### Cardiff School of Sport

#### DISSERTATION ASSESSMENT PROFORMA:

**Empirical**

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|          | **Results and Analysis**

|          | To include: description and justification of data treatment/data analysis procedures; appropriate presentation of analysed data within text and in tables or figures; description of critical findings. |
|          | **Discussion and Conclusions**

|          | To include: collation of information and ideas and evaluation of those ideas relative to the extant literature/concept/theory and research question/problem; adoption of a personal position on the study by linking and combining different elements of the data reported; discussion of the real-life impact of your research findings for coaches and/or practitioners (i.e. practical implications); discussion of the limitations and a critical reflection of the approach/process adopted; and indication of potential improvements and future developments building on the study; and a conclusion which summarises the relationship between the research question and the major findings. |
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CARDIFF METROPOLITAN UNIVERSITY
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CARDIFF SCHOOL OF SPORT

DEGREE OF BACHELOR OF SCIENCE
(HONOURS)

SPORT & PHYSICAL EDUCATION

AN INVESTIGATION INTO THE RELATIONSHIP
BETWEEN SOURCES OF CONFIDENCE AND
RETURN TO SPORT FROM INJURY

(Dissertation submitted under the discipline of
_______Psychology______________________)

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AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN SOURCES OF CONFIDENCE AND RETURN TO SPORT FROM INJURY
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ACKNOWLEDGEMENTS

I would like to acknowledge my dissertation tutor, Lynne Evans, for her constant support and assistance throughout the whole dissertation progress.

I would also like to thank my parents, for always pushing me to work that bit harder than I wanted to, and really achieve my full potential.
The aim of the present study was to investigate the relationship between sources of confidence and return to sport from injury. Injured athletes (N=61) with either a successful (N=31) or unsuccessful perception of their return to sport (N=30) completed the Modified Sources of Sport-Confidence Questionnaire (M-SSCQ; Magyar & Duda, 2000) and perception of success measure. A one-way analysis of variance (ANOVA) was conducted to examine differences in the sources of sport-confidence between the two groups. The results of the ANOVA indicated that athletes with successful perceptions of their return placed significantly more importance upon demonstration of ability (p<.001) and social support (p<.001) sources of confidence than athletes who perceived an unsuccessful return to sport. In contrast, athletes who perceived an unsuccessful return to sport placed significantly more importance on mental/physical preparation (p<.05) than athletes who perceived a successful return. These findings suggest that specific sources of confidence may be more beneficial than others in facilitating a successful return to sport. Further research of a qualitative nature could help to explain these differences in sources of confidence.
CHAPTER 1

INTRODUCTION
1.1 Introduction

The involvement in any sporting activity has within it an inherent risk of becoming physically injured (Tracey, 2003). Logically, immediate attention is often focused on the physical site of the injury; however researchers have recently documented the profound psychosocial impact that an injury can have on an athlete (Podlog, Dimmock & Miller, 2011). Further focus on this area has led researchers to recognise that physical readiness to return to sport is not necessarily synonymous with psychological readiness (Wadey & Evans, 2011). It is not surprising, therefore, that over recent years there has been growing interest in the psychology of injury and the factors that affect athletes’ appraisal of, ability to cope with, and responses to injury- particularly with regard to an athlete’s successful return to competitive sport.

A central focus within the return to sport from injury research has been to examine the antecedents of athletes’ emotional and behavioural responses to injury. Findings that have emerged from this research suggest that one factor that plays an important role in athletes’ injury experience, is self-confidence (Taylor, 2003; Carson & Polman, 2008; Hays et al., 2009; Wadey & Evans, 2011). Self-confidence is a concept which has evolved and been reconceptualised over the past three decades, from general feelings of self-efficacy to the recent identification of specific sources of confidence. However, to date very little research has focused on these sources of confidence from a return to sport from injury perspective. The purpose of the present study therefore is to investigate the relationship between sources of self-confidence and the return to sport from injury. Sixty one university athletes completed a Modified version of the Sources of Sport Confidence Questionnaire (M-SSCQ) as well as a Perception of Success measure. Results were then analysed to reveal the relationships between sources of confidence and return to sport following injury.
CHAPTER 2
LITERATURE REVIEW
2.1 Introduction

This chapter will open by discussing the issues surrounding injury within competitive sport, specifically focusing on the psychological responses to injury. This will be followed by a critical appraisal of the sport-confidence research, highlighting the influence of sources and types on efficacy expectations. Finally, this chapter will highlight the importance of restoring confidence within injured athletic populations, concluding with the purpose and rationale for the present study.

2.2 Injury in Sport

As a competitive athlete, the challenge of returning to sport from injury is one which most will face at some point in their sporting career (Podlog & Eklund, 2006). The majority of research within this domain has tended to focus on the medical and physical aspects of rehabilitation (Podlog, Dimmock & Miller, 2010). Recently however, increased research attention has been given to the return to sport phase from a psychological context. This research has acknowledged the importance of confidence for athletes to make a successful return to competitive sport (Carson & Polman, 2008; Hays et al., 2009; Wadey & Evans, 2011). However, despite this research attention and support for the importance of confidence, little is known about the actual sources from which athletes derive confidence. This knowledge is essential if sport psychologists and medical professionals are to aid athletes in their successful return to sport (Carson & Polman, 2008). Therefore the purpose of the current study is to further investigate the relationship between sources of self-confidence and the return to sport from injury; more specifically, to investigate which particular sources may aid a more successful return.

2.3 Psychological responses to injury

From the onset of sport injury to the return to competitive sport, athletes experience a number of psychological consequences (Wiese-Bjornstal et al., 1998). These consequences include changes in cognitions and emotions, for
example feelings of anxiety, anger, and altered self-perceptions (Tracey, 2003). With their review, Wadey and Evans (2011) highlighted that the manner in which athletes experience these emotions has been shown to change over time, generally following a temporal pattern across the rehabilitation process. Research has demonstrated that perceptions of one’s self, capabilities and worth may all be affected by the experience of becoming injured (Wiese-Bjornstal et al., 1998). For example Chan and Grossman (1988) found that self-esteem was significantly lower in injured runners than in non-injured runners. Similarly, McGowan et al. (1994) found significant decreases in global self-worth scores in a group of injured football players compared with a group of non-injured football players. These findings are important not least because of the likely impact that negative self-perceptions will have on emotional and behavioural responses to sport injury (Wiese-Bjornstal et al. 1998).

2.4 Conceptual models of Psychological Response to Injury

In order to understand athletes’ psychological responses to sports injury, a number of conceptual models have been forwarded. The model which has received most attention is Wiese-Bjornstal et al’s. (1998) integrated model of response. This model illuminates the stress-process, integrating the prediction of injury components (pre-injury) with response to injury components (post-injury) (Wiese-Bjornstal et al., 1998). The model suggests that pre-injury factors such as personality, history of stressors, and coping resources, combined with post-injury factors such as severity of injury, social support and rehabilitation environment will affect an athlete’s cognitive, emotional and behavioural responses to injury. These responses are constantly interacting with the athlete’s appraisal of the situation, therefore making the model dynamic, interactive and cyclical in nature (Tracey, 2003).

An athlete’s appraisal of the injury is thought to influence their emotional and behavioural responses to the injury and rehabilitation process. Indeed, the way in which injured athletes appraise their situation may potentially have more impact on their behaviours and emotions than the fact that the injury has occurred (Tracey, 2003). As an athlete’s cognitive
appraisals change over time, their emotional and behavioural responses also alter. These responses follow a temporal pattern with feelings of anger, confusion and worry prevalent immediately after injury, then replaced by feelings of impatience and anticipation as return to competition nears (Wadey & Evans, 2011).

A number of studies have also found temporal differences in athlete’s feelings of self-confidence during the rehabilitation period, with confidence declining at injury onset, before rising again once recovery is complete (Quinn & Fallon, 1999; Podlog & Eklund, 2006). One reason for this may be the effect that social support has on confidence and beliefs about treatment. Indeed, guidance from physiotherapists, in the form of informational support has been identified as particularly salient to an athlete’s recovery beliefs and adherence levels (Johnston & Carroll, 1998; Niven, 2007). This is particularly important when taking into account that recovery from injury is largely dependent on an athlete’s adherence with their prescribed rehabilitation program (Niven, 2007; Brewer, 2010). Findings such as these suggest that restoration of confidence may be an important factor in returning to sport, as well as highlighting the importance of situational factors such as social support as a way of increasing this confidence.

2.5 Self-Efficacy and Self-Confidence

Self-confidence has been identified by researchers and practitioners as one of the most vital psychological characteristics to effect sport performance (Vealey et al., 1998). Fascination with this construct stems from the dramatic influence that a loss in confidence has on performance, as well as the positive effects that high confidence is associated with (Vealey et al., 1998). Confidence levels have also been found to affect rehabilitation performance; indeed, a growing body of research has suggested that one of the biggest barriers to an athlete’s successful return to competitive sport following injury is a decrease in their self-efficacy/self-confidence (Magyar & Duda, 2000). Therefore, it is vital that these confidence beliefs are restored prior to their return (Magyar & Duda, 2000). Based on the findings that self-efficacy is a vital component of returning from injury, Bandura (1990) defined the process
of efficacy restoration as restoring confidence to a level where the athlete feels confident enough to return to competition following rehabilitation.

Self-efficacy can be defined as a person’s perceived capability to accomplish a certain level of performance (Feltz, Short & Sullivan, 2008). The judgement of one’s efficacy is the result of a complex process of self-appraisal that is dependent on various sources of efficacy information (Bandura, 1990). These sources include enactive mastery experiences, vicarious experiences, imaginal experience, verbal persuasion and perception of emotional and physiological states (Bandura, 1997; Maddux & Gosselin, 2003). It has been suggested that all six sources impact self-confidence and efficacy judgements, with mastery experiences being the strongest predictor (Magyar & Duda, 2000; Feltz, Landers, & Raeder, 1979). Although Bandura’s self-efficacy theory has shown to be a helpful theoretical framework from which to examine sources of self-efficacy, the fact that it is not a sport-specific framework has led researchers to question whether the sources identified are the most salient to athletes within unique sport contexts (Martens, 1979; Magyar & Duda, 2000; Hays et al., 2007).

In part, as a result of the aforementioned criticism, Vealey (1986) provided the first sport-specific model of confidence, and developed an inventory to operationalize confidence in competitive sport (Hays et al., 2009). Within this model, the term sport-confidence was used to represent an athlete’s belief or degree of certainty that he or she has the ability to perform successfully in sport (Vealey & Chase, 2008). This is a noted difference from Self-Efficacy theory as the concept is no longer general self-confidence but sport-specific self-confidence (Vealey, 1986). The model separated sport-confidence into two concepts; trait (SC-trait) and state (SC-state), and also included a dispositional construct termed competitive orientation, which refers to the particular type of goal that an athlete strives towards in competitive sport (Vealey et al., 1998). The model predicted that dispositional confidence (SC-trait) would interact with competitive orientation to elicit state-sport confidence (SC-state). However, although Vealey’s sport confidence model has been studied in terms of mediating processes and multiple effects, a number of limitations have been reported. For example, there has been limited support for the proposed relationships occurring within the model.
Indeed, Martin and Gill (1991) and Roberts and Vealey (1992) found that SC-trait was a better predictor of sport behaviour and performance than SC-state. Also, the determinants or sources of self-confidence were not examined, meaning that it is difficult to apply the model in a practical sense.

2.6 Sources and types of confidence

Having identified weaknesses in her previous model, Vealey et al. (1998) subsequently proposed a more advanced framework, one which viewed sport-confidence as a single construct, and included the sources of confidence which are salient to the performer. The reconceptualised model proposed that the organisational culture of sport, along with individual difference characteristics such as personality, influence the development of sport-confidence in athletes, as well as the sources on which their confidence is based (Vealey & Chase, 2008). Nine sources of confidence were identified to be particularly salient to athletes within the unique sport context; mastery; social support; demonstration of ability; physical self-presentation; physical/mental preparation; coaches’ leadership; vicarious experience; environmental comfort; and situational favourableness (Wilson et al., 2004; Hays et al., 2007). However, although Vealey focused more specifically on the competitive and training environments of sport, as well as its distinct social nature, there are clear similarities between Vealey’s sources of sport-confidence and Bandura’s efficacy beliefs (Vealey & Chase, 2008; Vealey et al., 1998). For example, mastery and vicarious experience were identified by Vealey as being important sources of sport-confidence, just as they were by Bandura.

Having identified the sources of sport confidence, Vealey et al. (1998) also considered which sources were identified most regularly by their participants. Results indicated that athletes sourced the majority of their confidence from five particular sources; mastery, social support, physical/mental preparation, demonstration of ability, and physical self-presentation. It should however be noted that there were significant gender differences within Vealey’s et al’s. (1998) study; for example, female athletes identified that social support was a more important source of sport-confidence
than did male athletes. These differences in the importance of social support are reflected in previous research, and highlight the fact that social evaluation influences the confidence of females more so than males (Vealey et al., 1998; Duda, 1989). Similarly, Hays et al. (2009) identified that female athletes may be more susceptible to external confidence debilitating factors associated with the organisational culture of sports performance than male athletes, - (i.e. the competitive level, and motivational climate). Consequently, it is important that practitioners are aware of these gender differences in order to highlight specific sources to an athlete, depending on their individual differences.

Because sport performance is an on-going process, in which athletes are cognitively involved before, during and after competition, research has also examined how self-confidence fluctuates over time in relation to competitive events (Vealey & Chase, 2008). For example, Olympic athletes have been shown to report their confidence as abnormally “fragile” prior to performance- due to the pressure that comes with world-class competition (Gould et al., 1999). Indeed, Vealey et al. (1998) suggested the sources from which an athlete bases their beliefs can affect the stability of their sport-confidence, and that deriving confidence from controllable sources (mastery, physical/mental preparation) facilitates stable sport-confidence beliefs; whereas athletes who derive their sport-confidence from uncontrollable sources may develop weaker or unstable perceptions of control and competence (Hays et al., 2009; Kingston et al., 2010). Understanding and influencing each individual’s sources of confidence is therefore, key to the designs of interventions to enhance confidence (Vealey et al., 1998).

2.7 Self-confidence and injury

Self-confidence has also been found to influence the rehabilitation process. Indeed, Taylor and Taylor (1997) state that confidence is perhaps the most important contributor to a complete and timely recovery from injury. It is therefore surprising that the process of restoring confidence has received only limited attention in the injury research literature. With reference to its impact upon rehabilitation, Magyar and Duda (2000) examined the relationship between sources of self-confidence and confidence restoration from athletic
injury. They found the most salient sources of confidence information were the perceived leadership qualities of the athletic trainer and the athlete’s degree of comfort with the training environment (Magyar & Duda, 2000). Other sources included mastery, demonstration of ability, vicarious experience and forms of persuasion (i.e., mental and physical preparation and verbal persuasion information). Although described in slightly different terms, these sources of self-confidence were also acknowledged as salient by Evans, Hardy and Fleming (2000) among three rugby players returning from injury; for example ‘simulation training as a form of structured practice’ as a way of demonstrating ability and ‘gaining confidence in the injured body part’ as a form of physical preparation.

A feature of both these studies was that they considered the relationship between different types of goals set by injured athletes and the sources of confidence used. For example, Magyar and Duda (2000) suggested “…the tendency to emphasise task involved goals in sport significantly predicted the selection of mastery and more self-referenced sources of confidence in rehabilitation” (p.372). These findings have significant implications for the way psychologists work with performers during rehabilitation as task involved goals have been linked with higher levels of intrinsic motivation and adherence to rehabilitation. A strength of Evans, Hardy and Fleming’s (2000) study was the fact that it was a longitudinal study and lasted until the athlete had full confidence in their ability to play rugby. This meant that the sources of confidence used by athletes at different time periods could be assessed and information on which sources are most beneficial at certain time periods could be explored.

In a more recent study, Carson and Polman (2008) identified social support as an important source of self-confidence in the case study of a professional rugby player returning from an ACL injury. This social support came in the form of reassurance and informational support from medical staff about the injured limb, which increased self-confidence in his physical fitness and decreased re-injury concerns. Wadey and Evans (2011) also identified informational support from medical personnel as a source of self-confidence in the ability of the injury to withstand sporting demands. In a much earlier study, Gordon and Lindgren (1990) examined the psychological responses of
a professional cricket player returning from injury and reported a lack of confidence during the initial return to sport; however this confidence increased as the player gained more match experience, further evidencing the importance of demonstration of ability as a source of self-confidence.

Although this research has gone some way to enhancing our knowledge and understanding of the sources of self-confidence associated with injured athlete’s successful return to sport it has a number of limitations. Specifically, although the case studies used in Carson and Polman (2008) and Gordon and Lingren’s (1990) studies allowed them to gain in depth information about their participants, they were unable to generalise findings to a larger population. As Gallagher and Gardner (2007) suggested, individual dispositional differences have an influence on each athlete’s response to injury, which may confound the utility of case studies.

Taken together, previous research suggests that athletes use a number of different sources of self-confidence when returning to sport from injury. However, with exception to Magyar and Duda (2000), return from injury research has not used the sources of confidence information as the framework to underpin their research. As a result, there is limited knowledge as to which particular sources of self-confidence are most salient to athletes when returning to sport. The purpose of the present study therefore is to investigate the relationship between sources of self-confidence and the return to sport from injury. Based on the findings of previous research it is hypothesised that social support, and the demonstration of ability will be most strongly associated with a successful return to sport.
CHAPTER 3

METHODOLOGY
3.1 Research design

The purpose of the current study was to investigate the relationship between sources of self-confidence and return to sport from injury. In order to examine this relationship, due to its ability to generate rich descriptive and statistically powerful data, which could be generalised to the wider population, a quantitative research design was adopted (Thomas & Nelson, 2001). The dependent variables were measured through administration of Magyar and Duda’s (2000) Modified Sources of Sport Confidence Questionnaire (M-SSCQ). Participants were then asked to complete a Perception of Success questionnaire in order to test the independent variable of success when returning to sport. Questionnaires are widely used within descriptive research due to their ability to gather large amounts of information which can then be analysed more scientifically and objectively than other forms of research (Thomas & Nelson, 2001). For these reasons it was decided that questionnaires were the preferred method of data collection within this study.

3.2 Participants

A purposeful sample of injured athletes who met a number of criteria took part in the study. Specifically, participants were required to (a) have sustained a sport related injury that required a minimum of two weeks physical rehabilitation prior to return to sport; and (b) have incurred this injury within the past 4 months - this time period has been selected in order to reduce memory decay (Altmann & Gray, 2002). The participants (N=61) consisted of male (N=36) and female (N=25) athletes whose ages ranged from 19 to 25 and injuries included ligament ruptures, broken bones and dislocations. Participant’s represented a variety of team (N=46) and individual (N=15) sports and levels of participation.

3.3 Measures

Sources of Self-Confidence. A modified version of The Sources of Sport Confidence Questionnaire (M-SSCQ), - developed by Magyar and Duda
(2000) was used to examine athletes’ sources of confidence specific to the rehabilitation context. When completing the questionnaire, the athletes were presented with the statement “I gain confidence from…” and then rated their level of confidence regarding each item on a likert scale from 0 (not at all) to 7 (always).

The questionnaire contains 43 items and a total of nine subscales: mastery (i.e. “improve my performance on a rehabilitation skill”), demonstration of ability (i.e. “completing rehabilitation exercises faster than others”), physical/mental preparation (i.e. “keeping my focus on the task”), physical self-presentation (i.e. “feeling that I look good”), social support (i.e. “being encouraged by coaches and/or family”), coach/physiotherapists leadership (i.e. “having trust in my physiotherapists decisions”), vicarious experience (i.e. “watching another athlete I admire perform a rehabilitation skill”), environmental comfort (i.e. “feeling comfortable in the rehabilitation environment in which I am performing”), and situational favourableness (i.e. “I see the breaks are going my way”).

Vealey et al., (1998) reported acceptable reliability scores for all nine subscales within the SSCQ, ranging from .71 to .93. Despite more recent findings from studies such as Wilson et al.’s (2004) SSCQ revalidation test, in which little support was found for situational favourableness as a source of confidence; the full 43 item SSCQ was used due to the sampling error highlighted as a possible cause of the poor fit (Wilson et al., 2004). Due to inconsistencies with the reliability of the SSCQ within previous research (e.g., Magyar & Duda, 2000; Wilson et al., 2004) a reliability analysis was completed for the M-SSCQ in order to establish internal reliability.

Perception of Success. A single-item measure was used to assess athletes’ perceptions of their success when returning to sport. This item required participants to rate the extent to which the following statement was true, - “I made/perceive I will make a successful return to sport post-injury” on a likert scale from 1 (not at all) to 5 (very much so).

Youngblut and Casper (1993) suggested that single item measures can be useful when a holistic impression is informative, such as an athlete’s perception of success in sport. Indeed, several studies have shown that single
item scales are correlated with longer measures when investigating a person’s perceptions of psychological wellbeing, job satisfaction and personality (Zimmerman et al., 2006). Therefore, for reasons of convenience, ease of interpretation and its holistic nature a single-item measure was used to assess perceptions of success.

3.4 Procedures

Participation in this study was voluntary. Athletes who met the selection criteria were identified, contacted by the author and asked if they were willing to take part in the study. Participants were assured of complete confidentiality and anonymity prior to their participation in the study. Oppenheim (1992) advised that this will lead to more honest and accurate responses. Questionnaires were administered to participants by the researcher at a convenient time and location. Prior to completion it was emphasised that there were no right or wrong answers and that participants should answer as honestly as possible. Participating athletes completed a questionnaire booklet that contained a Consent Form, Demographic Sheet, the M-SSCQ and Perception of Success measure. In all cases the author was present to respond to any queries or problems encountered by the participants. Once completed the booklets were collected back in by the researcher.

3.5 Data analysis

As recommended by Field (2009), prior to the main analysis internal reliability of the nine subscales of the Sources of Sport Confidence Questionnaire (M-SSCQ) was examined. Any subscale which revealed Cronbach Alpha values above .7 were accepted as having good reliability (cf. Nunnally, - 1978). However, Kline (1999) noted that placing general guidelines on psychological construct values must be done with caution due to the diversity of the constructs being measured. Where a subscale had an alpha below .7 individual item correlations were examined to assess the extent to which any items were detracting from the overall subscale reliability. In these instances any single item that was reducing the subscale alpha below an acceptable
level was deleted in order to increase subscale reliability. Any item which had a Corrected Item-Total Correlation score of less than .3 was also deleted, (cf. Field, - 2009). Once removed, internal scale reliability was recalculated to ensure that item removal had not affected overall reliability.

A one-way analysis of variance (ANOVA) was used to test whether there were any significant differences between the sources of confidence used by athletes who were high and low with regard to their perceptions of success. An ANOVA was deemed to be the most appropriate method of data analysis due to its ability to compare group means among a large number of dependant variables whilst reducing the chance of type 1 errors (Field, 2009). All underlying assumptions of parametric tests were checked prior to performing the ANOVA to ensure that results were accurate. A value of $p<.05$ was adopted to determine statistical significance. All analyses were conducted using SPSS for windows version 20.
CHAPTER 4

RESULTS
4.1 Scale reliability

The internal reliability for each M-SSCQ subscale was calculated using Cronbach's alpha (1951). Original reliability scores and final reliability scores after item deletion are presented in Table 4.1. Acceptable reliability ranging from .78 to .93 was reported for all subscales except for mental/physical preparation, environmental comfort, situational favourableness and coach/physiotherapists leadership.

Due to the observed low alpha of .50 for the situational favourableness subscale and its questionable suitability for the rehabilitation setting (Magyar & Duda, 2000), this subscale was not used in the present study. To overcome the marginal alpha's reported for environmental comfort and mental/physical preparation subscales, and consistent with Magyar and Duda, one item (i.e., "follow certain rituals") was removed from the environmental comfort subscale, and mental/physical preparation (i.e., "believing in my ability to give maximum effort to complete my rehab program"). This resulted in recalculated alphas of .85 and .72 respectively, and meant that the latter two subscales were retained for subsequent analyses. The coach/physiotherapists leadership subscale reported an alpha of .68, however it was deemed appropriate to retain this subscale due to its sighted importance within previous sources of confidence research (e.g., Magyar & Duda, 2000; Hays et al., 2007).
Table 4.1. Original and final coefficient alphas for the subscales of the M-SSCQ

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<tr>
<td>Vicarious experience</td>
<td>.84</td>
<td>.84</td>
</tr>
<tr>
<td>Environmental comfort</td>
<td>.67</td>
<td>.85</td>
</tr>
<tr>
<td>Situational favourableness*</td>
<td>.50</td>
<td>NA</td>
</tr>
<tr>
<td>Coach/physios leadership</td>
<td>.68</td>
<td>.68</td>
</tr>
</tbody>
</table>

*alpha value failed to meet the criterion.

4.2 Confirming underlying assumptions

All underlying assumptions were tested before performing the ANOVA. Levene’s test of homogeneity of variance was non-significant (p>.05) for all subscales apart from environmental comfort and social support, suggesting the assumption of homogeneity had been met (Field, 2009). The significance values of less than .05 for environmental comfort and social support suggested that the assumption of homogeneity of variances had been violated in those instances, and therefore caution must be suggested when interpreting the findings. The disparities in sample sizes have been identified as a possible cause of the violation of homogeneity (Field, 2009). The assumption of normality was also tested to measure the distribution parameters of the population from which the sample was drawn. Values of skewness and kurtosis were calculated for each subscale before being converted to z-scores. All eight subscales achieved z-scores of less than 1.96, suggesting that the assumption of normality can be confirmed (cf. Field, 2009).
4.3 One way ANOVA

Results from the one-way ANOVA showed that there were significant differences in three out of the eight subscale scores between athletes who perceived a successful return to sport and athletes who perceived an unsuccessful return to sport. These subscales were demonstration of ability ($p<.001$), mental/physical preparation ($p<.05$) and social support ($p<.001$). The subscales that showed no significant differences between the two groups were mastery, physical self-perception, vicarious experience, environmental comfort and coach/physios leadership. Subscale means and standard deviations for all subscale scores relative to perception of success are presented in Table 4.2.
Table 4.2  Means and standard deviations for the subscales of the M-SSCQ for athlete’s perceptions of success.

<table>
<thead>
<tr>
<th>Perception of success</th>
<th>Mean</th>
<th>SD</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>5.25</td>
<td>1.04</td>
<td>.129</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>4.89</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>Demonstration of ability*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>4.98</td>
<td>1.30</td>
<td>.000</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>3.39</td>
<td>1.18</td>
<td></td>
</tr>
<tr>
<td>Mental/Physical Preparation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>4.39</td>
<td>0.84</td>
<td>.002</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>5.07</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>Physical Self Presentation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>4.15</td>
<td>1.64</td>
<td>.801</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>4.26</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td>Social Support*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>5.57</td>
<td>0.79</td>
<td>.000</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>3.65</td>
<td>1.33</td>
<td></td>
</tr>
<tr>
<td>Vicarious Experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>4.13</td>
<td>1.09</td>
<td>.135</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>4.50</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>Environmental Comfort</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>4.04</td>
<td>1.39</td>
<td>.013</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>4.80</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
<td>Coach/physios Leadership</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successful</td>
<td>4.75</td>
<td>0.87</td>
<td>.654</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>4.85</td>
<td>0.72</td>
<td></td>
</tr>
</tbody>
</table>

Note.  * = significant difference;  p<.001  
** = significant difference;  p<.05

To summarise the table, athletes who perceived a successful return to sport rated demonstration of ability as a significantly more important source of confidence than athletes who perceived an unsuccessful return to sport (p<.001). Similarly, athletes who perceived a successful return to sport also rated social support as a significantly more important source of confidence than athletes who perceived an unsuccessful return to sport (p<.001). In contrast, athletes who perceived an unsuccessful return to sport rated mental
and physical preparation as a significantly more important source of confidence than athletes who perceived a successful return to sport. Environmental comfort also approached significance, with athletes who perceived an unsuccessful return to sport rating this source of confidence as more important than athletes who perceived a successful return to sport.

4.4 Injury severity

Although not originally discussed within the methodology, differences in injury severity between the two groups were also checked prior to data analysis. Injury severity has been sighted as having an effect on athlete’s responses to injury; therefore it was important that this was checked in order to remove the possibility of a confounding variable. An independent t-test was performed to test whether there was a difference in injury duration between athletes who perceived a successful return to sport and those who perceived an unsuccessful return to sport. Means and standard deviations for injury duration relative to perception of success are presented in Table 4.3.

<table>
<thead>
<tr>
<th>Perception of success</th>
<th>Mean length of injury (weeks)</th>
<th>SD</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful</td>
<td>7</td>
<td>10</td>
<td>.149</td>
</tr>
<tr>
<td>Unsuccessful</td>
<td>12</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Although not significant (\( p > 0.05 \)), the table shows that athletes who perceived themselves to be successful when returning to sport had a lower injury duration than those who perceived themselves to be unsuccessful when returning to sport.
CHAPTER 5
DISCUSSION
5.1 Introduction

The purpose of the present study was to investigate the relationship between sources of self-confidence and return to sport from injury. Results showed that there were significant differences in three out of the eight sources of confidence between athletes who perceived a successful return to sport and athletes who perceived an unsuccessful return to sport. These subscales were demonstration of ability, mental/physical preparation and social support. Analysis of the data also revealed differences between the two groups in relation to injury duration. Athletes with successful perceptions of return had a mean 7 week recovery as opposed to a mean 12 week recovery for athletes with unsuccessful perceptions of return. These results were found to be statistically insignificant however, therefore reducing the likelihood of injury severity acting as a confounding variable.

The following chapter, which presents a discussion of these results, firstly explores the differences between the sources of confidence identified by athletes with successful and unsuccessful perceptions of success when returning to sport. The second section features a critical reflection of the theoretical, conceptual and practical implications that can be derived from these findings. The third section discusses limitations of the research design and results of the present study. This will be followed by recommendations for future research within the area of sources of confidence and the return to sport from injury. Finally, this chapter will end with an overall conclusion to the study.

5.2 Sources of confidence and athletes’ perceptions of success.

The results of the study showed significant differences between the sources of confidence identified as being important by athletes who perceived a successful return to sport and those who perceived an unsuccessful return. Athletes who perceived a successful return to sport placed significantly more importance on social support as a source of confidence than athletes who perceived an unsuccessful return. Indeed, social support was ranked as the most important source of confidence for those who perceived a successful
return, as opposed to the seventh most important source for athletes who perceived an unsuccessful return. Johnston and Carroll (1998) and Niven (2007) found social support to be particularly salient to an athlete’s recovery beliefs and adherence levels; it is therefore unsurprising that athletes who perceived a successful return to sport sighted social support as their most important source of confidence. These findings are consistent with Brewer (2010) who suggested that social support in the form of information from physiotherapists has the potential to engender an autonomy supportive environment that promotes athlete’s self-esteem, adherence and rehabilitation outcomes. Indeed, these findings provide possible explanations for why athletes who perceived a successful return to sport ranked social support as an important source of rehabilitation confidence, whilst also highlighting the possible detrimental effects of placing little importance on social support; as in the unsuccessful athlete’s case. Wadey and Evans (2011) suggested that a lack of social support may lead to perceptions of isolation due to the imposed withdrawal from social and sport interaction. This is likely to reflect negatively on an athlete’s esteem when returning to sport due to a reduced sense of belonging and worth within the team (Wadey & Evans, 2011). The findings of the present study and previous studies (e.g., Niven, 2007) would suggest that social support is a vital source of confidence in order for athletes to perceive a successful return to sport.

The performance-related sources, namely mastery and demonstration of ability appeared to be particularly important sources of confidence to athletes who perceived a successful return to sport, ranked as second and third most important respectively. This finding is once again not surprising considering that performance accomplishments (whether self-referenced or based on social comparison) are expected to be particularly salient with regard to future confidence beliefs (Magyar & Duda, 2000). The importance of performance-related sources of confidence within the present study is consistent with previous qualitative research (e.g., Gordon & Lindgren 1990; Evans, Hardy & Fleming, 2000) in which demonstration of ability was highlighted as being integral to future confidence beliefs and success when returning to sport. In contrast, athletes who perceived an unsuccessful return to sport rated demonstration of ability as the least important source of
confidence. Vealey et al. (1998) suggested that demonstration of ability was based on uncontrollable factors, and therefore deriving confidence from such sources can lead to the development of unstable and fluctuating levels of confidence. In the context of the athletes with unsuccessful perceptions of success, negative attempts at demonstrating ability (such as rehabilitation setbacks) may have led to unstable levels of confidence and therefore negative perceptions of their return. This interpretation is supported by the findings that athletes with negative perceptions of success had longer injury durations than athletes with successful perceptions; therefore a greater loss in performance ability is likely to elicit negative emotions and instability in confidence. However further qualitative research would have to be conducted in order to confirm these interpretations of the findings.

Mental and physical preparation was found to be significantly more important to athletes who perceived an unsuccessful return to sport than those who perceived a successful return. These results are in contrast to Hays et al.’s (2007) findings which showed that preparation was an important source of confidence for world class athletes. One possible explanation for the current findings is that within the rehabilitation environment experiences associated with performance, such as mental/physical preparation can be detrimental due to their ability to elicit negative emotions. This contention is supported by Wadey and Evans (2011) who reported that injured athletes who rely upon sources associated with performance may experience detrimental emotions such as anger, due to a loss of ability and potential flashbacks of the injury incident. These findings highlight the possible differences between sources of confidence which are salient to injured as opposed to non-injured athletes; however caution must be advised when interpreting these findings due to the lack of focus on other emotions within the study.

Although not statistically significant, athletes who perceived an unsuccessful return to sport also rated environmental comfort as being a more important source of confidence than athletes who perceived a successful return to sport. Hays et al. (2007) found that world-class athlete’s placed very little importance on environmental comfort as a source of confidence due to the unstable perceptions of competence related to the source. Indeed, Vealey et al. (1998) stated that athletes who place greater importance on
environmental comfort as a source of confidence could be at risk of developing unstable perceptions of control and competence. The results of the present study support these findings and highlight the importance of athletes using stable sources of confidence in order to heighten their perceptions of control and return to sport successfully.

There was no significant difference between athletes as a function of perceptions of successful return to sport for physical self-presentation. This finding is consistent with previous research which questions the importance of physical self-presentation as a source of confidence (e.g. Magyar & Duda, 2000; Hays et al., 2007). Magyar and Duda (2000) found physical self-presentation to be the least important source of rehabilitation confidence to injured athletes within their study. Results of the current study show similar findings as physical self-presentation was rated as the 6th most important source of confidence for both groups. One possible reason for this may be the lack of subjectively judged sports such as trampolining or gymnastics within the present sample. Vealey et al. (1998) proposed that such sports are more likely to utilise physical self-presentation as a source of confidence, due to the emphasis that is placed upon an athlete’s body type and presentation. Hanton, Fletcher and Coughlan (2005) found that focus on perceptions of body type and looking good can act as a source of stress and something which will debilitate confidence. Therefore, although somewhat speculative, the lack of importance placed on this source within the present study may suggest the absence of this as a stressor for these participants.

Coach/physiotherapist leadership did not emerge as being significantly different for athletes with successful or unsuccessful perceptions of success. However the mean score was relatively high for both groups, with successful and unsuccessful athletes rating the source as 4th and 3rd most important respectively. These results are consistent with Magyar and Duda (2000) who found the perceived leadership qualities of the athletic trainer to be important sources of confidence information within the rehabilitation setting. Although athletes with unsuccessful perceptions rated this source higher than their counterparts, this may have been as a function of their somewhat greater injury severity.
The results of the present study suggest that significant differences exist in the sources of confidence rated as important between athletes who are high and low with regard to their perceptions of a successful return to sport. Demonstration of ability and social support were found to be sources of confidence perceived to be most important for a successful return to sport. In contrast, mental/physical preparation and environmental comfort were found to be perceived least important for a successful return to sport. Although physical self-presentation, vicarious experience, coach/physiotherapist leadership and mastery were not significantly different between successful and unsuccessful athletes, the findings were consistent with previous research, and further highlight the particular sources of confidence which may be associated with a more successful return to sport.

5.3 Practical Implications

A number of practical implications emerge from the findings of the study for maximising the importance placed upon certain sources of confidence during the rehabilitation process. The findings indicate that the most salient sources of confidence in relation to a successful return to sport were social support and demonstration of ability. Such findings have important implications for applied practitioners, as an awareness of the particular sources which are most effective during rehabilitation may result in greater return to sport success (Magyar & Duda, 2000).

Consistent with previous research, social support was identified as being an important source of confidence during the rehabilitation phase by athletes who perceived a successful return to sport. Therefore it is important that psychologists, coaches and team-mates are educated in order to reduce the reported detrimental effects of a lack of social support (e.g., isolation and lowered self-esteem). In addition to the education of coaches and team-mates, it is also important that physiotherapists are aware of the effects that informational support can have on injured athletes (e.g., increased motivation and adherence). Applied sport psychology consultants should emphasise
such psychosocial effects when working with coaches and physiotherapists, in order to provide an effective climate for the athlete to achieve success.

Athletes who perceived a successful return also placed significantly more importance on demonstration of ability as a source of confidence. This finding further highlights the inconsistency of previous sources of confidence research, as demonstration of ability has been reported to have both facilitative (Magyar & Duda, 2000) and debilitative (Vealey et al., 1998) effects. Although demonstration of ability has been associated with debilitating confidence stability (Vealey et al., 1998), athletes do appear to gain confidence from this form of social comparison. Findings of the present study suggest that athletes place heightened importance upon demonstration of ability with closer proximity of returning to sport, perhaps due to the greater focus on performance within this stage of rehabilitation. Practitioners should however discourage a reliance on demonstration of ability as a source of confidence when injury severity is high, due to its ability to elicit negative emotions and instability in confidence. Alternatively, injured athlete’s confidence should be facilitated through the promotion of more controllable sources of confidence, such as mastery. Mastery based sources have been found to be important in maintaining stable and enduring confidence beliefs, therefore practitioners should aim to structure rehabilitation environments that provide the opportunity for the mastery of new skills.

From an athlete’s perspective, the present findings provide further support for Vealey et al’s. (1998) suggestion that stable sources of confidence are less likely to debilitating confidence. For example, athletes with unsuccessful perceptions of their return placed greater importance on environmental comfort than those who perceived a successful return. This particular source has been related to unstable perceptions of competence and may therefore debilitating confidence (Hays et al., 2007). These findings have practical implications for injured athletes as an awareness of which sources of confidence render greater confidence stability may aid their rehabilitation process.
5.4 **Strengths and Limitations**

The present study had a number of strengths and limitations. In relation to its strengths; it addressed an area of sport psychology that has previously received limited attention, whilst also accounting for athlete’s perceptions of success after the rehabilitation process. The study also featured a generalisable sample, as athletes competed at different levels in a variety of team and individual sports, with varying degrees of injury severity. This is a strength of the study as results can be generalised to the wider sporting population.

Although the study aimed to further knowledge of the relationship between sources of confidence and return to sport from injury, there were a number of limitations found that were considered noteworthy. One limitation concerns the fact that participants were not categorised temporally (e.g. injury onset, rehab, and return). Previous research has suggested athletes’ responses to injury change temporally as a function of the appraisal of personal and situational variables and their effect on recovery status. These changes over time are also likely to affect the particular sources athletes identified as salient (Tracey, 2003).

Another limitation of the present study was the subjective nature of the perception of success measure. Participants were asked to indicate the extent to which they perceived they would make a successful return to sport post-injury, on a likert scale from 1 to 5. However, due to individual differences, perceptions of what constitutes a successful return to sport are likely to vary between athletes (Podlog & Eklund, 2009). The inclusion of a single-item measure was justified due to its ease of interpretation and holistic nature; however results must be viewed with caution due to the potential reliability issues of such a simple measure.

A final possible limitation of the study concerns the reliability of the SSCQ. Two of the items were removed from further analysis due to their substantial negative effects on the subscale alphas. A further subscale was also retained within the questionnaire even though it received what may be deemed an unacceptable alpha of .68. Although the use of a subscale which did not achieve an acceptable alpha value is a limitation of the study, the
justification was valid due to the sighted importance of the particular subscale within previous sources of confidence research.

5.5 **Recommendations for future research**

Based on the limitations of the present study, a number of recommendations can be identified for future research in this area. It is important that future research which focuses on injured athletes sources of confidence explores distinct phases (e.g. injury onset, rehabilitation and return to sport). Previous research (e.g. Wadey & Evans, 2011) has shown athletes cognitions and emotions to change over time during the injury response process. Therefore future research should aim to identify the changes in the salience of sources of confidence for athletes across the injury process.

Previous research has also identified the effect that competitive level has on the importance placed upon particular sources of confidence (e.g., Hays *et al.*, 2007). However within an injury context very little research has focused on whether an athlete’s competitive level affects the importance placed upon particular sources. Therefore, future research should aim to investigate the relationship between competitive level, sources of confidence and the return to sport from injury.

Furthermore, the results of the present study have important implications for the use of the SSCQ as a measurement tool in future sources of confidence research. Both Magyar and Duda (2000) and Wilson *et al.* (2004) found little support for situational favourableness as a source of confidence, resulting in the removal of this subscale within both studies. The results of the present study are consistent with these studies, as little support was found for situational favourableness as a source of confidence for athletes with high and low perceptions of success when returning to sport. Indeed, an unacceptable alpha of .50 led to the deletion of this subscale within the present study. These findings highlight some potential issues with using the SSCQ as a reliable measurement tool, and suggest that employing an inductive approach to confidence, such as that used in Hays *et al*’s. (2007) study would be more effective for the identification of sources of confidence.
5.6 Conclusion

In summary, the present study endeavored to investigate the relationship between sources of self-confidence and the return to sport from injury. Significant differences were found between the sources of confidence identified as important between athletes with high and low perceptions of success. Athletes who perceived a successful return to sport were found to place significantly more importance on demonstration of ability and social support than athletes who perceived an unsuccessful return. In contrast, athletes with unsuccessful perceptions of success placed significantly more importance upon mental/physical preparation as a source of confidence. From an applied standpoint, it appears that practitioners need to be aware of which sources would be most effective and most debilitative in the rehabilitation process. For example, the present results suggest that performance related sources (e.g., demonstration of ability and mental/physical preparation) may have debilitative effects on the confidence of athletes, especially when injury severity is high. Furthermore, controllable sources of confidence (e.g., mastery) were ranked as highly important for athletes who perceived a successful return to sport; further highlighting the importance of controllable sources of confidence on confidence stability. Overall, the current study did address a gap in the sport-confidence literature, by accounting for sources of confidence effects on perceptions of a successful return from injury. Although significant findings did emerge from the study, additional research of an inductive and qualitative nature should be conducted to further explore the relationship between sources of confidence and the return to sport from injury.


APPENDICES
APPENDIX A

PARTICIPANT INFORMATION SHEET
Participant information sheet

Project title: An investigation into the relationship between sources of self-confidence and return to sport from injury.

Background and aims of the research: When returning to competitive sport from injury, athletes gain confidence from a number of different sources. We (me and the research team) aim to investigate which particular sources of confidence athletes use when returning from injury, and to discover which particular sources are associated with a more successful return to sport.

Inclusion Information: Participants can be male or female, must be 18 years of age or older, and have sustained an injury which led them to be away from competitive sport for a minimum of 2 weeks. Athletes must have incurred the injury in the past 4 months.

Your role as a participant: Your role is to complete the questionnaire pack as honestly as possible. The questionnaire pack includes questions about your own confidence within sport, and where you seek this confidence from. The completion of the questionnaire pack is not compulsory, and you may withdraw from the study if you wish.

Benefits of taking part: The information we obtain from this study will allow better insight into the specific sources of confidence that injured athletes should use when returning to sport in order to elicit a successful return. We will be happy to share this information to any of the participants of the study. On request, we can also provide you with your own Sources of Confidence score, and discuss this with you in relation to your own sporting performance and return to sport.

Protection to privacy: Concerted efforts will be made to hide your identity in any written transcripts, notes, and associated documentation that inform the research and its findings. Furthermore, any personal information will remain confidential according to the guidelines of the Data Protection Act (1998).

Contact:

If you require any further details, or have any outstanding queries, feel free to contact me on the details printed below.

Tom Overbury
st10001048@cardiffmet.ac.uk
07976433161
APPENDIX B
INFORMED CONSENT FORM
CARDIFF Metropolitan

INFORMED CONSENT FORM

Title of Project: An investigation into the relationship between sources of self-efficacy and return to sport from injury.

Name of Researcher: Tom Overbury

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for this evaluation study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that it is possible to stop taking part at any time, without giving a reason.

3. I also understand that if it happens, our relationships with Cardiff Metropolitan University, or our legal rights will not be affected.

4. I understand that information from the study may be used for reporting purposes, but I will not be identified.

5. I agree to take part in this study on the relationship between sources of self-efficacy and return to sport from injury.

Name of Participant

Signature of Participant

Date

Signature of person taking consent

Date
APPENDIX C

MODIFIED SOURCES OF SPORT CONFIDENCE QUESTIONNAIRE
The Sources of Sport-Confidence Questionnaire  
Athlete Self-Rating Scale (SSCQ)

We are interested in learning about things you feel are important in helping **YOU** to be self-confident when participating in your rehabilitation program.

Listed below are some things that may help athletes feel confident during rehabilitation. Please circle the extent to which each statement reflects your current rehabilitation experience. Please respond to every statement even though they may appear repetitive. There are no right or wrong answers because each athlete is different. Please be honest - your answers will be completely confidential.

I gain confidence from...  

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Sometimes</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Getting positive feedback from my teammates and/or friends.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Completing rehabilitation exercises faster than others.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Keeping my focus on the task.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Psyching myself up.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Mastering a new skill in rehabilitation.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Getting breaks from my physio</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Performing in a rehabilitation environment that I like and in which I feel comfortable.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Feeling good about my weight.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Believing in my physio’s abilities.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Knowing I have support from others that are important to me.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Demonstrating that I am better than others.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Seeing successful rehabilitation performances by other athletes.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Knowing that I am mentally prepared for the situation.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Following certain rituals (e.g. wearing a lucky shirt, eating certain foods etc.)</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Improving my performance on a skill in rehabilitation.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Seeing the breaks are going my way.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Feeling that I look good.</td>
<td>0 1 2 3 4 5 6 7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
18. Knowing my coach will make good decisions. 0 1 2 3 4 5 6 7
19. Being told that others believe in me and my abilities. 0 1 2 3 4 5 6 7
20. Showing my ability by doing my best in rehabilitation. 0 1 2 3 4 5 6 7
21. Watching another athlete I admire perform a rehabilitation skill. 0 1 2 3 4 5 6 7
22. Staying focused on my goals. 0 1 2 3 4 5 6 7
23. Improving my rehabilitation skills. 0 1 2 3 4 5 6 7
24. Feeling comfortable in the rehabilitation environment in which I am performing. 0 1 2 3 4 5 6 7
25. Feeling that everything is “going right” for me in that situation. 0 1 2 3 4 5 6 7
26. Feeling as though my body looks good. 0 1 2 3 4 5 6 7
27. Knowing my coach is a good leader. 0 1 2 3 4 5 6 7
28. Being encouraged by coaches and/or family. 0 1 2 3 4 5 6 7
29. Knowing I can outperform others on rehabilitation exercises. 0 1 2 3 4 5 6 7
30. Watching a teammate successfully perform rehabilitation exercises. 0 1 2 3 4 5 6 7
31. Preparing myself physically and mentally for a situation. 0 1 2 3 4 5 6 7
32. Increasing the number of rehabilitation skills I can perform. 0 1 2 3 4 5 6 7
33. Liking the environment where I am performing. 0 1 2 3 4 5 6 7
34. Having trust in my physio’s decisions. 0 1 2 3 4 5 6 7
35. Getting positive feedback from coaches and/or family. 0 1 2 3 4 5 6 7
36. Proving I am better than others in rehabilitation. 0 1 2 3 4 5 6 7
37. Seeing a friend perform rehabilitation successfully. 0 1 2 3 4 5 6 7
38. Believing in my ability to give maximum effort to complete my rehab program. 0 1 2 3 4 5 6 7
39. Receiving support and encouragement from others. 0 1 2 3 4 5 6 7
40. Showing I am one of the best in rehabilitation. 0 1 2 3 4 5 6 7
41. Watching my teammates who are at my level perform well. 0 1 2 3 4 5 6 7
42. Developing new skills and improving. 0 1 2 3 4 5 6 7
43. Feeling my coach provides effective leadership. 0 1 2 3 4 5 6 7

C-3
APPENDIX D
PERCEPTION OF SUCCESS QUESTIONNAIRE
**Perception of Success Questionnaire**

Please indicate the extent to which the following is true:

<table>
<thead>
<tr>
<th>I made / perceive I will make a successful return to competitive sport post-injury (delete as appropriate):</th>
<th>Not at all</th>
<th>Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

I have already returned to competitive sport post-injury:  

- [ ] Yes  
- [ ] No