



**ROBERT HUNT**

**ST06002685**

**CARDIFF SCHOOL OF SPORT**



**UNIVERSITY OF WALES INSTITUTE CARDIFF**

**AN INVESTIGATION THE TEMPO PATTERNING**  
**OF STRESSORS AND COPING STRATEGIES**  
**DURING INJURY REHABILITATION**

## Table of Contents

	<b>Page Number</b>
List of Appendices	
Acknowledgements	i
Abstract	ii
Chapter One	
1. Introduction	1
Chapter Two	
2. Literature Review	3
2.1 Conceptualisations of Coping	3
2.2 Coping in the Sport Psychology Literature	5
2.3 Coping with Sports Injury	6
2.3.1 Stressors	6
2.3.2 Conceptual models of Sport Injury	8
2.3.4 Coping strategies	10
Chapter Three	
3. Methodology	13
3.1 Participants	13
3.2 Data Collection Methods	13
3.3 Data Analysis	15
Chapter Four	
4. Results and Discussion	16
4.1 Stressors during Phase 1	16
4.2 Coping Strategies during Phase 1	18
4.3 Stressors during Phase 2	20
4.4 Coping Strategies during Phase 2	22
4.5 Stressors during Phase 3	25

4.6 Coping Strategies during Phase 3	28
--------------------------------------	----

## Chapter Five

5. Conclusion	30
---------------	----

5.1 Limitation of the Study	31
-----------------------------	----

5.2 Future Research	32
---------------------	----

References	33
------------	----

## **List of Appendices**

	<b>Page Number</b>
<b>Appendix A:</b> Coping strategies Interview 1	39
<b>Appendix B.</b> Coping strategies Interview 2	40
<b>Appendix C.</b> Coping strategies Interview 3	42
<b>Appendix D.</b> Informed Consent Forms	43
<b>Appendix E.</b> Interview Guide	46
<b>Appendix F.</b> Stressors – Occurrence of injury	60
<b>Appendix G.</b> Stressors Interview 2	61
<b>Appendix H.</b> Stressors Interview 3	63

## **Acknowledgments**

## **Abstract**

This qualitative investigation study assessed three collegiate athletes rehabilitation from injury to uncover the temporal nature of stressors and coping strategies during the recovery process. This addressed a gap in the literature and followed guidelines but linking stress, stress source and coping strategy. It used three interviews at early, mid and late periods of recovery to achieve its aims. The stressors experienced during the first phase of rehabilitation were mainly associated with enforced behaviour due to the injury such as losing contact with team mates and not being able to work. This changed to the mid phase with frustration from social comparison and slowness of rehabilitation featuring highly. The final stage was more associated with fear of re-injury and fear of not re-gaining previous performance levels. This change in stressors were also reflected in the coping strategies. The early stage was associated with more isolation/avoidance coping strategies, whereas, the latter stages of the recovery process were associated far more pro active coping strategies; such as distraction and seeking re-assurance.

## CHAPTER I

# Introduction

## **1. Introduction**

Involvement in any sport or activity that requiring physical exertion has within it an inherent danger of physical injury (Tracey, 2002).Smith and Milliner (1992) noted that as the number of people participating in sport has increased so too has the number of injuries occurring. This risk however, is one that most athletes are prepared to take in order to succeed in their chosen sport (Heil, 1993). Therefore, the ability to resist injury and to rehabilitate well when injury occurs is fundamental to longevity in sport (Heil, 1993).

When athletes experience injuries, attention is automatically and logically focused on the physical site of the injury. Unfortunately, the focus often remains solely on the physical, which can ignore the psychological experience of being injured and the numerous thoughts, feelings, and behaviours associated with an injury (Tracey, 2003). It became increasingly evident that although athletes may be ready to return to sport physically, psychologically they may not (Wiese and Weiss, 1987). Heyman (1986) points out that even the suggestion to return from injury before psychologically ready could be very difficult to cope with.

The range of emotions an injured athlete experiences have been examined thoroughly (e.g. Brewer et al., 1995a; Gould et al., 1997a; Smith et al., 1990). However, the stress sources and coping strategies have received far less attention; particularly in relation to the period of rehabilitation they are experienced. Tracey (2003) was one study that is typical of this approach; themes that emerged highlighted the fluctuations in emotions characterized by feelings of loss, decreased self-esteem, frustration, and anger. However, because stress source and coping strategies used were not integrated the study is limited in its methodology.

To address this issue the interview guide in this study was developed for the sole use during this study. The purpose of this study is to interview injury athletes who have sustained an injury over three periods of their rehabilitation to identify the temporal nature of the stressors experienced and coping strategies utilised over the period. They will be conducted in the early, mid and late stage of rehabilitation in line with previous research (e.g. Evans et al., 2000; Johnston and Carroll 1997).

The qualitative methodology, such as that used in this present study, is one approach thought to be well suited for capturing the richness and complexity of individual experiences (Brewer, 1994; Patton, 1990). As the study is concerned with the individual athletes experiences, it is these that become the data source for this study, therefore, qualitative methods of data collection are the most appropriate to use to extract the in-depth responses necessary for analysis.

## CHAPTER III

# Methodology

### **3. Methodology**

#### **3.1 Participants**

Participants (N=4) were purposefully sampled according to a number of criteria; participants had sustained an injury with expected recover periods of between 8 and 12 weeks and their injury must have been sustained within the previous 2 week period. The types of injuries sustained included a broken collar bone, hyper extended elbow; damaged nerves in the elbow and fluid build up around the knee. The main/first sport represented by participants was rugby but all had a varied sporting background and were currently undertaking a sport degree. The participants consisted of 3 second year students and 1 third year student with a mean age of 21 (SD =  $\pm$  4). Participants all attended regular rehabilitation sessions at varying locations. All participants provided a signed informed consent form prior to their involvement in the study

#### **3.2 Data Collection Methods**

Both Brewer (1994) and Patton (1990) state that qualitative methods of collecting data particularly suited to capturing the rich and complex information about individual experiences. Indeed interviews can be used to obtain feedback and can offer the interviewer an opportunity to explore an issue. It allows the interviewee the opportunity to express their opinions, concerns or feelings. The semi structured nature means that the interviews can flow when needed in order to deal with issues in oppose to cutting someone off because they stray from the topic.

Semi structured interviews will allow the interviewee to follow a specific structure in order to obtain the vital information, while also allowing flexibility to facilitate a greater depth of information can be elicited (Patton, 2002). Semi structured interviews were conducted using an interview guide designed specifically for the purpose of the study. The interview guide provides topics or subject areas within which the interviewer is free to explore, probe, and ask questions that will elucidate and illuminate that particular subject (Patton, 2002). The interview guide was developed on an extensive review of the relevant literature.

The interview guide comprises a number of sections; identification of demands, identification of coping strategies and identification of improvements over the period. An example of questions used is 'What did you find stressful during this phase?' with possible probe questions being 'What thoughts ran through your mind in response to this demand?' 'How did you cope with this demand?' or 'How effective were the coping strategies you used?' Probes were used to gather greater depth of information into any interesting points raised. Once the initial interview guide was developed it was edited to provide guides that would be suitable for use at mid and late phases of rehabilitation. A pilot interview was conducted to improve interview technique and to further develop the interview guide. Feedback from this pilot study, mainly about the terminology being used, led to the development of a terminology sheet, this explained all terminology that could be viewed as confusing and was given to each participant before every interview.

Johnston and Carroll (1998a) and Johnston and Carroll (1998b) revealed key stages to injury rehabilitation as early, middle, and end of rehabilitation and re-entry into sport. Therefore once identified, participants were invited to participate in an initial interview within 2 weeks of injury occurrence, prior to their first physiotherapy appointment. This is because for the purpose of exploring emotional responses to injury, early post-injury access has been deemed ideal (Heil, 1993; Udry, 1997). Prior to each interview a pre-written introduction was read to each participant explaining what this particular interview was about (i.e. what phase), and reassuring the participant that there was no right or wrong answers. Interviews were conducted in a quiet room on UWIC University Cyncoed campus by the same person; they were recorded and subsequently transcribed verbatim by the researcher. The next two interviews were conducted concurrent with the rehabilitation phases. The mid phase interview was conducted during the rehabilitation phase of recovery. The final interview was conducted prior to full return to competition. This format served to uncover the possible temporal nature of both stressors and the coping strategies

being utilised over the whole period of the rehabilitation periods. Participants were asked to confine the accuracy and adequacy of each interview prior to data analysis.

### **3.3 Data Analysis**

Content analysis was carried out on each of the Interview transcripts; by exploring reoccurring words or themes. Content analysis is used to refer to any qualitative data reduction and sense-making efforts that takes a volume of qualitative material and attempts to identify core consistencies and meanings (Patton, 2002). Data analysis involved both deductive and inductive approaches. In essence the interview guide provided a deductive framework and the data was analysed inductively within this framework. The specific steps of the analysis were as follows:

1. All interviews were recorded on Dictaphone and transcribed verbatim by the researcher. Then to be verified by the participant.
2. All interviews were reviewed multiple times in a repeat analysis method. Where disagreements emerged, transcripts were re-examined and points of disagreement were discussed.
3. Raw data themes emerged from the interviews and were organised into theme groupings. The cross participant frequency of themes emerged and was presented in analysis tables. Quotes from the transcripts were used to show these themes.
4. The analysis tables were then used to develop a mixed results and discussion section. Most frequently observed themes being discussed first and least frequently raised themes last. At this stage a three way relationship will be formed between the current literature, the information from the current study and the researcher's opinion of the information.

## **CHAPTER IV**

# **Results and** **Discussion**

## **4. Results and Discussion**

This section of the study will attempt to present both the results and form a discussion led from themes derived from the interview guide. The findings will be examined during three specific phases (injury occurrence, rehabilitation and return to competitive sport). Themes emerged within dimensions that were deductively derived from the interview guide (i.e. Stressors and Coping strategies).

### **4.1 Stressors during Phase 1**

During the analysis of the data over this phase a number of dimensions were identified. These included; Loss of bodily functions/increased levels of incapacitation, Losing contact with friends/team mates, Personal image issues, Pain/Taking medication, Academic work and Sleeping issues, many of which have not been identified within the sports injury literature. Indeed, one of the most commonly reported stressor was the loss of bodily functions/increased levels of incapacitation, with all participants identifying. This stressor is concerned with not being able to carry out everyday activities such as dressing oneself or being able to carry out basic movement patterns and included driving. This was typified by comments such as “Yeah couldn’t move my arms and couldn’t do a number of things so was incapacitated to the extent with everyday activities” from participant 1 and “I have no real mobility with my arm really. It’s in a sling so I can really do anything in terms of moving my left shoulder so it’s really annoying and frustrating,” reported by participant 2. This is consistent with previous research by Evans et al. (2000) who identified incapacitation as a stressor during the first phase of rehabilitation. Indeed, participant B cited incapacitation as the most significant source of stress over the whole rehabilitation period. Bianco et al. (1999) and Johnston & Carroll (1998) also identified this stressor as loss and disruption of normal functioning.

All participants also cited Loosing contact with friends/team mates as a major source of stress. This is again consistent with Evans et al. (2000) study. Participant A explained “I couldn’t train I couldn’t participate in any of the exercising so you don’t feel so close to them because I can’t actually have a chance to say how I thought the session went.” And continued “I couldn’t keep in contact with a lot of the boys.” It had been suggested in Johnston and Carroll (2000) that sports performers could mobilize their well developed social support networks and therefore not sustain this type of stressor. However, this was not the case; an explanation for this could be found in Mullen and Suls, (1982) and Suls and Fletcher (1985) who found that isolation or avoidance coping was advantageous in the short term but not in the long term, such as in this case, becoming a stressor. Indeed, Bianco et al. (1999) and Johnston & Carroll (1998) also cited isolation as a source of stress however did not specify in what period it occurred.

Pain was reported by all participants throughout their interviews, but to counteract this pain killers or medication to being taken. The process of taking medication became a stressor for all of the participants. It was obvious that this was having an effect on each participant however to what extent they were reluctant to tell. Participant A gave the only real explanation “Don’t really like taking medication so I don’t really like it at the moment. Being restricted to having to take it every 4 or 5 hours it’s kind of a pain because I have to make sure it’s with me all the time, like in uni and if I forget to take it then I get the pain coming on again, yeah it’s kind of annoying at the moment.” This type of stressor has received no attention within the sports injury literature and thus little is known about its effect, due to the reluctance of the participants little more was discovered.

Two participants, A and B, reported impending financial concerns. However, these were yet to be realised due to the earliness of the interviews taking place. Participant A commenting “I’m going to have to find a way to figure that out” this showed that they were yet to fully experience this demand. Financial demands are consistent with Evans et al (2000) study but they were more prominent in the latter interviews. Bianco et al. (1999) and Johnston & Carroll (1998) also suggested financial concerns as a stressor, however we can now say it is first experienced during the first phase of rehabilitation.

Participant C experienced particular problems with his personal image this centred on the swelling around his knee and he particularly found the clothing he was forced to wear frustrating. When discussing this he stated “I can’t wear jeans or any nice clothes. I have to wear like tracksuit bottoms which is making me feel down, having to be in the house everyday and in the same type of clothes every day(!).” This type of stressor has not been identified within the sports injury literature and poses a significant importance with a possibility to effect motivation and mood, as was the case in this example.

#### **4.2 Coping Strategies during Phase 1**

Four coping strategies emerged from the interview guide these were avoidance/isolation, tangible social support, seeking reassurance/listening support and pushing through. Avoidance/isolation coping was very prominent during this phase for all participants. Avoidance coping ranged from staying away from games/training sessions to distancing oneself from team mates or friends and also included attempts to not think about activities they missed doing. All participants cited this coping strategy on a number of occasions throughout their first interviews and this led it to being the most dominant coping strategy being utilised. A citation that was typical of this method was, “I pretty much don’t try to think about it too much, I just want to get through this time and try not to think about it,” from

participant B. This theme was also identified in Gould et al. (1997) study into elite skier's rehabilitation from injury. He also termed this type of coping strategy as avoidance and isolation. Mullen and Suls (1982) and Suls and Fletcher (1985) have identified that whereas avoidance type coping strategies can be beneficial in the short term, other types of coping are more beneficial in the longer term. This is supported by this present study as isolation is also discussed as a stressor during this phase.

Gould et al (1997) also identified the coping strategy of sought and used social support, this study as split this coping strategy into two separate strategies. These are Tangible social support and Seeking assurance/listening support. The use of tangible social support was very prominent throughout this first period and continued throughout the whole rehabilitation. All participants received financial support from their parents to cover rent and living costs but also utilised friends for transportation. Participant A mentioned both "I've had to rely on my house mates to take me to a couple of lectures and bring me back to get my course work in and stuff." Showed the reliance on friends for transportation, whereas, "I'm just going to have to borrow some money off of my parents until I can pay them back," showed how parents helped to ease financial burden. Due to this type of coping strategy financial concerns seemed to not be a major issue through this early stage of rehabilitation.

As mentioned seeking assurance/listening support was also a coping strategy encountered during the interviews. Particularly participant C utilised this during the early phase, typically shown by his comments "yeah I talked to my parents while I was in hospital it's someone to talk to about it and its someone to tell me that it's going to be all right and re-assure me." This shows both aspect of the coping strategy; the listening factors and also the re-assurance. Gould et al. (1997) grouped both coping strategies, tangible social support and seeking assurance/listening support, under the umbrella title of sought and used social support however, there

was a clear distinguished difference between the two during this phase in the present study. Evans et al. (2000) also distinguished listening support as a single strategy and portrayed its benefit to participants in her study.

Lastly, Pushing through was a strategy that only two of the participants mentioned and didn't discussed in any real detail. Participant A said "I just have to grit and bear it" and participant C continued "I just keep going," in response to being asked how they were coping with certain stressors. Participants seemed to think by not doing anything and by just pushing through they were not actually using a coping strategy and did not want to expand on it. However, Gould et al. (1997) also identified this strategy but presented it as driving through. This term seemed more pro-active than those being utilised by the participants in this study, so a less forceful tag suited the coping strategy identified.

### **4.3 Stressors during Phase 2**

The dimensions that derived from the interviews during this phase were; Social comparison, Slowness of rehabilitation, Isolation, and Personal image issues. The stressors during this phase all seemed far more prominent than those during the previous. This in contrast to previous research by Johnston and Carroll (2000). They state that the early stage of rehabilitation is when greatest mood disturbance, and therefore most stressors, are experienced. These may be due to participant's unease during the first interviews compared to the second, once more familiar with the process and researcher. Another explanation could be the earliness of the first interview, having only experienced 2 weeks of stressors; they then had a large gap before their second interviews.

Social comparison was a grouping for a number of different themes. It included seeing other team mates playing/training and seeing other people in work doing activities you would normally be fulfilling. "I just felt really bad and embarrassed to be

honest, there as me sitting down and complaining about my elbow hurting and then there was all the other slogging and training really hard and there as me complaining I have got a bad arm. So you know I felt a bit embarrassed about that and annoyed I couldn't do anymore," shows how participant A found watching other train while he was doing his rehabilitation programme stressful. This is consistent with Gould et al. (1997a) who found social comparison a source of stress for one third of their participants. Although, the frequency of this stressor was far greater in this study, all participants suggested it as stressful.

Isolation continued to be a problem through this period of rehabilitation Participants A and B cited it as a stressor typical comments were "Well I think at the moment I feel a little isolated from the team, like I still can't even do light training just doing general skills so I can't even be involved in the sessions. And as I can't do weights I can't go to the gym with any of my team mates," by participant B. As already discussed this is consistent with previous research by Evans et al (2002) as well as Mullen and Suls (1982) and Suls and Fletcher (1985). At the beginning isolation/avoidance was a coping strategy now it has began to become a stressor. Bianco et al. (1999) and Johnston & Carroll (1998) also found isolation was a form of stressor.

Although financial stressors were reported by all participants, two seemed to cope reasonably well with it due to help from parents; participants B and C. However, Participant A was affected to a much greater extent. He commented "Yeah obviously I could work in the bar so I lost earnings that way, I lost X amount of money each week and it affected my rent so I had to borrow some money off of my parents and friends and stuff. To keep me going, I had enough money to pay for food and keep me going through the weeks but not enough to pay for the rent and things like that." This seemed like an innocuous comment and much in line with the other two, but when the interview continued and the participant started to relax more he revealed

“That was the most angry I was because I couldn’t really do anything, I could go out to the cinema or anything I couldn’t socialise or go out with my friends on a Saturday for a couple of drinks cause I didn’t have enough money to do it. That was the worst.” The stressor of financial concerns is consistent with previous research by Evans et al. (2000) although, the stressor in that particular study was more focused on sustaining a young family. Bianco et al. (1999) and Johnston & Carroll (1998) findings were more consistent with the type of stressor found in this study.

Two participants were beginning to get frustrated with the slowness of rehabilitation. Participant A was frustrated with the lack of access to his physiotherapist; “Just I was having basic stretches on the Monday and then by the Friday they were fine and weren’t really hurting or anything when I went to the appointment again by the following Monday. I would have rather had an appointment on the Friday, do an extra couple of sets or an extra couple of stretches but by the Monday it was becoming too easy and doing nothing.” Participant B was struggling to meet expectations and was also becoming frustrated; “It’s not coming as quickly as I would have liked it to be, you know it’s taking a lot of work and I’m putting in a lot of effort. But you know it still takes time for it to heal.” Evans et al (2000) found that meeting expectations or goals could also become a hindrance due to the pressure or over training performed to reach goals.

Personal image issues are another stressor that has continued to be experienced in the second phase. This time though it has more to do with muscle wastage and putting on weight than in the first phase. Bianco et al. (1999) and Johnston & Carroll (1998) identified putting on weight as a stressor but failed to realise the effects that experiencing muscle wastage could have. Two participants were affected with participant B stating “I’m quite a big person but at the moment I’m smaller. I feel quite weak, feel like I’m sort of wasting away,” participant C had similar views “The muscle in my left quad is wasting away, like I haven’t been using my left leg and calf

and I feel that I have started to put on some weight.” Both felt that this was natural with their types of injury and that nothing could be done to stop it. This helped them accept it but did not stop the stressor occurring.

#### **4.4 Coping Strategies during Phase 2**

The dimensions that emerged during this period were; Goal setting, Isolation/Avoidance, Concentrating on rehabilitation programme, Tangible Social support, Looking at others previous experiences, Social support/Listening support and Money Rationing. Four dimensions emerged as dominant during this period primarily Social support/Listening support and Tangible social support were utilised, and have been discussed during the previous phase. Johnston and Carroll (2000) suggests that people from sporting background are more likely to use this type of strategy, and the team sports that all participants take part in may also influence this. Johnston and associate also identify that younger people have been shown to have more extensive social support networks and to report greater perceptions of support from friends (Johnson & Carroll 2000). All may explain the volume of discussion on social support.

All participants raised another interesting coping method in Concentrating on rehabilitation programme. It was a response to negative feelings during this period participant A typified the reaction “basically I just trained as much as I could. Did as much training and re-hab as I could, just try to pass the time of the days along that way and try to get back to where I was before” participant B also commented “Apart from the general stretching and the exercise I have been given, just working to the best of my ability doing that, I think that’s the only way I cope. Just working as hard as I can at this, trying to get back to where I was, the more effort I put in the happier and more satisfied I am.” Participant B explained that this was his way of having an effect on the whole process and it made him feel more empowered over the situation, in contrast to the earlier stressors where he felt he could have no

influence. Evans et al (2000) describes the use of training as a relief but there is little other information available on this coping strategy.

Participant B raised an interesting point when he commented “Sort of trying to ignore it really. Just burry my head in the sand” this comment was the beginning of the isolation/avoidance coping dimension during this phase. All participants mentioned this dimension in passive comments but as you may have noticed earlier isolation was also discussed as a stressor during this phase. As already stated Mullen and Suls (1982) and Suls and Fletcher (1985) have stated that this type of coping is only beneficial over short time periods. All participants had utilised this strategy over a longer period of time so was losing it effectiveness. Participant A typified this view with “Yeah I wish I had done something different I wish I hadn’t isolated myself but at the time I felt it was the right way to go about it, and take myself away from everything but I wish I hadn’t done that now.”

Evans et al (2000) study was based on interventions and goal setting featured highly in these. During this period Participant C started to use this coping strategy. “I’ve set goals for myself for when I do get back so that I can aim to get back into the side. I’ve got certain training plans” this seemed to act as a re-assurance to this particular participant. Being able to put his return into perspective and plan out how he would get back to where I was only weeks before. Evans and associates set both short and long term goals and used them to varying degrees of success, participant C seemed to use long term goals as motivational and helped to promote positive behaviours, such as with his training plans mentioned. However other strategies where also present such as those being used by participant B.

Participant B Used others experiences as a source of comfort. He was experiencing confusion with how long the rehabilitation was taking and the amount of training he was doing. To try to counteract this he commented “I try to find someone else who

has had the injury or a similar injury and how long it took them.” The literature says that this is a risky strategy, Gould et al. (1997b) it could be facilitative to recovery. However, in contrast, Gould et al (1997a) has cited it as a possible source of stress. This complex issue did arise but only the positive aspects were encountered over this period. By looking at others rehabilitation from similar injuries participant B was able to get reassurance about his own rehabilitation progress and actions.

As discussed during the stressors section participant A started to suffer financial problems during this period. This first became apparent when he commented “I just had to make sure I couldn’t treat myself with clothes and stuff. I had to ration my food.” This was an interesting point so when asked to explain this point further he continued “Like before I would go out and stuff, say if I went shopping and stuff if there was offers on particular clothing or food items I liked then I wouldn’t have thought twice about it but now I have to ration what I buy and what I could do and what I could get, that kind of annoyed me.” Although this type of stressor was uncovered in Evans et al (2000) this particular type of coping was not and adds an interesting everyday view to financial consequences of injury.

#### **4.5 Stressors during Phase 3**

During the final stage of rehabilitation a number of new dimensions emerged from the data these were; lack of sporting confidence, re-injury concerns, personal image and team mates perceptions. During this period less stressors were experienced in comparison to the other previous phases. Lack of sporting confidence encompasses a number of themes these are; re-gaining fitness levels, fear of early return and letting team mates/coaches down. All participants experienced at least two of these sub themes with this dimension affecting the most people during this period. A strong view was presented by participant A:

The main one was letting my team mates and especially coaching staff down, they have taken a big gamble bringing me back into the training environment. They have assessed me to see if I am ready to play and I don't want to let them down especially as there are really big matches coming up just a few weeks away so I don't want to mess that up. I especially don't want to let my team mates down for those, you know like am I ready for it, should I be on the bench, should I start those sort of feelings. As much as I want to play I don't really want to let them down and not getting back to previous performance levels that coincides with letting my team mates down as well."

This type of dimension is consistent with previous research in particular Johnston and Carroll's (1997) study. Furthermore, Bianco et al. (1999) and Johnston & Carroll (1998) identified performance issues as a significant form of stress.

Re-injury concerns were another prominent dimension during this period. Bianco et al. (1999) and Johnston & Carroll (1998) had again experienced this stressor. Participants cited this stressor on a number of occasions, seemed that as the return got nearer so the stressor increased in intensity, as participant A states "We haven't got a game for a week but I think that once it does come around I will be even more nervous." The fear of re-injury was also two fold, fear of getting injured again and the implication of getting re-injured. The first is shown in this comment by participant B "At the moment just, what I'm finding stressful is the fear of breaking my shoulder again; maybe I'm going back too early." With participant A identifying the later with "if I get re-injured again then I will have to rely on my parents again to give me money. I don't think they can give me that much money; I don't want to have to rely on friends to give me money." This is consistent with Johnston and Carroll (1997) who stated that re-injury concerns are associated with the return to competition phase

.Another stressor during this final phase was the perceptions team mates had of the participants, or more specifically the appraisals of the participants to the perceptions of his team mates. For example participant C stated "I'm worried that they would not have the same feelings that they had about me before, it was a worry whether they would accept me as a player again." What shows the participants appraisals best though is participant A's quote

"What other people think of me, are they thinking he has come back too soon because he wants to play in this match or that match or why has he come back now because he hasn't played for a couple of weeks and all of a sudden he is coming back training. What other people are thinking of me coming back now I guess that is the only question; I guess that my identity as an athlete or as a player but that is a main one."

This paranoia is possible a cause of the lack of sporting confidence (Johnston and Carroll, 1997) that all the participants were suffering from.

Due to the type of injury that Participant C sustained, he was still experiencing personal image issues. The swelling on his knee that was left did not cause any pain issues instead he commented "It's like bruised it's left a scar there and is like hard and basically it's not nice to look at or touch. To be honest I don't feel comfortable in myself." With injuries that leave this type of lasting physical change, acceptance of this change is difficult. This change was only temporary so this participant had difficulty looking at it or letting others see it. This type of psychological demand has been discussed in sport psychology literature (Dale 2000; Gould et al. 1993; Holt & Hogg 2002; Nicholls et al., 2005) but not sport injury psychology

#### **4.6 Coping Strategies during Phase 3**

This phase also saw the amount of coping dimensions fall to its lowest with only four coping dimensions being identified; Increased training, seeking re-assurance, using medication/clothing and ensuring thorough preparation. Coping strategies during this phase became far more pro-active than in the previous two phases with by far the two most popular strategies being Increased training and seeking re-assurance. Increased training was being used as a distraction method to alleviate any negative feelings being experienced. Participant B showed this when explaining “Coping in the fact that I’m working and as long as I put in 100% effort then I get that sense of achievement that’s my way of coping with it as long as I know I cannot do anymore fitness work in that session or I have done enough in that week then I am happy.” This type of coping has been identified by Gould et al (1997) as distracting self. By concentrating on training the participants are distracting themselves from any negative emotions or fears they have about re-entry.

The other prominent coping strategy, seeking re-assurance, this was typified by participant A

“It’s just at the moment I just started to talk to a couple of boys I play with, just to find out what they think of me coming back, if they think that it is true. I’ve explained that to them and they have said that is not what they are thinking at all but obviously it’s only a couple of people I have spoken to so far. I have just got to speak to a few more people about it, because if they are thinking that then perhaps I have to go to the coaches and suggest I not play because I don’t want to let them down or don’t want them to think that about me. So perhaps I might explore that option.”

Clearly this strategy is concerned with hearing what the participant want to hear. It acts as a stress buffer and improved confidence, something that has been shown earlier to be low.

Participant A experienced specific stressors associated with his injury (i.e. continued swelling on the knee) as a consequence he used more diverse coping strategies. One such strategy was the use of medication/clothing. This strategy consisted of using supplementation to lubricate the joint to help remove the swelling and compression leggings to cover it up. Participant A commented “I wear skins (compression leggings). I don’t have to see it or whatever but it also keeps the swelling down or whatever and keep my muscles recovering better.” This type of strategy does not appear in the literature, probably due to the specific nature of the strategy and the type of stressor it was utilised to deal with.

Participant A also demonstrates another coping dimension that no other participant mentioned. He suggested that “Yeah actually I was taking energy drinks like lucozade and making sure my food was right” and continued “Also I strapped my knee just to make sure it was ok, just in case.” This method of ensuring all the preparation before competition was thorough seemed to increase confidence just before a very demanding activity (i.e. returning to training/competition). This dimension was termed ensuring thorough preparations. This dimension was another that did not appear in any previous literature.

## CHAPTER V

# Conclusion

## **5. Conclusion**

During all three phases different stressors and coping strategies were observed, this is important as it acts to highlight the dynamic process of recovering from injuries. The stressors experienced during the first phase of rehabilitation were mainly associated with enforced behaviour due to the injury such as losing contact with team mates and not being able to work. This changed to the mid phase with frustration from social comparison and slowness of rehabilitation featuring highly. The final stage was more associated with fear of re-injury and fear of not re-gaining previous performance levels. During the early phases participants used isolation/avoidance coping as a short term fix to stressors however as the rehabilitation proceeded, more pro active strategies were employed such as seeking re-assurance and concentrating on training schedules. Participant B noted that as he passed through the phases he felt that he had more control over the stressors and therefore could employ strategies that actually affected them. Such as in the early stages he felt he could not affect stressors such as, Pain, financial lose and not being able to play. However during the final period stressors such as not re-gaining performance levels and personal image issue could be affected.

Implications of this are that empowering the athlete could play a significant role in injury rehabilitation. If an athlete puts more effect into their rehabilitation or is more pro-active because they feel empowered then this state must be achieved as early in the process as possible. Evans et al (2000) study used goal setting to achieve this and this approach should therefore receive more focus. Also, a variety of coping strategies should be used over the periods and where possible injured athletes should steer clear of isolation/avoidance strategies.

### **5.1 Limitation of the Study**

There were a few weaknesses that were observed through this study. These were; the participants were limited to collegiate athlete rugby players, this means you cannot generalize the results for example younger people have been shown to have more extensive social support networks and to report greater perceptions of support from friends (Johnston and Carroll, 2000). Furthermore, the timing of interviews was not judge by a physiotherapist instead the timing was controlled by the researcher, who has no medical background. This could lead to differences in the timing of the second and third interviews. Lastly Evans et al (2000) has report that it took six weeks for participant to feel that they were able to fully focus on performance after return to competitive sport. However this study only measured until full return. This means that possible stressors and coping strategies that occurred during the six weeks that followed were missed

## **5.2 Future Research**

Any future research conducted on this area must continue to follow Gould et al. (1997) guidelines and link stress, stress source and coping. However, to further the current knowledge of the literature, and that discovered in the present study, future research must look at the effectiveness of the coping strategies and the type of effect that the strategies had on the stressors (i.e. alleviate, eliminate) and also whether they caused a modification in the response (i.e. lower, maintain, heighten, transform etc.). Furthermore, future research should look to generalise the results shown in this present study. By using a similar method on different populations a clearer understanding of the whole rehabilitation period could be gained. Indeed, by using a wider population results could even change due to environmental/situational differences. However, if concerned with performance sport the opposite is also true. By specifying a study to a more elite environment results would be of greater interest to high level athletes. Of further interest could be an investigation into whether certain injuries predispose individuals to certain stressors, for example if lower limb injuries stressors and different in any way to stressors from upper limb injuries.

## References

Aldwin, C. M. (1994). *Stress, coping and development: An integrative perspective*. New York: Guilford Press.

Andersen, M. B., and Williams, J. M. (1988). A model of stress and athletic injury: Prediction and prevention. *Journal of Sport and Exercise Psychology*, 10, 294-306.

Bianco, T., Malo, S., and Orlick, T. (1999). Sport injury and illness: Elite skiers describe their experiences. *Research Quarterly for Exercise and Sport*, 70, 157-169.

Billings, A.G. Moos R.H. (1984)  
[Coping, stress, and social resources among adults with unipolar depression](#). *Journal of Personality and Social Psychology*, 4, 877-891.

Brewer, B. W. (2001). Psychology of sport injury rehabilitation. In R. N. Singer, H. A. Hausenblas, and C. M. Janelle (Eds.), *Handbook of sport psychology* (2<sup>nd</sup> ed.) (pp. 787-809). New York: Wiley.

Brewer B.W. Linder, D.E. Phelps, C.M. (1995)  
[Situational Correlates of Emotional Adjustment to Athletic Injury](#). *Clinical Journal of Sport Medicine*, 4, 241-263

Brewer, B. W. (1994). Review and critique of models of psychological adjustment to injury. *Journal of Applied Sport Psychology*, 6, 87-100.

Carpenter B.N. (1992) *Personal coping: theory, research, and application*, Praeger Publishers.

- Carver, C.S., Scheier, M.F. and Weintraub, J.K. (1989) Assessing coping strategies: a theoretical based approach. *Journal of Personality and Social Psychology*, 56, 267-283.
- Carver, C.S. Scheier, M.F. (1990)  
[Origins and functions of positive and negative affect: A control-process view](#),  
*Psychological review*, 1, 19-35.
- Cox, T. Ferguson, E. (1991) *Personality and Stress Individual differences, stress and coping*, John Wiley & Son
- Crocker, P. (1992) Managing stress by competitive athletes: ways of coping.  
*International Journal of Sport Psychology*. 23, 161-175.
- Endler, N.D. and Parker, J.D. (1990) Multidimensional assessment of coping; a critical evaluation. *Journal of Personality and Social Psychology*. 58, 844-854.
- Evans, L., Mitchell, I. And Jones, S. (2006) Psychological Response to Sports Injury: A Review of the Current literature. In Hatton, S., and Mellalieu, S.D. (2006) *Literature Reviews in Sport Psychology*. Nova Science Publishers.
- Evans, L., Hardy, L., and Fleming, S. (2000). Intervention strategies with injured athletes: An action research study. *The Sport Psychologist*, 14, 188-206.
- Folkman, S (1992) Making a case for Coping, *Personal coping: Theory, research, and application*
- Folkman, S and Lazarus, R.S. (1985) If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 1, 150-170.

Folkman S and Lazarus R.S. (1984) [Stress, appraisal, and coping](#), Springer publishing company

Folkman, S and Lazarus, R.S. (1980) An analysis of coping in middle aged community. *Journal of health and Social Behaviour*. 21, 219-239.

Gould, D., Urdy, E., Bridges, D. And Beck, L (1997a) Stress sources encountered when rehabilitating from season-ending ski injuries. *The Sport Psychologist*. 11, 361-378.

Gould, D., Urdy, E., Bridges, D. And Beck, L (1997b) Coping with season ending injuries. *The sport Psychologist*. 11, 379-399.

Gould, D., Eklund, R. And Jackson, A. (1993) Coping strategies used by U.S. Olympic wrestlers. *Research Quarterly for Exercise and Sport*. 64, 83-93.

Hardy, L., Jones, G. And Gould, D (1996) *Understanding psychological preparation for sport: Theory and Practice*. Wiley.

Heil, J. (1993) *Psychology of sport injury*. Human Kenetics.

Heyman S.R. (1986) Psychological problem patterns found with athletes, *The Clinical Psychologist*, 3, 68-71

Holt, N.L. Hogg, J.M. (2002)

[Perceptions of stress and coping during preparations for the 1999 women's soccer world cup finals](#), *Sport psychologist*, 3, 251-271.

Johnson, L.H. and Carroll, D. (2000) Coping, social support and injury: changes over time and the effect of level of sports involvement. *Journal of Sport Rehabilitation*. 9, 290-301.

- Johnson, L.H. and Carroll, D. (1998a) The context of emotional responses to athletic injury – a qualitative analysis. *Journal of sports Rehabilitation*. 7, 206-220.
- Johnston LH, Carroll D. (1998b) The provision of social support to injured athletes: a qualitative analysis. *J Sport Rehabilitation*. 1998b;7:267-284.
- Krohne, H.W. Hindel, C (1988). Trait anxiety, state anxiety, and coping behaviour as predictors of athletic performance, *Anxiety, Stress & Coping*, 3, 225-241
- Lazarus, R.S (2000) [How emotions influence performance in competitive sports](#) *Sport Psychologist*, 3, 229-252.
- Leddy, M. H., Lambert, M. J., and Ogles, B. M. (1994). Psychological consequences of athletic injury among high-level competitors. *Research Quarterly for Exercise and Sport*, 65, 347-354.
- Mullen B, Suls J. (1982) The effectiveness of attention and rejection as coping styles: meta-analysis of temporal differences. *J Psychosom Res*. 26, 43-49.
- Patton, M.Q. (2002) [Qualitative research and evaluation methods](#). Newbury Park CA: Sage
- Patton, M.Q. (1990) *Qualitative evaluation and research methods*. Newbury park, CA: Sage.
- Podlog, L., Eklund, R.C. (2006) A Longitudinal Investigation of competitive athletes' return to sport following serious injury. *Journal of Applied sport Psychology*. 18, 44-68.

Nicholls, A.R Polman, R.C.J et al., (2007) Coping in sport: A systematic review  
Journal of Sports Sciences, 1,11-31

Smith, A.M. Scott, S.A., Fallon, W.M. and Young, M.L. (1990) Emotional responses  
of athletes to injury. Mayo Clinic's Proceedings. 65, 38-50.

Smith, A.M. Milliner E.K. (1994) [Injured athletes and the risk of suicide](#), Journal of  
Athletic Training, 4, 231-249

Suls J, Fletcher B. (1985) The relative efficacy of avoidant and non avoidant coping  
Strategies: a meta-analysis. *Health Psychol.*42, 49-288.

Thiots, P.A (1995) Stress, coping and social support processes – where are we?  
What next? Journal of health and Social Behaviour. Extra issue, 53-79.

Tracey, J (2003) The emotional response to injury and the rehabilitation process.  
Journal of Applied Sport Psychology. 15, 279-293.

Urdy, E. (1997) Coping and Social support among injured athletes following  
surgery. Journal of Sport and Exercise Psychology. 19, 71-88.

Urdy, E., Gould, D., Bridges, D. And Beck, L. (1997a) Down but not out:  
athlete responses to season-ending injuries. Journal of Sport and Exercise  
Psychology. 19, 229-248.

Urdy, E., Gould, D., Bridges, D. And Tuffey, S (1997b) People helping people?  
Examining the social ties of athletes coping with burnout and injury stress.  
Journal of Sport and Exercise Psychology. 19, 368-395.

Wiese-Bjornstal, D. M., Smith, A. M., Shaffer, S. M., and Morrey, M. A. (1998). An integrated model of response to sport injury: Psychological and sociological dynamics. *Journal of Applied Sport Psychology*, 10, 46-69.

Weiss-Bjornstall, D.M., Smith, A.M. and Lamotte, E. (1995) A model of psychological response to athletic injury and rehabilitation. *Athletic Training-Sport Healthcare Perspectives*. 1, 17-30.

(Wiese, D., & Weiss, M. (1987). Psychological rehabilitation and physical injury: Implications for the sports medicine team. *The Sport Psychologist*, 1, 318-330.

Williams, J.M. Andersen, M.B (1998) Psychosocial antecedents of sport injury: Review and critique of the stress and injury model, *Journal of Applied Sport Psychology*, 10, 5-10

# **Appendices**

## Appendix A: Coping strategies Interview 1

	Avoidance	Tangible social support	Pushing through	isolation	Social support	distraction
Jarrad	Well just trying to distance myself away from rugby just trying so i don't get even more depressed because I cant play or train.	Iv had to rely on my house mates to take me to a couple of lectures and bring me back to get my course work in and stuff,  I'm just going to have to borrow some money off of my parents before I can pay them back	I've just got to grit and bear it	over the last couple of days since I cant train Iv become a little bit more happier now that I distanced myself away from it a bit more		
Nigel	be honest with you I haven't seen them, I just keep myself to myself  I pretty much don't try to think about it too much, I just want to get through this time and try not to think about it	I'm just having to rely on other people really  Well my mum and dad send me money so they're defiantly helping out		I don't know why but I just wanted to get out of there	support from my friends and family is the key	
Tom	tried not to think about it too much	I had to get a life off of my house mates.	just like keep going		yeah I talked to my parents while I was in hospital its someone to talk to about it and its someone to tell me that it's going to be all right and re-assure me  Ringing my friends has been a good thing for me  the doctors kept telling me it should be ok	I've actually been able to get on with my work and not worry about rugby

## Appendix B. Coping strategies Interview 2

	Goal setting	Ignoring/avoidance	Concentrate on rehabilitation programme	Tangible social support	Others P/E	Social support/ listening support	Ration money
Jarrad		Yeah I wish I had done something different I wish I hadn't isolated myself but at the time I felt it was the right way to go about it, and take myself away from everything but I wish I hadn't done that now.	basically just trained as much as I could. Did as much training and re-hab as I could, just try to pass the time of the days along that way and try to get back to where I was before  kept to the re-hab programme and stuff like that really.	Because I couldn't get any money to pay for my rent I had to get money off of my parents I think I lent some money off some of my friends as well. I will obviously pay that back when I start working again now.  Just to getting to lectures and getting my assignments in on time I had to rely on lifts from people but obviously not everyone could pick me up because I live far away from the uni so I had to just rely on some people being kind enough to come and pick me up. But work I just had to wait until I got better and borrow some money off my parents and friends and stuff.  The only real method was just borrowing money really, there wasn't really anything I could do to cope with the financial lose other than borrow money really		I obviously spoke to my close friends about it and just trained and carried on with it to be honest.  talk to my friends my family, didn't really want to my team mates to know about it so didn't tell them and kept myself to myself. Only told close friends who weren't involved in the rugby.  I made more of an effort to get involved with the boys. Even though it made me more upset and moody that I couldn't properly get in with them, I grit and bared it and even though I couldn't do anything I get a bit more a part of the team again and socialise with them. After a while then a couple of days, weeks it go easier then, even though I was injured it wasn't as if I was isolated from the team. I was still able to communicate and speak to them and stuff	I just had to make sure I couldn't treat myself with clothes and stuff. I had to ration my food.  Like before I would go out and stuff, say if I went shopping and stuff if there as offers on particular clothing or food items I liked then I wouldn't have thought twice about it but now I have to ration what I buy and what I could do and what I could get, that kind of annoyed me.
Nigel		Sort of trying to ignore it really. Just burry my head in the sand	Apart from the general stretching and the exercise I have been given, just working to the best of my ability doing that, I think that's the only way I cope. Just working as hard as I can at this, trying to get back to where I was, the more effort I put in the happier and more satisfied I am	I'm just mainly getting financial support from my mum and dad at the moment and that's the only way I am coping	I try to find someone else who has had the injury or a similar injury and how long it took them.	My mum and dad my brother well they help me and they keep me on track you know focussed.  I just keep in contact with my friends. Then I feel like I haven't missed anything and I'm still a part of it.	
Tom	goals for myself for when I do get back so that I can aim to get back into the side. I've got certain training plans	I just try and avoid talking about it when I'm not watching it	try to commit to my re-hab programme to try to get back	My parents have been helping me out keeping me afloat. Just to keep me on my feet until I am able to work again.  They are stilling giving me a lift up to campus, sometimes		She has been really good, everything she has told me has been true so she has helped me a lot.  Do you ever talk to her about your feelings or anything? 2) Yeah, the isolation defiantly, she seems to know a lot about sport  she is from a sporting back ground herself and she seems quite wise so it's good to listen to her. I'm interested in her opinion  going out with my friends is a big help, it makes me feel a bit more involved and social aspects and that are improving	

						aring my team mates just to see how they got on, to see how they think they played and if they feel that they didn't play well then I can reassure them to be honest	
--	--	--	--	--	--	--	--

### Appendix C. Coping strategies Interview 3

	Increase training	Using medication	Using clothing	Ensured preparation (i.e. diet) was good	Seeking re-assurance
Jarrad	Not very well to be honest, it still bothers me still very nervous about it but I guess I got to try to see if I can do different types of training, different types of strength training to see if that lowers my demands for that				<p>had a general chit chat with family and friends, one or two team mates but not too many because I didn't want rumours spreading around about it. So mainly just family and friends outside of rugby, in work with me stuff like that really. Just to try and calm myself down relax myself and try to gauge what my feeling are towards it as well.</p> <p>It's just at the moment I just started to talk to a couple of boys I play with, just to find out what they think of me coming back, if they think that it is true. I've explained that to them and they have said that is not what they are thinking at all but obviously it's only a couple of people I have spoken to so far. I have just got to speak to a few more people about it, because if they are thinking that then perhaps I have to go to the coaches and suggest I not play because I don't want to let them down or don't want them to think that about me. So perhaps I might explore that option.</p>
Nigel	<p>just train as much as I can at the moment I put a lot more effort in off the field and try to put as much effort in as I can. I'm more in control I'm sort of like able to do weight it's all about how much I push myself to get back to where I was I'm in control of it so that's the only way I cope</p> <p>Coping in the fact that I'm working and as long as I put in 100% effort then I get that sense of achievement that's my way of coping with it as long as I know I cannot do anymore fitness work in that session or I have done enough in that week then I am happy</p>				<p>Acquiring assurance from other people really. Basically it's the basic what I want to hear really. I want them to tell me 'yes you will be good again' or 'don't worry it won't break' and 'you'll get back to your previous performance. So when I hear that it makes me feel a little bit better a little but more confident.</p> <p>I'm just talking to others and doing research on the internet and seeing how they felt mainly elite people. See how they coped and how they felt and that gives me the assurance of what I should be looking for</p>
Tom	Like doing a bit more fitness work	I've had some massage to try to move it and get it gone and also I've been taking a supplement to lubricate the joint	I wear skins. I don't have to see it or whatever but it also keeps the swelling down or whatever and keep my muscles recovering better	<p>Yeah actually I was taking energy drinks like lucozade and making sure my food was right</p> <p>Also I strapped my knee just to make sure it was ok, just incase.</p>	<p>I went straight to speak to the coaches as soon as I got there</p> <p>Like if I play or train well they will say well done which is good</p>

## Appendix D. Informed Consent Forms



# Informed Consent Form

---

**Subject:** Name \_\_\_\_\_ Sex: M / F  
Date of birth \_\_\_\_\_

**Investigators:** Robert Hunt

Lynne Evans

(Student)

(Member of Staff)

**Ethical Approval Gained?** Yes / ~~No~~

---

**Title of the Study:**

A qualitative study on the temporal nature of stressors and coping strategies experienced during injury rehabilitation.

---

### **Objective and Procedures to be Employed**

Before you read and consider the information presented below it is important that you are aware that all of the proposed interview guide and study procedures have been examined by the UWIC School of Sport ethics committee, which has accepted that the proposed study is suitable for use with consenting, human subjects.

### **Objectives**

The main aims of the study will be to determine whether injured athletes experience changed in stressors and coping strategies during the recover process. By determining this it is hoped that future injured athletes may benefit from the knowledge and experience a less stressful rehabilitation process.

### **Exercise protocol**

You will be required to attend interview sessions on three occasions, during the period of rehabilitation. This will be at the earliest possible opportunity (has to be within 2 weeks of injury occurrence), during the rehabilitation/mid phase and before return to competitive sport. You are requested to come to the session with an open attitude and be willing to discuss anything that may have occurred during this time. The interviews will follow a pre planned structured, however, there will also be the opportunity to discuss anything you wish to.

### **Potential Risks**

This study is relatively risk free. Stress maybe caused by discussion of stressful experiences/feeling. Every effort possible will be made to minimise this. If this does cause undue stress a sport psychologist is available to discuss any matters.

### **Benefits**

In becoming involved in this study you will enable us to collect data which forms part of a research programme. By doing this you will gain experience of a dissertation study which you will either be undertaking presently or in the coming years. By talking about anything you find stressful you could alleviate stress levels and relax yourself.

### **The Data**

All data collected during the testing will remain anonymous and will be treated with the strictest confidence, although it could form the basis of eventual scientific publications and/or presentations. The data collected will not be shared with anyone else and participants will be assigned a number instead of using their names for confidentiality

---

NB - The University and its staff accept no liability for any matters arising, either directly or indirectly, from the information and recommendations given to you as a result of the outcomes of your test. It is the responsibility of the athlete to ensure that the Sport Scientist is aware of any medical conditions or other information that might affect either the test itself or the interpretation of the results and subsequent recommendations.

---

### **Statement by the Subject**

I have been made fully aware of the risks and benefits involved from partaking in the present study. I understand that I am free to withdraw from the study at any time and that the results of the study will be treated anonymously and with total confidentiality.

I have had my attention drawn to the document produced by the American College of Sports Medicine (1997) entitled "Policy Statement Regarding the use of Human Subjects and Informed Consent". It has been made clear to me that if I feel my rights are being infringed and / or my interests are being ignored, neglected or denied, I should inform the chairman of the Cardiff School of Sport Research Ethics Committee who will undertake to investigate my complaint.

Signed: \_\_\_\_\_  
(Subject's signature)

Date: \_\_\_\_\_

I certify that the details of the study have been fully explained and described in writing to \_\_\_\_\_, and this information has been fully understood by him.  
(Subject's name, printed)

Signed: \_\_\_\_\_  
(Independent witness' signature)

Date: \_\_\_\_\_



Participant's contact details:

Address (including postal code):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Home telephone number:** \_\_\_\_\_

**Mobile telephone number:** \_\_\_\_\_

**E-mail address:** \_\_\_\_\_

## Appendix E. Interview Guide



### INTERVIEW GUIDE

#### SPORT INJURY: STRESSORS AND COPING RESPONSES

Participant details:

Name:

Age:

Gender:

Sport:

Event(s)/position(s):

Years participating in sport:

Current performance level:

Highest performance level:

Date of highest performance level:

Previous injuries:

Interview date:

Duration of interview:

## **INTERVIEW ONE**

### **SECTION ONE: INTRODUCTION**

First, and foremost, thank you for agreeing to take part in this study. My name is \_\_\_\_\_ and I am an undergraduate student from the University of Wales Institute, Cardiff (UWIC). The aim of this interview is to gain an in-depth understanding of your injury experience during three time phases: (1) the onset of your injury, (2) your rehabilitation, and (3) your subsequent return back into competitive sport. Specifically, I am interested in discussing the things that you found stressful (i.e., the demands you encountered) and the coping strategies you used within each of the three time-phases. The information you provide during this interview will be used in my dissertation and may also be published in scientific journals so that other athletes, coaches, and sporting personnel can benefit from your experiences. All your responses will remain anonymous and any information you provide will be stored in a secured area that is only accessible to me and my supervisory team. To ensure a complete and accurate account of this interview, I will be using a tape recorder.

Before starting the interview I would also like to confirm your rights as a participant. This interview is about your experiences and as such if you feel uncomfortable answering any of the questions then you are free to decline to comment or ask for the interview to be stopped. I would rather you declined to comment than answer in a way that you think I or someone else would want you to. Please take your time when responding to questions during the interview, pauses are fine. However, if you still can not recall, please let me know and do not guess. There are no right or wrong answers to any of the questions. If you have any questions yourself please feel free to ask them at any point, especially if I ask something that is not clear. Finally, please remember that I am interested in gaining an overall understanding of your injury experience; therefore, please do not hesitate to include anything that you believe had an impact on you during this time, such as family issues, relationships, examinations and so forth. Okay, before we make a start do you have any questions?

## INTERVIEW ONE

### SECTION TWO: INJURY ONSET

The interview today is about the period between your injury occurrence and the start of your rehabilitation (i.e., initial physiotherapy appointment).

**Need to work out time scale for this phase:**

Date of injury:

Date of initial physiotherapy appointment:

**2.1 Can you firstly tell me about how your injury occurred (i.e., what happened) and how you initially responded?**

Probe: Was it in a training session/competition?

Probe: Type, location, and severity of your injury?

Probe: What factors (if any) contributed to your injury?

Probe: How did you immediately respond? (i.e., thoughts, emotions, and behaviours)

**2.2.1 What did you find stressful during this phase / what demands did you experience? (e.g., delay in receiving diagnosis/prognosis, reaction of coach/teammates, physical pain) For each demand they identify, ask the following.**

Probe: How did you respond to this demand?

a. What thoughts ran through your mind in response to this demand?

b. Tell me about the physical feelings you may have felt when you experienced this demand?

c. Did this demand also influence your behaviour/actions? If so, how?

Probe: How did you cope with this demand?

Probe: How did you cope with the way you responded?

Probe: How effective were the coping strategies you used?

- a. Did they influence the demand? (e.g., eliminate or reduce the frequency and/or its intensity)
- b. Did they modify your response? (e.g., lower, maintain, heighten, and/or transform their response)

**2.2.2 In addition to the demands you've just mentioned and to ensure you have identified all the different types of demands (stressors) you experienced and the way you coped, I have identified a number of types of stressors which I would like you to consider - are there any additional demands here that you experienced? *Only go through those that haven't already been identified.***

- a. Injury/physical-related demands? (e.g., pain, incapacitation)
- b. Medical-related demands? (e.g., medical uncertainty, lack of access to appropriate medical support)
- c. Sport-related demands? (e.g., prospect of losing spot on team, isolation from other athletes)
- d. Education-related demands and / or work-related demands? (e.g., injury interfering with assignments and exams, having to miss work)
- e. Financial-related demands? (e.g., lack of financial support)
- f. Relationship, social, and home-related demands? (e.g., lack of support from friends, coach, family, teammates)
- g. Personal-related demands? (e.g., putting weight on)
- h. Other demands? (e.g., nutritional)

**For each demand they identify, ask the following:**

Probe: How did you respond to this demand?

- a. What thoughts ran through your mind in response to this demand?
- b. Tell me about the physical feelings you may have felt when you experienced this demand?

c. Did this demand also influence your behaviour/actions? If so, how?

Probe: How did you cope with this demand?

Probe: How did you cope with the way you responded?

Probe: How effective were the coping strategies you used?

a. Did they influence the demand? (e.g., eliminate or reduce the frequency and/or its intensity)

b. Did they modify your response? (e.g., lower, maintain, heighten, and/or transform their response)

**2.3 Were there any other factors that you feel affected the way that you coped during this phase?**

Probe: What were these?

Probe: What affect did they have on your thoughts, feelings, and behaviours?

Probe: Why do you feel they had this effect?

**2.4 Reflecting back over this period is there anything else you feel you could have done or done differently to help you cope more effectively?**

Probe: What specifically do you think you could have done?

Probe: How and why do you think it would have helped?

**2.5 Are there any other factors relevant to this phase that we have not fully discussed?**

## INTERVIEW TWO

### SECTION THREE: REHABILITATION

This interview is concerned with your rehabilitation until your re-turn to competitive sport. Please remember, this interview is not intended as a test to catch you out in anyway. There are no right or wrong answers to any of the questions. I am only interested in learning from your experiences. If you have any questions yourself please feel free to ask them at any point, especially if I ask something that is not clear.

**Need to work out time scale or this phase:**

Date of initial physiotherapy appointment:

Date of return (projected) to competitive sport (i.e., full training or competition):

**3.1.1 What did you find stressful during this phase / what demands did you experience? (e.g., slowness of rehab progress, lack of medical / rehab support and advice, concerns about putting weight on, feeling isolated). For each demand they identify, ask the following.**

Probe: How did you respond to this demand?

a. What thoughts ran through your mind in response to this demand?

b. Tell me about the physical feelings you may have felt when you experienced this demand?

c. Did this demand also influence your behaviour/actions? If so, how?

Probe: How did you cope with this demand?

Probe: How did you cope with the way you responded?

Probe: How effective were the coping strategies you used?

a. Did they influence the demand? (e.g., eliminate or reduce the frequency and/or its intensity)

b. Did they modify your response? (e.g., lower, maintain, heighten, and/or transform their response)

**3.1.2 In addition to the demands you've just mentioned and to ensure you have identified all the different types of demands (stressors) you experienced and the way you coped, I have identified a number of types of stressors which I would like you to consider - are there any additional demands here that you experienced? *Only go through those that haven't already been identified.***

- a. Injury/physical-related demands? (e.g., nature of the rehab, uncertainty in effectiveness of rehab programme, slowness of progress, inability to train 'normally', concerns that you won't regain previous levels of fitness)
- b. Medical-related demands? (e.g., medical uncertainty, lack of access to appropriate medical support)
- c. Sport-related demands? (e.g., isolation from other athletes)
- d. Education-related demands and / or work-related demands? (e.g., injury interfering with assignments and exams, having to miss work)
- e. Financial-related demands? (e.g., lack of financial support, loss of earnings)
- f. Relationship, social, and home-related demands? (e.g., lack of support from friends, coach, family, teammates)
- g. Personal-related demands? (e.g., putting weight on)
- h. Other demands?

**For each demand they identify, ask the following:**

Probe: How did you respond to this demand?

- a. What thoughts ran through your mind about this demand?
- b. Tell me about the physical feelings you may have felt when you experienced this demand?
- c. Did this demand also influence your behaviour/actions? If so, how?

Probe: How did you cope with this demand?

Probe: How did you cope with the way you responded?

Probe: How effective were the coping strategies you used?

a. Did they influence the demand? (e.g., eliminate or reduce the frequency and/or its intensity)

b. Did they modify your response? (e.g., lower, maintain, heighten, and/or transform their response)

**3.2 Were there any other factors that you feel affected the way that you coped during this phase?**

Probe: What were these?

Probe: What affect did they have on your thoughts, feelings, and behaviours?

Probe: Why do you feel they had this effect?

**3.3 Reflecting back over this period is there anything else you feel you could have done or done differently to help you cope more effectively?**

Probe: What specifically do you think you could have done?

Probe: How and why do you think it would have helped?

**3.4 Are there any other factors relevant to this phase that we have not fully discussed?**

**3.5 What differences are you aware of between this phase and the previous phase in relation to:**

a. The demands that you have experienced?

b. The way you have tried to cope with them?

c. The effect of your coping strategies?



## INTERVIEW THREE

### SECTION FOUR: RE-ENTRY INTO COMPETITIVE SPORT

This interview addresses your re-entry into competitive sport (i.e., your return to full training and competition). Please remember that I am interested in gaining an overall understanding of your injury experience; therefore, please do not hesitate to include anything that you believe had an impact on you during this time, such as confidence, re-injury concerns, and regaining match fitness.

**Need to work out time scale for this phase:**

Date of re-entry into competitive sport:

Date had full-confidence in your injured body part:

Date you were back to preinjury levels of performance:

**4.1.1 What did you find stressful during this phase / what demands did you experience? (e.g., re-injury concerns, fitness concerns). For each demand they identify, ask the following.**

Probe: How did you respond to this demand?

a. What thoughts ran through your mind in response to this demand?

b. Tell me about the physical feelings you may have felt when you experienced this demand?

c. Did this demand also influence your behaviour/actions? If so, how?

Probe: How did you cope with this demand?

Probe: How did you cope with the way you responded?

Probe: How effective were the coping strategies you used?

a. Did they influence the demand? (e.g., eliminate or reduce the frequency and/or its intensity)

b. Did they modify your response? (e.g., lower, maintain, heighten, and/or transform their response)

**4.1.2 In addition to the demands you've just mentioned and to ensure you have identified all the different types of demands (stressors) you experienced and the way you coped, I have identified a number of types of stressors which I would like you to consider - are there any additional demands here that you experienced? *Only go through those that haven't already been identified.***

- a. Injury/physical-related demands? (e.g., levels of fitness, fear of re-injury)
- b. Medical-related demands? (e.g., decisions relating to your return to competitive sport)
- c. Sport-related demands? (e.g., not regaining previous performance levels, letting team mates / coaches down)
- d. Financial and-related demands? (e.g., financial consequences of re-injury)
- e. Relationship, social, and home-related demands? (e.g., friends, coach, family, teammates)
- f. Personal-related demands? (e.g., loss of self-identity as an athlete)
- g. Other demands?

**For each demand they identify, ask the following:**

Probe: How did you respond to this demand?

- a. What thoughts ran through your mind about this demand?
- b. Tell me about the physical feelings you may have felt when you experienced this demand?
- c. Did this demand also influence your behaviour/actions? If so, how?

Probe: How did you cope with this demand?

Probe: How did you cope with the way you responded?

Probe: How effective were the coping strategies you used?

- a. Did they influence the demand? (e.g., eliminate or reduce the frequency and/or its intensity)

b. Did they modify your response? (e.g., lower, maintain, heighten, and/or transform their response)

**4.2 Were there any other factors that you feel affected the way that you coped during this phase?**

Probe: What were these?

Probe: What affect did they have on your thoughts, feelings, and behaviours?

Probe: Why do you feel they had this effect?

**4.3 Reflecting back over this period is there anything else you feel you could have done or done differently to help you cope more effectively?**

Probe: What specifically do you think you could have done?

Probe: How and why do you think it would have helped?

**4.4 Are there any other factors relevant to this phase that we have not fully discussed?**

**4.5 What differences are you aware of between this phase and the previous phase in relation to:**

- a. The demands that you have experienced?
- b. The way you have tried to cope with them?
- c. The effect of your coping strategies?

**SUMMARY**

**5.1 Reflecting back on your overall injury experience:**

- a. How stressful have you found it?
- b. What have been the most challenging demands?
- c. How effectively do you feel your coping efforts have been?
- d. What do you feel that you have coped with least well, and why?

e. What do you feel that you have coped with most well, and why?

f. What could have done differently to cope more effectively with your injury experience?

## **CONCLUSION FOR ALL INTERVIEWS**

**6.1 How do you think the interview went?**

**6.2 Do you feel we missed any important areas you would like to discuss/add to?**

**6.3 Have you any comments or suggestions about the interview itself?**

**Thank-you**

## Appendix F. Stressors – Occurrence of injury

	Not being able to play	Loosing contact with team mates	Pain	Loss of bodily functioning	Taking medication	Unable to work/Finances	Personal Image
Jarrad	Not being able to train or play was pretty stressful'	couldn't keep in contact with some of the boys  ' I couldn't train I couldn't participate in any of the exercising so you don't feel so close to them because I cant actually have a chance to say how I thought the session went.'	'Um physical pain like my forearm and elbow couldn't move properly just getting pain all the time in my arm'	'Yeah couldn't move my arms and couldn't do a number of things so was incapacitated to the extent with everyday activities'  'can't drive so that's emotional with work sometimes'	'Don't really like taking medication so I don't really like it at the moment. Being restricted to having to take it every 4 or 5 hours it's kind of a pain because I have to make sure it's with me all the time, like in uni and if I forget to take it then I get the pain coming on again, yeah it's kind of annoying at the moment.'	'Work definitely I am going to have to miss a couple of shifts because I can't pull any pints cause I work behind a bar and I can't use my arms to do that.'  I needed to work to get my money, to pay for my rent and stuff and now I can't do that. It's going to be annoying and I'm going to have to find a way to figure that out	
Tom	I was frustrated about not being able to play obviously. All my housemates play rugby and whatever, but all I could do was sit in the house and think about trying to get back into the team once I get back  I worry about people getting in front of me know. Because obviously they have been playing and I haven't	With my friends I'm not able to see them as much	I had pain and swelling on the knee, it was even tender to touch. If I got a bang on the knee I couldn't even walk I couldn't even bend my knee I had to keep it straight	If I got a bang on the knee I couldn't even walk I couldn't even bend my knee I had to keep it straight  It was worrying to be honest because I didn't know what was happening  Yeah getting back and forward to uni; I couldn't use the bus so I had to get a life off of my house mates.	I had an infection so I've been taking anti-biotic		I have swelling on my knee  I can't wear jeans or any nice clothes. I have to wear like tracksuit bottoms which is making me feel down, having to be in the house everyday and in the same type of clothes every day.
Nigel		loose my social interaction with my mates through sport	pain is pretty much the main issue	I have no real mobility with my arm really. Its in a sling so I can really do anything in terms of moving my left shoulder so it's really annoying and frustrating  I'm very frustrated that I can't do anything.  I had to get a life off of my house mates.	It's just the chore of having to take them all the time and remembering when to	usually work at a bar but cant at the moment so that becoming a bit of a problem  I'm not bringing in any money so yeah that a worry	

## Appendix G. Stressors Interview 2

	Watching others in the team	Physical Image	Fear of not regaining previous physical levels	finances	isolation	Slowness of rehabilitation	Social comparison
Jarrad	But just not being able to train normally seeing everyone else training the way they can and me just on the side doing stretches and stuff you know.		Just concerned I won't get back to where I was before. Just concerned that what I was doing was right, and whether I should be doing it that way and just pretty annoyed that it happened, then with you doing certain exercises for a few weeks certain feelings run through your mind about are you going to get back to the level you were at before	<p>Pretty much the stressful stuff is I'm supposed to be working quite a lot in a bar, couldn't do that and found a lack of money was a bit of a stressors to be honest that has kind of annoyed me as well</p> <p>I was very annoyed and frustrated with how it is going, with how it was going before because it was going so well before with the weights and stuff. But then that happened and then not being able to work, not being able to get money is kind of frustrating.</p> <p>Yeah obviously I could work in the bar so I lost earnings that way, I lost X amount of money each week and it affected my rents so I had to borrow some money off of my parents and friends and stuff. To keep me going, I had enough money to pay for food and keep me going through the weeks but not enough to pay for the rent and things like that.</p> <p>That was the most angry I was because I couldn't really do anything, I could go out to the cinema or anything I could socialise or go out with my friends on a Saturday for a couple of drinks cause I didn't have enough money to do it. That was the worst</p>	<p>Just isolated from my friends, especially from people I wouldn't have seen unless I was at the rugby or playing rugby and stuff like that. Couldn't see them, lost contact with them. I found that when I did see them I didn't really have anything to talk or have anything to identify with them, cause I wasn't training I couldn't say something like "training was hard tonight" or anything like that. That normal conversation I would normally have with them was gone, that made me feel isolated.</p>	<p>The physio was really slow, like for one instance I was doing stretches and stuff I was one certain type of stretches for a few weeks and didn't really progress from it. It's sort of annoying really not being able to progress from that onto light weights and stuff.</p> <p>I just the only thing that annoyed me was I couldn't get as much treatment as I wanted just to make sure the stuff I was doing was appropriate but with my recovery that was the only thing really that let me down.</p> <p>) Just I was having basic stretches on the Monday and then by the Friday they were fine and weren't really hurting or anything when I went to the appointment again by the following Monday. I would have rather of had an appointment on the Friday, do an extra couple of sets or an extra couple of stretches but by the Monday it was becoming too easy and doing nothing. I kind of lost interest a little bit but I managed to stick to it and carry on.</p>	<p>I just felt really bad and embarrassed to be honest, there as me sitting down and complaining about my elbow hurting and then there was all the other slogging and training really hard and there as me complaining I have got a bad arm. So you know I felt a bit embarrassed about that and annoyed I couldn't do anymore.</p> <p>Work related demands I just couldn't work as much, usually when I'm in work I have to do the heavy lifting and stuff cause I work with barrels and I have to set the bars up around the ground and stuff but I found I couldn't do any of this. When you see other people doing your job it makes you pretty mad that you cannot do it yourself. There were a lot of shifts I couldn't work especially the first couple of weeks</p>
Nigel		<p>I think the most noticeable to look is defiantly muscle loss and thats the most severe at the moment</p> <p>I'm quite a big person but at the moment I'm smaller. I feel quite week, feel like I'm sort of wasting away</p>		<p>Worry to an extent. It's sometimes a little bit guilty because there is a lack of control in that area. Like because I can't earn any money I just have to take some off my parents which I don't like doing</p>	<p>Well I think at the moment I feel a little isolated from the team, like I still can't even do light training just doing general skills so I can't even be involved in the sessions. And as I can't do weight s I can't go to the gym with any of my team mates so I'm still feel a bit osteosized form my team at the moment.</p>	<p>It's not coming as quickly as I would have liked it to be, you know it's taking a lot of work and I'm putting in a lot of effort. But you know it still takes time for it to heal.</p>	<p>I'm not able to lift heavy weight you know playing rugby I am able to do a lot of weight lifting at the moment I can't lift any weights and I find that very frustrating yeah defiantly</p> <p>So generally still lifting anything heavy is still a stress.</p> <p>There is a lot of fatigue in that area when I do anything. it tires very quickly then after it stiffens, and then after any sort of exercises I do or generally during the day it hurts quite a lot. You know I can still</p>

							<p>get quite a bit of pain.</p> <p>I'm still finding it stressful because I have a lack of mobility at the point of injury,</p> <p>toward the end of the day when I've been trying to move and the stiffness of my shoulder</p>
Tom	<p>also I tend to find myself watching my position and if he is playing well</p> <p>Well I've been watching my team mates play, they are still winning, and its making me wonder if I'm gunna be able to get back into the team or not</p> <p>when I come back I feel like I'm going to not be a part of the team spirit and I just feel I'll be a bit on my own</p>	<p>of muscle in my left quad, like I haven't been using my left leg and calf</p> <p>I feel that I have started to put on some weight</p>	<p>I go back now I'm not going to be as strong in just one leg I feel that it might be imbalanced</p>	<p>I'm not able to go to work to earn money</p>	<p>I'm used to being with my team mates, and not being with them is a problem</p>		

## Appendix H. Stressors Interview 3

	Not re-gaining level of performance	Fear of re-injury	Personal image	Worried about early return	Letting team mates down	Team mates perceptions
Jarrad	<p>Lose of form I was worried what other people thought of me, was I coming back just because it was coming to the business end of the season, and could I pick up from where I left off before, with my match fitness am I going to be sharp am I going to be rusty am I going to be tired and want to come off after 10 minutes.</p>	<p>The main thing was not re-injuring myself again, that's what I'm most concerned of.</p> <p>Training I was just worried I might hurt it again in contact and stuff but when I was performing I didn't really think about it to be honest, as soon as the coach calls us in to have a chat and all that I think oooh I'll see how my arm feels test in and all that.</p> <p>if I get re-injured again then I will have to rely on my parents again to give me money. I don't think they can give me that much money; I don't want to have to rely on friends to give me money. Plus I'm starting to get more shifts again in the bar I don't really want to be injured again because I will lose all them plus little bits extra in the week that I am going to do. Plus there is always that question in the back of your mind that will they sack me or get rid of me if it happened again, they don't want someone who is constantly injured on their pay roll so that's the main thoughts running through my mind in that regard.</p>		<p>Yeah the physio told me to return and the questions were running through my head that should I actually be returning now am I ready for this, to return to training now and playing.</p>	<p>The main one was letting my team mates and especially coaching staff down, they have taken a big gamble bringing me back into the training environment. They have assessed me to see if I am ready to play and I don't want to let them down especially as there are really big matches coming up just a few weeks away so I don't want to mess that up. Especially don't want to let my team mates down for those, you know like am I ready for it, should I be on the bench, should I start those sort of feelings. As much as I want to play I don't really want to let them down and not getting back to previous performance levels that coincides with letting my team mates down as well.</p>	<p>what other people think of me, are they thinking he has come back too soon because he wants to play in this match or that match or why has he come back now because he hasn't played for a couple of weeks and all of a sudden he is coming back training. What other people are thinking of me coming back now I guess that is the only question; I guess that my identity as an athlete or as a player but that is a main one.</p>
Nigel	<p>I think that is one of the main stressors and maybe returning to my level before hand, like my previous performance. That seems to be my main ones</p> <p>I just want to keep pushing myself; I'm really driven to get back you know. But I have always got that in the back of my head that I'm not ready fitness wise. So I'm just still a little bit behind the pace at the moment</p>	<p>At the moment just, what I'm finding stressful is the fear of breaking my shoulder again; maybe I'm going back too early.</p>	<p>I sorta lost some of my identity as a player. I sorta looked like a footballer basically; I didn't look like a rugby player.</p>	<p>The only medical is I feel that the question of am I ready to go back into sport and am I ready to play at my previous level</p>		

Tom	I'm worried that I won't get to the level of performance that I was at before	I might get re-injured	<p>I've still got swelling on my knee, it's not painful or anything it's just the fluid that is left and it's gone hard</p> <p>It like bruised is left a scar there and it like hard and basically it's not nice. To look at or touch to be honest I don't feel comfortable in myself</p>	<p>My physio wanted me to wait another week but I felt that I could run so I thought I could do something about it myself</p> <p>I was very nervous because I was afraid that I could have another bang then I would have to see the physio again and that would be so good</p> <p>I could have waited, I wouldn't have felt so nervous or worried about how the injury was going to go</p>	<p>I've been worried about not being able to perform as well as I was when I come back, I was performing well before and I'm worried about what my team mates will think of me now before a game.</p>	<p>Just that they would not have the same feelings that they had about me before</p> <p>it was a worry whether they would accept me as a player again</p>
-----	---	------------------------	---	---	---	---