Intervention Strategies
With Injured Athletes:
An Action Research Study

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This action research study employed a multi-modal intervention with three athletes rehabilitating from injury. The efficacy of a number of intervention strategies emerged, including social support, goal setting, imagery, simulation training, and verbal persuasion. Emotional support was perceived by athletes as important when rehabilitation progress was slow, setbacks were experienced, or other life demands placed additional pressures on participants. Task support mainly took the form of goal setting. There was support for the use of long-term and short-term goals, and both process and performance goals. The effect of outcome expectancy, rehabilitation setbacks, financial concerns, isolation, social comparison, and the need for goal flexibility emerged as salient to athletes’ responses to, and rehabilitation from, injury. In the reentry phase of rehabilitation, confidence in the injured body part, and the ability to meet game demands was perceived by participants as important to successful return to competition.

Action research emerged from America as a form of rational social management, and it has been employed widely within educational practice and nursing.

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and as a means of examining a number of social issues (Hart & Bond, 1996). Action research is “a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which these practices are carried out” (Carr & Kemmis, 1988, p. 162). It is concerned with interventions in real life situations and a close examination of their effects (Castle, 1994). As a result, the emphasis is not on obtaining generalizable scientific knowledge but rather precise knowledge about a given situation for a given purpose (Cohen & Manion, 1994). Two essential features of action research are involvement and improvement (Carr & Kemmis, 1988).

In a recent review of issues in intervention research in sport psychology, Vealey (1994) identified the need for reflective research to be conducted by practitioners in the field in order to “clarify patterns of understanding that are developed in practice” (p. 501). This reflective practice underpins action research and was employed within a specialist sports injury clinic as a means of monitoring a goal-setting program with injured athletes, in collaboration with physiotherapist personnel (Gilbourne, Taylor, Downie, & Newton, 1996). The study by Gilbourne et al., like many other such projects, was undertaken in a medical-rehabilitative context, but there is no necessary condition that precludes action research in other spheres of human interaction (Sparkes, 1991). Berlak and Berlak (1987) go further and indicate that action research can occur in any arena of human activity and need not be attached to the physical environment of social institutions (the peripatetic nature of applied sport psychology renders the notion of an institution problematic, especially because the institution is created by the presence of the intervening actor).

As Sparkes (1991) suggests, there has seldom been a shared understanding of action research, and the operational description of an action research intervention protocol is unlikely to be defined in a precise way. As a result, the ontological and conceptual bases of some action research studies have been challenged and contested. The work of Hult and Lennung (1980), however, indicates that definitions can be inclusive and wide-ranging and their summary provides an important conceptualization of action research:

Action research simultaneously assists in practical problem-solving and expands scientific knowledge, as well as enhances the competencies of the respective actors, being performed collaboratively in an immediate situation using data feedback in a cyclical process aiming at an increased understanding of a given social situation, primarily applicable for the understanding of change processes in social systems and undertaken within a mutually acceptable ethical framework. (p. 247)

The present study employs a cycle of planning, acting, monitoring, reflecting, and evaluating (Carr & Kemmis, 1988; Tinning, 1992) in a climate of critical thought and the empowerment of participants (Sparkes, 1991). The purpose of the study was to employ the process of action research in a longitudinal psychological rehabilitation intervention with three injured athletes. Although originally conceived as a goal-setting intervention, over the course of the study, the intervention evolved to embrace the use of a number of other techniques. These included simulation training, visualization, and verbal persuasion. Social support, in the form of emotional support and emotional challenge, listening, shared social reality, and
task support also became an integral feature of the intervention (cf. Rosenfeld, Richman, & Hardy, 1989).

Method

Participants

The three participants, identified through their involvement in a five-week goal-setting study, were invited to participate in a longitudinal action research project. The sample was purposive in that it involved the selection of information rich cases of rugby players, who had sustained serious injuries while playing or training, for in-depth study (Patton, 1990). Two of the participants were in the first week and third week, respectively, of the five-week intervention study when invited to take part in the action research project. The third was approached after sustaining a second injury, 10 months after having participated in the earlier study. Participants agreed to take part in the study and completed a consent form that also enabled the researcher (first author) to discuss their rehabilitation progress with the physiotherapist.

In the brief biographical descriptions that follow, the relevant key characteristics of each participant’s individual situation are described to contextualize the project. For reasons of confidentiality all participants’ names have been changed.

Participant 1: Lyndon. Lyndon, a professional rugby player, was 23 when he dislocated his shoulder six weeks into the competitive season. He had broken his ankle six months prior to this in one of the last games of the season. He had spent the off-season and pre-season recovering from the ankle injury and a minor knee operation. Lyndon played first class rugby with a premier division rugby club he had been with seven years, since joining as a youth player. Lyndon had represented his country at under-19 and under-21 levels, and had received a senior “A” cap as a replacement. He sustained his injury two weeks prior to participating in the study. A week into the study, following a magnetic resonance imaging (MRI) scan, the prognosis of his injury was revised. The initial recommendation of five weeks of rest and rehabilitation became one of surgery to his shoulder and three months rehabilitation. Lyndon participated in the study for almost five months, including the first six weeks of his return to playing competitive rugby.

Participant 2: Peter. Peter was a 26-year-old semi-professional rugby player when he sustained a fractured fibia and tibia two weeks before the end of the competitive season. Two and a half years prior, a torn anterior cruciate ligament in his knee had resulted in a 10-month lay off. Additionally, a fractured fibia had required a six-month recovery period. At the time of the injury, Peter had been playing first class rugby with a premier division club for six years. He had represented his country at school and under-19 levels. Peter had made the most first team appearances for his club during the season that his injury occurred. Nevertheless, three months after his injury and three weeks into the start of the following season, his playing contract with the club was terminated. At this time he was in his third week of participating in the study and continued to participate for a further seven months. This period included the first six weeks of his full return to playing. Peter was in full-time employment. He and his partner had a young son.

Participant 3: Howard. Howard was 26 when he tore his left anterior cruciate ligament in pre-season training. He had been back to full training three weeks
after recovering from a torn anterior cruciate ligament in his right knee, sustained eight months earlier. Howard experienced his first of a catalogue of knee problems six years ago, including a torn medial ligament and torn cartilage. Following the latest operation, Howard was advised that there was a possibility that he would never play rugby again, a prognosis that was subsequently revised. Howard played amateur rugby with a division one club. He had previously played semi-professional rugby and represented his country in rugby and track and field at schools and under-20s level. For the last three years, Howard had been employed as a physical education teacher. Prior to his involvement in the current study, Howard had participated in a five-week, goal-setting intervention study (during his previous injury). Howard was 12 weeks post operation at the start of this study and participated in it for 12 months. He has not yet returned to playing rugby.

Practitioner/researcher. A key feature of the present study is that the same individual fulfilled the roles of both practitioner and researcher. The role of practitioner involved providing a psychological intervention as a basis for promoting and evaluating change. The practitioner/researcher (first author) was an accredited sport psychologist (British Association of Sport and Exercise Science) who worked within a sports science department at a British university. In addition, she had previously worked with rugby union at an applied level and specifically with over 40 rugby players rehabilitating from rugby related injuries.

Physiotherapist. All participants in the study were being treated by the same chartered physiotherapist employed within the private medical sector and operating out of a specialist sports medicine clinic. The physiotherapist had extensive experience of the treatment and rehabilitation of sports injuries, particularly within the sport of rugby union. The physiotherapist had been involved in treating all participants for prior injuries and as a result, had known the three participants some years. The physiotherapist was responsible for the administration of all physical rehabilitation procedures.

Data Gathering

A number of techniques were employed to monitor participants’ rehabilitation progress. The information gained was integral to the process of self-monitoring and formed the basis for negotiating action.

Consultations With Participants. Regular consultations took place with participants throughout the duration of their involvement in the project. The purpose of these consultations was to deliver the psychological intervention to expedite participants’ successful rehabilitation and return to competitive sport. The consultations took the form of face-to-face and telephone consultations. The former provided the primary method of monitoring rehabilitation progress and negotiating action and took place every one to two weeks, depending on an individual participant’s needs. For two participants these consultations usually took place at their homes and for the third, at a rugby club. Occasionally, consultations took place at the sports medicine clinic and also involved the physiotherapist. The consultations involved the participant reflecting on rehabilitation adherence, setbacks and the possible causes, perceived progress, physical and psychological symptoms, and personal and professional pressures that may have been influencing their rehabilitation. Intermittent telephone consultations supplemented face-to-face consultations and occurred in response to specific situations (e.g., during a setback).
Consultations With the Physiotherapist. The purpose of consultations between the physiotherapist and researcher/practitioner was to ensure participants were following correct rehabilitation procedures at all times. Although as participants progressed through their rehabilitation, the need for them to attend physiotherapy sessions became less and consultation between the physiotherapist and the researcher was maintained. During these consultations the participants' progress was discussed on an individual basis as a means of monitoring rehabilitation progress, discussing setbacks, and validating actions/interventions (where appropriate).

Diaries. Participants maintained daily diaries for the duration of their involvement in the study and were asked to record all rehabilitation and training activities, as well as any other information they felt was relevant to their progress. All participants recorded information relating to ongoing physical symptoms and how they felt about their injury, rehabilitation, and progress. Participants gave their diaries to the researcher at each face-to-face consultation.

Case Notes. Case notes recorded by the researcher took the form of analytic memoranda. These notes reflected systematic thoughts, particularly in relation to setbacks or obstacles to progress, that emerged during the project. Such memoranda were recorded periodically in response to specific situations that arose for a participant (e.g., “Peter’s anger towards the rugby club at the termination of his contract is continuing to detract from his rehabilitation motivation. The effect upon his rehabilitation motivation will need to be addressed at our next consultation, although it is difficult in the context of his proposed legal action” [case note]). According to Elliott (1991), analytic memoranda enable the researcher to record (a) new ways of conceptualizing the situation under investigation, (b) evidence to “ground” and examine emergent concepts and hypotheses, and (c) statements that reflect emerging problems and issues that relate to future action.

Interviews. Semi-structured interviews were conducted with all participants at the conclusion of their involvement in the study. Interviews were conducted using an interview guide that was adapted to reflect issues particular to each participant (e.g., the effect of specific features of a participant’s injury history). The interview guide ensured that key issues were covered during the interview with each participant (Patton, 1990).

Two interviews were conducted with two participants and only one with the third. The initial interviews ranged in duration from 80 to 100 min. The two follow-up interviews lasted between 20 to 30 min in duration and focused on the period of return to competitive sport, applicable to only two of the participants. The interviews were tape recorded, transcribed verbatim, and checked by the first author for accuracy of transcription. The transcripts were subsequently sent to participants for the purpose of data verification.

Reflexive Narrative

Early Phase of Rehabilitation

When the study started, two of the participants had already commenced their rehabilitation. Peter was experiencing feelings of uncertainty over his position at his rugby club, but was highly motivated to get back to playing first-class rugby within the timescale that had been agreed upon with the surgeon. Howard was motivated
and welcomed the opportunity to take part in the study. He was, however, also becoming despondent at his failure to make progress as quickly as he had on the previous occasion. The situation with Lyndon was a little less clear because he was due to have a scan on his shoulder in five days time.

Within two weeks of the study commencing, Peter’s worst fears were realized: “Well the bombs finally dropped—I had a tap on the shoulder and the magic words ‘Can I have a quick chat Peter?’ 5 min later I’m released—what a surprise!!” (diary extract). Although, because a number of injured players at the club had been released and Peter had had his suspicions he might also be released, the impact was no less traumatic. He recalled during the interview:

I was gutted, not just at being released, but the way in which it was done, that really pissed me off more than anything . . . I’d been a first class player for six years, and now you’re not part of a team . . . They also had contractual obligations, financial obligations, and they tried to renge on them . . . so being released opened up another set of problems [financial], which I hadn’t been anticipating.

At his request, no face-to-face consultations were held with Peter over the following two weeks, and he took two weeks out of his rehabilitation program. At the next consultation, Peter was clearly demoralized and had lost some urgency about his rehabilitation: “Before getting released I knew my contract would depend on how quickly I got back, and when I got released I stepped off the gas . . . the driving force in my rehab was really taken away from me” (interview extract). As a result, we adjusted the time scale for his return to rugby, and revised his initial goals. What became particularly apparent during the subsequent consultation was the support role I (practitioner/researcher) could fulfill as part of the psychological intervention. Much of the consultation was spent discussing Peter’s hopes and aspirations, and I provided empathetic support and a willing ear. The efficacy of this support was later confirmed by Peter: “Felt much better after discussing my situation with Lynne” (diary extract). The support took a number of forms: (a) listening support, as he described the events surrounding his release, and the playing and financial implications; (b) emotional support, as he expressed his feelings, frustrations, and thwarted aspirations; (c) emotional challenge, as we discussed the obstacles and challenges he faced in achieving his aspirations and revised long-term goal; and (d) task support, which involved long-term and short-term goal-setting.

The goals set during this consultation included both performance and process goals. For instance, we set a performance goal for Peter’s return to playing. To regain his focus and motivation, we set a number of short-term goals for the following two weeks. Process goals were used to direct Peter’s attention to processes in which he needed to engage and focus on during his rehabilitation (e.g., the heel-toe foot plant action in walking and jogging activities). Performance goals were considered more appropriate than outcome goals because they do not involve interpersonal comparisons that may be inappropriate in a rehabilitation context. Performance goals also possess important motivational properties (Burton, 1989). Meanwhile, process goals are characterized by greater flexibility (than both performance and outcome goals) and help focus attention. As a result, they lend themselves particularly well to tasks where specific parts need to be emphasized (Hardy
& Nelson, 1988; Kingston & Hardy, 1994), a feature considered important because of the unpredictability of rehabilitation progress. The physiotherapist also emphasized the importance of process features of the rehabilitation, and, as a result, process goals formed an integral part of the goal-setting program.

The extended support role that became apparent during this consultation continued throughout Peter’s rehabilitation (it was also a feature of the intervention with Lyndon) and embraced a number of personal and professional features that impinged directly and indirectly on his responses to, and rehabilitation from, injury. The personal features included parental and child care responsibilities, financial concerns, and playing aspirations. On a professional level, the support embraced professional aspirations and commitments. There is limited empirical research into the effects of social support on athletes’ responses to injury (and the moderating effects of other life events), particularly in relation to coping with setbacks. A number of researchers have suggested that social support for rehabilitation activities may be more significant in predicting rehabilitation adherence than social support per se (Duda, Smart, & Tappe, 1989; Fisher, Domm, & Wuest, 1988; Udry, 1997). Using a global measure, Udry found that social support failed to predict rehabilitation adherence. In their qualitative study of athletes experiencing season-ending injuries, Udry, Gould, Bridges, and Beck (1997) highlight the importance of emotional support for injured athletes during setbacks such as those described here. Moreover, Gould, Udry, Bridges, and Beck (1997b) suggest the need to identify and gain a better understanding of conditions under which social support is mobilized or curtailed. In the present study, following a period of coming to terms with the setback, Peter appeared to use support to vent his disappointment and sense of loss, to rationalize his experience, and to find a way to re-focus on the challenge ahead of him. This problem-solving approach formed the basis for reinvesting in the task of rehabilitation. Interestingly, Peter’s circumstances raised another issue, which also emerged out of Howard’s situation: the effect of outcome expectancy on rehabilitation adherence.

Initially, Howard and I set about establishing a number of short-term rehabilitation goals. This process had been successful during his previous injury rehabilitation, and, as a result, he was keen to engage in this process again. On this occasion, however, the situation was different. A few weeks after his operation, Howard’s surgeon advised him of the possibility that he would not be able to play rugby again. Although we had touched upon the possibility in our discussions, Howard made it clear that it was something he did not wish to address. Instead, we engaged in the process of setting rehabilitation goals on the premise that whether he returned to playing or not, he needed to rehabilitate fully in order to do his job effectively. The loss of both Peter and Howard’s original long-term rehabilitation outcome goal (outcome expectancy) caused motivation problems that, in Howard’s case, were never fully resolved. Of his motivation to rehabilitate, Howard reflected, “I haven’t had anything to train for so I haven’t trained as much as perhaps I should have . . . I’ve always trained for something, rugby or athletics, and at the moment I don’t feel as if I will play again” (interview extract).

A number of researchers have suggested the importance of long-term outcome goals for maintaining motivation over protracted periods of rehabilitation (Fisher, 1990; Fisher & Hoisington, 1993; Hardy et al., 1996). Both Peter and Howard, however, were keen to rehabilitate fully from their injuries, albeit for different reasons, and so the intervention proceeded. It is also interesting to note
that both Peter and Howard described a change in priorities in their lives over the subsequent weeks. Peter’s sentiments were similar to Howard’s: “My priorities have changed a bit. I had promotion in work, I’ve taken on more responsibilities with different teams coaching . . . so I haven’t got as much time to train as I did have” (interview extract). This change in priorities may have been just coincidence, but it clearly detracted from their motivation to expedite recovery. Brewer (1998) highlights the need to examine the relationship between rehabilitation adherence and rehabilitation outcome, and the cases reported here provide some support for the important moderating effect that outcome expectancy may have on rehabilitation adherence. What Peter and Howard experienced represented significant losses (cf. Gould et al., 1997a). Gould et al. (1997b) provide support for the importance of action that focuses an athlete on setting and working toward goals as a strategy to cope with such loss.

During this period, regular features in Howard’s diary were “left knee clicking, both knees very sore, left knee won’t straighten.” These recurring problems meant we had to set flexible rehabilitation goals, and even they proved difficult to achieve. It soon became apparent that Howard’s right knee had not recovered sufficiently from the previous operation to provide the support he now required from it, causing additional stress on the injured left leg. As a result, Howard was admitted to the hospital four weeks into the study to have fluid drained off the right knee and to have the back of the left patella shaved and the cartilage trimmed. Gilbourne and Taylor (1998) highlight the importance of assessing rates of progress once goals are set as a basis for evaluating when to alter the nature or difficulty of the goal. They suggest: “This is particularly pertinent to injury rehabilitation as recovery is typified by an unpredictable mix of rapid progress and disappointing setbacks” (pp. 134-135). Although principles of effective goal setting suggest the need for goals to be specific, measurable, and realistic (e.g., Weinberg, 1992), participants’ commitment to such goals leaves little flexibility in the goal. This lack of goal flexibility can be particularly problematic in an injury rehabilitation context, especially in the early stages of rehabilitation. A natural setback can be further exacerbated if rehabilitation goals are not achieved (Gilbourne & Taylor, 1998). The unpredictability, in Howard’s case, of swelling, soreness, and pain had the potential to represent a setback in itself. The challenge was to set goals that adhered to the principles of effective goal setting but at the same time incorporate sufficient flexibility to avoid the demotivating effects of not achieving the goal. Both Howard and Lyndon had a tendency to ignore discomfort and aches and pain in the injured limb in an effort to achieve the outcome associated with a previously agreed goal, despite being encouraged to adjust goals on a daily basis. The commitment to achieving an agreed goal meant that the self-evaluative nature of the goals at times proved dysfunctional (cf. Beggs, 1990). As a consequence, goals were sometimes set that specified only the process in which Howard had to engage. For example, goals such as one min on the tramette doing controlled proprioceptive alternate leg hops were replaced by using the tramette for controlled alternate leg hops “when the knees are up to it.” Similarly, twenty min in the swimming pool doing a prescribed number of leg strengthening exercises was replaced by “go to the pool and do what you can of the leg exercises without aggravating the knee.” This approach to setting goals enabled Howard to engage in rehabilitation activities, and by doing, take positive action without incurring a negative reaction from trying to achieve a goal that would be detrimental to the continued
progress of the knee. It may be that in a rehabilitation context, particularly in the early stages of rehabilitation that are characterized by frequent swelling and soreness (minor setbacks), the flexibility offered by such an approach may be useful. Unfortunately, because Howard found it more motivating to work toward a clear outcome, in his case, this approach was less than fully effective.

Four days into the study, following an MRI scan on his shoulder, Lyndon was advised he would require surgery and would be out of rugby for a minimum of three months. As Lyndon recalled,

I was gutted . . . I felt like filling up when I was told, but I just couldn’t because [the physio] was next to me, and I thought, I’m not going to cry in front of [the physio] . . . and then on the way home in the car . . . all I could think about was my contract . . . a couple of the boys with injuries less serious than mine had been released from their contracts with the club . . . and I haven’t got any qualifications to do any other job . . . so I was really uptight about that. (interview extract)

Lyndon and I met a few days after his operation. Following the operation, Lyndon’s arm had been put in a sling, and he had been told it had to stay in the sling for six weeks. Lyndon found this prospect particularly frustrating. His diary entries during the first week of being in a sling read, “bored, really bored, and feel absolutely useless,” “I’m really frustrated,” “this is a nightmare.” Being in a sling meant he couldn’t drive and so he was having to spend a lot of time in the house on his own, exacerbating his feelings of isolation. He was also concerned about putting weight on. As he recalled during the interview,

. . . the restriction, being in the house on my own, and knowing that I love to eat . . . I was thinking about it all the time, when can I eat next? I can’t because I’m not doing any exercise to burn it off.

Lyndon had been told he had to rest the shoulder completely for two weeks. When asked what emotions he associated with this period of time, he responded, “depression, weight gain, food.”

During our first meeting post-operation, Lyndon expressed his fears, frustrations, and concerns. I provided emotional support by empathizing with what he was experiencing, both physically and psychologically. Shared social reality and emotional challenge were provided as a means of coming to terms with the implications of the injury and helping him maintain a positive attitude by reframing what he saw as barriers and obstacles into challenges. Lifestyle management goals focused on structuring his days so that time spent on his own was occupied with purposeful activities such as going for a walk, reading, and actively encouraging people to visit. This strategy was akin to emotion focused, and to a lesser extent, task focused coping. This approach we felt would also minimize the time he had available to think about food and eating. Later that day, to clarify what activities Lyndon could and could not do (he was unsure of exactly what he could do), I contacted the physiotherapist. After talking to the physiotherapist we were able to incorporate activity on an exercise bike into his schedule. Although I was not initially sure that I had been able to provide sufficient tangible support, I was reassured by his diary entries that week: “feel much better after talking to Lynne,” “getting better every day,” “weight still down, which is really good . . . so glad I can cycle,” “went on bike, I’ve lost some weight!”
A long-term goal had been agreed upon between the surgeon and physiotherapist for Lyndon’s return to playing rugby, and the rugby club had reassured Lyndon that they were happy with the proposed time scale. By the third week of being in a sling, however, Lyndon had become extremely frustrated. This frustration reflected his perceived lack of progress and the imposed restriction because of his inability to drive. At our consultation that week, during which we had agreed to a number of rehabilitation goals, he admitted to having taken his arm out of the sling in order to be able to drive and get about. adamant that the physiotherapist not be told, he assured me he would not do anything else he was not supposed to do. Looking back over the diary for that week, it was clear that he had increased the intensity of his training and varied the training activities beyond those agreed. Although I felt I had to honor his request for confidentiality, I did feel uncomfortable about it. Later that week Lyndon started to experience pain in his shoulder and had to contact the physiotherapist. Sufficiently panicked by the incident, his arm was put back into the sling where it remained for a further two weeks. When asked about the incident during the interview, Lyndon recalled,

I just thought it felt really good, and two other players who had had the same op were saying “we had it done and took it out early.” They both played months before they should have, and were okay. So I thought maybe I’ll be able to get back a bit quicker.

The desire to rehabilitate faster than both the surgeon and physiotherapist had recommended, although ever present, did not result in any further setbacks. Because this desire represented a complex interaction of contractual concerns, playing concerns, disruption to normal living, and loss of identity as a rugby player, the management of it was challenging. The use of short-term goals was not sufficient as a strategy in itself, and what approached rational-emotive therapy was briefly used to deal with Lyndon’s maladaptive cognitions about the speed with which he felt he could expedite recovery. His cognitions were incongruent with the time required for the healing process prescribed by the surgeon, and hence, principles of logic and rational thinking were used (cf. Harrell, Beiman, & LaPointe, 1995). When the sling was finally taken off, Lyndon started to work on strengthening his shoulder, and two weeks later, he started running. At this point, short-term process and performance goals became the most essential feature of his rehabilitation. We used performance goals to set specific rehabilitation targets and process goals to focus on specific features of the activities, for example, range of motion and control in shoulder strengthening exercises. Later, Lyndon reflected on this period of his rehabilitation:

Once I was out of the sling, although the shoulder was still sore, I knew the exercises were worthwhile, and I knew I had to do them every couple of hours, but I didn’t really mind because I had my goals, and I really stuck to them . . . and once I could start running, and I got a fitness program via you from [a fitness advisor who had previously been with the club (it was checked by the physiotherapist)] . . . I started drilling myself into the ground, knowing that I had to put some fitness back in the bank, and I really stuck to that as well. (interview extract)

Lyndon’s responses during these early weeks raised a number of issues that have been identified in previous research. One of the factors that contributed to
Lyndon’s initial reaction to his injury (also identified by Peter) was his financial/contractual concerns. Primarily applicable to professional/semi-professional athletes, Gould et al.’s (1997a) study is one of few that identify financial/contractual concerns as a source of stress for injured athletes. With the funding available to elite athletes, financial concerns may become an increasingly prevalent source of stress for injured athletes.

Lyndon’s incapacitation and resulting isolation caused him enormous frustration. The potentially debilitating effects of such perceptions of isolation have been highlighted in a number of qualitative studies (e.g., Gould et al., 1997a; Johnston & Carroll, 1998; Udry et al., 1997). In Gould et al.’s study, isolation stems from feeling cut off from the sporting environment, coach, teammates, and familiar routines. Despite the strategies employed, it was quite difficult to address this feature of Lyndon’s injury experience because of the practical assistance required from other people. The intensity of Lyndon’s feelings of frustration and isolation led him to take his arm out of the sling in order to drive (to the club). According to Gould et al. (1997b), injured athletes identified having other injured athletes act as models or references as a facilitating factor. Social comparison, however, is cited as a source of stress by one-third of injured athletes in an earlier study (Gould et al., 1997a). The use of such social comparison or models/references can have either a beneficial or detrimental effect on injured athletes. Lyndon’s use of models/references was to validate actions that were harmful to his own rehabilitation progress. Fortunately for Lyndon, the setback that resulted from his use of other players to validate potentially injurious activities was relatively minor and served to reinforce the importance of adhering to the prescribed rehabilitation program.

**Mid Phase of Rehabilitation**

Four weeks after his initial setback, and having had two weeks where he had been able to exceed his rehabilitation goals, Peter experienced a further setback. Following his appointment with the surgeon, he recorded in his diary:

> Very disappointed with my x-ray. Whereas the smaller bone seemed completely healed, the larger bone hadn’t changed since my last x-ray. Although the consultant said I could gradually increase my training, I could see that he was disappointed as he’s usually more encouraging. My next appointment is not until 19th December [he had originally hoped to be playing by then], so it doesn’t look like I’ll be playing this year.

The contact that Peter had with his surgeon was the only medical support he continued to receive. The physiotherapy had been arranged through the rugby club, and although he knew the physiotherapist well, he had contact with her only twice over the phone throughout the remaining period of his rehabilitation. Initially, I found Peter’s decision not to pursue physiotherapy treatment personally frustrating and professionally a cause for concern. Eventually, having been unable to persuade him of the need to see a physiotherapist, I came to terms with Peter’s decision. Throughout, however, with Peter’s consent, I continued to consult with the physiotherapist in relation to rehabilitation procedures. This contact helped ease some of my frustration and concern. Gilbourne et al. (1996) report a decrease in injured athletes’ adherence to goal-setting programs when they spent protracted
periods away from the clinical environment and resulted from athletes’ inability to interpret feedback from the injury and have confidence in setting rehabilitation goals. This decrease in adherence was not apparent in Peter’s case, and as he later explained:

I knew what rehab I had to do because [the physio] and [consultant] told me what I would have to do in the beginning, so there didn’t seem any need to go back . . . I think I had confidence in the physio, and knew I could turn to [the physio] at any time. (interview extract)

He elaborated:

I liked to have my independence, I wanted to stand on my own two feet. I would rather go through the pain barrier and see if I could beat it . . . and I’d been through a lot of the stages before with my previous injuries, and drew on those experiences. I knew I had to ride out the troughs and just got on with it . . . I suspect it reflects my stubborn character. I’d rather sort my own problems out and not look to others . . . I suppose if I’ve got a weakness, I don’t want other people to know about it. (interview extract)

The focus of my continued consultations with Peter was two-fold: providing support and helping him to manage his rehabilitation (primarily by means of goal setting). During this period, emotional support and listening support were still features of the intervention (albeit to a lesser extent) when Peter described his frustrations at his lack of motivation and the conflict he was experiencing in trying to meet the demands of his job, family, and rehabilitation. The uncertainty about where he would be playing and at what level (outcome expectancy) was ever present. Task support focused on setting goals in relation to the management of his rehabilitation (an approach supported by Gilbourne et al., 1996), as well as setting rehabilitation goals per se. The goals we set during this period included training on targeted days of the week, and/or completing a specified number of sessions per week. Process goals focused, for example, on running form and technique (e.g., knee lift, stride pattern), and performance goals included running a specified number of laps of the rugby pitch or running continuously for a set period of time (e.g., 20 min).

Peter completed his rehabilitation program on his own because he was no longer associated with a club. Gilbourne and Taylor (1998) have drawn attention to the debilitative emotional effects reha-bilitating on their own may have on athletes. In Peter’s case, it detracted from rehabilitation motivation. The situation was further exacerbated by Peter’s financial concerns that precluded the regular use of indoor facilities because of the financial cost. Peter’s financial concerns meant he rehabilitated outside during the winter months. It appeared, however, that Peter generally found our discussions, and the process of managing his rehabilitation through goal setting, helpful: “Lynne visited again tonight. Enjoyed our discussion and found it really helpful—I’ve found a definite benefit to having another person’s viewpoint on my training schedule and my recovery, particularly the way we are able to structure it” (diary extract). Although motivation proved to be an ongoing problem, short-term goals helped to maintain Peter’s rehabilitation progress. Three months into the study Peter wrote:
Went for a run tonight. I completed 10 (!!!) laps of the field without stopping. No problem with my ankle or shins. I couldn’t believe it tonight. This is as far as I could run before I broke my leg. Over the moon. This is definitely the end of my rehab—obviously I’ll still get the odd ache and pain, but as far as I’m concerned the next big hurdle is to prove to myself that I haven’t lost any ability during the last 7 months. Considering waiting until the end of January to return to playing, though I think as soon as I start back with the local team I’ll be itching to play. (diary extract)

Ten days later he wrote:

Appointment today went really well. [Consultant] said that it would be between 6-8 weeks before I could play again. I was glad to see that the bones have now healed. He also said it would be okay for me to start training with my local team. A good day.

Although Peter experienced a number of minor setbacks over the ensuing weeks, the next hurdle for Peter and Lyndon was their return to competitive rugby.

Two weeks after having had minor surgery on one knee, and the other knee drained, Howard attended an appointment with the orthopedic surgeon. He recorded in his diary, “[Consultant] very happy with both knees.” Over the ensuing eight weeks the diary entries were very similar from one week to the next: “Knees sore” or “knees very sore” appeared frequently. Less frequent were, “knees feel good” or “knees feel better.” Throughout this period my consultations with Howard took place on a regular basis and focused on setting rehabilitation goals based on physiotherapist feedback and the soreness he was experiencing with his knees. Although Howard’s motivation clearly diminished over time, at his behest we continued to set goals. Setting goals that were specific, challenging, and achievable continued to be difficult due to the soreness. Howard clearly preferred to work toward achieving performance goals that had some specified outcome (e.g., five min continuous jogging on the treadmill). When soreness meant this goal was no longer realistic, he would either get extremely frustrated and reduce his commitment to all goals or ignore the pain in order to achieve them. Occasionally, he would adjust the goal. Sometimes, however, striving to achieve the original goal resulted in increased soreness the following day and, as a result, failure to achieve subsequent goals. Despite these ongoing difficulties, Howard remained extremely positive. Almost five months into the study, Howard wrote, “knees very sore, but confidence is beginning to build” (diary extract). Two weeks after the introduction of jogging into his rehabilitation, his diary entry read, “Saw physio and consultant. Both pleased with progress.” At this appointment, the consultant advised him that although he would always experience pain and soreness and greater problems in later life, if he wanted to, he could play rugby again. Although it became increasingly apparent that realistically Howard would not return to playing rugby, he made it clear to me that he would not or could not admit it. When Howard reported what the consultant had said, he added, “but I’ll never admit to the fact that I’m not going to play rugby again even if I know I won’t. I can’t admit to that.”

Howard participated in this study for almost 12 months. At the time of writing it is 15 months since the injury occurred. Although he feels he has benefited from his involvement in the study, I have found the entire process particularly difficult to manage, and throughout have questioned whether I could be making a
more significant contribution to his rehabilitation motivation. Howard’s extremely positive attitude seemed inconsistent with the slowness of progress, the lack of motivation (compared to his previous injury), and the ongoing problems he was experiencing. During the interview, a number of pertinent features emerged that explained some of the inconsistencies:

Over the last three months my training has been poor in all aspects because I think I’m not pushing myself to play at the moment, and perhaps you could say that realistically I won’t play again, but I haven’t thrown it out of the window. So I haven’t really had anything to train for . . . that little bit of hope can keep you going. To say “right I’m not going to play again, I’m finished,” is a big decision and for me to say I’ll never play rugby again, I don’t think I’ll ever do it . . . I don’t think I will ever make the decision that I won’t play again. If it happens, it’ll just happen.

Of his motivation to train, he suggested, “Some people train because they want to lose weight, granted that’s a reason, but I have always trained to compete, and I think that’s what I miss. I haven’t got that competitive edge or competitive feel to my training.” In relation to his positive attitude toward his injury and rehabilitation Howard suggested:

I’ve always focused on the positive side of things. In training I’d focus on the positive aspects of my training rather than on my knees. I’ve been lucky over the last two years. I’ve been unlucky with my knees, but I’ve been very lucky in my profession and other aspects of my life.

Two days before the interview Howard completed his first 5k run in a charity race.

**Late Phase of Rehabilitation: Reentry Into Competitive Sport**

In contrast to Howard, reentry into competitive rugby was the final phase of rehabilitation for Peter and Lyndon. While Lyndon eagerly awaited his return, Peter initially reacted with some hesitation to the prospect of playing. As a result of his progress, Peter brought forward his final appointment with the consultant. When given the “green light” to start playing, however, he was quite shocked:

When I sat down and thought about what I would need to do to be playing in the time-scale he suggested, all I could think of was having to take a tackle [the injury occurred when he was being tackled], and I realized, it came as a bit of a shock you know, that I’m not confident to go into a tackle situation . . . so I didn’t think I would be ready to play in that time-scale, in six weeks. Up until that day I thought I would, but when he said it I thought, well I’m not going to be ready confidence wise.

Interestingly, Gould et al. (1997b) found that patience and taking it slowly was cited more by successful than unsuccessful recoverers from injury. Unfortunately, it is unclear whether this feature related to the whole rehabilitation period or distinct phases, such as reentry.

During this phase, the intervention focused on preparing both Peter and Lyndon for their return to competitive rugby. Confidence, identified by both players as key to their successful return to playing, became the major component. All
training was underpinned by goal setting. Performance goals focused on the intensity, duration, and nature of training activities; process goals were used to emphasize, for example, body position in contact situations and correct angles of running. Initially, both Peter and Lyndon gained confidence from training at an appropriate intensity for game demands. Later, we agreed the focus should change to improve confidence in the injured body part to meet specific game situations through simulation training and imagery. As Peter’s first game approached, the intervention focused on mental preparation for the game through the use of imagery, particularly in relation to specific situations (e.g., being tackled). Verbal persuasion information derived from performance success (i.e., goal achievements and successful experiences) was also used to enhance confidence. These strategies were based on Bandura’s (1982) four sources of self-efficacy (i.e., performance accomplishment, vicarious experience, verbal persuasion, and emotional arousal). Ten months after the injury occurred, Peter played his first competitive game of rugby. On the morning of the game he wrote, “I’m writing this before I play—I’ll be having a drink afterwards. I’m a bit nervous about today. I’m going to take my time and not get too involved. Fingers crossed” (diary extract). The next diary entry read:

I survived!! Ended up playing for the second team. The first half went well, I scored an early try and felt okay. However, my batteries ran out big time in the second half. I now know how far I am off match fitness. I took some tackles and made some hits. I’m not aching as much as I thought I would. Glad to get it under my belt—out of the way.

In the run up to Lyndon’s first game, a similar strategy was employed, though with less success. Unlike Peter, Lyndon had not been able to simulate the tackle situation in which he had incurred his injury. The importance of simulating this specific tackle situation was emphasized by both the physiotherapist and myself, but as Gilbourne and Taylor (1998) suggest, the role of coaching staff in the final phase of rehabilitation is critical. For Lyndon, a lack of collaboration between myself and the coaching staff became a limiting factor in the effectiveness of the intervention, although, as Lyndon acknowledged, his own inability to take responsibility for ensuring structured practice of the tackle situation in training was also a contributory factor. At the time, Lyndon was reluctant to do anything that might jeopardize his scheduled return to playing, and he felt that asking the coaching staff for their assistance in structuring specific practice situations was too risky. Unfortunately, the prevailing political climate (which cannot be elaborated on for reasons of anonymity), meant it was not possible for me to liaise directly with the coaching staff. During the interview, Lyndon described himself as “80% confident” going into his first game. In the discussion following the game, he admitted to having a problem with tackling and to not having made a single tackle while playing (on the advice of myself and the physiotherapist he had only played the second half of the game).

During the next two games, Lyndon continued to avoid tackling players with his injured shoulder. He recalled, “if I could see someone coming towards me I’d change my body angle and try and get into a position so I could tackle with my right shoulder [non-injured shoulder]” (interview extract). Tackling in effect with the wrong shoulder (right) not only created a problem for his right shoulder, but also meant Lyndon exposed himself to potentially dangerous situations by placing
his head and neck in the wrong position. In reality, the intervention was less than successful in addressing this problem. Without the involvement of the coaching staff, however, I was at a loss as to what else I could have done to help resolve this problem. We had discussed at length both the importance of simulating specific tackle situations and ways in which this could be achieved, and goals had been set accordingly. Eventually, Lyndon began tackling with his injured shoulder because it became too painful to tackle using his right shoulder.

Peter and Lyndon both agreed that their participation in the study would conclude once they had regained full confidence in their ability to play rugby, and the injury was no longer interfering with their performance. Until this time, the intervention continued to focus on regaining confidence through performance reviews and setting goals for subsequent performances based on those reviews. Imagery was used as part of both the performance review and the preparation strategy. It took about six weeks of playing competitive rugby before Peter and Lyndon considered they had regained confidence and had very few injury-related cognitions while playing. As Peter suggested during the interview,

> Even then, although my focus during games was on my performance, the odd thing would occur during a game when I would think about my leg, but I think it'll be a very long time before that never happens. I was as close to being fully recovered after six weeks as I could be.

Both Lyndon and Peter have returned to playing first class rugby with premier division teams.

**Summary and Conclusions**

We have reported the implementation of a longitudinal action research project involving three injured athletes. The present study demonstrates the importance of a multi-modal approach for the rehabilitation of injured athletes, and in doing so lends support to an explicit multi-modal approach to intervention research more generally (cf. Cupal, 1998; Greenspan & Feltz, 1989; Vealey, 1994). The reflexive narrative described and evaluated the intervention strategies employed in response to individual and situation specific needs over the course of the athletes' rehabilitation.

The efficacy of a number of intervention strategies emerged from this study and included social support, goal setting, imagery, simulation training, and, to a lesser extent, verbal persuasion. Emotional support (including listening and emotional challenge) were perceived by the athletes as important in situations where rehabilitation progress was slow, setbacks were experienced, or where other life demands were placing additional pressures on them. Task support, including task challenge, primarily took the form of goal setting, and was used to enhance motivation and adherence in the early and mid phases of rehabilitation. Toward the latter phase, and during reentry into competitive sport, it was used to enhance self-efficacy. Support was provided for the use of both long-term and short-term goals, and process and performance goals. In particular, process goals helped focus attention on specific features of a given task, and performance goals provided structure and specific targets for participants’ rehabilitation. The study also highlighted the importance of goal flexibility. A number of features emerged as salient to athletes’ psychological responses to and rehabilitation from injury. These included
the effect of outcome expectancy, rehabilitation setbacks, financial concerns, isolation, and social comparison.

To date, the period of reentry into sport has remained largely under-researched and the present study provided an insight into this critical phase of rehabilitation. Gaining confidence in the injured body part to meet the demands of the sport and gaining confidence in situations when the injury occurred were two important aspects of reentry. Also important, although less significant, was confidence in overall level of fitness. Confidence was gained via simulation training in structured practice, the use of imagery to prepare for specific game situations, particularly those that approximated the situation in which the injury had occurred, and verbal persuasion information gained from successful experiences. One case, in particular, highlighted the risk of reinjury that performers face if they return to sport having not regained confidence, particularly in relation to situations in which the injury was sustained. The two performers who returned to playing reported it took them six weeks before they were able to focus fully on their performance, have confidence in their injured body parts to meet the demands of the game situation, and not be distracted by injury-related cognitions. This time scale has important implications for coaching and for sports science personnel in the management of rehabilitating athletes, generally and their reentry into sport, specifically.

As rehabilitation progressed and the need for physiotherapy treatment diminished, the role of the researcher (sport psychologist) became wider in scope and reinforced the multifaceted role that a sport psychologist may play in facilitating successful rehabilitation (the physiotherapist was consulted on all matters requiring physiotherapy expertise).

In conclusion, the current project has identified a number of issues that future research should attempt to address. These include (a) the moderating effect of rehabilitation outcome expectancy on adherence; (b) relative merits of different psychological intervention strategies to address various features of the rehabilitation process; (c) salience of different types of goal-setting (e.g., process, performance, outcome) to athletes’ psychological responses to, and rehabilitation from, injury; (d) importance of collaboration between sports medicine, sports science, and coaching personnel to the rehabilitation process; and (e) factors affecting reentry into sport.

References


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