for injury management and rehabilitation in the AFL.

CONTRIBUTIONS TO LITERATURE

This study has contributed to the literature in a number of ways. For example, this research is the first study to examine the injury-related experiences of professional Australian rules football players. Although some findings have been consistent with previous research with respect to the initial emotional reactions to injury (e.g., Gayman & Crossman, 2003; Tracey, 2003; Udry et al., 1997a), the present study did identify several notable differences in professional Australian footballers relative to other athletic populations. In particular, findings with athletes from one specific sport at the elite level indicated that the response to injury was moderated by the severity of the injury. Previous research has not differentiated between amateur, semi-professional, and professional athletes (e.g., Rose & Jevne, 1993), competitive athletes and recreational athletes (e.g., Daly et al., 1995; Quackenbush & Crossman, 1994), and Olympic athletes and state-level competitors (Quinn & Fallon, 1999). In addition, this research indicates that there appears to be the acceptance of an injury among AFL players. There was an acknowledgement among players that they would have to carry minor injuries throughout the season. Indeed, players' welcomed a minor injury as an opportunity to have some time off to freshen up. The severity of the injury did, however, moderate a number of psychological responses to the injury, for example muscles strains resulted in players being more positive and optimistic about their injury, whereas long-term injuries such as a knee reconstruction were more negative, inconsistent and challenging with an increase in anxiety and frustration as the injury prolonged and once the player had returned to competition. In

addition, preliminary information has been identified in relation to a lack of support from coaches within this particular AFL team. This topic warrants further investigation utilizing a wider sample from multiple AFL clubs that potentially examines AFL players from a narrative line of enquiry. This type of research has been proposed in the methodology of research in sport and exercise psychology (e.g., Smith & Sparks, 2009) and may assist the understanding of the lived experiences of AFL players sporting and everyday life.

PRACTICAL IMPLICATIONS

From a practical perspective, based on findings regarding players concerns of poor skill execution upon return to play, coaches could be encouraged to alleviate these concerns by building player self-efficacy. Specifically, coaches could remind players of athletes who have returned to competition from a similar injury and excelled, or even instances of when the player himself has been able to perform well following the injury. Indeed, this discussion could be supplemented with appropriate video footage of games. Furthermore, given that players valued the input of coaches, yet felt a lack of connection with coaches during rehabilitation, coaches could benefit from making specific regular enquiries about how the rehabilitation process is progressing and to invite players to discuss how they are feeling about the process. This strategy may potentially combat feelings of isolation in the long-term injured player and encourage the coach to become more involved in the rehabilitation of the injured athlete.

Based on the reported variability in psychological responses among players, often as a result of the severity of the injury, it is recommended that sports trainers and medical staff appreciate this variance among injured players. Furthermore, based on findings pertaining to boredom with the repetitiveness of rehabilitation and players missing the team environment, it is further recommended that the rehabilitation activities are varied and that players are encouraged to rehabilitate in a team environment wherever possible. Research has demonstrated that athletes in team sports need to feel like an integral part of the team and feel like they are contributing to the on-field performance (Podlog & Eklund, 2006).

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