A Parental Perspective on Adolescent Injury Rehabilitation and Return to Sport Experiences

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A Parental Perspective on Adolescent Injury Rehabilitation and Return to Sport Experiences

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The purpose of this study was to examine parent perspectives of their adolescents’ injury rehabilitation and return to competition experiences. Ten Australian parents (seven females, three males) were interviewed over an 11-month period. Six key themes emerged from parent interviews: injury rehabilitation and return to competition stressors, coping strategies for psychological and physical pain, parental concerns regarding injury rehabilitation and return to sport, the provision of social support, perceptions of a successful return to sport, and benefits of the injury experience. Results are discussed in relation to the psychology of injury literature and self-determination theory findings.

A wide body of research demonstrates that injury may have important psychosocial implications for competitive athletes including disruptions in mood states, a loss of positive social identity and uncertainties regarding the prospects of a return to pre-injury competitive levels (Bianco, 2001; Gould, Udry, Bridges, & Beck, 1997). Anxieties associated with re-injury and...
concerns about meeting the performance expectations of significant others such as teammates, family, and coaches may also be prevalent (Evans & Hardy, 2002; Podlog & Dionigi, 2010). Although knowledge of the psychosocial factors implicated in injury onset and rehabilitation has grown substantially, much of this research has focused on elite level or adult athletes. Among adolescent athletes, however, sport injury may be a particularly arduous challenge given developmental issues such as identity concerns, social skill acquisition, self-regulation, and self-perception issues (Manuel et al., 2002). In light of these developmental challenges, parents may play a pivotal role in assisting their adolescents in dealing with the multitude of injury-related obstacles. Little is known, however, about parent perceptions of the challenges or stressors of adolescent injury rehabilitation and return to sport, or the forms of support and assistance they offer.

To date, previous investigations have indicated several convincing reasons for focusing on the specificities and particularities of the adolescent injury experience (Brewer et al., 2003; Tripp, Stanish, Reardon, Coady, & Sullivan, 2003; Udry, Shelbourne, & Gray, 2003). For example, Udry et al. (2003) found that adolescents reported higher preoperative mood-disturbance levels than adults but higher levels of psychological readiness for surgery (i.e., 10 psychological process of change, pros versus cons of surgery, and rehabilitation efficacy). Similarly, Tripp et al. (2003) reported that adolescents experienced increased levels of pain, state anxiety, and catastrophizing as compared to adults, 24 hr post-surgery. Finally, a third investigation revealed that younger patients reported higher adherence when they were highly invested in the athlete role as a source of self-worth, whereas older patients reported that self-motivation and social support were key determinants of post-surgery rehabilitation adherence (Brewer et al., 2003).

Collectively, these studies indicate that injured adolescent athletes may experience heightened negative emotionality and increased stress responses in comparison with older athletes. In attempting to understand adolescents’ injury-related challenges and experiences, gaining the insights of parents may be invaluable. Undoubtedly, parental pressures to compete in sport or to play through pain and injury may represent a source of adolescent stress (Hellstedt, 1990). Parents, however, may also be influential in buffering the effects of negative life events and facilitating the coping process (del Voi le, Bravo, & López, 2010). As such, parents may possess valuable knowledge into the stressors and coping processes of their injured adolescents. Second, parents can offer an insider’s perspective on adolescent injury by virtue of their close proximity to their adolescents. Moreover, parents have the benefit of an outsider’s perspective given that they are one step removed from the injury experience itself. This dual insider/outside perspective gives parents a unique ability to shed light on their adolescents’ injury experiences. Lastly, given their age, parents may have the advantage of being able to articulate the nature and depth of adolescent experiences in ways that younger adolescents in particular may find difficult. Understanding the nature of adolescents’ injury experiences and the key personal and environmental factors influencing their rehabilitation may be essential in the development of age-appropriate interventions.

Literature on adult elite athlete experiences in returning to sport from injury indicates that three key factors articulated in self-determination theory (SDT; Ryan & Deci, 2000), specifically competence, autonomy, and relatedness, are relevant in examining transitional issues accompanying a return from injury (Podlog & Dionigi, 2010; Podlog, Lochbaum, & Stevens, 2010). Competence concerns about performing to pre-injury levels, re-injury anxieties, and reservations about achieving future performance goals are often salient (Gould et al., 1997; Johnston & Carroll, 1998). Moreover, evidence that athletes experience external and internal pressures to return to full activity (Nixon, 1994; Podlog & Dionigi, 2010), and that they typically value freedom from pressure suggests that autonomy issues may be relevant.
(Bianco, 2001). Finally, relational concerns related to perceptions of alienation from friends, teammates and fellow competitors, as well as a lost sense of social identity, may be prevalent (Gould et al., 1997). Importantly for this investigation, SDT findings, both in and outside the sport injury context (e.g., Niemiec & Ryan, 2009; Podlog et al., 2010) indicate that environments that satisfy competence, autonomy and relatedness needs are associated with higher levels of personal well-being, healthy social development, and self-determined (i.e., volitional) behaviors.

From an SDT perspective, the extent to which parents address the psychological needs of adolescents may have direct implications for the quality and nature of adolescents’ rehabilitation and return to sport experiences. Given preliminary evidence for the benefits of need satisfaction among injured adult athletes, examining the extent to which injured adolescents experience concerns about competence, autonomy and relatedness is essential for optimizing rehabilitation environments. This knowledge would be useful for parents, coaches, and rehabilitation specialists attempting to better understand and facilitate the rehabilitation of injured adolescents.

The primary purpose of this investigation was to examine (a) parental perceptions of adolescents’ injury rehabilitation and return-to-sport experiences, and (b) to explore parents’ perceived influence and role in the rehabilitation of their injured adolescents. A second aim was to utilize SDT as a framework for interpreting and discussing these issues. A qualitative approach was deemed appropriate to meet the study objectives.

**METHOD**

**Participants**

Ten parents (seven females, three males) between the ages of 39–51 ($M = 43.5$, $SD = 3.47$) from regional towns in the Central West area of New South Wales, Australia, participated in one-on-one interviews. Parents were recruited if their adolescents’ were (a) 12–17 years of age ($M = 15.2$, $SD = 1.81$), (b) on a state team or a member of an institute of sport squad, and (c) had incurred an injury requiring a minimum one-month absence from sport participation.

Although none of the young athletes had competed internationally, they were at the penultimate level of competition prior to that stage. With the exception of one adolescent, all athletes aspired to play in a professional league in Australia, to win an Australian National age-group medal or to compete on a junior or senior national team. The sports in which the adolescents competed were basketball ($n = 1$), netball ($n = 4$), soccer ($n = 3$), rowing ($n = 1$), and athletics ($n = 1$). Adolescents’ injury types included torn anterior cruciate ligament (ACL, $n = 1$), shoulder dislocation ($n = 2$), dislocated knee ($n = 2$), broken bone ($n = 1$ fibula, $n = 1$ arm), lumbar spine fracture ($n = 1$), Sherman’s Disease ($n = 1$ back), injured Achilles ($n = 1$), and a bulging disc. The average length of time that adolescents were unable to participate as a consequence of injury was 5.2 months (range 1 to months 12, $SD = 3.58$). To ensure parents’ and adolescents’ anonymity, pseudonyms were utilized.

**Procedures**

Based on the extant research on the psychology of sport injury, a semi-structured interview guide was created to address issues spanning the rehabilitation phase (e.g., “Describe any stressors your adolescent has experienced regarding his/her injury rehabilitation”), the pre-return to competition (e.g., “Discuss any forms of support/assistance that you have given your adolescent as s/he prepares to return to competition?”), and the return to competition following
injury (e.g., “Do you think your adolescent feels s/he has been successful in his/her comeback to date? Explain why or why not?”). A full list of interview questions is available upon request from the first author.

After receiving institutional research approval, participants were contacted through administrators at the Western Region Academy of Sport. During the initial meeting, participants were given an information sheet regarding the study’s purposes and informed consent procedures followed. Utilizing a longitudinal design, a total of 24 semi-structured interviews lasting 1 to 2 hr were conducted with participants in person (n = 20) and via telephone (n = 4). Interviews took place over an 8–11 month period, depending upon the length of adolescents’ rehabilitation phase. Parents were interviewed on one or two occasions during their adolescents’ rehabilitation and once following the return to competition. Due to logistical issues, six parents were only interviewed once during their adolescents’ rehabilitation and once following the return to competition. The number and the timing between interviews depended upon considerations such as parents’ availability and schedule.

Data Analysis

All interviews were recorded and transcribed verbatim. The first stage of analysis involved intratextual (i.e., within-text) and intertextual (i.e., cross case) analysis of the data using the constant comparative method of analysis (Maykut & Morehouse, 1994). Intratextual analysis entailed writing analytic memos in the margins regarding salient adolescent injury experiences and grouping meaningful text segments (i.e., quotes) into raw-data themes. Intertextual analysis involved identifying raw-data themes that were common across interviews to form higher order-themes. The second stage of analysis involved an examination of the extent to which emergent themes had an underlying conceptual overlap with competence, autonomy and relatedness needs articulated within self-determination theory. Given our a priori purpose of using SDT as a framework for interpreting parents’ perceptions of their adolescents’ injury experiences, we did not adopt a pure grounded theory approach (Glaser & Strauss, 1967). Rather, a hybrid approach (Podlog & Dionigi, 2010) was employed in order to enable (a) the emergence of key themes from the data, and (b) the use of SDT to interpret our findings.

Multiple interviews, empathetic stance, investigator triangulation and the use of “devil’s advocate” were used to ensure the goodness criteria (Sparkes, 1998) had been met. Conducting multiple interviews with parents provided the opportunity to examine changes in parents’ perceptions throughout their adolescents’ rehabilitation and return to sport. An empathetic stance was cultivated by having the first and last authors read through the transcripts on four separate occasions to gain a thorough understanding of participants’ perspectives and point of view. Empathetic understanding was further accomplished through ongoing discussions between two of the investigators regarding salient points emerging from interview transcripts. Investigator triangulation was addressed by the independent analyses of the data using the constant comparative method described above by trained researchers. Independent analyses of the data revealed a 96% agreement rate with regard to theme development and categorization, indicating validity of the theme classifications. Finally, the first author served as devil’s advocate by questioning, challenging and discussing the appropriateness of a second researcher’s theme classification. These discussions took place on multiple occasions during the intra and intertextual data analyses to ensure the accuracy of the themes.

RESULTS

Six key themes emerged from parent interviews spanning the rehabilitation, pre-return to competition, and competitive phases. These themes included injury rehabilitation and return to
Injury Rehabilitation and Return to Competition Stressors

Parents articulated a number of stressors during their child’s injury rehabilitation including negative emotional responses to injury, the impact of physical mobility difficulties, motivational decrements, and missed bonding opportunities. Re-injury concerns, failing to achieve sport-specific goals, and injury setbacks were also prominent stressors described in parent interviews.

Negative Emotional Responses to Injury

Negative emotional responses, but particularly, feelings of disappointment or frustration by adolescents, were reported to occur at various points throughout the injury rehabilitation process. Such feelings generally stemmed from the inability of adolescents to be physically active, a feeling of powerlessness to do what brought adolescents’ satisfaction, missing sporting opportunities, or the perception of falling behind their peers in skill level or fitness. Laura commented, “when we were lying in the hospital waiting for the X-rays to come back, she kept looking at me with those sad puppy-dog eyes. She said ‘It’s not broken, is it, mum?’ ... As soon as they said ‘No, it’s broken,’ she just sort of burst into tears.” Missing out on opportunities to compete or to advance to a higher level (e.g., a tryout for an elite team) were clear sources of frustration for adolescents according to parents. Janice stated, “I just think that it was difficult, especially dropping out of the 17s State Team because she trained right up to a week before, or two weeks before, the competition.”

Physical Mobility Difficulties and Limitations

Physical mobility difficulties and limitations were also believed to be stressful as they impacted adolescents’ scholastic activities, daily physical functioning, fitness levels and body image perceptions. Deborah commented, “... there are a lot of steps at Balmore High, so that [prevented] him from actually going to school on some occasions, which means he’s had to be at home and there’s been an interruption to his study.” Physical mobility limitations also impacted daily functions such as getting into the shower, navigating steps, and bending and lifting objects. These alterations made simple tasks more arduous, and parents believed such adaptations often resulted in adolescents’ feeling helpless and embarrassed. As Andrea remarked, “certainly for those first two weeks when she’s in the splint and not able to wait there, you know, life is very difficult at that stage. I mean, she needs a hand to get into the shower, and being a twelve-year-old girl that all adds to it.”

Such physical limitations were also associated with fitness and strength decrements that were believed to impact adolescents’ eating habits and body image perceptions. Several parents commented that youth were more cognizant of dietary issues during injury, or in some instances, increased strength training in non-injured areas to maintain weight or fitness levels. Despite such attempts, several adolescents gained weight during injury rehabilitation. Deborah commented that despite her son’s efforts to watch his diet, “he’s packed on a little bit of weight, but he’s solid and I don’t think he likes that. And that’s pretty hard to keep off when you can’t do what you want to do.”

Parents described how their youth worried that a lack of physical fitness would inhibit the ability to meet sport-specific demands and would hinder post-injury performances. In some instances, such concerns were justified as adolescents’ struggles with achieving competitive fitness levels were apparent upon the return to sport. Overcoming fitness challenges was stressful for adolescents because it typically resulted in reduced playing time, feelings of
frustration and for some, resentment toward teammates. According to parents, diminished fitness levels of the adolescents were due to a lack of time and effort put into fitness during the injury rehabilitation. It was also acknowledged that fitness levels of the athletes would take time to return to pre-injury levels.

**Motivational Decrements**

The parents perceived that for some adolescents, injury occurrence negatively affected the motivation to return to sport. Declines in motivation appeared to stem from a concern regarding an inability to return to previous skill levels or due to an increasing interest in non-sport activities. In regard to the fear of not regaining previous levels, Myron said that his son “... found it hard to get back into it. He sort of had the attitude that it’s not worth it, he’s giving up all his free time for training, not getting anywhere with it, like a real negative approach to it.”

**Missed Bonding Opportunities**

Missed social interactions and opportunities by adolescents to bond with teammates during injury rehabilitation was a stressor articulated in parent interviews. Exclusion from sport training and competition meant that adolescents missed socializing opportunities with sport peers, interactions that were seen as integral to adolescents’ well-being and self-concept. In discussing the impact of injury on her son’s emotional state, Deborah, remarked, “... in regards to his psychological status I’ve been a little bit in trepidation and on guard and watching, in fear really... I realize what soccer means to him and it’s not just the mere sport, it’s the interaction with his friends. He’s got a wide group of friends from all different walks of life and he’s grown up with these guys, and he kind of misses it... He’s a little bit isolated.

An inability to partake in social and team functions and to compete in activities of long-standing involvement impacted adolescents’ sense of social identity. Typical of other parents, Laura stated that her daughter, “just lives netball. She just has done so well with it. She’s known in the town for that.” Not being able to partake in regular training routines and competition or to do what adolescents were known for was suggested to negatively impact their identity and self-concept.

**Re-injury Anxieties**

Re-injury concerns were also highlighted, particularly as the return to competition approached. Although feelings of excitement and eagerness to return to sport were reported, such emotions were tempered by an uncertainty about the ability of the formerly injured body part to withstand competitive rigors and demands. Some parents felt their adolescents’ re-injury anxiety stemmed from ongoing physical pain symptoms, whereas others noted that the occurrence of multiple injuries resulted in diminished physical confidence. Regarding the perception that insufficient healing had occurred, or the belief in a high probability of injury recurrence, Myron said of his son, “He’s definitely keen to want to compete again, but he’s very worried that he may not be physically fit and that his back problem is just going to keep reoccurring.”

For some athletes, re-injury worries persisted during the initial months of the return to competition. Andrea commented that her daughter, “was worried about her knee dislocating again,” a concern that for many, typically manifested in cautious or hesitant play, particularly when entering physical contact situations or ones similar to the initial injury occurrence. Epitomizing this idea, Susan noted that in the last game her daughter played, “she felt that she
really couldn’t play, she wasn’t playing to her full potential, you know, she was a bit scared . . . a little bit timid.”

**Failing to Achieve Sport Goals**

Failure to achieve sport specific goals was another prevalent stressor reported following the return to competition. In discussing a long-jump competition following the return to sport, Myron indicated his son,

... came fourth actually, he jumped terrible . . . Yeah and then after that he was sort of pissed off and cranky with himself more than anything. And he just said that’s it, and he’s not competing anymore till he’s ready to do it. And he hasn’t, he hasn’t been back to the warm-up track again or, he’s done nothing.

As Myron’s quote suggests, an inability to attain goals was a clear stressor for adolescents, one that in some instances led to cessation of sport involvement. Moreover, a number of parents (n = 7) suggested that injury had negatively affected their adolescent’s ultimate sporting aspirations. Andrea commented that her daughter dislocated her knee practicing for a try-out, “... so it’s definitely affected her goals, I think. She’s been unable to achieve some of them. I think they would have been higher had she not had all these injuries.”

**Injury Setbacks**

A final stressor mentioned in parent interviews was the experience of injury-related setbacks following the return to competition. Six parents noted their youth had severe pain when executing sport-specific skills or movements, often resulting in a return to physical therapy sessions, taping, or applying a brace to the injured body part. Unfortunately, three athletes experienced re-injury following the return to competition. Andrea commented, “... the next time she convinced me to let her play a bit longer ... and the second quarter, she dislocated her patella again.” Two parents whose youth experienced re-injury believed their youth would still return to sport after their rehabilitation was completed, but one parent said the re-injury caused her daughter to make the decision to not return.

**Coping Strategies for Psychological and Physical Pain**

The most common form of coping with injury-related challenges was to keep busy by engaging in non-sport related tasks and by socializing with friends. Doing so reportedly enabled the youth to keep their mind off the injury, while providing the opportunity to excel in previously neglected activities. Susan noted her daughter, “... hurt her knee and then in year eleven started topping exams, which she’s never done before; because I think she wanted the competition, she missed the competition so she put it [effort] in another area.” Socializing with friends was also beneficial in keeping adolescents’ minds off of the injury because it enabled the adolescents to cultivate non-sport friendships, to partake in new activities, and to develop a sense of identity outside the sporting realm. Deborah said about her son, “I think he’s made a more conscious effort to keep involved with maybe some of the other friends that aren’t involved in his soccer stuff. He’s kind of diversified.” In some instances, one consequence of socializing with non-sport peers and/or involvement in non-sport activities was a reduced motivation and interest in returning to sport. Myron expressed disappointment in relaying an instance where his adolescent commented that he no longer had the drive to return to his previous competitive level, a fact that Myron attributed in part to the development of non-sport interests and friendships.
Another injury-coping behavior observed by parents was for their adolescents’ to take on a different team role or to support teammates. Although athletes expressed some ambivalence in discussions with parents about remaining involved, interview comments revealed that continued involvement provided a beneficial coping function. In discussing her injured daughter’s attendance at a netball competition, Laura’s comments exemplified this sentiment:

The team was really good, the coach was fabulous. He invited her along to all the training sessions and she was allowed to go with them . . . Although I think she felt like she was still intruding on them and she wasn’t part of the team really. But, I mean, I think in a way it was probably the best way for her to do it. If she hadn’t have gone at all, I think it would have been the feeling that she had missed out altogether.

Coping strategies in the form of “toughing it out” or “pushing through pain” were also reported (n = 7) with regard to dealing with the physical pain of injury occurrence and rehabilitation. Parents recognized that their adolescents typically embraced the mentality that one must be tough in order to surmount rehabilitation challenges, to return to sport or to be a successful athlete. Candice commented about her daughter, “She finds it hard to say, ‘I’m injured. I’m not going to play.’ If she’s really in that much pain, I mean, the coach can see that and she will pull her off anyway, which she had to do originally when it very first got injured.” Interestingly, some parents were critical of the macho sporting ethos that promoted the notion that one must hide or disregard injury pain. Deborah, for instance suggested that “… everybody is so different and I just want him [son] to have it covered; not to be lying there in agony and not feeling like he’s a wimp if he asks for some pain relief. There’s this common misconception that boys are supposed to be tough and not cry, you know, and that’s crap.”

Parental Concerns Regarding Injury Rehabilitation and Return to Sport

Interviews with parents revealed that they were typically aware of and sensitive to the concerns and coping strategies employed by their adolescents. Discussions with parents also provided them the opportunity to reveal their own injury-related concerns. Just as concerns of a physical nature were believed to be at the forefront of adolescents’ minds, so too such preoccupations were of primary importance for parents. In particular, fear that one’s adolescent would experience re-injury was a prevalent stressor for parents. Karen stated, “I know damn well it’s [re-injury] in the back of my mind every time she went in for a tackle, I was worried about it.” Concerns about re-injury occurrence seemed most salient among parents who received mixed messages from medical practitioners regarding the extent of injury, adolescents’ current physical status, or their readiness to resume competitive activities. Janice commented,

… we’d go to a doctor or we’d go to the physio and no one could really say exactly what was wrong . . . well, he did an MRI for a start, which meant that he could have a really good look at the back and look if there was any other problems. So I guess that was good to go there. Initially that was sort of fairly frustrating, and not only that, it was a bit worrying because you’d hear one thing from one person and something else from someone else.

Parents also articulated apprehensions over having to cover medical expenses such as doctor’s visits, surgery or rehabilitation. Such costs enacted a financial toll on families that was stressful, as alluded to in Deborah’s comment that, “finances are a bit of an issue, but we borrowed money to pay for his [son’s] surgery so he can have it in Sydney and not here.” Despite the financial burden, Deborah, like other parents, indicated that she wanted to assist
her child, even if it entailed personal sacrifice: “It has affected us a lot financially, an awful lot, but you only have your kids once and you do every bit for them.”

An additional source of concern or difficulty for parents related to the implications of injury for interactions with other parents of adolescent athletes. Just as injury impacted adolescents’ social contact with teammates and training partners, it also exerted a parallel influence in minimizing parental interaction with parents of non-injured adolescents. For some, such interactions were an important source of connection and a significant contributor to their well-being. Deborah’s comments epitomized this idea:

I’m wondering if in the whole network of this that my husband has probably been more depressed than anyone about it . . . Jack’s got to know quite a few of the parents and a few fathers in particular have become good friends and they’re similar kind of guys. They have a lot of fun. Jack misses the social interaction . . . Jack’s got this time where he hasn’t got to go to soccer. What’s he doing now, you know?

** Provision of Social Support**

Common across interviews was the assertion that adolescents generally received a high level of social support from family members, coaches and teammates. One of the most frequent forms of support highlighted \( n = 8 \) was transportation to the physiotherapist or doctor which often required several hours of driving for those in regional or remote communities. Some parents \( n = 3 \) also performed rehabilitation exercises alongside their adolescent such as walking or swimming, whereas others discussed how they purchased additional exercise equipment for rehabilitation purposes. Laura commented, “. . . there were times when, she [her daughter] had to go swimming a lot, so I joined the gym for her, and she needed to go for walks, so I’d go for a walk with her, or whatever, I suppose, just to get her motivated . . .”

Informational and emotional forms of social support were also articulated. Parents described instances where they provided positive encouragement following adolescents’ rehabilitation progress. The parents provided reassurance that the adolescent was capable of a successful return in times of doubt and uncertainty while seeking out injury-specific information to provide a better understanding of the injury. Deborah indicated, “I’ve even got on the Internet and looked up a couple of things and said to Nathan: ‘You might like to read this’; printed out a couple of things. Any information I get I kind of pop in his direction.”

Social support from teammates, friends and coaches was suggested to be an important source of support for adolescents. Such support typically consisted of checking in to see how the injury was progressing and offering positive words of encouragement via phone calls, text messages, or e-mails. Concerning teammates and friends, Andrea indicated that, “. . . verbally they’ve all been very encouraging, quite supportive. I haven’t seen anything otherwise. The kids say things like, ‘We can’t wait for you to be back and you were the best defender’ and that type of thing, yes. So they’re quite encouraging that way.” Similarly, coaches typically made regular inquiries to check on athletes’ rehabilitation progress and to show support. As Susan stated, “she [her daughter] got support. The coaches were ringing constantly to make sure she was all right.”

Interestingly, parents also suggested that trainers were supportive insofar as they avoided putting pressure on athletes to return to sport. Most described instances in which explicit statements were made to the effect that athletes should not return to play until they were physically prepared to face competitive demands. As Andrea noted,

Well, I think the physiotherapist put it into perspective when he said, you know, look at how much you’ve got invested into playing, and how much playing time you actually got, I mean
it’s a good twelve months of physiotherapy to play less than an hour, so who in their right mind would do that?

Although high levels of support were typically reported, instances of insufficient support from coaches and medical practitioners were also discussed. Typical of other parents who commented on instances of insufficient support, Rachel remarked,

Not having the support and encouragement of your coaches, I mean she’s had support and encouragement from her parents and other parents, but not from the people who train [her]. And I think it’s a much harder issue, particularly when they’re adolescents and they’re dealing with adults, and these adult coaches are very specific in what they want all the children to achieve regardless of whether they’re in pain or injured or whatever, their main concern is winning.

Parents also described how living in remote or regional communities (some of which did not have a physiotherapist) made regular contact with medical specialists more difficult and the receipt of social support less frequent. Unfortunately, in some instances a lack of support was attributed to adolescents’ cessation of sport involvement. Myron, for example, expressed his concern that his son may have lost his potential because of a lack of support from trainers and doctors: “He’s had nothing, and that’s to me the main downfall for him. It’s very stressful for me knowing that I’m looking at an athlete that may be, you just don’t know, but maybe possibly he may have it, and it may be lost because of, really, a lack of support.” Ultimately, parents felt strongly that many of the aforementioned forms of support were integral to rehabilitation and return to sport success.

Perceptions of a Successful Return to Sport

On the subject of a successful return to sport from injury, parents delineated three key factors that would make their adolescents’ return to sport a success. One significant aspect appeared to be remaining uninjured and pain free in order to engage in competitive play. Comments such as, “I guess his [son] assessment and evaluation will be if his knee does not sublux or dislocate, and that’ll be over many games.” Or “She doesn’t injure herself or come off thinking, ‘Oh gosh. I don’t think I can go back on ...’ so minimal pain would probably be that answer” typified this sentiment. The corollary was that athletes who were unable to continue as a result of re-injury, pain experiences or improper healing would be considered unsuccessful. As Myron said,

“For a while I think it [pain] did [make it unsuccessful] yeah. He’d [his son] deny that but you know, you could see the look on his face down there in Sydney when he was trying his hardest but he couldn’t run cause his knee was that sore and then when he did run he couldn’t jump, and yeah he just sorta ... that’s what made him throw the towel in, he just said no.”

Another salient component of a successful return was the ability of the adolescents to return to previous competitive levels and to attain new goals that had been set prior to the injury. For instance, retaining a starting status on the team, making useful contributions to the team, and surpassing goals set prior to the injury were all indicators of a successful return to sport. Achieving long-term aspirations such as winning medals at Australian age group championships was also considered an important determinant of success for some. As Myron indicated, “... so like a PB [personal best] really probably won’t be good enough, I mean yes, it’d be great to do a PB, but at the end of the day he wants to hold an Australian medal around his neck at the national titles.”
A third and final component highlighted in parent interviews was receiving praise or positive feedback on performances following a return from injury. Such feedback was deemed especially imperative in the immediate return period when adolescents were still questioning their athletic capabilities and testing their formerly injured body parts. Tom stated that his daughter “got a lot of praise from everyone and she played an excellent game” while Candice indicated, “The coaches are happy with her [daughter]. The coach always tells her that she did well, which is great. So she’s getting a lot of feedback which is very positive.”

Benefits of Injury

Despite the many injury-related stressors and obstacles, parents articulated what they perceived to be a number of benefits associated with the injury experience. Such benefits included learning how to cope with adversity, the necessity of injury prevention measures (e.g., appropriate warm-up and stretching), a better appreciation of the arduous nature of injury rehabilitation, and a more sympathetic attitude toward other injured athletes. As Deborah summarized about her son:

I think that it’ll help him deal with adversity and cope, and develop ways to cope. It’ll strengthen him. It’ll make him look at other aspects of his life. It’ll make him really prioritize and evaluate what’s important to him … It might have accelerated his growing up, whether he wanted it or not.

A number of other benefits were highlighted, among them enhanced determination to reach future goals, the development of a stronger work ethic upon the return to sport, more time to focus on activities outside the sport domain (e.g., academics and non-sport friendships), and insights into the possibility of new career options. With regard to career issues, Andrea commented that her daughter has “… gone from wanting to be a historian or an astronomer to wanting to be a physiotherapist now. She basically just had a really good connection with the last physiotherapist … ”

A final benefit related to the importance of having adolescent input into the decision to return to full activity. Although clearance from sport medicine practitioners and coaches was required, adolescent involvement in return to sport decisions gave them a sense of control, ownership and responsibility over the return process. When asked about when and if her son would return to sport, Deborah said, “It’s a personal decision and it will be made by Nathan … an informed decision.” According to parents, youth involvement in the decision to return, demonstrated that parents respected and trusted their judgment and were proud of them. As Andrea suggested, “I respect her [daughter] for what she has put into this, and in that way I respect her decisions.” Interestingly, it was suggested by a parent that medical practitioners often felt the final decision to return to sport should be made by the adolescent by stating

And I mean, even the surgeon has specifically said that there’s certainly not much point in having a life if you can’t do the things you want to do, so if she wants to do netball then again he’s made it clear that it should be her decision. Even though it’s not what he would recommend he’s still quite happy to go along with her decision.

DISCUSSION

This paper focused on parental perceptions of adolescent experiences in recovering and returning to sport following injury. Parents’ perceived influence and role in the rehabilitation
and return to sport, as well as injury implications for the parents themselves were also examined. As issues of competence, autonomy and relatedness were salient in parent comments regarding their adolescent’s rehabilitation and return to sport following injury, SDT will be used to interpret the six key themes described above.

**Competency Issues**

Competency issues surfaced in parent comments regarding the stressors of adolescents’ rehabilitation and return to sport. Stress in the form of negative emotional responses to injury was apparent in adolescent feelings of disappointment and frustration, a finding consistent with past research (e.g., Johnston & Carroll, 1998). Such emotions appeared to be primarily rooted in perceptions that one’s peers were becoming more competent (while the injured adolescent was losing competence) during one’s competitive absence. This finding supports previous investigations that elite adult athletes perceive falling behind others to be a major concern (Podlog & Dionigi, 2010; Podlog & Eklund, 2009). Competence-related concerns of a physical nature were also articulated in terms of worries about losing stamina and strength, difficulties in regaining competitive fitness levels, re-injury anxieties, hesitant post-injury play, and failing to reach specific performance goals upon returning. Pain experiences, movement difficulties, and actual re-injury also impacted adolescent perceptions of physical competence and were believed to prevent athlete attainment of self-relevant goals and the continued pursuit of athletic proficiency. These findings echo past research indicating physical competence concerns to be particularly salient during the initial return to sport period (Bianco, 2001; Gould et al., 1997; Johnston & Carroll, 1998; Podlog & Dionigi, 2010).

Podlog and Eklund (2009) previously reported that definitions of success among high performance athletes returning from injury were related to the achievement of particular competence levels. Many of the competence-related stress sources were also, according to parents, key components of a successful return to sport. In particular, remaining uninjured, returning to pre-injury levels and attaining new goals, and receiving praise and positive feedback indicate that perceptions of success were largely grounded in notions of physical competence and the attainment of higher competence levels. Coaches, managers, and medical practitioners can also ensure opportunities for competence need satisfaction by providing injured athletes with graduated physical tests in training and simulated competitive situations (Podlog & Dionigi, 2010), goal-setting meetings (Evans & Hardy, 2002), and imagery training (Sorodoni, Hall, & Forwell, 2000). SDT research demonstrates that external events (e.g., receiving positive feedback) that conduce towards perceptions of competence are associated with positive motivational and well-being benefits (Ryan & Deci, 2000). Findings from this study suggest that adolescents who experience support and perceive themselves to be competent will likely experience perceptions of success in their return to sport from injury.

Finally, competency issues were also reflected in parent comments regarding adolescent coping mechanisms and in terms of injury-related benefits. One common form of coping also highlighted in previous research (Crossman, 2001) was to divest energies into non-sport tasks, in particular, academic endeavors. Consequently, one injury benefit was enhanced scholastic ability and performance. Other suggested injury benefits indicated by the parents included adolescents’ ability to cope with and overcome adversity, greater knowledge of injury prevention measures, and decision-making involvement regarding the appropriateness of a return to sport. Thus, it appears that injury presented athletes with opportunities to develop a range of valuable skills and competencies. Further research is needed to examine whether competencies developed as a consequence of injury are utilized by adolescent athletes outside the sport domain.
Autonomy Issues

Two key themes related to the notion of autonomy emerged from the data, including adolescent involvement in decisions to return to sport, and a lack of pressure to return from coaches. Parents indicated that involving adolescents in the decision to return to play facilitated perceptions of volition, responsibility and ownership over the return to sport process. This finding is consistent with SDT research and theorizing that autonomy-supportive environments (i.e., social contexts that support choice, personal involvement, and decision-making) permit athletes and exercisers to have an internal locus of causality regarding their sport and exercise involvement (Gagné et al., 2003). It may be that coaches and medical practitioners who foster a sense of autonomy in return-to-play decisions increase adolescent perceptions of physical healing, intrinsic motivation to achieve post-injury goals, and determination to overcome return-to-competition barriers and challenges. Further prospective research examining this contention is warranted.

As a caveat, caution is warranted in allowing athletes to make unilateral decisions regarding their readiness to return. Consistent with previous research indicating that athletes may place internal pressures on themselves to return (Podlog & Dionigi, 2010), parents reported that adolescents were often very eager to return to sport. This, in addition to the fact that several adolescents experienced re-injury, suggests that the latter may not be the best judges of their readiness to return. Consequently, ensuring that adolescents feel autonomous in their desire to return to competition while providing a framework of choices or options in which decisions can be made, seems important in ensuring a safe and successful return to sport. As suggested, further research examining the implications of athlete autonomy in the return to sport would be beneficial.

A second autonomy issue highlighted in parent interviews pertained to the subject of pressure to return to sport. Interestingly, although several parents indicated that their adolescents placed pressure on themselves to return, a noticeable absence of external pressures from coaches, medical practitioners and parents was reported. In fact, adolescents were explicitly told to take their time in returning to sport and to ensure adequate recovery. This finding is in contrast with research highlighting external pressures placed on elite adult athletes to demonstrate their toughness and to play through pain and injury (e.g., Murphy & Waddington, 2007; Nixon, 1994). Although an absence of pressuring statements or behaviors are indicative of autonomy-supportive behaviors (Ryan & Deci, 2000), parents in this study suggested that such actions and statements were viewed as forms of athlete support. This finding supports Ryan and Deci’s (2000) contention that autonomy-supportive environments lead to enhanced perceptions of psychological need satisfaction. Specifically, autonomy supportive actions and statements in the form of a lack of pressure to return to sport may reinforce adolescent perceptions of connection to and support from significant others. From a self-determination standpoint, the use of non-controlling language (e.g., “it’s important that you feel confident and ready to return”) and involvement in decisions to return to play may be useful in diminishing perceptions of pressure to return, and in turn, enhancing feelings of relatedness.

Relatedness Issues

A number of issues highlighted in this investigation were explicitly related to adolescents’ sense of connection (i.e., relatedness) to others. Stephan and Brewer (2007) have found that relationships with other athletes are important in maintaining one’s identity as an athlete. Consistent with previous psychology of injury research (Bianco, 2001; Gould et al. 1997), missed bonding opportunities and limited social interactions with teammates were key stressors for
injured adolescents. Conversely, a lack of sport interactions appeared to influence adolescents’ sense of social identity and self-concept. From a practical standpoint, these findings underscore the importance of ensuring opportunities for meaningful sport-related interactions (e.g., involvement in team training sessions, assisting with coaching or managerial roles) and to maintain a sense of athletic identity. Such interactions may also provide important opportunities for social support exchanges, interactions that parents believed were integral to the success of adolescents’ rehabilitation and return to sport. Indeed, the benefits of social support in offsetting the alienating, social dislocating and stressful aspects of injury occurrence are well-documented (Bianco, 2001; Corbillon, Crossman, & Jamieson, 2008; Johnston & Carroll, 1998). Parents in this study reiterated similar benefits, although instances in which social support exchanges did not always occur were expressed. In an effort to enhance social support provision, research examining the effectiveness of coach education programs incorporating social support and group maintenance affirmation strategies is warranted.

Relatedness issues were also apparent in this study as the parents suggested that socializing with non-sport friends served a valuable coping mechanism. By nurturing relationships outside the sport context, injured athletes were able to take their minds off their injury, and to develop a sense of connection and identity outside the sport arena. It was also suggested, however, that for some adolescents, involvement with non-sport peers and interests in new activities decreased motivation to return to their sport. From an SDT standpoint, satisfaction of relatedness needs should be beneficial for enhancing intrinsic motivation (Ryan & Deci, 2000). The findings from this study suggest that the context or source of relatedness satisfaction (i.e., inside versus outside the sport domain) may have implications for athletes’ situational motivation to return to sport following injury. It may be that injured athletes who experience relatedness need satisfaction outside the sport realm are better able to cope with their injury but are also more likely to experience diminished motivation to return to sport. Further research examining this contention is needed.

Limitations

The present study has a number of limitations. It is possible that interviewing parents prospectively may have influenced their subsequent behaviors in a fashion that might not otherwise have occurred with retrospective interviews. For example, asking about the provision of social support could have prompted additional support or drawn parents’ attention to support related issues that influenced the nature of follow-up discussions. In an effort to mitigate such effects, open-ended neutral questions were utilized and the interviewer (first author) refrained from value judgments that might alter future parental behaviors or actions. Second, although every attempt was made to ensure that parents were interviewed at roughly similar time points, logistical issues such as parents’ availability and schedule, meant that not all parents were interviewed at standardized time points. As such, recall biases in reflecting on recent injury experiences may have influenced some parents to a greater extent than others. Along these lines, the fact that four parents were interviewed on three occasions whereas six were only interviewed twice meant that particular patterns emerging from a close-up prospective examination may have not have been uncovered among those interviewed on two occasions. Third, as parents were drawn from a single regional area on the East Coast of Australia, the findings may not be generalizable to other contexts. Finally, it is possible that different adolescent injuries, different sport types (e.g., individual versus team), and different levels of parental involvement may have influenced parents’ support levels and responses to questions.
CONCLUSION

Findings from this investigation have a number of relevant implications for sport injury research and practice. As many of the issues highlighted related to notions of competence, autonomy and relatedness articulated in SDT, it seems logical that interventions address these three target areas. A range of strategies including goal-setting (Evans & Hardy, 2002), imagery (Sorodoni et al., 2000), and the provision of progressive physical training (Podlog & Dionigi, 2010) may be effective in meeting athletes’ competence needs. Results of this investigation suggest that in utilizing these strategies coaches and medical practitioners should direct adolescents’ attention to self-referent goals and standards of improvement. Coaches and parents can also facilitate injury-coping processes by encouraging adolescents to develop non-sport competencies such as scholastic endeavors and personal activities of interest. Similarly, involvement in injury rehabilitation and return to sport decisions as well as non-pressuring behaviors may enhance injured adolescent perceptions of autonomy. Coaches and rehabilitation specialists can enhance autonomy perceptions by providing choices and options regarding rehabilitation exercises, a rationale for the benefit of performing particular exercises, and the use of non-controlling language to reinforce perceptions that one is returning to competition for autonomous reasons. Finally, employing various social support and group involvement strategies may be beneficial in meetings athletes’ relatedness needs (Bianco, 2001; Corbillon et al., 2008). Having weekly or bi-weekly meetings to discuss athlete progress in their rehabilitation and to assess progress towards athletic goals may simultaneously fulfill competence and relatedness needs. Practitioners can also minimize the socially dislocating aspects of the injury experience by partnering injured adolescents during rehabilitation sessions and by arranging injury discussion groups or contact with injury role models. Further research examining the effectiveness of SDT-based interventions using well-controlled experimental designs and sufficient sample sizes seems a worthwhile step. Furthermore, research examining coach and athlete perceptions of the extent to which they provide or receive need satisfaction would reveal areas that receipt of athlete need satisfaction could be enhanced. Finally, prospective research examining whether need satisfying experiences during rehabilitation are predictive of enhanced post-injury outcomes would be beneficial. The wealth of research outside the sport domain highlighting the benefits of psychological need satisfaction (Ryan & Deci, 2000) suggests similar outcomes are likely within a sport injury context.

REFERENCES


