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Self-concept: alternative perspectives and clinical applications

Moriarty, Tom

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Self-Concept: Alternative Perspectives and Clinical Applications

By

Tom Moriarty

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SUMMARY

This thesis examined self-concept from both a theoretical and applied perspective. It is written as a series of research papers, each of which investigates a specific aspect of this topic. These papers are preceded in Chapter 1 by a comprehensive review of the most relevant research in this area of empirical investigation. The most significant development in self-concept research over recent years has been the shift from a unidimensional model to a multidimensional model that is hierarchically organised. However, this hierarchical structure has received weak empirical support. The study in Chapter 2 revisited this hierarchical model and found stronger support for it than has been hitherto available from previous studies. The acceptance of a multidimensional model of self-concept has inevitably raised key questions regarding the relationship between global and specific domains. In particular, the question as to whether the contribution of a specific domain to global self-concept may be larger when its perceived importance is greater has been the subject of a number of studies. However, there has been little or no support for the importance hypothesis from many of these studies. In Chapter 3, the importance hypothesis was again tested with alternative regression models. The results of this study provided varying levels of support but did not conclusively disprove the conclusions of previous studies. Despite the absence of conclusive proof, the findings nevertheless challenge recent thinking on the limited role of the importance hypothesis and highlight the possible therapeutic value of addressing the importance of domains as a means of enhancing self-concept. The final study in Chapter 4 was designed to access the personal perspectives of participants with regard to the impact of stressful life experiences on self-concept. This study also evaluated the effectiveness of a personalised intervention programme to facilitate the enhancement of self-concept in the context of the importance hypothesis, and the results provided contrasting levels of support for its effectiveness. The thesis concludes in Chapter 5 with a review of the theoretical and applied implications of the various studies together with implications for future research

Chapter 1

GENERAL INTRODUCTION

Self-esteem has been identified as a key factor in a broad network of constructs associated with motivation, performance, and well-being. Esteeming oneself – thinking well of oneself – has often been found to relate to more effective behaviour and better adjustment than has low self-regard (Deci & Ryan, 1995). Many therapies and intervention strategies for anxiety, depression, and eating disorders focus on the enhancement of self-esteem as a means of developing more effective coping skills (Sonstroem & Morgan, 1989; Silverstone, 1991). The role of self-esteem in the coping process within an occupational setting has been the topic of numerous studies (Adler, 1980; Mossholder et al., 1981; Brockner, 1988; Pierce et al., 1989, 1993; Ganster & Schaubroeck, 1995) while a range of studies have also explored the influence of self-esteem in an athlete's predisposition to and recovery from injury (Pargman & Lunt, 1989; Smith et al., 1993; Wiese-Bjornstal et al., 1998). Self-esteem is most generally regarded as the evaluative component of self-concept (Sonstroem, 1984), or the degree to which individuals feel positive about themselves (Sonstroem & Morgan, 1989). While definitions accord the process of description to self-concept and evaluation to self-esteem, the two terms are often used interchangeably (Sonstroem, 1984).

Historically, self-concept research focused almost exclusively on a unidimensional self-concept that minimised the role of specific dimensions and facets. Self-concept researchers emphasised a broad global construct that did not differentiate between self-perceptions in physical, social, academic and other domains. Self-esteem

was seen as a unidimensional construct and was typically assessed by inventories that simply totalled responses to a multitude of true/false items referring to self in a variety of different life situations (e.g., Rosenberg Self-esteem Scale, 1965; Coopersmith Self-Esteem Scale, 1967). More recently, this approach was challenged because of its failure to acknowledge the differential weightings and relationships among the various elements that may contribute to overall self-concept (Harter, 1986; Fox & Corbin, 1989).

An alternative and widely accepted model placed a strong emphasis on the multiple dimensions of self-concept. Shavelson, Hubner and Stanton (1976) proposed that self-concept is a multidimensional construct in that people have different perceptions of themselves for different aspects of their lives (e.g., perceptions of their physical appearance, perceptions of their academic abilities) as well as a global self-concept. They also suggested that self-concept is hierarchically organised in terms of generality, in that more global perceptions of the self are formed by perceptions of the self in more specific situations. Similarly, Harter (1982) viewed self-concept as having specific domains in the areas of physical, athletic, social and behavioural constructs, as well as a global component.

The Self Description Questionnaire III (SDQ III, Marsh, 1990) reflects the multifaceted hierarchical structure of self-concept derived from the Shavelson et al. (1976) model. The SDQ III evaluates 13 domains of self-concept: Physical Ability, Physical Appearance, Same Sex Relations, Opposite Sex Relations, Parent Relations, Religion/Spiritual Values, Honesty/Trustworthiness, Emotional Stability, Problem Solving, Mathematical Skills, Verbal, Academic, and General Esteem. The structural validity of this hierarchical model of self-concept has been tested using confirmatory factor analysis on the SDQ III. The results of the Marsh and O'Neill (1984) confirmatory

factor analysis were inconclusive in that they failed to find support for either the unidimensional model or the multidimensional hierarchical model. The Marsh (1987) findings provided some support for the hierarchical model. Thirteen first-order factors consisted of the 4 academic, 7 non-academic and general (Esteem) domains predicted by the model. The non-academic domains comprised physical, social, and moral facets. The first-order factor correlations among the four academic factors supported the existence of two second-order academic factors (math/academic and verbal/academic), but there was no support for the physical, social, and moral facets that were posited. Marsh (1990) again tested the hierarchical model and found support for the existence of two second-order academic factors, one non-academic second-order factor but the existence of separate physical, social, and moral second-order factors was again not empirically supported. Marsh (1990) concluded that the hierarchy was more complicated and weaker than originally anticipated.

The role of the importance of a specific area of self-concept in determining general self-concept was initially proposed by James (1890, 1892) who noted that because a person cannot be all things, he or she must select carefully "the strongest, truest, deepest self...on which to stake his salvation" (p 310) so that "I, who for the time have staked my all on being a psychologist, am mortified if others know much more psychology than I. But I am contented to wallow in the grossest ignorance of Greek. My deficiencies there give me no sense of personal humiliation at all. Had I 'pretensions' to be a linguist it would have been just the reverse" (p 310). For James, self-esteem reflected the ratio of one's successes to one's pretensions. Thus, if one's successes were at a level equal to or greater than one's pretensions, high self-esteem would be evident whereas if one's pretensions towards success exceeded one's actual level of success, low self-esteem

would result. The essence of James' formulation was that self-esteem should primarily only be affected by domains that are important to the self, as captured by his term pretensions (Harter, 1986). The issue of how important is importance (i.e. the importance hypothesis) has resulted in a range of studies. Hoge and McCarthy (1984) examined the relationship between specific facets of self-concept, their perceived importance, and global esteem and found very limited support for the importance hypothesis. Marsh (1986) critically evaluated their study, identified methodological problems, tested the importance hypothesis with an alternative methodology that incorporated a generalised moderated regression approach and still found little support for the hypothesis. Harter (1986) hypothesised that in order to maintain a positive sense of self-worth, one must discount the importance of domains in which one is not performing competently, as well as endorse the importance of domains in which one is competent. This became known as the "Discounting Hypothesis" and Harter found evidence for such a phenomenon among children. She argued that the ability to discount the importance of areas in which one is not competent is strongly associated with one's overall sense of self-worth and global self-worth, in part, reflects the degree to which we are successful in those domains that we deem important. Harter has promoted the concept of discounting as a self-enhancement strategy. This in effect should prevent shortfalls in competence from impacting on self-esteem. Those unable to discount domains in which they exhibit low competence would seem to be liable to importance-competence discrepancies and low self-esteem. In contrast, those who successfully discount domains in which they exhibit low competence would have a higher congruence between their importance and competence ratings across domains and high self-esteem. Harter and her colleagues have provided different levels of supportive evidence across a range of populations to

substantiate the impact of these concepts on self-esteem (for a review, see Fox, 1997). However, Marsh (1986) argued that the logic underlying Harter's model was flawed and that the empirical support for it was questionable. He stated that a problem with the use of self-concept/importance cross products is that the effect of the self-concept/importance interaction is confounded with the main effects of the self-concept and importance ratings. In particular, he stated that a problem with the use of self-concept/importance differences in the Harter discrepancy model is that the difference scores confound the main effects of the self-concept ratings and importance ratings. Marsh (1993b) used a generalised multiple regression approach to test Harter's model and found that the mean actual-importance discrepancy score proposed by Harter was substantially less correlated with global self-concept than the simple unweighted average of specific scales that did not incorporate the importance ratings. Fox (1997) was critical of Marsh's methodology and conclusions and stated that if the discounting hypothesis is taken into account, only those domains deemed high in importance should be included in any analyses – in the Marsh generalised multiple regression approach all the domains were used.

Pelham and Swann (1989) utilised a different model than Marsh (1986) to test the validity of the importance hypothesis. They emphasised that self-views that are strongly linked to an individual's goals and values - those identified as more personally important - will be self-views that strongly influence global self worth. They introduced the concept of "differential importance", i.e., the amount of importance people impute to particular attributes relative to their other attributes. They stated that the extent to which people invest in their self-views will also be influenced by the extent they are certain of them (i.e., attribute certainty) and the discrepancy between actual and ideal self-views. They tested the hypothesis that only high levels of certainty and importance acting

together can ensure that a specific self-conception will have considerable impact on self esteem. Their results indicated modest support for an interaction between differential importance and people's specific self-views. Analysis indicated that whereas differential importance was unrelated to self-esteem of participants with relatively positive or even moderate self- views it was clearly associated with self esteem for participants with relatively negative self-views. They concluded: "apparently, if individuals are convinced that they have a great number of talents, it is not necessary for them to believe that their greatest talents are also those that are most important to them. Alternatively, for individuals who do not see themselves as especially talented in most areas, attributing great importance to their favourable attributes appears to have substantial impact on their self esteem". Their data suggested that importance should be most closely associated with self esteem for individuals who possessed a greater than average number of negative self views and yet were highly certain of their more favourable self views. They argued that their statistical model throws light on what they refer to as the "elusive importance effect". However, they acknowledged that the effects observed might have been a function of "sample and measures rather than our conceptual approach". In order to address this issue they conducted what they referred to as "more conventional analyses". Specifically, they computed four separate indexes giving greater weight to individuals' more important self-views. These four indexes included all possible combinations of raw (untransformed) versus standardised self-ratings and raw versus ipsatised importance ratings. These analyses yielded result quite similar to those reported by Marsh (1986) i.e., the importance of sub-domains did not make a statistically significant contribution to global self-concept. Similarly, a regression analysis that included all 10 specific self-ratings, all 10 importance ratings, and 10 Self-Rating X Importance interaction terms

revealed only one marginally reliable interaction. They concluded that their analyses offered new insights into relations between specific domains and global self-esteem not offered by previous approaches. They argued that their findings might also have practical therapeutic implications. The interactions involving people's specific self-views and differential importance, for example, could have implications for cognitive therapies designed to improve people's self esteem. They suggested that whereas convincing individuals with negative self views to accept themselves for what they are may produce some improvement in their self esteem, convincing individuals with predominantly negative self views to appreciate the importance of their more positive self views should be an especially effective method of raising their self esteem.

Marsh (1993b) tested the Pelham and Swann (1989) conclusions and contested their analyses. He reanalysed the data using what he regarded as the more appropriate generalised moderated hierarchical regression approach and showed that there was almost no support for their conclusions. Marsh (1993b) also explored the importance hypothesis in the context of the constant weighted model in which the weight assigned to each domain is constant across all individuals and individually weighted model in which the weight assigned to each domain varies from individual. The results supported the constant weighted model but provided strong evidence against the individually weighted model. A further test of the importance hypothesis was completed by Marsh and Sonstroem (1995) and the results confirmed the Marsh (1993b) conclusions. However, despite the strong evidence against the individually weighted model, Marsh (1994) acknowledged that the importance hypothesis originally proposed by James (1890, 1892) had an intuitive appeal and warranted further consideration.

Several other authors have elaborated on specific aspects of the Shavelson, Hubner and Stanton (1976) definition. Wayment and Zetlin (1989) noted that the traditional notion of self-concept as being stable in individuals has been challenged by the alternative idea of a "dynamic multidimensional model of self concept that has been affirmed and reaffirmed by researchers and theorists". They highlighted two major facets of this model as: 1) individuals differ with regard to self complexity, the number of self schemas and the degree to which distinctions are made among self schemas and, 2) while a certain image of an individual might consistently present itself, the self concept ebbs and flows with certain aspects becoming more salient to how one feels about one-self over time and across situations. Demo (1992) stated that most researchers view self-concept as a set of structured self-attitudes that is relatively stable and "characteristic" of the individual and argued that self-concept "is a structural product of reflexive activity but is also susceptible to change as the individual encounters new roles, situations and life transitions". He further stated that even casual observers of human behaviour recognise "the situational shifts and fluctuations, the mild surges and dramatic plunges that are typical of an individual's feelings about and attitudes towards one self." Demo (1992) emphasised the variable element of self-concept -the "working copy" - noting that it is subject to constant change, revision, editing and updating as a function of variations in situations and situational demands. He argued that such a conceptualisation is helpful in that it enables us simultaneously to consider the situationally variable aspects of self concept and the more lasting relatively stable and durable self conception that one carries across relationships, situations and contexts. He concluded that "generalised self concept is stable over extended periods of time while situation specific self images or working self concepts are malleable". Finally, Zaharopoulos and Hodge (1991) referred to

Shavelson's et al. (1976) definition of self-concept as what the individual thinks of himself or herself. These perceptions of one's self are formed through the individual's experience with the environment, are influenced by reinforcements and evaluations by significant others, and influence the person's behaviour and psychological well-being.

A further area of research data has focused on the cognitive aspects of the development of self-concept and self-esteem. Pelham and Swann (1989) argued that both affective states (i.e., positive affects, negative affects) and cognitions are critical influences with affective states influencing cognitions rather than vice versa. They highlighted the role of early affective experiences in determining the individual's sense of self worth; children learn that their environments are either friendly and satisfying or hostile and frustrating and their sense of worthiness may not only serve as the foundation of self esteem but it may also influence the way they see themselves and their worlds as adults. This view was supported, to a great extent, by Brown (1993) who stated that self-esteem is rooted in affective processes that directly influence cognitions.

The shaping influences (on self concept and self esteem) of significant others is a common theme of a number of authors. Deci and Ryan (1995) distinguished between contingent self-esteem and true self-esteem. Contingent self-esteem often involves social comparison because, to the extent that one has to live up to externally imposed criteria to feel worthy, one is likely to esteem oneself in accord with how one measures up relative to others. In contrast, true self-esteem is more stable, more securely based in a sense of self where the individual has a high level of self-esteem by being who she/he is rather than matching external standards and where self-worth does not require an ongoing process of self-evaluation. Marsh (1993) highlighted the potential of "frame-of-reference" effects for understanding the formation and maintenance of (physical fitness) self concept

and noted the Marsh and Peart (1988) study that demonstrated the practical implications of frame-of-reference effects on physical self concept in that a competitively oriented aerobics intervention actually led to a decline in physical self concept despite increases in physical fitness. He postulated that in highly competitive sports, the frame-of-reference established by other participants and the expectations of significant others may have as much influence on physical self concept as actual skill levels e.g., young athletes who were athletic "stars" in their local communities may experience a decline in physical self concept when they join elite athletic teams in which everyone is a star. He suggested that maintenance of a positive self-concept in these situations may require alternative strategies such as the evaluation of performance in relation to baseline performances by the same person over time or "personal bests" that correct for aspects of fitness that cannot be easily altered, the use of criteria based standards or de-emphasising the competitive nature of the activity. Hopper, Guthrie and Kelly (1991) also noted that the evidence suggests that self-concept is sport specific and is shaped by social comparison. They stated that children receive evaluative feedback in sport from significant others such as parents and coaches, by comparing their own performance with that of peers, from internal factors such as personal goals, and from actual performance statistics.

Self-esteem is regarded as a critical factor in the development and maintenance of effective coping skills (Deci & Ryan, 1995; Silverstone, 1991; Sonstroem & Morgan, 1989). The competitive environments of sport and business have provided fertile settings in which to study the influence of self-esteem in practical life events. In both these settings the individual may have invested heavily in the development of performance skills and, consequently, any decrements in performance levels may impact on levels of

self-esteem with resultant changes in coping strategies. The consequences of such changes may have far reaching implications for the individual's future.

The role of self-esteem in the athlete's response to injury has been explored by many authors. The results of a study by Pargman and Lunt (1989) of forty male college athletes who were members of football teams and who had sustained a significant injury during the course of the season, showed a significant negative correlation between self-concept and severity of injury and a significant positive correlation between external locus of control and severity of injury. Results also showed that low self-concept in combination with an external locus of control were significantly related with severity of injury. More specifically, they stated that low self-concept and an external locus of control were related to a larger number of days of participation missed due to athletic injury. They concluded that beliefs about self-concept and locus of control may influence the incidence of athletic injury, but they failed to consider that the direction of causality might be in the opposite direction i.e., injury may impact negatively on self-concept. Furthermore, they suggested that the shifting of self-concept or locus of control from a negative or external view to a more positive or internal orientation may help to reduce the frequency of injury and may also facilitate recovery from injury. In contrast, Williams and Roepke (1993) stated that differences in self-concept may play a role in injury vulnerability but any definitive conclusion regarding whether or not self-concept affected injury rates, much less how it might have influenced injury severity and rehabilitation, remained to be determined.

Smith et al. (1993) queried whether mood disturbances predisposed an athlete to injury rather than the injury causing a mood disturbance. In a study of 238 male and 38 female competitive athletes from hockey, basketball, volleyball, and basketball they

attempted to determine whether there were differences evident between pre-injury and post-injury mood state and self-esteem and whether the severity of the injury influenced the mood state or self-esteem of competitive athletes. An injured athlete was defined as an athlete who had sustained an injury as a consequence of participating in sports, exercise, or a game. For inclusion in this study, a sport related injury must have restricted activity for at least one day after injury and prompted the athlete to seek medical attention. Severity of injury was defined as the duration of non-participation in sports activities. A total of 36 athletes (31 males, 5 Females) sustained an injury during the course of the study. When the injuries were classified by severity (on the basis of duration of non-participation in sports activities), 23 were minor (did not participate in sports during one postinjury assessment), 4 were moderate (did not participate during two weekly assessments), and 9 were severe (did not participate during three or more post injury weekly assessments). The Emotional Responses of Athletes to Injury Questionnaire, the Profile of Mood States and the Rosenberg Self-Esteem Inventory were used to determine the athletes' pre-injury and post-injury emotional state, mood and self-esteem. Data analysis indicated that injury resulted in increased depression and anger, decreased vigour and the most severely injured athletes experienced more post-injury depression than those with moderate or minor injury. However, no significant pre-injury to post-injury differences in self-esteem were found. Smith et al. (1993) concluded that the significant post-injury increases in depression and anger and decrease in vigour were most likely attributable to the injuries sustained. However the validity of these conclusions must be viewed with some caution, as the test instruments may not have been the most appropriate. The Profile of Mood States is essentially an instrument used for the assessment of the general population and is neither sport specific nor specific to the

phenomenon under investigation, while the Rosenberg Self-Esteem Inventory measures global self-esteem but does not measure domain specific aspects of this trait. Furthermore, the athletes who were not injured were not assessed again after the pre-injury testing and therefore a non-injured control group was not available for comparison. Finally, the severity of injury of the majority of the participants was in the minor category. The question of level of severity of injury experienced by participants has been highlighted by Evans and Hardy (1995) who stated: "Injuries that prevent participation for one day do little to advance our understanding of the psychological responses of injured athletes, even if they do assist in implementing studies with larger sample sizes. An assessment of injured athletes who are unable to participate for a minimum of 3 weeks would enable researchers not only to assess the relative contribution of the theoretical models proposed within the sport psychology literature but also to assess the complex pattern and interaction of behavioural, emotional, and psychological variables as a basis for designing intervention strategies."

Leddy et al. (1994) examined the psychological reactions to injury of 343 high-level male collegiate athletes who had participated in ten sports. All athletes were assessed using measures of depression (Beck Depression Inventory), anxiety (State-Trait Anxiety Inventory-Form Y), self-esteem (Tenessee Self-Concept Scale) during preseason physical examinations. In this study, the Tenessee Self-Concept Scale provided a measure of athletes' perceptions and evaluations of their physical self in addition to a measure of overall self-esteem. Injured athletes along with matched controls were later assessed within one week of experiencing an athletic injury and reassessed two months later. Injury status was classified under four categories – injured, recovered, non-injured, and late injured (athletes who were not injured at post-injury but were injured at follow-up).

The results provided evidence that injured athletes exhibited greater depression and anxiety and lower overall self-esteem and physical self-esteem than controls immediately following physical injury and at follow-up two months later. The results probably have greater validity than those of Smith et al. (1993) as the study design and measurement instruments were stronger. However, concerns regarding the severity of the injuries on which the study was based could be regarded as a limitation of this study. The authors' definition of injury as "physiological damage or body pain that required medical attention and caused an athlete to miss a game, practice session or subsequent game play because athletic participation was impeded" suggested that many of the injuries may have been in the minor category with limited potential to reflect the possible psychological responses associated with serious injuries that result in significant absence from competitive sport. Wiese-Bjornstal et al. (1998) reviewed the empirical research on the cognitive appraisals and emotional responses associated with sport injury and highlighted the importance of post-injury cognitions related to self-perception i.e. the athlete's self-perceived worth, general abilities, and specific abilities. They stated that perceptions of one's self, capabilities, and worth may all be affected by the sport injury experience. Self-perceptions could be thought of as moderators of responses and as dynamic responses in and of themselves. They further stated that these self-perceptions would in turn likely influence emotional and behavioural response to sport injury and noted that the challenge to researchers and practitioners was to examine these effects and design interventions that would minimise the negative effects of injury on these important self-perceptions.

The individual's capacity to cope with the demands of occupational roles has also been explored by a number of authors. As in the research on sport injury, the central role of self-esteem has been evaluated. Despite methodological limitations associated

with instrumentation and an emphasis on global rather domain specific self-esteem studies provide interesting insights, even if the results have to be viewed with some caution. Adler (1980) explored how individual differences explained the causal factors that produced job satisfaction and dissatisfaction. Subjects were 110 working business students (full-time and part-time employees) who attributed causality for satisfying and dissatisfying incidents on their jobs. Those high in self-esteem were significantly more internal in their attributions for satisfaction than those low in self-esteem. He concluded that those high in self-esteem were more likely to take personal responsibility for their own satisfying job experiences than those low in self-esteem. Hartley (1980) investigated the impact of job loss and unemployment on global self-esteem. He compared 87 unemployed middle and senior managers with 64 employed senior managers. Results showed no decrease in self-esteem due to unemployment. However, significant methodological limitations call into question the validity of these results. Global rather than domain specific self-esteem was measured; the impact of unemployment on self-esteem is likely to be more related to specific aspects of self-concept (e.g. work self-concept) rather than the totality of self-concept. Furthermore, the study did not take account of individual differences in the reactions of the unemployed managers or their previous esteem levels. Mossholder et al. (1981) examined the moderating effects of global self-esteem on the relationships between role perceptions (i.e. role ambiguity and role conflict) and employee satisfaction and performance. Subjects were 161 nursing personnel and the results suggested that low self-esteem employees would show greater negative reactions to role conflict and ambiguity than high self-esteem employees.

The theoretical and empirical basis for positing a moderating role for self-esteem in a wide variety of contexts, including environmental stimuli – employee response

relationships, has been developed by Brockner's (1988) concept of "behavioural plasticity". This concept was based on a wide range of field and laboratory research data (Bachman & O'Malley, 1977; Abramson, Seligman & Teasdale, 1978; Seligman et al.,!979; Brockner, 1979; Adler, 1980; Hartley, 1980; Mossholder, 1981; Brief & Aldag, 1981; Schwalbe, 1985; Brockner et al., 1987.) Behavioural plasticity refers to the extent to which an individual is affected by external factors, particularly social factors. Brockner hypothesised that there are differences in the degree to which individuals attend and react to external cues, and as a consequence, external environmental factors affect their attitudes and behaviours differently (Pierce et al., 1993). The degree of an individual's behavioural plasticity could conceivably be associated with any number of individual characteristics. Brockner (1988) focussed on self-esteem as one major cause of observed variation in plasticity and stated that individuals with low self-esteem (low SEs) are (often, though not always) more susceptible to influence by organisational events than their high self-esteem counterparts (high SEs). Using social psychological theory Brockner (1988) argued that, theoretically, low SEs may be more plastic than high SEs for the following reasons. Firstly, lacking self-confidence or certainty in their own beliefs and behaviours, low SEs are prone to regard external or social cues as guides for appropriate thought and action. Secondly, not liking themselves, low SEs are especially dependent on the receipt of positive evaluation from others. One way to receive such positive evaluations, they might reason, is to conform to (i.e. be influenced by) the beliefs and behaviours of others. Thirdly, having a fragile sense of self-identity, low SEs may be especially prone to perceive negative feedback in one area to generalise to other parts of the self and domains of personal activity.

Most of the earlier research that explored the moderating role of self-esteem in the coping process within occupational settings focused on global self-esteem and utilised measures of questionable validity. Tharenou (1979) noted that on numerous occasions researchers utilised global measures when it would have been more appropriate to use a more narrowly focused measure of self-esteem. Global self-esteem scales are likely to be appropriate for studies of individuals within the context of life events, but task specific measures of self-esteem that reveal a person's worthiness in a particular activity are appropriate for very task-specific behaviours (Pierce et al., 1989). In order to address the issue of self-esteem specifically from an organisational frame of reference Pierce et al. (1989) introduced the construct "organisation-based self-esteem" (OBSE). They defined OBSE as the degree to which organisational members believe that they can satisfy their needs by participating in roles within the context of an organisation. On the basis of results from seven studies involving 2000 subjects from diverse organisations and occupations such as teachers, managers from manufacturing and service organisations, and office employees they validated the construct of OBSE. Their results suggested that people with high OBSE have a sense of personal adequacy as organisational members and a sense of having satisfied needs from their organisational roles in the past. Thus, OBSE reflects the self-perceived value that individuals have of themselves as organisation members acting within an organisational context. As a result, employees with high OBSE should perceive themselves as important, meaningful, effectual and worthwhile within their employing organisation.

Pierce et al. (1993) tested Brockner's self-esteem – behavioural plasticity hypothesis using an organisation-based measure of self-esteem (OBSE) instead of a global measure. The study was conducted in two phases using 186 employees in an

electrical company representing managerial-supervisory, administrative and engineering employees. Results were generally supportive of the plasticity hypothesis; individuals with low organisation based self-esteem, when compared to people with high organisation based self-esteem, reacted with greater intensity to characteristics of their work environment whether those characteristics were positive or negative. OBSE moderated the impact of role stressors, work environment support, and supervisory support on both job performance and job satisfaction. Jex and Elacqua (1999) examined whether self-esteem moderated relations between role stressors (role ambiguity and role conflict) and both psychological (frustration and depression) and physical symptoms. However, unlike previous studies, they used measures of both global self-esteem and OBSE. They were critical of the methodology used by Pierce et al. (1993) because that study did not directly compare OBSE with global self-esteem and a direct comparison would "help occupational stress researchers to evaluate the utility of OBSE". Data was collected from two non-overlapping samples of employees - 202 female clerical employees and 200 mainly managerial/professional employees from a variety of occupations who were also part-time students pursuing graduate degrees. Results provided some support for the moderating effects of self-esteem and were consistent with Brockner's (1988) plasticity hypothesis. Both global self-esteem and OBSE measures moderated the relationship between role ambiguity and both depression and physical symptoms in the same manner in such a way that the relationship was strongest for those reporting low levels of global self-esteem and low OBSE. Significantly, Jex and Elacqua (1999) questioned "whether OBSE offers occupational stress researchers much beyond current measures of global self-esteem". However, this may have been too critical a conclusion as the construct of OBSE could be regarded as one aspect of the multidimensional model of self-esteem

(Shavelson, Hubner & Stanton, 1976) but may require more refinement both in terms of definition and measurement before its validity can be empirically established.

The moderating role of global self-esteem (rather than self-esteem specific to particular areas of one's life) in determining how the employee appraised and dealt with role conflict and role ambiguity was explored by Ganster and Schaubroeck (1995). Specifically, they hypothesised that self-esteem would interact with role conflict and role ambiguity in determining the level of somatic health complaints and that the relationship between these two occupational stressors and somatic health complaints would be stronger for those with low (global) self-esteem. Survey data were obtained from 157 male members of a city fire department who had a mean age of 35.5 years and were relatively free from major health problems. Results provided some support for their hypothesis in that role conflict showed a significant positive relationship with somatic health complaints for those respondents low in self-esteem. They concluded that their data provided credible evidence regarding the difference in vulnerability between high and low self-esteem workers to the stressful demands of work. Finally, the concept of burnout epitomised a significant outcome of excessive occupational stress with particular relevance to self-concept. Burnout refers to the syndrome of physical and emotional exhaustion involving the development of negative self-concept, negative job attitudes and loss of concern and feeling for clients (Pines & Maslach, 1978, p 233). While this definition pointed to a link between burnout and decrements in self-concept, the role of self-concept as a moderating variable in the burnout process would seem to have received little attention. Dolan (1995) explored the relative impact of organisational factors and personality traits in predicting managerial burnout; self-esteem was one of the four personality traits included in the study. The participants in the study were 224 senior

executives from different private-sector organisations who had attended an executive health clinic. Results indicated a significant relationship between self-esteem and three dimensions of burnout – emotional exhaustion, depersonalisation, and personal accomplishment.

The shift from a unidimensional to a multidimensional model of self-concept has placed an increasing emphasis on determining the relationship between specific domains of self-concept and global self-concept. The increasing awareness of the influence of self-esteem on the individual's capacity to cope with the impact of personal, social, and environmental stressors and, alternatively, the impact of such stressors on self-esteem has crystallised the need to continue to analyse the multidimensional model. The empirical data to date has provided some support for the interaction between self-esteem and role conflict, role ambiguity, job satisfaction, burnout, and the influence of social factors within the work setting. The empirical data on the impact of injury on the athlete's self-esteem also points towards a moderating role for self-esteem with regard to vulnerability to injury and recovery from injury. The athlete's emotional and behavioural responses to injury would seem to have a reciprocal relationship with self-esteem, although some of the data in this regard is inconclusive. As research continues, the potential clinical value of the emerging data is becoming clearer. It remains a challenge to researchers and clinicians to further evaluate the dimensions of self-concept, to assess the impact of stressful life events on the development and enhancement of self-concept and to design interventions that would minimise the negative effects of such factors.

The structural validity of the hierarchical model of self-concept has not gained the anticipated level of support despite a number of analyses. Variables such as age and range of life experiences may have influenced the results of such analyses or there may be

alternative formulations for second-order factors that better represent the hierarchical structure. Irrespective of the causes, a further empirical investigation with a more varied sample of participants and different pairings for second-order factors would seem to be warranted in order to provide stronger support for the hierarchical model.

The critical role of self-esteem in motivation, performance, and well-being highlights the need to identify key factors in the development and maintenance of high levels of self-esteem. The intuitive appeal of the importance hypothesis continues to be a valid topic for empirical investigation. The appeal of utilising the importance of a specific domain of self -esteem to enhance global self-esteem is clinically appealing with regard to enhancement strategies in that it would provide the clinician with a very concrete therapeutic resource. However, most of the empirical data to date has not been supportive of the importance hypothesis. Nevertheless, some studies (Harter, 1986; Pelham & Swann, 1989) have tended towards support for the importance hypothesis although the validity of their results has been challenged on methodological grounds (Marsh, 1986, 1993b). Therefore, a further test of the importance hypothesis utilising alternative methodological and statistical models would seem to be justified.

Some self-concept enhancement studies with young students (Craven et al., 1991; Tabassam & Grainger, 2000) have been successful in enhancing specific domains of self-concept that have been specifically targeted with no changes in non-targeted domains. In one study (Craven et al., 1991) there was also a modest improvement in overall self-concept. These studies suggest that global self-concept may be improved by targeting the importance of a specific domain of self-concept through the provision of specific self-concept enhancement strategies. If self-concept enhancement strategies can consistently achieve positive results with participant samples that vary in age and life experiences then

support for the importance hypothesis may be increased. A study exploring whether an intervention strategy designed to enhance the importance of a specific domain of self-concept would result in a more positive perception of self in that domain with resultant improvements in global self-concept might make a worthwhile contribution to understanding the relationship between global and specific domains in the context of the importance hypothesis.

This thesis is comprised of three chapters, each of which reflects a specific study with regard to self-concept. The study in Chapter 2 addresses the structural validity of the hierarchical model. Chapter 3 has an extensive study that investigates the importance hypothesis while the impact of stress on self-concept and the effectiveness of an intervention programme is explored in Chapter 4. A series of general conclusions are outlined in the final section of the thesis titled "General Conclusions".

Each chapter is written as a stand-alone paper that investigates a specific aspect of self-concept and has a methodology and statistical model that is significantly different from each of the other two papers and from previous similar research. The emphasis in each paper is to address the topic from a hitherto unexplored perspective with participants who have had varying life experiences, with a view to formulating conclusions that would be of practical value to clinicians and clients.

Chapter 2

SELF-CONCEPT: THE HIERARCHICAL MODEL REVISITED[1]

[1] This Chapter has appeared as: Moriarty, T., & Hardy, L. (2001) Self-Concept: The Hierarchical Model Revisited. In Craven, R.G., & Marsh, H.W. (Eds.). Self-Concept Theory, Research and Practice: Advances for the New Millenium, (pp 331-336). Self Research Centre: University of Western Sydney.

Chapter 3

SHAPING SELF CONCEPT: THE ELUSIVE IMPORTANCE EFFECT

Historically, self-concept research focused almost exclusively on a unidimensional self-concept which minimized the role of specific dimensions and facets. However, more recent research has seen an increasing emphasis on multiple dimensions of self-concept. Many authors (Sonstroem,1984, Marsh & Shavelson,1985, Sonstroem et. al., 1989, Marsh, 1993a, 1993b, Marsh & Sonstroem,1995) have referred to the Shavelson, Hubner and Stanton (1976) definition of self-concept which states that: 1) self-concept is multidimensional; 2) it is hierarchically organized, with perceptions of behavior at the base moving to inferences about self in sub-areas, and then to inferences about self in general; 3) general self-concept is relatively stable, but as one descends the hierarchy, self-concept becomes increasingly situation specific and, as a consequence, less stable; 4) self-concept becomes increasingly multi-dimensional with age; 5) self-concept can be differentiated from other constructs; and 6) self-concept is both descriptive and evaluative.

Self-esteem is most generally regarded as the evaluative component of self-concept (Sonstroem, 1984), or the degree to which individuals feel positive about themselves (Sonstroem & Morgan 1989). While definitions accord the process of description to self-concept and evaluation to self-esteem, the two terms are often used interchangeably (Sonstroem, 1984). Several authors have elaborated on specific aspects of the Shavelson, Hubner and Stanton (1976) definition. Wayment and Zetlin (1989) referred to the fact that self-concept ebbs and flows with certain aspects becoming more

relevant over time and across situations. Demo (1992) emphasized the variable element of self-concept - the working copy - noting that it was subject to constant change, revision, editing and updating as a function of variations in situations and situational demands.

The acceptance of a multi-dimensional definition of self-concept inevitably raises key questions regarding the relationship between global and specific domains. The question of how individuals integrate self-perceptions from specific domains into more global perceptions of self-worth has become a critical issue in the study of self-concept. The contribution of a specific domain to global self-concept may be larger when its perceived importance is greater and, conversely, the contribution of a specific domain to global self-concept may be smaller when its perceived importance is of lesser value. In essence, the importance of a specific domain of self-concept may have a critical role in the development of global self-concept. Domain specific ratings in combination with information about individual importance may be better able to predict global self-concept than domain specific ratings alone. Fox (1990), and Pelham and Swann (1989), have highlighted the critical factor of importance with regard to the contribution of specific domains of self-concept to global self-concept. Fox (1990), and Fox and Corbin (1989), refer to the fact that a number of studies (e.g., Marsh, 1986, Rosenberg ,1982) have provided evidence to suggest that individuals may "customize" their self-concept structure and content by the attachment of importance weights to aspects of self-perception. Fox (1990) also referred to Harter's (1986) concept of "discounting" - a self-serving mechanism whereby areas of perceived low competence are effectively eliminated by the attachment of a low importance score while, conversely, a high importance value is assigned to those areas where high competence is perceived. Fox (1990) proposed the interesting concept of importance scores operating as a "screen" or

"filter" between domains and sub-domains by the attachment of value to performance in that domain/sub-domain. Pelham and Swann (1989) emphasized that self-views which are strongly linked to an individual's goals and values - those identified as more personally important - will be self-views that strongly influence global self-worth.

The common sense supposition that the effect of a specific facet or domain of self-concept on global self-concept will depend on its importance is not only supported by the Pelham and Swann (1989) study but also has an intuitive appeal (Marsh, 1986). However, empirical studies by Marsh (1986, 1993a, 1993b), and Marsh and Sonstroem (1995), have disputed this role. Marsh (1993b) distinguished between simple unweighted models that require weights to be constant across domains and individuals, constant weighted models that allow weights to differ according to the domain but require weights assigned to each domain to be constant across all individuals, and individually weighted models that allow the weights assigned to each domain to vary from individual to individual. Marsh (1993b) tested the importance hypothesis using the individually weighted importance model where the weight assigned to each domain is free to vary from individual to individual. He stated that the critical assumption in this model is that domains should be more strongly related to self-concept for individuals who judge those domains to be more important and less strongly related to self-concept for individuals who judge them to be less important; i.e. the effect of a specific domain interacts with the individual importance placed on that domain.

Marsh previously tested this model in his 1986 study with the generalized multiple regression approach in which global esteem was predicted by the set of domain specific self-concept ratings, the set of domain specific importance ratings, and the set of domain specific self-concept x importance cross-product terms. Marsh (1993b) argued that

support for the individually weighted importance model required that the variance explained by the set of cross-product terms used to test the domain x importance interaction was statistically significant when all terms were simultaneously included in the regression equation, and that cross-product terms contributed over and above the contribution of the domain specific self-concept and importance ratings.

One of the objectives of the Marsh (1993b) Study 1 was to evaluate the importance of importance in the individually weighted model, i.e., to determine whether the domain x importance interaction contributed significantly to the prediction of global self-concept beyond the contribution of specific self-concept and domain importance ratings alone. The results indicated that these cross-products only explained 0.6% of additional variance in self-concept while 15 specific domain ratings contributed 46.0% to this variance. Marsh (1993b) concluded that "the results provided strong evidence against the individually weighted model". The importance hypothesis was again tested in the Marsh and Sonstroem (1995) study. The results of this study confirmed the Marsh (1993b) results, i.e. the additional variance explained by the domain x importance cross-product was not significant while the variance explained by the specific domains was significant. Marsh and Sonstroem (1995) stated that "the findings failed to support the usefulness of importance in the theoretical models considered here". Marsh and Sonstroem (1995) further stated that "when self-concept scores and importance ratings were considered separately for each domain, the importance ratings contributed significantly beyond the criterion variance that could be explained by corresponding self-concept ratings". Marsh and Sonstroem (1995) cite the Marsh (1994) suggestion that the perceived importance of self-perceptions of body fat, physical endurance and physical activity may be useful in predicting individuals who will persist with physical activity

programs designed to reduce body fat or to increase physical fitness. However, when multiple self-concept scales and corresponding importance scales were included in the same analysis the unique variance due to the importance ratings was not statistically significant. Marsh and Sonstroem (1995) concluded that "importance ratings still make a positive and unique contribution when self-concept and importance ratings are considered separately for each domain".

Marsh (1994) acknowledged the intuitive appeal of the importance hypothesis and stated that it may warrant further consideration because of the strong theoretical rationale that underpins it. The process of aggregating and integrating self-perceptions from specific domains into more global perceptions of self may be moderated by cognitive skills. However, the influence of age, gender and life experiences on these cognitive processes, particularly with regard to the importance an individual attaches to each domain, may also be important. Shavelson, Hubner and Stanton (1976) stated that self-concept becomes increasingly multi-faceted with age, while Demo (1992) argued that self-concept is susceptible to change as the individual encounters new roles, situations and life transitions. In this regard, the Marsh (1993b) Study 1 has a number of questionable features.

The sample essentially comprised young adolescent male students only (grades 7 to 10), and the study had a very narrow focus on school related domains of self-concept rather than on more broadly defined domains of self-concept, i.e., the study focused upon School Esteem rather than Global Esteem. In particular, Marsh (1993b) examined only the importance students attached to specific school subjects and how such importance ratings contributed to school esteem. However, students of such an age and level of cognitive development may regard many school subjects as of almost equal importance

rather than specifically classify them as more important or less important. Furthermore, there may not be sufficient variation in the Marsh (1993b) sample with regard to age, gender and life experiences to adequately address the key shaping influences highlighted by Shavelson, Hubner and Stanton (1976) and Demo (1992). Finally, "additional" variance may be difficult to detect in the Marsh (1993b) Study 1 due to the very large number of independent variables entered which may mask interaction effects upon predicted variance. The Marsh (1993b) model entered 30 main effect variables and 15 cross-products into the regression equation.

Fox (1997) critically evaluated the individually weighted model and argued that if the "discounting" hypothesis proposed by Harter (1986) was taken into account, only those domains deemed high in importance by the individual should be included in the analyses. The "discounting" hypothesis (Harter, 1986) reflects the intuitive appeal of the importance hypothesis for which Marsh (1994) advocated further consideration.

In light of all the above arguments, it was felt there was a need to re-evaluate the importance hypothesis in the context of the Marsh (1993b) regression model but with a more representative sample with regard to age, gender and life experiences. Furthermore, it was also felt that there was a need to utilize other analytical strategies in order to address the problems arising from the large number of independent variables utilized in the Marsh analyses. The current study utilized the generalized multiple regression approach proposed by Marsh (1993b) but also incorporated additional regression models to test the validity of concluding that there is no support for the importance of importance hypothesis. The sample of participants used provided greater variation with regard to age, gender and life experiences than that used by Marsh (1993b) and Marsh & Sonstroem (1995). Participants were selected in such a way that they might be expected to differ with

respect to the perceived importance of certain domains of self-concept. It was hypothesized that if an individual believed that a particular domain of self-concept was very important then that domain should have a greater impact on general self-esteem than domains of much less importance. For example, if an individual believed that physical ability was very important then the amount of physical ability the individual had would have greater impact on global self-esteem than other domains that had lower importance ratings. The current study differed from the Marsh (1993b) Study 1 in a number of ways. It evaluated the broadly defined domains of general self-concept rather than the more narrowly focused domains of school related self-concept considered by Marsh (1993b). Consequently, the SDQIII (Marsh, 1992) was used instead of the Academic Self Description Questionnaire II (ASDQ II). Data was provided by separate samples of both males and females with age ranges and profiles that contrast sharply with those used by Marsh (1993b). The present study used additional analytical procedures as well as Marsh's (1986) generalized multiple regression approach.

METHOD

Participants

The present study was based on the responses of 506 Irish participants to the Self Description Questionnaire III (SQD III). Three groups of participants were used. Group one comprised 175 non-sporting academics who were involved in full-time or part-time second or third level education with no significant involvement in competitive sport. Participants in this group comprised men (n = 72) and women (n = 103) between the ages of 18 years and 39 years (mean = 19.98; SD = 4.37).

Group two comprised 184 high level amateur athletes who had achieved national, regional, county or premier league status in their particular competitive sport. Participants in this group comprised men (n = 108) and women (n = 76) between the ages of 18 years and 40 years (mean = 24.29; SD = 5.76). Group three comprised 147 mental health clients who were in receipt of regular mental health services with a classification of Neuroses (WHO, 1992). Participants in this group comprised men (n = 75) and women (n = 72) between the ages of 18 years and 40 years (mean = 31.60; SD = 6.78).

Instrumentation

The Self Description Questionnaire III (SDQ III, Marsh, 1992) contains 13 self-concept scales. The thirteen scales are as follows: Physical Ability, Physical Appearance, Problem Solving, Relations with Same Sex, Relations with Opposite Sex, Relations with Parents, Religion/Spiritual Values, Honesty/Trustworthiness, Emotional Stability, Mathematical Skills, Verbal, Academic, and General Esteem. Each scale is represented by 10 or 12 items, half of which are negatively worded. Responses to each item are made along an 8 point Likert response scale that ranges from 1 (definitely false) to 8 (definitely true). The SDQ III also incorporates an importance scale (i.e., how important is this characteristic in determining how you feel about yourself?) and an accuracy scale (i.e., how accurate is this statement as a description of you?). Responses to these items are made on Likert scales ranging from 1 (very unimportant/very inaccurate) to 9 (very important/very accurate). The SDQ III appears to have generally good psychometric properties based on analyses of the normative archive of responses by 2,436 respondents that are described in the test manual (Marsh, 1992).

Procedure

Responses to the SDQ III were obtained by means of group administration and postal questionnaire. Participants for the group administration were selected because of availability and location; groups consisted of 15 - 20 participants. The group administrations were supervised by one of the authors who outlined the purpose of the study, clarified confidentiality and explained the response scales. Participants for the postal questionnaire were selected because of attendance at a clinical setting or team training sessions. One of the authors explained the purpose of the study, clarified confidentiality and requested participation in the study. Those who indicated a willingness to participate were given an addressed and unsealed envelope which contained the questionnaire and an explanatory letter which again clarified the purpose of the study and confidentiality. They were asked to complete the questionnaire and return it to the authors in the envelope provided. The response rate was 80%.

RESULTS

Initial statistical analyses followed the application of the generalized multiple regression model utilized by Marsh (1993b), and Marsh and Sonstroem (1995). This statistical analysis utilized Z score (M = O; SD = 1) transformations of the self-concept and importance ratings, and computed the self-concept x importance cross products based on these Z scores (but did not apply Z score transformations to the resulting cross-product scores).

Jaccard et al. (1990) have stated that unstandardized regression coefficients are generally preferred to standardized ones when comparing causal relationships that differ as a function of a moderator variable and pointed to causal invariance as the basis for this

preference. Causal invariance exists when the same causal relationship exists across a number of different groups. Jaccard et al. (1990) argued that unstandardized regression coefficients properly reflect causal invariance whereas standardized regression coefficients do not (See Jaccard et al. for further details). In the present study all regression coefficients were unstandardized, unless otherwise stated.

Multiple regression analysis was first used to test the Marsh (1993b) statistical model for the variance explained by each set of variables (specific self-concept ratings, importance ratings, and self-concept x importance cross products), together with additional statistical models which were devised by the authors to test the importance effect. This was initially applied to the total sample in the study. Marsh (1993b) argued that this was the most appropriate test of the individually weighted model. As previously mentioned, it requires the domain x importance cross products to contribute uniquely and positively to the prediction of general self-esteem. The results confirmed Marsh's (1993b) conclusion of no support for the importance hypothesis. The 12 domain ratings explained 75.3% of the variance in general self esteem, while the variance uniquely explained by importance was only 0.5%, and that explained by the 12 cross products, 0.6%, was minimal and not significant. In the generalized multiple regression approach (Marsh 1993b), blocks of (independent) variables are entered into the regression equation in the order: all domain levels; all domain importances; all domain level x importance cross products. The change in variance for the final entry in this sequence represents the proportion of variance accounted for after the variance for the preceding variables has been accounted for. This proportion does not accurately reflect the total contribution of the final sequence of variables to the variance. Thus, the authors reversed the order of entry to test this hypothesis. When the 12 cross products were entered into the regression

model first, followed by the 12 importance ratings with the 12 domain ratings entered last, the variance uniquely explained by the 12 cross products rose to 6.4% which, while small, was significant, $p < .001$; the variance explained by the importance ratings was 7.2% and that explained by the domain ratings was 62.9%.

A gender x type analysis of variance with general self-esteem as the dependent variable indicated significant differences for gender [$F(1, 500) = 14.24$, $p < .001$], type [$F(2, 500) = 52.05$, $p < .001$] and gender by type [$F(2, 500) = 5.84$, $p < .001$]. Similarly, a multivariate analysis of variance utilizing Wilks' Lambda indicated significant differences on the specific domains of self-esteem for gender [$F(12, 489) = 10.09$, $p < .001$], type [$F(24, 978) = 13.46$, $p < .001$], and gender by type [$F(24, 978) = 3.50$, $p < .001$]. Consequently, any effects associated with different sub-domains upon general self-esteem in the regression analysis previously reported could have been due to these potentially confounding effects. In order to eradicate this problem, separate analyses were performed for males and females, academics, high level athletes, mental health clients, and each gender by type combination. The results of these analyses generally supported the findings from the generalized multiple regression analysis on the full sample, except that the sub-samples occasionally showed small interaction effects. However, when the sequence of entry was reversed (i.e. the cross products entered first) the variance uniquely explained by the 12 cross products increased for all sub-samples, and particularly so for Male Academics and Female High Level Athletes. In summary, then, when Marsh's (1993b) analysis was used to test the importance hypothesis the results broadly matched his results and offered little or no support for the hypothesis. However, the authors had some reservations about Marsh's approach because of the large number of independent

variables (domain ratings, importance ratings, domain x importance cross products) included in his model possibly saturating the variance that could be accounted for.

This study sought to examine alternative regression models to evaluate the importance hypothesis. A key influence in the development of such alternative models was Harter's (1986) concept of discounting, which hypothesized that "in order to maintain a positive sense of self-worth one must discount the importance of domains in which one is not performing competently, as well as endorse the importance of domains in which one is competent". Fox (1997) argued that if the discounting hypothesis was taken into account only those domains deemed high in importance by the individual should be included in any analyses. The authors incorporated elements of Harter's (1986) and Fox's (1997) views on importance and hypothesized that if an individual believed that a particular domain of self-concept was very important then that domain should have a greater impact on general self-esteem than a domain of very little importance. In order to test this hypothesis mean importance ratings based on raw importance scores were determined for the eleven different groupings within the sample; i.e. males, females, academics, high level athletes, mental health clients, male academics, female academics, male high level athletes, female high level athletes, male mental health clients, and female mental health clients. For each sub-sample the domains identified by the three highest and three lowest mean importance ratings were then entered into a regression equation as two separate blocks, with the most important domains entered in the first block and the least important domains entered in the second block. This sequence was then reversed.

The three domain ratings deemed most important by males (Table 5) explained 61.8% of the variance in general self esteem while the three domain ratings deemed least important explained only 5.6% (small but significant). When the sequence was reversed

and the least important domains were entered first, the three domains deemed most important still contributed 23.9%, which was significant. The three domains deemed most important by females explained 59.8% of the variance in general self-esteem while the three domains deemed least important explained only 0.3%, which was not significant. When the sequence was reversed the three domains deemed most important still explained 51.4%, which was significant.

Table 5: Changes in the variance of general self-concept accounted for by the three most and three least important domains when males and females were analyzed separately.

	Model	Domains	R^2_{Change} Model 1,2	R^2_{Change} Model 2,1
Male (n = 255)	1	HONS, EMOT, PRNT	.618***	.239***
	2	APPR, MATH, RELG	.056***	.435***
Female (n=251)	1	HONS, PRNT, EMOT	.598***	.514***
	2	PHYS, MATH, RELG	.003	.087***

Note. HONS = Honesty/Trustworthiness, EMOT = Emotional Stability, PRNT = Relations with Parents, APPR = Physical appearance, MATH = Mathematical Skills, RELG = Religion/Spiritual Values, PHYS = Physical Ability.

*** $p < .001$

When the sample was analyzed by type (Table 6), the three domains deemed most important explained 45.8% (Academics), 62.9% (High Level Athletes), and 64.9% (Mental Health Clients) of the variance in general self-esteem (all significant), while the three domains deemed least important explained 0.8% (Academics), 6.6% (High Level Athletes), and 2.0% (Mental Health Clients) of this variance. When the sequence was reversed the three domains deemed most important by the Academics and Mental Health

Clients still explained 38.3% and 46.7% of the variance. The reverse sequence for High Level Athletes indicated a weaker contribution (18.6%) to the variance in general self-esteem; nevertheless, this was still highly significant.

Table 6: Changes in the variance in self-concept accounted for by the three most and three least important domains when Academics, High Level Athletes and Mental Health Clients were analyzed separately.

General Self	Model	Domains	R^2_{change} Model 1,2	R^2_{Change} Model 2,1
Academics (n=175)	1	HONS, EMOT, PRNT	.458***	.383***
	2	MATH, PHYS, RELG	.008	.083**
High Level Athletes (n=84)	1	HONS, PRNT, PHYS	.629***	.186***
	2	APPR, MATH, RELG	.066***	.509***
Mental Health Clients (n=147)	1	HONS, EMOT, PRNT	.649***	.467***
	2	RELG, MATH, PHYS	.020**	.202***

Note. HONS = Honesty/Trustworthiness, EMOT = Emotional Stability, PRNT = Relations with Parents, APPR = Physical appearance, MATH = Mathematical Skills, RELG = Religion/Spiritual Values, PHYS = Physical Ability.

** $p < .01$, *** $p < .001$.

When the sample was split by gender and type (Table 7), the three domains deemed most important by the Male and Female Academics explained 48.2% and 46.7% of the variance in general self-esteem. The three domains deemed least important explained 16.8% and 1.6% of the variance. When the sequence was reversed the three domains deemed most important by females still made a very significant contribution to the variance in self-esteem (43.1%), while the contribution for males was weaker (11.7%) but still significant. When the three domains deemed most important by Male High Level

Athletes were entered in the first block they made the smallest contribution (24.7%) to the variance in general self-esteem of all the groups, and when the sequence was reversed the contribution was only 6.4% and minimally significant. In contrast, the three domains deemed most important by Female High Level Athletes explained 78.1% of the variance in general self-esteem. The three least important domains explained 6.5% of the variance. However, when the order of entry was reversed, the three least important domains accounted for 62.6% of the variance in general self-esteem, while the three most important domains accounted for 22.0% of the variance. The variance explained by the three domains deemed most important by Male Mental Health Clients was 72.2% and when the sequence was reversed this variance was 49.0%. A similar pattern pertained to Female Mental Health Clients whose three domains deemed most important explained 60.0% of the variance in general self-esteem and when the sequence was reversed this variance was 37.2%

In order to further evaluate the importance hypothesis, the authors decided to re-examine their models using only those domains whose importance was considered significantly different by the participants. In order to identify these domains, a one-way analysis of variance with repeated measures was employed on the raw importance scores for all six groups obtained by splitting the sample by gender and type.

Table 7: Changes in the variance of general self-concept accounted for by the three most and three least important domains when the sample was analyzed by gender and type.

General Self	Model	Domains	R^2_{Change} Model 1,2	R^2_{Change} Model 2,1
Male Academics (n=72)	1	EMOT, PRNT, HONS	.482***	.117***
	2	APPR, MATH, RELG	.168***	.533***
Female Academics (n=103)	1	HONS, EMOT, SSEX	.467***	.431***
	2	MATH, PHYS, RELG	.016	.052
Male High Level Athletes (n=108)	1	HONS, PHYS, PRNT	.247***	.064*
	2	MATH, APPR, RELG	.149***	.332***
Female High Level Athletes (n=76)	1	PRNT, HONS, PHYS	.781***	.220***
	2	APPR, MATH, RELG	.065***	.626***
Male Mental Health Clients (n=75)	1	HONS, EMOT, VERB	.722***	.490***
	2	MATH, RELG, PHYS	.022	.254***
Female Mental Health Clients (n=72)	1	HONS, PRNT, EMOT	.600***	.372***
	2	RELG, MATH, PHYS	.022	.250***

Note. HONS = Honesty/Trustworthiness, EMOT = Emotional Stability, PRNT = Relations with Parents, APPR = Physical appearance, MATH = Mathematical Skills, RELG = Religion/Spiritual Values, PHYS = Physical Ability, SSEX = Relations with Same Sex, VERB = Verbal Skills.

$p < .05$, *** $p < .001$

The Mauchly test of sphericity for Male Academics was significant [$x^2(65) = 175.60$, $p < .01$] and consequently the Huynh-Feldt correction factor was used. There was a significant difference in importance across different domains [$F(8.76, 587.03) = 18.05$, $p < .01$]. Follow-up Tukey's tests suggested that for this group Emotional Stability and Relations with Parents were significantly more important than Mathematical Skills and Religion/Spiritual Values (Table 8). When the two most important domains were entered as the first block in the regression analysis they explained 38.4% of the variance in general self-esteem. When the sequence was reversed and the two most important

domains were entered as the second block, they still accounted for 29.5% of the variance in self esteem. Both these proportions were highly significant. The domains which were significantly less important accounted for only a minimally significant proportion of variance when entered first and a non-significant proportion when entered second.

The Mauchly test of sphericity for Female Academics was significant [$x^2(65) = 314.79$, $p < .01$] and the Huynh-Feldt correction factor was again used. There was a significant difference in importance across different domains [$F(7.49, 749.27) = 57.41$, $p < .01$]. Follow-up Tukey's tests suggested that for this group Honesty/Trustworthiness, Emotional Stability, Relations with Same Sex, Physical Ability, and Relations with Parents were significantly more important than Physical Appearance, Mathematical Skills, Physical Ability, and Religion/Spiritual Values. When the more important domains were entered in the regression equation as the first block in the sequence of entry they explained 49.0% of the variance in general self-esteem but this dropped to 17.5% (still significant) when they were entered last in the sequence. However, the domains which were of least importance made a greater contribution to variance (56.4%) when entered first and still made a significant contribution (24.9%) when entered last in the sequence of entry. The most notable feature of this data set was the very large contribution to variance of one of the least important domains (Physical Appearance), which was included in the regression equation as a result of the Tukey's tests, but was not one of the three least important domains identified by mean importance ratings alone (see Table 7).

Table 8 : Changes in the variance of self-concept accounted for by the most and least important domains when these domains were identified by analysis of variance of each gender by type sub-sample.

General Self	Model	Domains	R^2_{Change} Model 1,2	R^2_{Change} Model 2,1
Male Academics (n=72)	1	EMOT, PRNT	.384***	.295***
	2	MATH, RELG	.027	.116*
Female Academics (n=103)	1	HONS, EMOT, SSEX, PRNT	.490***	.175***
	2	APPR MATH, PHYS, RELG	.249***	.564***
Male High Level Athletes (n=108)	1	HONS, PHYS, PRNT, EMOT	.392***	.090**
	2	MATH, APPR, RELG, ACAD	.073*	.375***
Female High Level Athletes (n=76)	1	PRNT, HONS, PHYS, SSEX, EMOT	.843***	.128***
	2	OSEX, APPR, MATH, RELG, PROB	.049***	.763***
Male Mental Health Clients (n=75)	1	HONS, EMOT, PRNT, VERB	.737***	.446***
	2	SSEX, MATH, RELG, PHYS	.026	.316***
Female Mental Health Clients (n=72)	1	HONS, PRNT, EMOT	.600***	.372***
	2	RELG, MATH, PHYS	.022	.250***

Note. HONS = Honesty/Trustworthiness, EMOT = Emotional Stability, PRNT = Relations with Parents, APPR = Physical appearance, MATH = Mathematical Skills, RELG = Religion/Spiritual Values, PHYS = Physical Ability, ACAD = Academic Skills, OSEX = Relations with Opposite Sex, SSEX = Relations with Same Sex, PROB = Problem Solving Skills, VERB = Verbal Skills.

$p < .05$, ** $p < .01$, *** $p < .001$

The Mauchly test of sphericity for Male High Level Athletes was also significant [$x^2(65) = 235.96$, $p < .01$] and consequently the Hunyh-Feldt correction was used. There was a significant difference in importance across domains [$F(8.20, 877.69) = 34.39$, $p < .01$]. Follow-up Tukey's tests suggested that for this group Honesty/Trustworthiness, Physical Ability, Relations with Parents, and Emotional Stability were significantly more important than Mathematical Skills, Physical Appearance, Religion/Spiritual Values, and Academic. The more important domains contributed 39.2% to the variance when entered in the regression equation as the first block and 9.0% when entered in the second block,

both being significant. The 37.5% contribution to variance of the least important domains when entered first was highly significant but these domains were only minimally significant (7.3%) when entered in the second block of the regression equation. The reader's attention is again drawn to the presence of Physical Appearance in the significantly less important domains.

For Female High Level Athletes, the Mauchly test of sphericity was also significant [$x^2(65) = 211.54$, $p < .01$] so the Hunyh-Feldt correction factor was used. There was a significant difference in importance across domains [$F (7.54, 565.18) = 26.41$, $p < .01$]. Follow-up Tukey's tests suggested that for this group Relations with Parents, Honesty/Trustworthiness, Physical Ability, Relations with Same Sex, and Emotional Stability were significantly more important than Relations with Opposite Sex, Physical Appearance, Mathematical Ability, Religion/Spiritual Values, and Problem Solving. The more important domains explained 84.3% of the variance when entered into the regression equation first and 12.8% when entered second, both proportions being significant. The least important domains explained 76.3% of the variance when entered first and 4.9% when entered second, both proportions also being significant. Physical Appearance again featured in the significantly less important domains.

The Mauchly test of sphericity for Male Mental Health Clients was significant [$x^2(65) = 191.92$, $p < .001$] so the Hunyh-Feldt correction factor was again used. There was a significant difference in importance scores across domains [$F (8.87, 629.73) = 11.82$, $p < .01$]. Follow-up Tukey's tests suggested that Honesty/Trustworthiness, Emotional Stability, Relations with Parents, and Verbal Skills were significantly more important than Relations with Same Sex, Mathematical Skills, Religion/Spiritual Values, and Physical Ability. The more important domains explained 73.7% of the variance in

general self-esteem when entered into the regression equation first and 44.6% of the variance when entered second, both being highly significant. The least important domains made a much smaller contribution (31.6%) when entered first and a minimal and non-significant contribution when entered second (2.6%). Physical Appearance was not present in either group of domains.

Finally, the Mauchly test of sphericity was also significant for Female Mental Health Clients [$x^2(65) = 170.33$, $p < .001$] and consequently the Hunyh-Feldt correction factor was again applied. There was a significant difference in importance across domains [$F(9.02, 640.17) = 24.12$, $p < .001$]. Follow-up Tukey's tests suggested that, for this group, Honesty/Trustworthiness, Relations with Parents, and Emotional Stability were significantly more important than Religion/Spiritual Values, Mathematical Skills, and Physical Ability. The more important domains explained 60.0% of the variance when entered into the regression equation first and 37.2% when entered second, both being highly significant. The least important domains explained 25.0% (significant) of the variance when entered first and only 2.2% (not significant) when entered second. Physical Appearance was again absent from both groups of domains.

The most obvious feature of these analyses was the very large contribution to variance in general self-esteem that seemed to be attributable to one of the least important domains, Physical Appearance (APPR). Furthermore, in the female academics, the inclusion of this domain in the regression model led to the results switching from offering support for the importance hypothesis in Table 7 to them not supporting the importance hypothesis in Table 8. Conversely, Physical Appearance was identified as one of the three least important domains by both the Male and Female High Level Athlete samples, neither of which offered clear support for the importance hypothesis in either Table 7 or

Table 8. The authors concluded that denial (of importance) may be a factor in these participants' ratings of importance for this domain. Further regression analyses of the least important and most important domains were therefore completed for all six sub-samples with physical appearance removed from the equation.

For the Female Academics, Physical Appearance was deleted from block 2 and so one other variable, Relations with Parents (PRNT), was deleted from block 1 in order to ensure there was an equal number of domains in each block. The three most important domains then explained 46.7% of the variance when entered into the regression equation in the first block and 43.1% when the sequence was reversed, both being highly significant. The three least important domains explained 5.2% of the variance when entered in the first block and 1.6% when entered in the second block, neither figure being significant (see Table 9).

For the Male and Female High Level Athletes, Physical Appearance was removed from the least important domains, while Emotional Stability (Males) and Relations with Opposite Sex (Females) were removed from the most important domains. Male and Female High Level Athletes' most important domains then explained 24.7% and 79.8% of the variance, respectively, when entered into the regression equation first and 12.2% and 19.9% when entered second, all proportions being significant. The least important domains for this group contributed 20.2% and 63.2% when entered first and 7.7% and 3.2% when entered second, all proportions again being significant (see Table 9).

However, it could be argued that the influence of an individual's most and least important domains on global self esteem cannot be assessed by using the mean importance ratings for the group to identify such domains. In other words, the highest and lowest importance ratings specific to each participant should be used to identify domains

rather than the mean importance ratings for the group. In order to address this concern the actual scale scores for the three most important domains and three least important domains were identified for each participant in the study. For the total sample and each sub sample the actual scale scores for each these three most important domains and the actual scores for each the three least important domains were entered into the regression as two separate blocks, with the three most important domains entered in the first block and the three least important domains entered in the second block. The sequence was then reversed.

For the total sample the three most important domains explained 44.1% of the variance in general self esteem while the three least important domains only explained 7.4%, both being significant. When the sequence was reversed the three most important domains still explained 26.0% of the variance, which was significant. The three most important domains for males explained 40.5% of the variance in general self esteem while the three least important domains explained 14.6%, both being significant. When the sequence was reversed and the three least important domains were entered first, the three most important domains still contributed 26.3%, which was significant. The three most important domains for females explained 32.9% of the variance in general self esteem while the three least important domains explained only 8.8% (small but significant). When the sequence was reversed the three most important domains still explained 25.6%, which was again significant.

Table 9 : Changes in the variance of self-concept accounted for by the most and least important domains when these domains were identified by analysis of variance of each gender by type sub-sample and APPR was removed from the analyses

General Self	Model	Domains	R^2_{Change} Model 1,2	R^2_{Change} Model 2,1
Male Academics (n=72)	1	EMOT, PRNT	.384***	.295***
	2	MATH, RELG	.027	.116*
Female Academics (n=103)	1	HONS, EMOT, SSEX	.467***	.431***
	2	MATH, PHYS, RELG	.016	.052
Male High Level Athletes (n=108)	1	HONS, PHYS, PRNT	.247***	.122**
	2	MATH, RELG, ACAD	.077*	.202***
Female High Level Athletes (n=76)	1	PRNT, HONS, PHYS, SSEX	.798***	.199***
	2	OSEX, MATH, RELG, PROB	.032*	.632***
Male Mental Health Clients (n=75)	1	HONS, EMOT, PRNT, VERB	.737***	.446***
	2	SSEX, MATH, RELG, PHYS	.026	.316***
Female Mental Health Clients (n =72)	1	HONS, MATH, EMOT	.600***	.372***
	2	RELG, PRNT, PHYS	.022	.250***

Note. HONS = Honesty/Trustworthiness, EMOT = Emotional Stability, PRNT = Relations with Parents, MATH = Mathematical Skills, RELG = Religion/Spiritual Values, PHYS = Physical Ability, ACAD = Academic Skills, OSEX = Relations with Opposite Sex, SSEX = Relations with Same Sex, PROB = Problem Solving Skills, VERB = Verbal Skills.

*** $p < .05$, ** $p < .01$, *** $p < .001$**

When the sample was analyzed by type the three most important domains explained 38.4% (Academics), 61.0% (High Level Athletes) and 35.4% (Mental Health Clients) of the variance (all significant), while the three least important domains explained 8.8% (Academics), 4.4% (High Level Athletes) and 6.7% (Mental Health Clients) of this variance. When the sequence was reversed the three most important domains for Academics, High Level Athletes and Mental Health Clients still explained 27.7%, 30.5% and 23.2% of the variance in general self esteem, all significant.

When the sample was split by gender and type the three most important domains for Male and Female Academics explained 35.3% and 43.9% of the variance. The three least important domains explained 20.3% and 7.5% of this variance. When the sequence was reversed the three most important domains for Male and Female Academics still explained 26.2% and 26.9% (both significant) of the variance in general esteem. When the three most important domains for Male High Level Athletes and Female High Level Athletes were entered in the first block they explained 37.1% and 72.2% of the variance while the three least important domains explained 6.1% and 6.7% respectively. When the order was reversed the three most important domains accounted for 24.4% and 21.7 % of the variance, again significant. The variance explained by the three most important domains for Male and Female Mental Health Clients explained 40.6% and 30.8% (both significant) while the three least important domains explained 21% (significant) and 1.3% (not significant) of this variance. When the sequence was reversed the three most important domains still explained 27.2% and 22.0% of the variance in general self esteem, again significant.

The results from these alternative regression models offered quite strong support for the importance hypothesis. The only notable exceptions were the results for Male Academics, Male High Level Athletes, and to some extent Female High Level Athletes in the analyses that used mean importance ratings. However, the results from all the different groupings within the sample that used actual importance scores offered varying levels of support for the importance hypothesis, the only exception being Female High Level Athletes.

DISCUSSION

The data from this study offer contrasting conclusions. The results which were based on the Marsh (1993b) regression model provided no support for the importance hypothesis and confirmed the Marsh (1993b), and Marsh and Sonstroem (1995) findings. However, the alternative regression models proposed by the authors offered quite strong support for the importance hypothesis. Results which were based on domains identified by the three highest and three lowest mean importance ratings provided some support. When the sample was split by gender, the results for both Males and Females (Table 5) supported the importance hypothesis with the data from Females offering strong support. When the sample population was split by type (Table 6), Academics and Mental Health Clients provided strong support while the data from High Level Athletes was less convincing, but nevertheless consistent with the importance hypothesis. When the sample was split by gender and type (Table 7) there was strong support for the hypothesis from Female Academics, and Male and Female Mental Health Clients, while weaker support was provided by Female High Level Athletes. The results for Male Academics and Male High Level Athletes did not support the importance hypothesis.

Results that were based on domains that differed significantly in importance provided equivocal results. When the sample was split by gender and type (Table 8), strong support for the importance hypothesis was provided by Male Academics, and Male and Female Mental Health Clients. However, no real support was provided by Female Academics, and Male and Female High Level Athletes. However, when Physical Appearance (APPR) was removed from the least important domains, together with one other variable from each of the most important domains, the regression analyses provided strong support for the importance hypothesis (Table 9). The data from Male and Female

Academics together with Male and Female Mental Health Clients provided substantial support, while the data provided by Male and Female High Level Athletes offered some support.

Results that were based on actual scale scores for each participant's three most important domains and three least important domains also supported the importance hypothesis, but with a somewhat different pattern. The support was consistent in all subgroups, even when the three most important domains were entered second in the regression. In particular, the support provided for the importance hypothesis by the results from the High Level Athletes, Male Academics and Male High Level Athletes was stronger than the results that utilized mean importance ratings. The weakest support was provided by Female High Level Athletes.

The large change in the regression results for the least important domains in Female Academics when Physical Appearance (APPR) was removed lends support to the hypothesis that participants in this group presented with a significant level of denial with regard to the importance of Physical Appearance. A similar conclusion can be made regarding Male Academics, Male and Female High Level Athletes when the regression analyses which included Physical Appearance (Table 7) are compared to the regression analyses which did not include that domain (Table 9). The Male and Female Academics were the youngest participants in this study (Mean age 19.98 years; SD=4.37), while the Male and Female High Level Athletes were the second youngest (Mean age 24.29 years; SD=5.76). Thus, developmental factors may be an influence in their use of denial.

It seems that while these groups do not rate Physical Appearance as one of their most important domains, this domain nevertheless makes a very significant contribution to their general self esteem. One possible explanation for this finding is that the SDQ III

items that measure importance do not provide a valid and reliable measures of the construct. However, this would appear to be a somewhat simplistic explanation of a very complex psychological process. Fox (1997) referred to the social constraints facing the self; cultures and groups have membership requirements (i.e. social laws and traditions) that place pressures on the self to conform through appearance, abilities and behavioral characteristics. Sparkes (1997) stated that individual characteristics such as a person's physical appearance, style, taste, manners, and bodily deportment are not merely personal idiosyncrasies but are highly influenced by socio-cultural norms linked to social class, gender, and ethnicity. Fox (1997) also stated that the importance weights an individual attaches to a domain might be influenced by personal and cultural values. It may be that the level of denial associated with Physical Appearance in Male and Female Academics, and Male and Female High Level Athletes can be explained by such personal and cultural values. The culture of these groups may have applied constraints regarding an open declaration of the importance of Physical Appearance. These constraints may have been accentuated by both the developmental phase of the Male and Female Academics and the frame of reference of the Male and Female High Level Athletes (i.e., all aspects of the physical self are likely to be important to the athlete). Denial was a confounding influence for four of the six groups with respect to Physical Appearance.

The proportions of variance in general self-esteem that are accounted for by the most important domains in Male Academics and Male High Level Athletes are much smaller than for the other samples (Table 9). It may be that the participants in both these groups are even more constrained by personal values, gender, and age when asked to openly acknowledge the importance of particular domains. In contrast, Male Mental Health Clients would seem to be less constrained, possibly because of their ongoing

involvement in mental health programs which may have addressed the issue of denial. Certainly, the results provided by the authors' alternative regression models offer sufficient evidence to dispute the Marsh (1993b) and Marsh & Sonstroem (1995) conclusions.

From a theoretical perspective, the current study utilized an alternative paradigm to Marsh's (1993b) Study 1. This provided for greater variation with regard to age, gender and type, but more importantly examined only domains that differed considerably in importance. The regression equations utilized only domain ratings (rather than domain ratings, importance ratings and cross-products) with the choice of domain determined, in the first instance, by the participants' three highest and three lowest mean domain importance ratings in accordance with the governing hypothesis. Subsequent choice of domains for the regression equations was determined by analysis of variance of domain importance ratings for each sub-sample. A further elaboration on this alternative paradigm was the use of each individual participant's highest and lowest importance rating (rather than mean importance ratings for the particular group) to identify the most and least important domains and the use of the actual scale scores in the regression for the three most and least important domains. This is a significant departure from the Marsh (1993b) generalized multiple regression approach which utilized a very much larger number of main effect variables than the present study. The development of this alternative regression model was greatly influenced by Harter's (1986) discounting hypothesis and Fox's (1997) critical evaluation of the individually weighted model with particular reference to his statement that if the discounting hypothesis is taken into account, only those domains high in importance should be considered. The authors are concerned that the very large number of main effects utilized in the Marsh (1993b)

generalized regression model may saturate the model in the sense that very little variance in general self-esteem remains that could be accounted for by the interaction terms.

The variance in global esteem that can be attributed to differences in importance would seem to be linked to age and life experiences. The largest variance accounted for by importance was in the Mental Health Clients group whose participants were older than participants in the other two groups and probably had a wider range of life experiences. This finding is consistent with Shavelson et al.'s (1976) prediction that self-concept becomes increasingly multidimensional with age and life experiences. It may also be the case that the relevance of importance as a moderating influence on cognitions is increased as a consequence of particular life events. Thus, future studies assessing the importance hypothesis in the development and maintenance of self-concept should take both age and life experiences into account.

In summary, the results of the present study challenge Marsh's (1993b) generalized regression model as the only appropriate model that can be used to test the importance hypothesis. The present study's alternative model seems to have the necessary elements to test the hypothesis, and the results of the study seem to suggest that it may be too early to dismiss importance as irrelevant.

There appear to be a number of applied implications to the findings of this study. First, the relevance of importance as a moderating influence on the shaping of general self-concept would seem to have gathered some statistical substance as well as having an intuitive appeal. Importance may therefore be a critical factor associated with clinical intervention strategies designed to improve self-concept and, ultimately, coping skills. Emphasis in such interventions should not discount the relevance of the domains that

individuals regard as important, and maximize the benefits of such domains to the individual in the development and enhancement of general self-concept.

Second, the results of this study would seem to offer tentative support for the view of Harter (1986), Pelham and Swann (1989), and Fox (1990) that the evaluation of domains of self-concept in the context of importance is a critical process in the development of general self-concept. Cognitive appraisals are amenable to change and a cognitive process that would facilitate individuals to positively reappraise the ratings of their least important domains could further enhance general self-concept. Clinical intervention programs for individuals with low or poor general self-concept might emphasize cognitive restructuring strategies such as those proposed by Hardy, Jones and Gould (1996) for elite athletes. Such a program would seek to encourage individuals to either positively reappraise the importance of their less rated domains or to appraise, perhaps for the first time, areas of their lives previously unrecognized as sources of success with a view to strengthening the foundations of their general self concept.

Third, the weakest support for the importance hypothesis was provided by the Male and Female High Level Athletes when mean importance ratings were used to identify domains; the proportions of variance explained by variables entered in the first block across all four regression analyses were similar regardless of importance. In the alternative approach where the actual scale scores were used to identify the most and least important domains for each participant in the study the Female High Level Athletes also provided the weakest support. However, the participants in these two groups were all amateur athletes who had a significant involvement in other non-sporting activities such as daily employment, social and leisure activities together with a healthy involvement in sport. Thus, it is likely that they had a greater range and balance of life activities and

experiences (probably with greater levels of success) than any of the other four groups. Accordingly, their self-concept may have been more broadly based and more multidimensional. The dangers of a constrained set of life experiences leading to the development of a unidimensional self-concept in highly accomplished young athletes whose identity is almost exclusively based on one sport has been highlighted by Coakley (1992). He argued that identity constriction among such athletes ensured that they were trapped in a "developmental tunnel"; such entrapment, according to Coakley (1992), led to increasing stress levels and burnout. The High Level Athletes in the current study would seem to have achieved the life experience balance advocated by Coakley (1992); a healthy involvement in sport together with a range of other life experiences would seem to be very relevant to the development of a broad based multidimensional self-concept.

Finally, clinicians and therapists may need to be conscious of cultural and developmental factors with regard to the shaping of self-concept. These latent influences may inhibit aspects of the development of self-esteem through a process of denial. Clinical intervention strategies will need to address this issue as a range of positive experiences and attributes may be lost to the esteeming process because of such influences. This may be particularly relevant to those whose self-esteem is fragile.

A number of limitations can be identified in the current study. While the sample provides far greater variation than the Marsh (1993b), and Marsh and Sonstroem (1995) studies with regard to gender and life experiences, the range of such life experiences is still somewhat restricted. The sample does not reflect marital status, family structure or occupational choice, and the results may not be appropriate to other cultures and ethnic groups. Furthermore, the participants in the High Level Athlete group consisted of

amateur athletes only; perhaps professional athletes would provide a different range of data with regard to the importance hypothesis.

The results of this study have reopened the importance of importance debate. It will be the task of future studies to continue to evaluate the concept of importance from new and innovative perspectives. A longitudinal study to track specific groups through developmental stages, age ranges and life experiences would be one such innovative perspective that would contribute enormously to the debate. A study examining the value of exercise and sport programmes as an adjunct to clinical intervention strategies for those with ineffective coping skills might also be useful. Such a study could explore the role of a unidimensional versus multidimensional self-concept in poor coping skills. Finally, an evaluation of the impact and effectiveness of cognitive restructuring strategies with regard to importance ratings would be relevant to clinicians and practitioners working in the area of self esteem and self concept.

Despite the correlational nature of the present study precluding any causal inferences, the authors would suggest that the current findings are at least consistent with the notion of importance as a key variable in the development of self-concept.

Chapter 4

SELF CONCEPT: THE EFFECT OF STRESS AND A STRATEGY FOR CHANGE

Psychological adjustment to injury has generally been considered in the context of two models – the grief model (Kubler-Ross, 1969) and the cognitive appraisal model (Lazarus & Folkman, 1984, 1987; Brewer, 1994). The grief model of adjustment to athletic injury was based on the premises that the disability associated with the injury constituted a form of "loss" of an aspect of the self and that the injured athlete passed through a predictable sequence of phases e.g. denial, anger, bargaining, depression and acceptance, on the way to positive adjustment (Brewer, 1994). The cognitive appraisal model was initially developed to explain the psychological processes associated with stressful life events and the individual's coping responses. Lazarus and Folkman (1984) outlined a general model of the role of cognitive appraisal in the stress response. In their model, psychological stress was a relationship between the person and the environment that was appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being. Appraisal was defined as the process of categorising an encounter, and its various facets, with respect to its significance for well-being. Reappraisal referred to a changed appraisal based on new information from the environment or the individual's cognitive re-evaluation of the event or situation. In the past twenty years, research on the psychological adjustment to injury has been increasingly based on the cognitive appraisal model (Weiss & Troxel, 1986; Wiese & Weiss, 1987; Rose & Jevne, 1993; Johnston & Carroll, 1998; Williams & Anderson,

1998). From a mainly theoretical perspective Brewer (1994) proposed that the way an individual interpreted (or appraised) an athletic injury determined the emotional response (e.g. anger, depression, relief).

The role and influence of self-concept and self-esteem in an individual's predisposition to and recovery from injury has remained a topic of debate. Self-esteem is the evaluative component of self-concept (Sonstroem, 1984), or the degree to which individuals feel positive about themselves (Sonstroem & Morgan, 1989). While the definitions accord the process of description to self-concept and evaluation to self-esteem, the two terms are often used interchangeably (Sonstroem, 1984). Studies on the impact of injury have assigned a significant role to self-concept (Pargman & Lunt, 1989; Williams & Roepke, 1990; Leddy et al., 1994). Wiese-Bjornstal et al. (1998) reviewed the empirical research on the cognitive appraisals and emotional responses associated with sport injury and highlighted the importance of post-injury cognitions related to self-perception i.e. the athlete's self-perceived worth, general abilities, and specific abilities. They stated that perceptions of one's self, capabilities, and worth could all be affected by the sport injury experience. In contrast, Smith et al. (1993) reported no differences between pre-injury and post-injury measures of self-esteem.

The psychological processes associated with the stress of injury and the moderating factors that influence coping responses may be reflected, to a greater or lesser degree, in how an employee copes with significant occupational stressors. The moderating role of self-esteem in the coping process within an occupational setting has been the topic of studies that produced contrasting and varied results (Adler, 1980; Hartley, 1980; Mossholder et al., 1981). The theoretical and empirical basis for positing a moderating role of self-esteem in a wide variety of contexts, including environmental

stimuli – employee response relationships, has been developed by Brockner's (1988) concept of "behavioural plasticity". This concept was based on a wide range of field and laboratory research data (Bachman & O'Malley, 1977; Abramson, Seligman & Teasdale, 1978; Seligman et al., 1979; Brockner, 1979; Adler, 1980; Hartley, 1980; Mossholder et al., 1981; Brief & Aldag, 1981; Schwalbe, 1986; Brockner et al., 1987). Behavioural plasticity refers to the extent to which an individual is affected by external factors, particularly social factors. The degree of an individual's behavioural plasticity could conceivably be associated with any number of individual characteristics. Brockner (1988) focussed on self-esteem as one major cause of observed variation in plasticity and stated that individuals with low self-esteem are (often, though not always) more susceptible to influence by organisational events than their high self-esteem counterparts.

The increasing awareness of the role of self-concept in many coping strategies and processes demands a brief summary of current thinking. Historically, self-concept was regarded as unidimensional with the emphasis on a broad global construct that relegated specific facets of the concept to a minor role (Marsh, 1986). However, more recent research has emphasised a multidimensional definition of self-concept. Many authors (Sonstroem, 1984; Marsh & Shavelson, 1985; Marsh, 1993b; Marsh & Sonstroem, 1995) have referred to the Shavelson, Hubner and Stanton (1976) definition of self-concept which stated that: 1) it is multidimensional; 2) it is hierarchically organised, with perceptions of behaviour at the base moving to inferences about self in sub-areas, and then to inferences about self in general; 3) general self-concept is thought to be relatively stable, but as one descends the hierarchy, self-concept becomes more increasingly situation-specific and, as a consequence, less stable; 4) self-concept becomes increasingly multidimensional with age; 5) self-concept can be differentiated from other

constructs; and 6) self-concept is both descriptive and evaluative in that individuals may describe themselves ("I am happy") and evaluate themselves ("I do well in mathematics").

The acceptance of a multi-dimensional model of self-concept raised key questions regarding the relationship between specific domains and global self-concept. In particular, the question of how individuals integrated self-perceptions from specific domains into global self-concept and whether the contribution of a specific domain would be larger or smaller when its perceived importance is of greater or lesser value has been explored by many authors (e.g., Hoge & McCarthy, 1984; Harter, 1986; Marsh, 1986; Pelham & Swann, 1989; Fox & Corbin, 1989; Marsh, 1993b). These studies hypothesised that domain specific ratings in combination with information about individual importance would make a larger contribution to global self-concept than domain specific ratings alone. These studies provided contrasting levels of support for the importance of importance i.e., the importance hypothesis. Hoge and McCarthy (1984), Harter, (1986), and Pelham and Swann (1989) all provided data in support of the importance hypothesis. However, Marsh (1986, 1993b) critically evaluated these studies, identified methodological limitations and tested the importance hypothesis with an alternative methodology. The Marsh (1986, 1993b) studies found little support for the importance hypothesis and concluded that the effect of any specific domain on global self-concept did not vary much for individuals who rated the domain as more or less important. He argued that the consistently weak support for the role of importance could have been because researchers failed to include domains that "differed more dramatically in their importance" and proposed that domains differing more in importance should be considered. He also tested this hypothesis but it failed to gain sufficient support. The

present author also explored the importance hypothesis from a number of perspectives (including the evaluation of the contribution to global self-concept of domains that differed dramatically in importance) and found varying levels of support. The results of that study are outlined in Chapter 2. Most of the studies to date have acknowledged the intuitive appeal of the importance hypothesis and that, together with empirical date supportive of the concept of importance, suggests that the reappraisal of domains may be an important intervention strategy to enhance global self-concept.

Self-esteem would seem to be central to a broad network of constructs associated with motivation, performance, and well-being (Deci & Ryan, 1995). While many studies have distinguished between high self-esteem and low self-esteem (Brockner, 1988; Pierce et al., 1993; Ganster & Schaubroeck, 1995) and focused on the impact of these two classifications on coping skills, a more refined analysis of the concept of self-esteem was provided by Deci and Ryan (1995) who distinguished between contingent self-esteem and true self-esteem. Contingent self-esteem refers to feelings about oneself that result from matching some standard of excellence. In contrast, true self-esteem is more stable, more securely based in a solid sense of self where the individual has a high level of self-esteem by being who he/she is rather than matching external standards and where self worth does not require continual validation. The influence of perception of self on the individual's capacity to cope with life events and environmental demands was explored extensively by Bandura (1997). He argued, from both a theoretical and empirical perspective, that perceived self-efficacy directly influences coping skills. Perceived self-efficacy refers to beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments.

An alternative but related perspective on the influence of self-esteem on coping skills is provided by attribution theory that is concerned with the causal judgements that individuals use to explain events that happen to themselves (Forsterling, 1988). Attribution theory and self-efficacy theory suggest that a relationship exists between self-attributions, self-efficacy and self-concept (Tabassam & Grainger, 2000). Attribution theory as posited by Weiner (1986) assumed that following success or failure individuals tend to ask *why* the outcome has occurred. The "answer" to this "why question" (the causal attribution) should, in turn, guide important aspects of subsequent achievement-oriented thinking, feeling, and behaviour (Forsterling, 1988). Weiner (1986) stated that successful outcomes that are ascribed to internal causes such as ability and effort result in greater self esteem and pride than success that is ascribed to external causes such as task characteristics and luck. In a similar manner, failure ascribed to internal causes such as ability and effort results in lower self-esteem than failure that is externally attributed to task characteristics and luck. Attribution theory also offers causal explanations for anger, pity, guilt, and shame. Finally, Weiner (1986) claimed that the perceived causes of performance (attributions) must be changed in order to change self-concept.

Enhancement of diminished self-concept would seem to be a key task in facilitating the development of effective coping skills. The results of self-concept enhancement studies that explored the structure of self-concept have highlighted the need for devising interventions that recognise the multidimensionality of self-concept by targeting specific domains rather than self-concept as a global entity (Craven et al., 1991; Tabassam & Grainger, 2000). Self-concept enhancement studies have typically used two approaches to change domains of self-concept, either direct enhancement or indirect enhancement approaches (Tabassam & Grainger, 2000; Craven et al., 1991). The direct

enhancement approach targets domains of self-concept by providing praise and performance feedback. This type of feedback has been referred to as "internally focused feedback" and focuses on statements of positive ability coupled with statements on performance feedback. The indirect enhancement approach seeks to enhance domains of self-concept indirectly by targeting a related construct, such as attributional style or the self-efficacy beliefs of the individual. Forsterling (1988) outlined a range of strategies to assess and change causal attributions and suggested that, in the context of the basic assumptions of attribution theory, the use of information was the most obvious method for the alteration of attributions. An individual's unrealistic and dysfunctional attributions can be changed by testing them against reality in accordance with systematic strategies such as consensus information, consistency information, and distinctiveness information. Consensus information entails facilitating the individual to establish how other persons behave in similar situations with a view to deciding whether a certain way of responding is due to oneself or due to the situation or circumstances. Consistency information (regarding effective coping, perhaps) concerns the common occurrence of an event with different timepoints (consistency across time) and in different situations and circumstances (consistency across modalities). This information is utilised to counteract dysfunctional attributions based on selective abstraction i.e. from a series of available information, only one negative piece of information is used to reach a conclusion. Distinctiveness information is similar to consistency information and entails identification of areas of success in the individual's life to counteract over-generalisations of negative estimations of a lack of ability after failure. However, distinctiveness information is not always already available and, thus, it may be necessary to encourage the individual to participate in new life activities in order to provide experiences of success.

In summary, the foregoing research has highlighted an increasing awareness of both the role of self-concept in response to the stressful experiences of athletic injury or major occupational stress, and the possible impact of such experiences on self-concept. The individual's interpretation of stressors may be moderated by self-esteem and the impact of such stressors on self-esteem may dictate the effectiveness of coping responses. The experience of injury or occupational stress may cause a loss of some aspect of the "self" that, in turn, governs the emotional reaction to cognitive appraisal following injury or occupational stress. However, detailed analysis of the role of self-concept requires further investigation. The current study addresses the following questions:

1. Does the experience of a career threatening injury adversely affect specific domains of self-concept rated as important by the athlete with resultant decrements in global self-concept?

2. Does the experience of major occupational stress adversely affect specific domains of self-concept rated as important by the corporate executive with resultant decrements in global self-concept?

3. Would an intervention strategy designed to enhance the importance of a specific domain of self-concept result in a more positive perception of self in that domain with resultant improvements in global self-concept?

METHODOLOGY

Many studies pertaining to grief, stress, and injury (Weiss & Troxell, 1986; Smith et al., 1993; Leddy et al., 1994) and occupational stress (Pierce et al., 1993; Jex & Elacqua, 1999) have utilised quantitative approaches that are related to the theoretical framework of nomothetic methodology. The subjective experience of major stressors may impact negatively on specific domains of self-concept but the nature of such an impact is likely to vary from individual to individual. Nomothetic methodology usually addresses generalisations associated with the phenomenon under investigation and thus may fail to accurately ascertain specific individual changes in self-concept. On the other hand, idiographic methodology provides greater insights with regard to personal experiences and may be more productive when the specific responses of an individual to major stressors are under investigation (Patton, 1990). The extent to which general principles and laws (i.e., nomothetic knowledge) are beneficial depends largely upon the degree to which they can provide an understanding at an individual level. The idiographic validation of nomothetic principles would seem to be necessary if a better understanding of an individual's behaviour is to be acquired. A greater understanding of the phenomenon being studied is more likely to be obtained if both idiographic and nomothetic findings are reported (Dunn, 1994). Both methodologies have much to offer and both qualitative and quantitative data can be collected in the same study (Patton, 1990). Thus, quantitative methods can be used in idiographic studies.

The author used both qualitative and quantitative methods with domain specific measures of self-concept in the current idiographic study. Qualitative techniques were used to access individual perspectives with regard to the impact of significant life stressors on self-concept but the design did not constitute a qualitative study. Rather, the

advantages of a mixed qualitative and quantitative methodology were utilised to gather the widest range of data relevant to the development of a self-concept enhancement programme.

Design

A primary objective of this study was to access the perspective of the athlete and the corporate executive with regard to the impact of injury and major occupational stress on self-concept. Supplementary quantitative analysis was utilised to assess the impact of such experiences on specific domains of self-concept rated as important and also to assess secondary outcomes such as affect. Specifically, athletes who had suffered a career threatening injury and corporate executives who had occupied a senior managerial position and experienced major occupational stress took part in individual in-depth interviews regarding the impact of such stressors on self-concept. The primary purpose of the interview was diagnostic; participants' views were used as a basis for developing an appropriate intervention strategy. Additional data was provided through psychometric evaluation. A personalised intervention programme was then designed for each participant to facilitate the enhancement of a specific domain of self-concept with a view to improving global self-concept.

A multiple-baseline across subjects, single subject design was utilised. With multiple baseline designs, intervention effects are demonstrated by introducing the intervention to different baselines at different points in time. The baseline represents the participant's existing levels of performance over a period of time in, for example, the target domain prior to the intervention programme. Continuous assessment is a basic requirement because single case designs examine the effects of intervention on

performance over time. Continuous assessment allows the investigator to examine the pattern and stability of performance before intervention is initiated. This pre-intervention information collected over an extended period provides a picture of what performance is like without the intervention. If each baseline changes when the intervention is introduced (and not before), then changes can be attributed to the intervention rather than to extraneous events. In this study, the number of data points in the baseline was 4 for Participant 1 in each of the two categories of participants (i.e. corporate participants and sport participants), 6 for Participant 2 in each category and 8 for Participant 3 in each category while, in the post-intervention phase, the corporate participants each had 4 data points and the sport participants each had 6 data points. Measurement points were three days apart for all participants. The varying number of data points allowed the intervention to be applied and evaluated at different time points so that the effects could be attributed to the intervention rather than to extraneous events. The intervention programme was applied over a six-week period between the baseline and post-intervention phases. The study comprised three phases – assessment, intervention and re-assessment post-intervention.

The author, who is a qualified and practicing senior clinical psychologist, provided the assessment and intervention phases. The participants were utilising formal clinical services on a professional and confidential basis. The individual consultations were based on a cognitive-behavioural model and complied with best clinical practices.

Participants

The participants comprised three male high-level amateur athletes (sport participants) and three male corporate executives (corporate participants). The sport

participants had suffered a career threatening injury in the previous eight weeks that required ongoing medical care, prevented participation in training and competitive sport for at least eight weeks and called into question their future participation in sport. A career threatening injury was defined as an injury that, because of severity or timing, might prevent the athlete from returning to prior levels of competitive performance (Heil, 1993). The three corporate participants had experienced significant work-related difficulties in the previous eight weeks that resulted in stress related sick-leave and medical care for at least two weeks. The three sport participants, who were unmarried, were between the ages of 22 years and 25 years (mean = 23.66; SD = 1.52) while the three corporate participants were married and between the ages of 38 years and 46 years (mean = 42.00; SD = 4.00).

METHOD – ASSESSMENT PHASE

Instrumentation

Separate standardised open-ended interview guides (Patton, 1990) were developed for the athletes and the executives. The interview guide was used to standardise all interviews and minimise bias. The interview guide was divided into the following sections: (a) background information (e.g., nature and extent of injury/work stress); (b) cognitive reactions; (c) current affect status; (d) description of self-concept, past and present; (e) impact of self-concept on coping strategies. The two interview guides were pilot-tested on several individuals and minor changes were made before they were used in the present study.

The Self Description Questionnaire III (SDQ III; Marsh, 1990) was administered to participants. The SDQ III contains 13 self-concept scales. The thirteen scales are as

follows: Physical Ability, Physical Appearance, Problem Solving, Relations with Same Sex, Relations with Opposite Sex, Relations with Parents, Religion/Spiritual Values, Honesty/Trustworthiness, Emotional Stability, Mathematical Skills, Verbal, Academic, and General Esteem. Each scale is represented by 10 or 12 items, half of which are negatively worded. Responses to each item are made along an 8 point Likert response scale that ranges from 1 (definitely false) to 8 (definitely true). The SDQ III also incorporates an importance scale (i.e., how important is this characteristic in determining how you feel about yourself?) and an accuracy scale (i.e., how accurate is this statement as a description of you?). Responses to these items are made on Likert scales ranging from 1 (very unimportant/very inaccurate) to 9 (very important/very accurate). The SDQ III appears to have generally good psychometric properties based on analyses of the normative archive of responses by 2,436 respondents that are described in the test manual (Marsh, 1990).

The Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1981) was also administered to the participants. The POMS is a 65-adjective rating scale, derived through factor analysis, which measures six dimensions of mood states: Tension-Anxiety, Depression-Dejection, Anger-Hostility, Vigour-Activity, Fatigue-Inertia, and Confusion-Bewilderment. A Total Mood Disturbance Score is calculated (Morgan et al., 1987). While the POMS has four possible response sets the authors requested the participants to respond in terms of "how have you been feeling today". The POMS has been used extensively to investigate the effects of overtraining in sport (Martin et al., 2000).

Procedure

The assessment phase consisted of two consultations. The first consultation entailed an outline of the purpose and format of the study, collection of basic demographic data, and assurances of confidentiality. Participants were advised that selected quotes from the interviews would be used in the published study in order to illustrate important ideas and concepts, that such quotes would be strictly anonymous and that their identities would be protected. At the completion of the first consultation participants were requested to complete the SDQ III and POMS.

The second consultation entailed the completion of the diagnostic interview. Each interview lasted approximately 60 minutes. Participants' responses were subsequently transcribed verbatim by the author to facilitate analysis. The participants were then requested to complete the SDQ III and POMS at their homes on alternate days prior to the commencement of the intervention phase. All participants had completed the assessment phase within four weeks of the initial consultation.

Analysis of the interview themes was completed by the author. Raw themes were identified for each participant and similar raw themes were classified into categories. As the primary purpose of the interview was diagnostic hierarchical content analysis and other standard analytical procedures were not deemed necessary.

Interview Themes

Analysis of the interview themes of Participant 1 (Corporate) indicated that he experienced significant changes in the role and responsibilities associated with his employment. He perceived these changes as being imposed upon him and did not regard

himself as having the skills to successfully discharge the duties and responsibilities of this new role. Self-esteem and self-efficacy decreased rapidly with a resultant deterioration in work performance, an increase in stress indicators such as poor sleep, palpitations, weight loss, nausea, and a pessimistic thinking style. He attributed the cause of his poor work performance to lack of ability and appraised the future as bleak. Work consumed an excessive amount of his time, was the main determinant of his self-esteem that was essentially contingent on work performance and the approval of significant others in the workplace. Prior to the changes in his work responsibilities his self-esteem had been high, but the changes precipitated a sense of loss. He previously had a satisfactory involvement in sport, but currently had no worthwhile involvement in exercise or leisure activities despite aspirations to achieve a better balance between work and leisure, and was devoid of any definite strategies to ameliorate his concerns. The following quote reflected his thinking style:

> "I don't know what I need to do……. I suppose I need to think more positive thoughts about myself…… have little successes and try to reaffirm them in my own mind …..but I can't say I'm convinced that I'll be able to do that……I need to change ……I'm not sure if changing my views will do that…… but I just know I need to be more of the old me….. I know that I have to get that back and I'm not sure if that's just my concept of myself that needs to change or is there something else that needs to change…… it is all in my mind you know…. something has to change"

This quote implied that the participant's self-esteem was very low and very fragile, that he had some insight with regard to the need to change his view of himself by experiencing success but was not convinced he could achieve this objective. Consequently, the authors decided that an activity that utilised readily available skills, provided almost immediate reinforcement of success that could be attributed to ability and effort would be beneficial in facilitating the participant to reappraise his view of himself. This approach is similar to Bandura's (1997) strategy for improving self-efficacy by means of enactive mastery experiences. Self-efficacy refers to belief in one's

capabilities to organise and execute the courses of action required to produce given attainments. According to Bandura (1997) enactive mastery experiences serve as indicators of capability and are the most influential sources of efficacy information because they provide the most authentic evidence of whether one can muster whatever it takes to succeed. Successes build a robust belief in one's personal efficacy while failure undermines it. Self-concept enhancement strategies used by Craven, Marsh and Debus (1991), Tabassam and Grainger (2000) also have a similar emphasis. The domain of Physical Ability was chosen to be the target domain of the intervention programme as the participant had a previous history of satisfactory participation in sport and exercise activities, and perceived himself as having the capacity to again become involved in such activity.

Analysis of the interview themes of Participant 2 (Corporate) highlighted his total dependence on work for almost all aspects of his life, low self-esteem that was contingent upon work tasks, and no social experiences outside of the work environment, which was also located in a foreign culture. The nature of his work meant that he spent a lot of time in isolated locations, working in a pressurised environment with colleagues from different cultures. Significant occupational stress with regard to role conflict and role ambiguity resulted in a further decrease in self-esteem together with an increased sense of failure, social withdrawal, uncontrolled anger, a very pessimistic thinking style, and extreme apprehension regarding the future. He perceived his inability to cope with the dynamics of the work environment as very threatening for him both as an employee and as a parent. The following quote highlights the range of emotions resultant from this perceived inability to cope:

> "I'm extremely fearful about going back ..... don't get me wrong but I feel a little bit guilty I suppose .... I've let the wife and let my wife and family

> (down)..... I feel a little bit guilty I suppose that what I now perceive as something maybe small I mean has landed me here..... I could have dealt with the situation and stayed there..... I also feel very apprehensive about eh returning....I don't know what is going to happen.... because they don't employ guys like me for our physical f---ing acumen.... its just for our mental health or whatever. So it will... I mean there is no doubt the enormity in terms of what this will do for the next how many ever years ..... that is very very serious"

He accepted that he would have to return to his job, did not perceive himself as being able to satisfactorily control the work dynamic, had insight regarding the need to develop coping skills but no clear strategies.

> "I need a survival tool kit..... I need some way to survive in that eh office, ... I will need some tool kit.... to enable me to take whatever distresses or whatever will be in the office..... to be able to manage them"

These quotes implied that this participant's self-esteem was also very low, very fragile and almost totally contingent on a work dynamic that he had very limited capacity to control. The authors concluded that he needed to develop an alternative source of self-esteem in an activity that would provide an experience of success that he could attribute to his own ability and effort, that would be readily accessible, and that would have secondary social benefits. Despite no previous involvement in exercise activities the domain of Physical Ability was chosen to be the target domain of the intervention programme as the participant expressed an interest in developing interests outside of the work environment and exercise facilities were readily available to him.

Analysis of the interview themes of Participant 3 (Corporate) indicated that he had previously been a successful senior executive in number of companies but had ceased work due to stress associated with management issues. He had also been very successful in sport both as a player and a coach, but had no involvement in sport or exercise activities for some considerable time prior to his participation in the study. Work and sport had previously been the dominant sources of high self-esteem that was contingent

upon success in each of these areas of his life, particularly in sport. His statements highlighted a significant level of dissatisfaction regarding his current lack of involvement in a structured work environment or involvement in sport, a persistent and recurring lack of application and persistence in tasks, and acute stress associated with financial difficulties linked to his previous employment. Stress indicators included panic feelings, poor sleep, variable mood states and suicidal ideation. Self-esteem and perceived self-efficacy were low and he attributed this to lack of effort and persistence rather than lack of ability. The following quotes illustrate his feelings with regard to his awareness of this characteristic:

> "I just don't do things .....I just don't motivate myself .... I've thought about that and I feel guilty about that as well...I'm a waste...I'm no good.... I can't complete anything... I think it's down to me.... my lack of action or my lack of application is a big part of this.... I'm taking the easy way out and not finishing things....I've often thought that you know the time I've had the last few years..... I could have gone back and gone to college a full-time student and finished but I know in my heart and soul I wouldn't have done it..... I wouldn't have completed it....I think I can do things..... but its . getting the motivation to..... its just doing them.... I know I can do things".

These quotes illustrate that the participant perceived himself as having the potential to be successful but the absence of structured activities to provide experiences of success, his lack of commitment to either initiating or completing such activities resulted in low self-esteem. However, his motivation to change was strong as the following quote suggests:

> "....if I started achieving I would change..... it would be like throwing a switch ...I feel I could change dramatically."

The authors therefore decided that the domain of Physical Ability would be an appropriate target domain for the intervention programme, as it would provide structured activities in an area that the participant had previously experienced significant success and had the potential to again provide success that could be attributed to ability and effort.

Successful participation in activities associated with physical ability would probably improve personal belief, motivation, persistence, and ultimately facilitate the participant to reappraise his perception of himself. Bandura's (1997) theory of self-efficacy is relevant to this participant's profile and the choice of target domain. He argued, from both a theoretical and empirical perspective, that perceived self-efficacy directly influences coping skills. Efficacy beliefs affect thought processes, the level of motivation and affective states, all of which are important contributors to performance. He concluded that people who doubt their capabilities in particular domains of activity shy away from difficult tasks in those domains. They find it hard to motivate themselves, give up quickly in the face of obstacles and dwell on their personal deficiencies. They have low aspirations and weak commitment to the goals they choose to pursue, are slow to recover their sense of efficacy following failure or setbacks and are prone to stress. Enactive mastery experiences were regarded by Bandura (1997) as the most effective means of improving self-efficacy and the authors concluded that activities associated with the target domain of physical ability would provide such experiences.

Analysis of the interview themes of Participant 1 (Sport) confirmed a huge investment in and commitment to sport from an early age. Self-esteem was relatively high and while sport contributed significantly to his positive view of himself it was not the only contributory factor as he also had a very successful academic career. He did not regard his achievements to date in sport as meeting his requirements for success and had set himself very definite goals to achieve. He had a number of serious injuries over the previous years, some requiring surgery. His current injury was his most serious to date, required a new and complex surgical procedure and a long rehabilitation period. This

career threatening injury precipitated a huge sense of loss and fear for the future best illustrated by the following quote:

> "The thoughts I had were… 'is this the end of the road for me?'… and ' would I ever be able to if I did come back would I be able to compete at the same level?'… and…. 'would I be able to do the same sort of training that I did before?' …… and …'if I didn't come back …… what would I do, how would I cope?… with not being involved in the sports, something that I love and something I've been doing for the last fifteen seventeen years".

This sense of loss subsequently manifested itself in irritability, bitterness and anger. His insight regarding the variable mood states resultant from his injury created an awareness of the need to manage these emotions during the rehabilitation period. However, the response of significant others to his injury and the frustration associated with his perceived inability to control such responses exacerbated his emotional reaction. The following quote illustrates the intensity of these emotions:

> "I have gained a reputation for being injury prone which I don't like and which I disagree with……. I don't think there's such a thing as being prone to injury….some players would think that …..I don't know whether they say I like being injured … or that it's in my head which really gets to me really really gets to me ……and it's been levelled at me over the last couple of years and I just…. I can be nice and friendly and everything but when people say that to me I just tend to snap….because it's so far from the truth …. you know it really is…….. I mean I'm not ……. I won't get psychosomatic pain or anything like it …… and I don't want to be injured….. I don't get any secondary gain out of being injured ,you know….. I mean the attention…… they think I like doctors and especially now when I went to do medicine they said 'Oh sweet Jesus' ….but … it couldn't be further from the truth ……I have an interest in medicine but I'm not doin' it because I'm always injured"

These quotes implied that the participant's emotional reaction to his injury and his attitude to the responses of significant others to the injury could potentially impede recovery. An increasing preoccupation during the rehabilitation period with the possibility of failure to return to previous performance levels (casework notes) precipitated further anxiety. The author decided that a cognitive approach to the management of emotions would be appropriate and essential to facilitate optimal recovery

and therefore the domain of Emotional Stability was chosen to be the target of the intervention programme.

Analysis of the interview themes of Participant 2 (Sport) confirmed a major commitment to sport that took precedence over his social life and career. His self-esteem was relatively high but essentially contingent upon performance and achievements in sport from an early age. Nevertheless, he was dissatisfied with his level of achievement, as he perceived himself to be capable of better but felt he had not been given the opportunity to prove himself at the highest level. He had sustained a serious and potentially career threatening knee injury that required surgery and a long rehabilitation period; he had sustained a similar injury five years previously. An intense emotional reaction to the injury was illustrated by the following quotes:

> "....that's it, I'm finished for the year..... and everyone thought I was only messing... but I knew myself at the time and it never hit home until I remember (the sports injury specialist) said to me ...'you'll have to get this operated on'..... and I actually started crying in the surgery because I couldn't believe it... but when it was said to me... you're kind of shit... what you have to go through..... the hardship of going to hospital... at that stage I was only... I was in my new job say five or six months .....and now I have to go straight away to the boss and say I want X amount of time off..... to go get my knee done"

The implications and frustration of possibly being unable to return to active participation in sport are clear:

> "I wouldn't be able even play club Hurling,.....I wouldn't be able to play Junior Hurling .....I wouldn't play Junior Football..... I wouldn't be able to have a kick around soccer out on the back lawn with a couple of friends..... I'd have to stand there and look on literally".

He experienced a strong sense of loss, felt worthless, frustrated, and very apprehensive regarding his capacity to return to competitive performance at the level at which he wanted to compete. He also experienced anger at being deprived of the opportunity to prove himself, as this quote indicates:

> "I'd say just anger..... and wanting to prove myself .....and wanting to get back ... I felt I had a point to prove and now I knew that that my chance of proving a point was gone .....and I (would) just have to sit down in the stand again and look at people play and accept what people thought of me"

These quotes implied that the participant was experiencing a strong emotional reaction to his injury that had the potential to impede recovery and lead to decrements in self-esteem. Furthermore, at the time of his injury his relationship with his girlfriend had ended at her request. Casework with the participant confirmed that constructive management of his emotions was a priority for him and he acknowledged a need for support with this task. Therefore, the author decided that a cognitive approach to the management of emotions would be appropriate and thus the domain of Emotional Stability was chosen to be the target of the intervention programme.

Analysis of the interview themes of Participant 3 (Sport) also confirmed a major commitment to sport from early childhood with a significant level of success at national and international level. He adhered to a daily training schedule, was very disciplined in this regard while his studies and social life were always assigned a lower priority. Self-esteem was positive but almost totally contingent upon success in sport, public recognition and approval. A serious ankle injury that required surgery and a moderately long rehabilitation period was his first experience of an injury that required a significant period out of training and competitive performance. While the injury afforded him the opportunity to concentrate on his studies and participate in a previously prohibited social life, he experienced a sense of loss, particularly with regard to his physical appearance and he attributed this to lack of effort on his part. This sense of loss with regard to his physical appearance dominated his thinking, as evident from the following quote:

> "I knew I had to get the operation done but I wish I didn't have it done 'cause I'm looking at myself now and .... I went through Christmas and I'd say I put on a stone in weight... not fit, ankle feels bad,.....all these thoughts and .....

> football is coming up again and you're not even near right……. I'm not even say thirty percent right to go back playing football now at the minute and it's the thought of…. I don't mind training at all and I don't mind the hardship…. but it's just the thought of doing all that now to get myself even right for a game…… and then you don't know will you ever be back to normal… it's just I want to come back ….. I want to be right……..the hard thing is that when you've enjoyed the other parts of life you know like Christmas and you're eating turkey and you're eating sweets and ….. you just don't worry about football…… and now you're just prepared to go back and you're saying 'oh my God why did I do'… I should have minded myself a bit more."

His preoccupation with his unacceptable physical appearance impacted negatively on his self-esteem and led to the development of a negative thinking style. The following quote summarised his feelings:

> "I definitely wouldn't be the same person or happy with myself as I was before the operation…… going into the operation I was saying I was in good shape……. I'm conscious now that I have weight on….. I'm conscious now that I'm not fit…….I'm wondering will I ever get back to what my full fitness was….. or get back to playing as good as I was …..you're just worried…. you don't know …. you could be perfect but you just don't know…… you have to go through the hard slog to find out".

These quotes implied that the injury and associated deterioration in the participant's physical appearance were leading to a gradual lowering of self-esteem and an increase in anxiety levels, factors that could impede recovery. Therefore, the author decided that an enhanced perception of his physical appearance would probably be beneficial to his self-esteem and recovery. The domain of Physical Appearance was chosen to be the target domain of the intervention programme.

METHOD – INTERVENTION PHASE

Procedure

The author, who is a registered senior clinical psychologist, facilitated the intervention. Participants were seen individually for an average of six one-hour individual consultations. The individualised intervention programme was based on the themes from each participant's interview, the ratings of the thirteen domains of the SDQ III, and the self-concept enhancement strategies of attributional retraining and internally focused feedback as developed by Tabassam and Grainger (2000), Craven et al. (1991), and Forsterling (1988).

The influence of self-esteem on motivation, performance and well being, the distinction between contingent and true self-esteem (Deci & Ryan, 1995), the multidimensional structure of self-concept (Shavelson, Hubner, & Stanton, 1976) the causal attributions for success and failure, and the consequent impact of such attributions on self-esteem and emotional status (Weiner, 1986) were addressed with each participant individually at the initial consultations. At subsequent consultations, causal attributions and causal dimensions for each participant's ratings of particular domains of the SDQ III and interview themes were discussed. Each participant was facilitated to identify undesirable or maladaptive causal attributions and increase desirable causal attributions about behavioural outcomes (i.e. success and failure) through a process of attributional retraining (Forsterling, 1988).

The choice of the target domain for the intervention phase was discussed with each participant in the context of the need to create opportunities to experience ongoing success, the need to make appropriate attributions for success and failure and the impact of success on specific domains of self-esteem. A programme of activities to enhance the importance of the target domain in the esteeming process was agreed with each

participant. Performance was reviewed at each subsequent consultation. This ongoing review process entailed facilitating the participant to identify achievements, desirable causal attributions for such achievements, and the possible changes in perceived sense of self and psychological well being resultant from such achievements. The process of cognitive reappraisal of the importance of the target domain was repeated at each consultation. Reappraisal refers to a changed appraisal on the basis of new information from the environment (Lazarus & Folkman, 1984). The reappraisal of the importance of the target domain was facilitated by internally focussed performance feedback and attributional feedback (Craven et al., 1991) together with systematic strategies such as consensus information, consistency information, and distinctiveness information (Forsterling, 1988).

A brief summary of the design of this study would seem appropriate at this juncture. A multiple-baseline across subjects, single subject design was used. The number of data points in the baseline was either 4, 6, or 8 for the participants in each group while, in the post intervention phase, the corporate participants had 4 data points and the sport participants had six data points.

Data Analysis.

Visual inspection has been the traditional method of analysis for single subject data. This method entailed visually examining a graphed display of the data, and assessing whether or not the intervention had produced a reliable change in the data. A change was considered significant if it was large, abrupt, and sustained; if change was not obvious, the effect was too small, or experimental control inadequate (Crosbie, 1993). With long stable baselines visual inference may be reasonably reliable but with short

baselines typically reported in many studies visual inference may be problematic. Crosbie (1993) stated that visual inference had an excessive risk of Type I error (i.e., an erroneous inference of a significant difference between phases). Fisch (2001) reported that with visual inspection treatment effects were often missed and trends in date were either misrepresented as stable treatment effects, or went completely unnoticed (i.e., a Type II error).

In response to the identified problems with visual inspection, F and t-tests can be used to analyse single-subject data on the basis that baseline observations for a single subject and observations in the intervention phase constituted independent groups of scores and therefore, change could be assessed with a between groups ANOVA or t-test. (Gentile, Roden & Klein, 1972). However, the use of such tests requires that the data displays homogeneity of variance, is normally distributed and there is no serial dependency (i.e., adjacent data points are not correlated). If any of these underlying assumptions are violated the traditional parametric tests cannot be used.

To check for serial dependency in the present study, autocorrelations were computed on the baseline and post-intervention data of the SDQ III. For Participant 1 (Corporate) the autocorrelations for the domains of Physical Ability and General Esteem were significant at $p < .01$, thus serial dependency existed in this data. Although no serial dependency existed in the data for the construct of importance of Physical Ability, the variance of the baseline data (1.58) for this construct was more than double the variance of the post-intervention phase data (0.67) and, therefore, the homogeneity of variance assumption required for parametric tests was violated (Stevens, 1996). No serial dependency existed in the data for Participant 2 (Corporate) but the variances of the post-intervention data for Physical Ability (0.18), importance of Physical Ability (2.66), and

General Esteem (0.58) were more than double the variances in the corresponding baseline data (0.00; 0.25; 0.02). For Participant 3 (Corporate) the autocorrelations for General Esteem were significant at $p < .01$, thus serial dependency existed. No serial dependency was evident in the data for Physical Ability or the importance of Physical Ability but the variance of the baseline data for Physical Ability (0.07) was more than double the variance for the post-intervention data (0.01) while the variance of the baseline data for the importance of Physical Ability (0.26) was also more than double the variance of the post-intervention phase (0.00). Thus, the underlying assumptions for Corporate participants' data were violated and therefore, traditional parametric tests were not suitable for this group.

For Participant 1 (Sport) no serial dependency was evident for the domain of Emotional Stability but the variance of the baseline data (0.21) for this domain was more than double the variance of the post-intervention data (0.04) and thus the homogeneity of variance assumption was violated. No serial dependency or significant variance was evident in the data for the importance of Emotional Stability or General Esteem but the data was not normally distributed. Autocorrelations for Emotional Stability in the data of Participant 2 (Sport) were significant at $p < .01$, thus serial dependency existed. The variance of the baseline data for the importance of Emotional Stability (0.40) was more than double the variance for the post-intervention data (0.00) while the data for General Esteem was not normally distributed. For Participant 3 (Sport) there was no serial dependency in the domains of Physical Appearance, General Esteem or the importance of Physical Appearance. However, the variance of the post-intervention data for Physical Appearance (0.13) and General Esteem (0.24) was more than double the corresponding baseline data (0.04 and 0.05). The data for the importance of Physical Ability was not

normally distributed. Thus, the Sport participants' data was not suitable for traditional parametric tests.

The POMS Total Mood Disturbance Score data were also analysed according to the same criteria for both groups of participants. The autocorrelations for Participant 1 (Corporate) and Participant 2 (Corporate) were significant at $p < .01$, thus serial dependency existed while the variance of Participant 3's baseline data (1266.12) was more than double the post-intervention data (43.58). There was no serial dependency for any of the Sport participants but the variance of the baseline data of Participant 1 (946.96) and Participant 2 (418.25) was more than double the variance of the corresponding post-intervention data (71.46 and 67.90). The variance of the post-intervention data for Participant 3 (100.56) was also more than double the variance of the baseline data (35.92). Accordingly, this data was also unsuitable for traditional parametric tests.

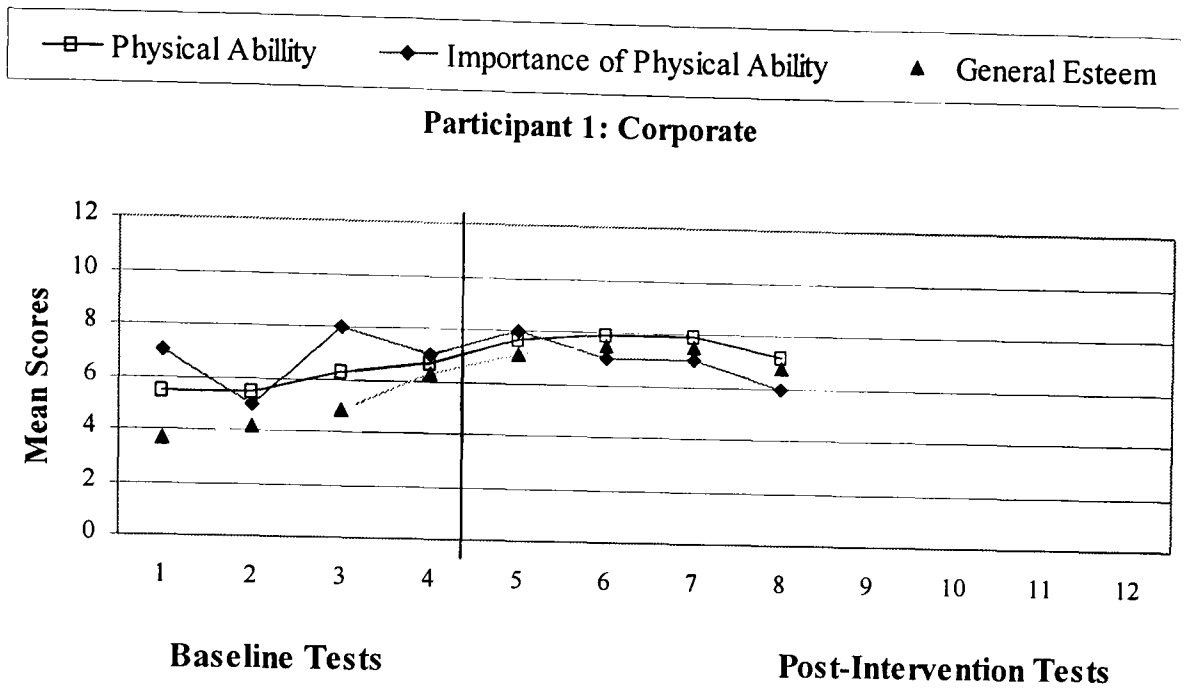
In order to address the problem of Type I and Type II errors in the analysis of single subject data, Crosbie (1993) developed ITSACORR as a procedure for analysing short series autocorrelated data, while controlling for Type I error but maintaining acceptable power. ITSACORR models data on the assumption that data points are autocorrelated, and that each phase (e.g., baseline and post-intervention) has a different intercept and slope. Algebraic manipulation is used to accurately estimate the amount of autocorrelation. This autocorrelation parameter is then used to control for autocorrelation when General Linear Modelling is used to determine whether there is a significant difference between the two intercepts and between the two slopes. The procedure has three statistical outputs: first, an omnibus F value to demonstrate change from baseline to post-intervention phase (i.e., an overall increase or decrease in the dependent variable), second a t-value for the intercept (i.e., to demonstrate if the dependent variable has

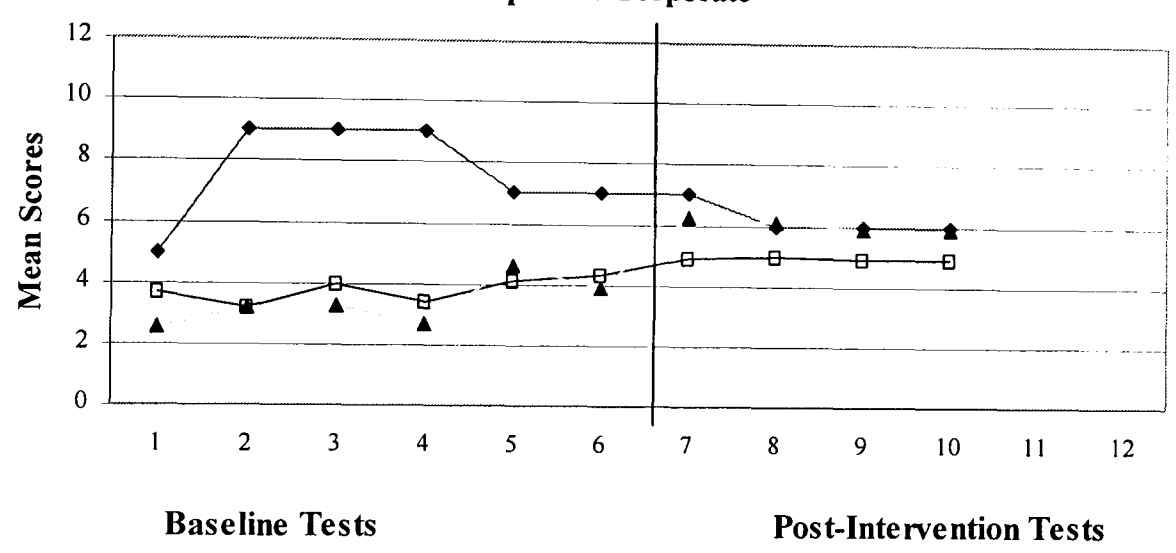
increased or decreased from the last data point of the baseline to the first data point of the post-intervention phase), and third a t-value for the slope to demonstrate any changes in the trend of the data (i.e., has there been an acceleration or deceleration in the values of the dependent variable). The omnibus F-test is a multivariate test of changes in intercept an slope combined. To control for a Type 1 error, the omnibus F value must be significant before any significant results in the t values can be interpreted (Callow & Waters, 2002; Morrison, 1983). In view of Crosbie's (1993) claim that ITSACORR can control Type I error adequately, particularly when time series are short and have high levels of positive autocorrelation, the authors regarded it as an appropriate instrument to assess change in single subject data.

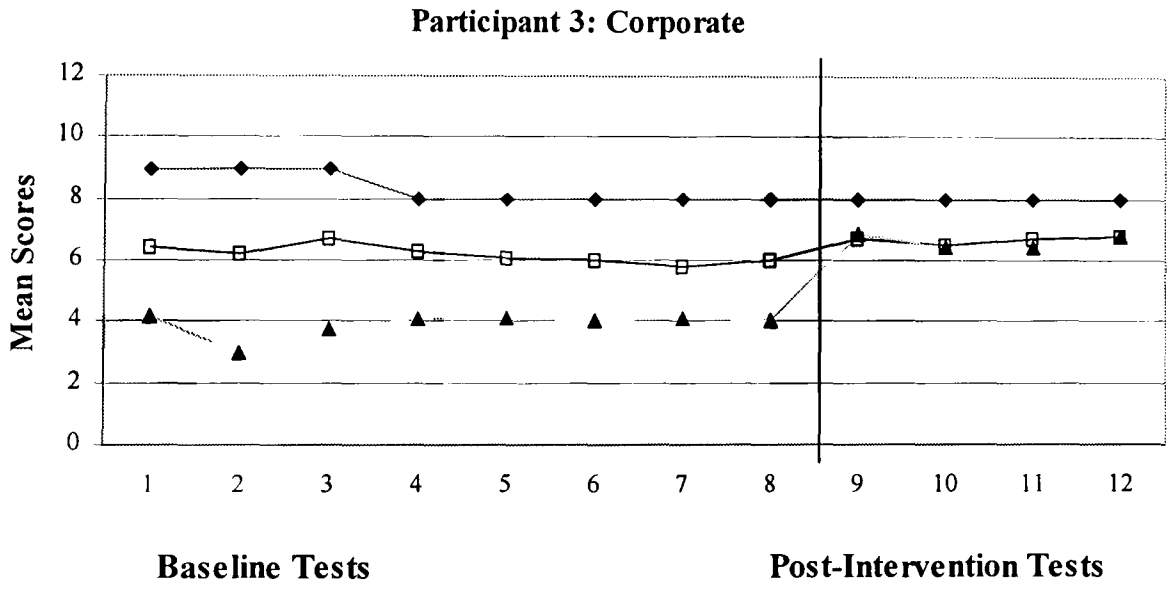
RESULTS

The present study utilised a multiple baseline across subjects, single subject design using two groups of participants with three participants in each group. Thus, for each group the ITSACORR test would have to be conducted three times, once for each participant. Therefore, in order to reduce the likelihood of a Type 1 error occurring, the alpha value of < .05 was divided by the number of participants, (three), and an alpha value of <. 02 was employed (Crosbie, 1993; Robey, Schultz, Crawford, & Sinner, 1999). The baseline and post-intervention mean data scores for the SDQ III were analysed using ITSACORR.

Graph 1: SDQ III Target Domains for Corporate Participants

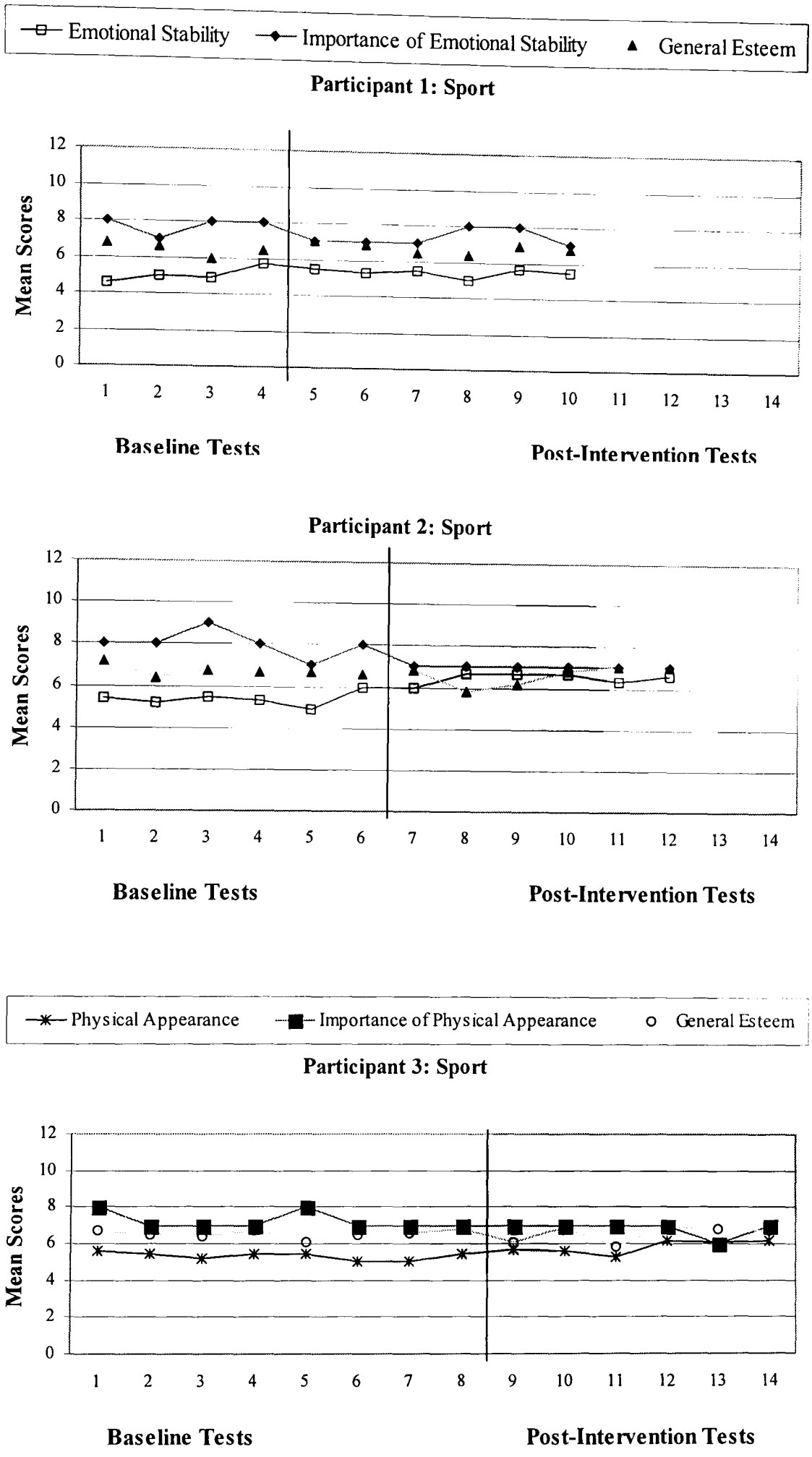






Note: The vertical line on each graph, indicates the period during which the intervention was delivered to the participant

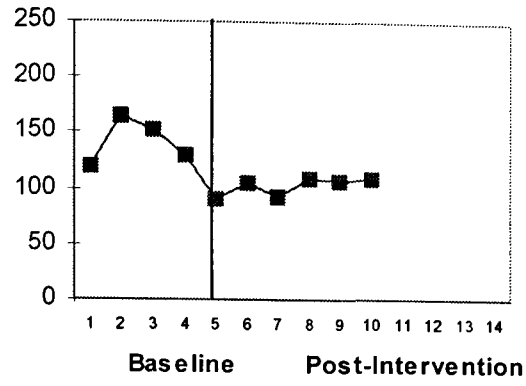
Graph 2: SDQ III Target Domains for Sport Participants



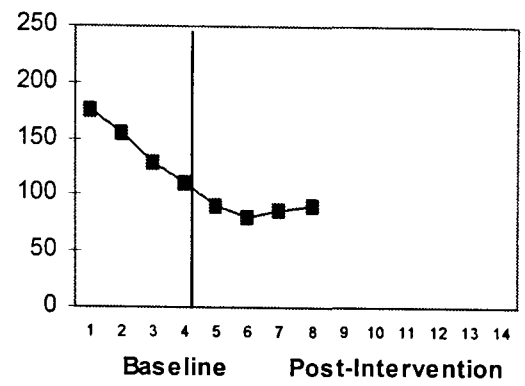
Note: The vertical line on each graph, indicates the period during which the intervention was delivered to the participant

Graph 3: POMS - Total Mood Disturbance Scores for All Participants

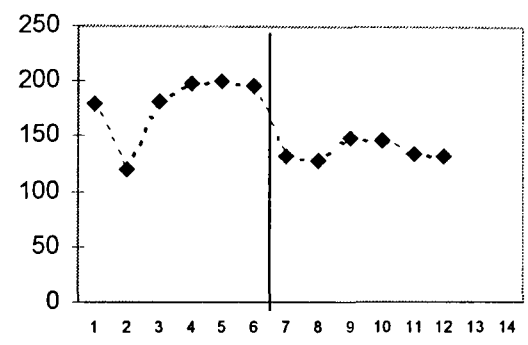
Sport Participant 1



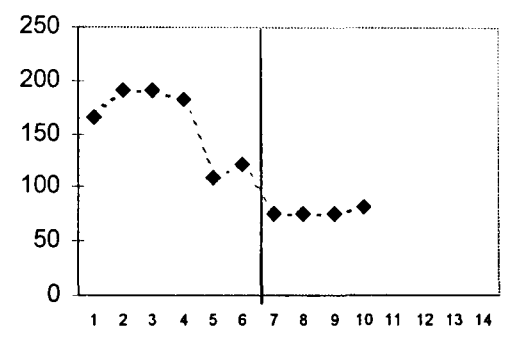
Corporate Participant 1



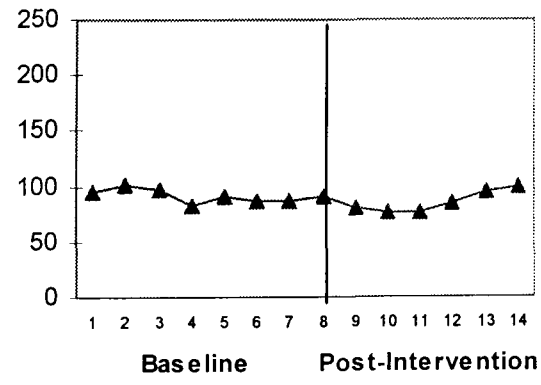
Sport Participant 2



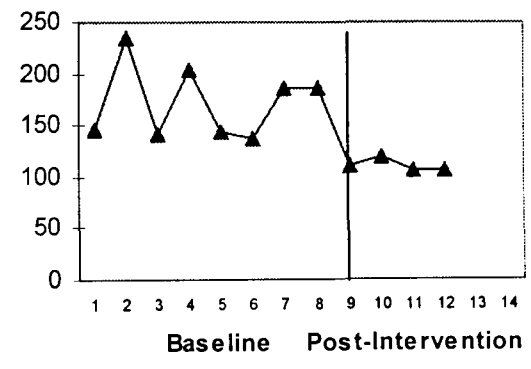
Corporate Participant 2



Sport Participant 3



Corporate Participant 3



Note: The vertical line on each graph, indicates the period during which the intervention was delivered to the participant

For Participant 1 (Corporate), there was no significant change in the SDQ III domain of Physical Ability from the baseline to the post-intervention phase, F (2. 3) = 5.79, p = .09. The change in the importance of Physical Ability from baseline to the post-intervention phase approached significance, F (2, 3) = 13.24, p = .03, and associated with this there was a significant change in intercept t (3) = 5.26, p = .01 and slope t (3) = -4.95, p = .01. There was a significant change in General Esteem from the baseline to the post-intervention phase, F (2, 3) = 23.88, p = .01, this also being due to a significant change in both intercept t (3) = 4.86, p = .01 and slope t (3) = -6.90, p = 0.01. Visual inspection of the graphed data suggests an increase in General Esteem, a slight increase in Physical Ability and a decrease in the importance of Physical Ability. (See graphed data above).

For Participant 2 (Corporate) there was no significant change in Physical Ability from the baseline to the post-intervention phase, F (2, 5) = 3.85, p. = .09. Similarly, there was no significant change in the importance of Physical Ability from baseline to post-intervention, F (2, 5) = 1.79, p = .25. The change in General Esteem approached significance, F (2, 5) = 5.21, p = .06, and was accompanied by a significant change in intercept t (5) = 5.14, p = .004 but no change in slope t (5) = -1.33, p = .24. Visual inspection of the graphed data supports an increase in General Esteem.

For Participant 3 (Corporate), there was also no significant change in Physical Ability from the baseline to the post-intervention phase, F (2, 7) = 1.05, p = 0.39, and no significant change in the importance of Physical Ability, F (2, 7) = 0.01, p = 0.99. There was a significant change in General Esteem, F (2, 7) = 8.29, p = .01, which was accompanied by a significant change in intercept t (7) = 4.90, p = .002, but no significant

change in slope, t (7) = -1.48, p = 0.18. Visual inspection of the graphed data supports these results.

For Participant 1(Sport) there was no significant change in Emotional Stability from the baseline to the post-intervention phase, F (2, 5) = 1.16, p = 0.386, no significant change in the importance of Emotional Stability F (2,5) = 1.83, p = 0.25, and no significant change in General Esteem F (2, 5) = 0.53, p = 0.61. Visual inspection of the data supported these results.

For Participant 2 (Sport) there was no significant change in Emotional Stability from baseline to the post-intervention phase, F (2, 7) = 0.57, p = 0.59, no significant change in the importance of Emotional Stability, F (2, 7) = 1.16, p =0.36, and no change in General Esteem, F (2,7) = 0.24, p = 0.79. A similar pattern of results was evident from a visual inspection of the data.

For Participant 3 (Sport) there was also no significant change in Physical Appearance from baseline to the post-intervention phase, F (2, 9) = 0.18, p = 0.84, Similarly, there was no change in the importance of Physical Appearance, F (2, 9) = 0.45, p = 0.65 and no change in General Esteem, F (2,9) = 2.87, p = 0.10.Visual inspection of the graphed data supports these results

The baseline and post-intervention Total Mood Disturbance Scores (TMDS) from each participant's Profile of Mood States (POMS) were also analysed with ITSACORR. For Participant 1 (Corporate), there was no significant change in TMDS from baseline to the post-intervention phase, F (2, 3) = 2.44, p = 0.23. However, visual inspection of the graphed data suggests a decrease in TMDS from baseline to post-intervention. For Participant 2 (Corporate), there was also no change in TMDS from baseline to the post-intervention phase, F (2, 5) = 2.92, p = 0.14. Similarly, visual inspection of the graphed

data suggests a decrease in TMDS. For Participant 3 (Corporate) there was no significant overall change in TMDS, F (2, 7) = 1.46, p = 0.29, while visual inspection of the graphed data again suggests a decrease in TMDS from baseline to the post-intervention phase.

For Participant 1 (Sport) there was a significant change from baseline to the post-intervention phase, F (2, 5) = 10.42, p = .016, accompanied by a significant change in intercept t (5) = -4.99, p = .004, and slope t (5) = 3.51, p = .017. Visual inspection of the graphed data supports these results. For Participant 2 (Sport) there was no significant change in TMDS, F (2, 7) = 2.56, p = 0.14. Visual inspection of the graphed data also suggests a decrease in TMDS. For Participant 3 (Sport) there was no significant change in TMDS from the baseline phase to the post-intervention phase, F (2, 9) = 1.67, p = 0.24, and visual inspection of the graphed data confirms this result.

DISCUSSION

This study was designed to access the personal perspective of corporate executives and athletes with regard to the impact of significant occupational stress and serious injury on self-esteem. The study was also designed to evaluate the effectiveness of an intervention programme to ameliorate the impact of such stressors. The results show some modest support for the hypothesis that these stressors had a negative impact on self-esteem and also show some support for the effectiveness of the intervention programme, although the level of support varied between the two groups of participants.

Corporate participants' interviews confirmed the negative impact of occupational stressors on domains of self-esteem and global self-esteem coupled with a very definite sense of loss. However, sport participants' interviews were most notable for their emphasis on a significant sense of loss with minimal evidence of a negative impact on

self-esteem. The contrasting perspectives from participants' interviews may be explained by the fact that corporate participants' self-esteem was almost totally contingent upon performance accomplishments at work while sport participants appeared to have a range of alternative sources of self-esteem other than sport. The inability of corporate participants to utilise alternative sources of self-esteem other than work inevitably precipitated a significant decrease in their overall sense of personal effectiveness. Furthermore, corporate participants had a limited sense of control over events in the workplace that may also have contributed to a deteriorating sense of personal effectiveness. In contrast, the sport participants had alternative sources of self-esteem such as academic studies, work, a range of social and recreational activities and, therefore, the psychological impact of injury was specific rather than global. These perspectives provide some support for the Deci and Ryan (1995) classifications of contingent and true self-esteem and may also be supportive of Bandura's (1997) theory of self-efficacy, which stated that self-concept largely reflected people's beliefs in their personal efficacy. Those who have strong belief in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. The use of enactive mastery experiences in the development of efficacy beliefs has already been referenced and it would seem that the sport participants had many such experiences in various areas of their lives both before and after their injury, thus minimising the impact of injury on self-esteem.

The effectiveness of the intervention programme was evaluated by means of statistical analysis of the SDQ III and POMS data using ITSACORR. The analysis of SDQ III data provided contrasting results for the corporate and sport participants. There was a significant overall increase in General Esteem for Participant 1 (Corporate) and

Participant 3 (Corporate) but no significant overall increase in General Esteem for Participant 2 (Corporate). There was no significant change in the target domains or the importance of the target domains for any of the corporate participants. A more detailed examination of these results revealed that for Participant 2 (Corporate), the overall change in General Esteem approached significance. Visual inspection of the graphed data indicated that General Esteem increased sharply at data points 5 and 6 in the baseline phase. He acknowledged that completion of the SDQ III items facilitated insight regarding the need to think more positively of himself (casework notes) and this influenced his responses towards the end of the baseline phase. Thus, it is likely that changes in General Esteem began to emerge for this participant before the commencement of the intervention phase, perhaps because of the possible therapeutic value of the baseline phase. There was a significant change in intercept for all three corporate participants indicating that the intervention programme had an immediate impact on General Esteem, although the omnibus F value was not significant for Participant 2 and therefore the t value cannot be meaningfully interpreted. In contrast, the analysis of the SDQ III data for the sport participants did not reveal any support for the effectiveness of the intervention programme with regard to the target domains, the importance of the target domains or general esteem. This confirms the emphasis in the sport participants' interviews on a significant sense of loss associated with injury and the relative absence of a negative impact on self-esteem.

The absence of significant change in the target domains for all six participants may have been due to the limited number of data points in the baseline and post intervention phases. Crosbie (1993) recommends that ten to twenty scores per phase should be used where possible to obtain a more accurate estimation of autocorrelation and

power. Implicit in this recommendation was the view that the number of data points should be large enough to avoid a Type II error occurring. The absence of change in the target domains (in contrast to change in global self-esteem) for the corporate participants may also be explained by the possibility that the activities associated with Physical Ability had personal, social, and emotional connotations with aspects relevant to other domains such as Physical Appearance, Same Sex Relations, Opposite Sex Relations, and Emotional Stability. Thus, the impact of the intervention programme with the corporate participants may have been generalised to domains other than the target domain (including General Esteem). The absence of change in the target domains of the sport participants is more difficult to explain The self-esteem of these participants appeared to be based on a far wider range of sources (than the corporate participants) and, perhaps, the potentially positive impact of the intervention programme on the target domain was overshadowed by positive experiences in other aspects of their lives. Another possible but less likely explanation is that, in view of the age and gender of the sport participants, there was an element of denial in their post-intervention responses with regard to the target domain. However, the emphasis in the sport participants' interviews on a significant sense of loss and the relative absence of a negative impact on either global self-esteem or domains of self-esteem may be the most obvious explanation. Finally, the absence of significant change in the importance of the target domain for all six participants (although the change in importance for one corporate participant was approaching significance) may also have been due to the limited number of data points in the baseline and post-intervention phases. A further factor may be that, for ethical reasons already stated, it was not possible to target unimportant domains. Therefore, the potential for change in importance may not have been sufficient. Nevertheless, the standard

deviation of the importance scores decreased for all six participants from baseline to post-intervention reflecting, perhaps, the fact that post intervention ratings of importance are more consistent and stable than baseline scores. Participants' appraisal of the importance of the targeted domains did not indicate an improved rating, possibly because the post intervention ratings of importance may reflect actual performance accomplishments while baseline ratings may reflect fluctuating aspirations.

Results indicated that there was no significant overall change in Total Mood Disturbance Scores (TMDS) for any of the corporate participants. One of the sport participants (Participant 1) showed a significant change in mood scores while the remaining two showed no change. These results are somewhat surprising as visual inspection of the graphed data suggests a decrease in TMDS for all three corporate participants and Participants 1 and 2 (Sport). The non-significant scores may be a function of the limited number of data points (Crosbie, 1993). The significant overall change in TMDS together with changes in intercept and slope from baseline to the post intervention phase for Participant 1 (Sport) may reflect his own initial emotional reaction and the reaction of significant others to his injury that was very evident in his interview as well as the possible effectiveness of the intervention programme in modifying such emotions. The intervention programme focussed on specific cognitive techniques to constructively manage the emotions associated with the injury. In particular, cognitive strategies to deal with recurring negative thoughts associated with the possible long-term implications of the injury, the difficulties with the rehabilitation programme and the reactions of significant others to his injury were implemented and reviewed during the course of the intervention programme. Success in constructively managing his emotions

constituted enactive mastery experiences (Bandura, 1997) and probably contributed to the decrease in TMDS.

One of the most notable features of this study was the significant change in global self-concept resultant from the intervention programme for two of the corporate participants (with the third participant approaching significance) while global self-concept was relatively unchanged for the sport participants at the completion of the intervention. Two factors may explain these contrasting outcomes. Firstly, interviews with the corporate participants' suggested that, prior to the commencement of the study, self-concept would seem to have been based almost entirely on performance accomplishments at work and when the work environment became negative there was a corresponding shift from high to low self-esteem. Deci and Ryan (1995) proposed the construct of contingent self-esteem to describe such feelings about oneself that are dependent on externally controlled factors such as standards set by others, as would apply in a work setting. Consequently, contingent self-esteem may be unstable and susceptible to changing environmental influences. Secondly, Brockner's (1988) self-esteem – behavioural plasticity hypothesis may also be relevant; this hypothesis states that employees with low self-esteem may be particularly prone to generalising failure in one area of their life (i.e. work) to many other aspects of the self. Both these factors suggest that the impact of failure in the workplace may have had a catastrophic impact on the contingent self-esteem of the corporate participants, particularly with regard to capacity to provide for family members, public image, personal relationships and future employment. The intervention programme provided alternative sources of self-esteem that replenished global self-esteem even though the post-intervention target domains did not reflect this, for the reasons already stated.

In contrast, the self-esteem of the sport participants was not exclusively contingent on sport, they were amateurs rather than professionals, they did not have the same family responsibilities and the injury did not have implications for future employment. It is also likely that, in view of their age, they had extensive support systems Therefore, the injury did not precipitate the same catastrophic impact on self-esteem. Furthermore, interviews with the sport participants indicated minimal evidence that the injury had an impact on global self-esteem. The literature on the impact of injury on self-esteem is divided on this issue. For example, Smith et al. (1993) reported no differences between pre-injury and post-injury measures of global self-esteem while Leddy et al. (1994) found that athletes did indeed exhibit lower post-injury global self-esteem.

Finally, the results of this study are at variance with the other studies that have evaluated self-concept enhancement strategies. Craven et al. (1991) reported change in the target domain and general esteem while Tabassam and Grainger (2000) reported change only in the target domain. However, both these studies were based on the responses of children and the target domain was academic self-concept, a domain that may be particularly amenable to change in young students. As previously stated, the absence of change in the target domains and the importance of the target domains in this study may be a function of the less than acceptable number of data points (Crosbie, 1993).

The present study has three limitations. First, the total sample of participants did not have proper gender balance and the sample of sport participants did not have a combination of amateurs and professionals. Second, the number of data points in the baseline and post intervention phases was below the optimal level for acceptable power and, consequently, some significant changes in the trend of the data may not have been

detected. Third, there were no post intervention interviews to access the personal perspectives of the participants with regard to the effectiveness or otherwise of the intervention programme.

There are a number of applied implications to emerge from this study. The impact of serious injury on the self-concept of athletes may be different for amateurs and professionals. The experience of injury for amateur athletes may focus more on a sense of loss rather than decrements in global self-concept and the content of any intervention programme should reflect this. The combination of executives and elite athletes as subjects for a study on self-esteem has provided new insights with regard to this topic. The use of participants with a wide range of life experiences in pressurising environments may provide further valuable insights. Future studies might include participants from distinct occupational categories and contrasting sports, both amateur and professional.

In conclusion, the results of this study provided contrasting insights with regard to the impact of stress on the self-concept of executives and athletes. There was modest support for the effectiveness of a self-concept enhancement strategy but methodological limitations may have restricted the significance of these results. The use of ITSACORR for single-subject data analysis may be a more reliable instrument to assess change in single subject designs and its use in this study may encourage others to consider it for future studies.

Chapter 5

GENERAL DISCUSSION

The author's interest in self-concept is based on a career in education and clinical psychology spanning almost thirty years during which the predominant theme of contact with students and clients has been the impact of low self-concept on general functioning. Initially the author worked for five years as a teacher with young students from deprived family backgrounds and, in hindsight, the profile of many of these students reflected poor self-concept with consequent coping difficulties. Subsequent work as a clinical psychologist with adolescents who had been convicted by the courts of delinquent and antisocial behaviour confirmed a similar profile. A further period of clinical work with adolescent students in special education and latterly with adult clients in a private mental health facility reinforced the view that a positive self-concept is a core characteristic of those who can cope effectively. These professional experiences fostered a keen awareness of the need to develop a deeper understanding of the structure of self-concept and, in particular, to develop clinical intervention strategies to enhance it.

The series of studies contained in this thesis was designed to answer three questions with regard to self-concept. The first study reviewed the weak empirical support for the hierarchical structure of self-concept as proposed by Shavelson, Hubner and Stanton (1976) and tested a modification of the model that had been tested inconclusively by Marsh (1987, 1990). Specifically, it was hypothesised that that the first-order domains at the base of the hierarchy should define four second-order factors i.e.

Academic, Physical, Social, and Moral. The study was based on the responses of 506 participants to the Self Description Questionnaire (Marsh, 1990). Confirmatory factor analyses were performed using a three-phase process. A full hierarchical model was not tested because the sample was too small and the model too complex. For all four factors the fit was acceptable. The second-order Academic factor consisting of Mathematics, Verbal, Academic and Problem Solving was supported with good fit indices. The Marsh (1987, 1990) second-order Academic factor did not include the Problem Solving domain. The second-order Moral factor was also supported by good fit indices – the influence of culture and religion possibly contributed to the strength of this factor. The strength of the Social factor may have reflected the influence of the family in Irish culture and the importance of relationships for the three groups of participants. Finally, the Physical factor also displayed reasonably good fit indices. The results of this study provided stronger support for the hierarchical structure than had been hitherto available from previous studies.

The second study was designed to test the hypothesis that the contributions of a specific domain of self-concept to global self-concept are dependent upon their perceived importance. The Self Description Questionnaire was administered to a sample of 506 male and female adult participants with a wide range of life experiences. Analysis of the data using Marsh's (1993b) individually weighted multiple regression model confirmed previous findings of no support for the importance hypothesis. In contrast, the results from the author's alternative regression models provided varying levels of support for the importance hypothesis, but did not conclusively disprove the Marsh (1993b) conclusions. In particular, results that were based on domains identified by the three highest and three lowest mean importance ratings provided a level of support for the importance hypothesis

not evident in previous studies while results that were based on actual scale scores for each participant's three most important domains and three least important domains also provided a significant level of support. The results also highlighted the possible influence of denial with regard to the importance assigned by particular groups of participants to particular domains of self-concept. Despite the absence of conclusive proof from the alternative regression models, the findings nevertheless challenge recent thinking on the limited role of the importance hypothesis and once again highlight the possible therapeutic value of addressing the importance of domains as a means of enhancing self-concept.

The third study was an idiographic study that used both qualitative and quantitative methods together with domain specific measures of self-concept. This study was designed to access the personal perspectives of three corporate executives and three high-level athletes with regard to the impact of significant occupational stress and serious injury on self-esteem, and also to evaluate the effectiveness of a personalised intervention programme to facilitate the enhancement of self-concept. In-depth individual interviews were used to access participants' perspectives and these interviews were also used as a basis for the initial development of a personalised intervention programme. This intervention programme was based on each participant's interview themes and the SDQ III domain ratings and included the self-concept enhancement strategies as developed by Forsterling (1988), Craven et al. (1991), Tabassam and Grainger (2000). The results of this final study provided support for the negative impact of stress on the self-esteem of the corporate executives. However, the data from the high level athletes was most notable for the emphasis on a sense of loss resultant from the experience of injury with minimal evidence of a negative impact on self-esteem. The effectiveness of the intervention

programme was evaluated by means of analysis of statistical data using ITSACORR and showed support for its effectiveness with the corporate participants but no support from high level athletes. Methodological limitations may have contributed to these contrasting results.

These studies highlight a number of theoretical implications. There would seem to be reasonable grounds to challenge Marsh's (1986, 1993b) conclusions regarding the limited role of importance and to complete further quantitative studies utilising, perhaps, the statistical model of the thesis or variations of this model. However, the use of mixed qualitative and quantitative methodologies (Patton, 1990) may be more productive with regard to accurately identifying the factors that influence the multidimensional nature of self-concept. Qualitative methodology provides greater insights with regard to personal perspectives (Patton, 1990) and the increased use of such methodology may provide valuable insights that would guide the empirical evaluation of the importance hypothesis. The construct of importance is usually measured psychometrically on single item scales (Marsh, 1990); however, it may require multiple item scales or, alternatively, may be more accurately measured by an in-depth qualitative interview that would access each participant's personal perspective on importance. Most of the research on self-concept to date (e.g., Rosenberg, 1982; Harter, 1986; Marsh & Sonstroem, 1995) has used nomothetic methodology that usually addresses generalisations associated with the phenomenon under investigation (Dunn, 1994) and thus may fail to accurately identify key factors. In contrast, idiographic methodology focuses on the individual perspective through the use of "thick description" or accounts that attempt to capture the meaning and experiences of individuals (Denzin, 1989) and might provide insights with more theoretical and clinical relevance. The individual perspective should not be ignored and

idiographic methodology may be more effective in assessing the relevance of key aspects of self-concept utilising the theoretical framework provided by nomothetic studies. Personal importance is closely related to appraisal and the variables considered personally relevant to appraisal may be very idiosyncratic (Lazarus, 1984).

This thesis has considered the influence on self-concept of other variables not considered in previous research such as age, gender and, in particular, life experiences. The contrasting perspectives provided by all the various groups in this thesis suggest that the more frequent use of participant samples that have a wider range of significant life experiences may provide hitherto unidentified insights with regard the basis of fluctuations in self-concept, especially regarding the impact of stress and the use of denial. The data from such participant samples may deliver an alternative theoretical framework from which to consider the multidimensional nature of self-concept, and, in particular, the importance hypothesis. Furthermore, the hierarchical structure of self-concept (Shavelson, Hubner & Stanton, 1976) had received weak empirical support prior to the completion of the first study in this thesis. The influence of varying cultural and ethnic variables in the first study suggests that these variables may also be of interest from a theoretical perspective. Many of the participants in this thesis (e.g., mental health clients, executives who have experienced major occupational stress, injured athletes) reflected, to a great extent, core clinical populations that utilise the various health services. The insights provided by such groups may be of particular interest to many other clinical professions. The relevance of self-concept to the myriad of issues that the clinical professions are required to deal with might be more forcefully emphasised if researchers concentrated on participant samples (particularly adult participants) that reflect core clinical groups.

There are a number of applied implications worthy of consideration. Although self-esteem has been identified as a key factor in motivation, performance, and well-being (Deci & Ryan, 1995) its relevance to practical clinical work may not be fully appreciated. Many clinicians articulate an appreciation of the role of self-concept but the author's experience to date has been that this awareness is somewhat shallow in content. Many clinicians tend to view self-concept from a unidimensional perspective and consequently its role in clinical intervention strategies is minimised. Raising the awareness of the critical role of self-concept in the individual's capacity to cope would seem to be a primary objective with regard to many clinical professions. The data from this thesis and previous research (Brockner, 1988; Brewer, 1994; Bandura, 1997), suggests that self-concept may be a core issue in many situations where the individual displays poor coping skills and poor personal efficacy despite having the potential to perform more effectively. The assessment of self-concept as part of the initial evaluation of those requiring intervention by mental health services would seem to be both necessary and obvious. However, in the author's clinical experience, the level of awareness and understanding of the role of self-concept may not be sufficient to ensure that such a proposal would be adopted by many of the clinical professions. An educational programme for key mental health professionals to address the obvious gaps in knowledge might be necessary for such a practical and essential development in clinical practice to materialise.

Self-concept enhancement strategies (Tabassam & Grainger, 2000; Craven et al., 1991) have been developed, implemented, and evaluated on mainly student populations. This thesis would seem to suggest that the use of such strategies with adult clinical populations utilising mental health services might prove more beneficial to both clients and service providers. Although coping skills were not measured in the final study, the

author's casework notes reflected corporate participants' post intervention comments that highlighted significant positive changes in coping that were linked to improved self-esteem. While acknowledging the methodological limitations of the final study, the results nevertheless suggested that self-concept enhancement strategies might have significant clinical implications in the amelioration of many stress and mental health issues. Low self-concept appears to be a core characteristic in the profiles of those who present with such issues and self-concept enhancement strategies may be more clinically effective and cost efficient in addressing core causes than the more traditional therapies. The attractiveness of such strategies is that the client can take ownership of the process at an early stage thus enhancing perception of control and personal efficacy, features possibly lacking in many therapies where such control, to a great extent, may remain with the therapist for most of the duration of the therapy. Because the client participates in the choice of the activities included in the self-concept enhancement programme and because such activities are based on the clients need and skills, it is likely that it will be perceived as more meaningful and relevant as well as devoid of the stigma possibly associated with many of the traditional intervention strategies such as occupational therapy and medication.

The data from the amateur athletes in the final study of this thesis may be particularly relevant with regard to the relationship between self-concept and coping skills. The athletes' capacity to minimise the impact of the stress of serious injury on general self-concept would seem to have been based on the fact that a wide range of activities and experiences contributed to global self-concept and these were appraised positively by the athletes themselves, similar to the Deci and Ryan (1995) classification of true self-esteem. This broadly based self-concept would seem to have acted as a buffer

against the stress associated with the injury thus minimising the impact on global self-concept. In contrast, the self-concept of the corporate executives would seem to have been based on a very limited range of experiences and activities that required meeting the standards set by others, similar to the Deci and Ryan (1995) classification of contingent self-esteem. Failure to meet those standards resulted in low self-concept and poor coping as there were no other sources of self-esteem. A broadly based self-concept may be one of the contributory to the development of effective coping skills and adequate personal efficacy, while a narrow based self-concept may also be one of the factors that predispose an individual to ineffective coping when stress levels are excessive.

The author has been responsible over the last five years for the delivery of a corporate mental health service to a number of companies in the commercial sector. This service provides stress management programmes to groups and individuals within these companies. From a clinical perspective, the most significant feature of the impact of stress in the workplace that the author has identified in the delivery of the corporate health service has been loss of self confidence, poor productivity and an increase in sick-leave. The data from the interviews with the three corporate executives in the final study of this thesis confirm these outcomes. As in other areas of life, the role of self-esteem in the workplace would seem to be central to the capacity of the employee to cope effectively. Brockner's (1988) concept of "behavioural plasticity" would seem to be particularly relevant and incorporates many key issues with regard to self-esteem. As previously stated, the concept of behavioural plasticity states that individuals with low self-esteem will often be more susceptible to influence by organisational events than their high self-esteem counterparts. Lacking confidence and certainty in their own beliefs, employees with low self-esteem are prone to regard external or social cues as guides for

appropriate thought and action and are especially dependent on the receipt of positive evaluation from others. Furthermore, having a fragile sense of identity, they tend to perceive negative feedback in one area to generalise to other parts of the self and domains of personal activity. This profile of low self-esteem employees should be of particular concern to employers as such employees may have a reduced capacity to meet the requirements of the job if they are more influenced by a negative organisational work dynamic. Current work practices in most Western European companies require that employees undertake periodic performance evaluations with their supervisors. Such evaluations should place a significant emphasis on enhancing the employee's self-esteem. However, it has been the author's experience that many supervisors and employers lack an awareness of this need to esteem the employee and thus the potential of performance evaluations may not be fully utilised. Employers also need to be sensitive to ensure that organisational policies, structures, and procedures support the need to esteem employees. However, as with key personnel in the mental health services, an educational programme for employers may be necessary in order to harness their support as their commitment to the self-esteem of their employees may often be overshadowed by commercial priorities.

As already stated, the capacity of the athletes in this thesis to minimise the impact of the stress of injury on global self-concept would seem to have been based on the fact that a wide range of activities and experiences contributed to global self-concept and, therefore, the absence of competitive sport did not have a catastrophic effect. It would seem logical therefore to suggest that all athletes, whether amateur or professional, should be encouraged to develop activities and interests other than sport as the possibility of a serious career threatening injury is likely to be high. Coaches, managers and administrators in sport need to foster a broad based self-concept in their athletes

(especially young athletes) in order to ensure that, in the absence of sport, these individuals can continue to cope effectively. Coakley (1992) examined the issue of burnout among young athletes and concluded that one of the reasons they left competitive sport is that they had a constrained set of life experiences leading to the development of a unidimensional self-concept. Their sport participation involved social experiences that fostered the development of a single identity exclusively related to sport participation and perpetuated a limited set of social relationships directly tied to sport. He described such athletes as being in the equivalent of a "development tunnel" and, because their exclusive commitment to sport had begun so early in life, they had little to fall back on, no other way to view themselves outside the narrow experiences associated with sport involvement, and no viable alternative identities for interacting with other people in a meaningful way. He suggested that the development of multiple identities among adolescent athletes would provide a cushion for the stress inherent in their sport, mediate the impact of their successes and failures, and help sustain a more effective profile.

Finally, in the interviews with the three injured athletes there was an implicit suggestion, subsequently confirmed in post-intervention discussion, of the need for ongoing psychological support for those awaiting surgery and those participating in rehabilitation programmes in order to counteract the possible negative impact on self-esteem of being isolated from team members and not being involved in competitive activities. The role of coping and social support among injured athletes was examined by Udry (1997), who found that instrumental coping was the most used coping strategy. Instrumental coping involved attempts to alleviate the stress through activities such as finding out more about the injury, listening to the advice of health care providers, or both. As with key mental health personnel and employers in the corporate sector, an educational process for

physicians, sport medicine specialists, and physiotherapists would seem necessary in order to ensure that such becomes a reality.

At an intellectual level, a strength of this thesis is that it expands on previous work in this area (Marsh, 1993b; Fox, 1990; Marsh & Sonstroem, 1995) that explored theoretical and applied aspects of self-concept. Alternative statistical models that may have potential to more accurately evaluate the concept of importance were utilised and the influence of variables such as age, gender and life experiences on self-concept were explored. In particular, participants (i.e. corporate executives and high level amateur athletes) who were experiencing an acute personal crisis that had potentially significant negative consequences provided contrasting insights with regard to the impact of stress on self-concept and the effectiveness of an intervention strategy. The use of such participants was, perhaps, somewhat unique in that they provided a range of life experiences characterised by excessive pressure to perform at the highest level (although professional rather than amateur athletes might have been more comparable to executives). The role of self-concept in the coping skills of such participants would seem to be very relevant from a clinical perspective as they represented many typical life situations that increasingly engage the skills of mental health professionals. If the critical role of self-concept in coping skills is to be accepted by mental health professionals then studies utilising such participants on a more frequent basis will be necessary. Further strengths of this thesis include the breadth and size of the sampling used in the first and second studies together with the level of sophistication of some of the statistics in the third study.

Finally, the author is a practicing clinician who was motivated to complete this thesis in order to gain a more comprehensive knowledge of self-concept from both a theoretical and applied perspective. It is the author's view that research, while stimulating

future studies, should also preferably have practical clinical application that enhances the clinician's repertoire of skills and techniques and is ultimately of benefit to the client. This thesis would seem to have achieved these objectives as the section on applied implications demonstrates. The skills acquired by the author during the course of this thesis will inevitably result in further studies, some of which are discussed in the section on future studies.

There are a number of limitations to this thesis. The results cannot unequivocally state that the Marsh (1993b) conclusions with regard to the importance hypothesis are either right or wrong. Although the results offer some support for the importance hypothesis they are not definitive, even though they challenge recent thinking on its limited role (Marsh, 1986; Marsh, 1993; Marsh, 1994; Marsh & Sonstroem, 1995). In view of the very limited support for the importance hypothesis in previous studies by such eminent researchers, any definitive case that importance ratings have a critical role in the multidimensional model would require very convincing data. A further possible limitation of the thesis is that the intervention programme with corporate executives and elite athletes should have targeted a completely unimportant domain rather than enhancing a domain already rated as relatively important. However, the ethics of clinical practice prevented this theoretical approach. Corporate and athlete participants were in an acute crisis and required, from both a clinical and client perspective, an intervention strategy that had credibility, the potential for facilitating positive change and the development of more effective coping skills. A request to participants in such an acute crisis to work on a domain of self-concept that they rated as unimportant would probably, in their perspective, have had very negative implications for the professional credibility of the clinician (i.e. the author) and the relevance of the intervention strategy. Obviously this

will be a major dilemma for future studies testing the importance hypothesis, that wish to use participants who are experiencing significant coping difficulties. Furthermore, post-intervention interviews to access participants' perspectives on the effectiveness of the intervention programme might also have provided valuable evidence in support of the importance hypothesis. Although only 3 participants were used in each group in the final study, this model allowed the author to study the identified issues in depth and include the subjective experiences of each of the participants in a way that would not have been possible with a large group of participants. This provided very specific insights into the way they appraised the stressors, the emotions they experienced and the impact of such stressors on each participant's self concept. Qualitative methods permit the study of selected issues in depth and in detail. Approaching fieldwork without being constrained by predetermined categories of analysis contributes to the depth, openness, and detail of qualitative inquiry (Patton, 1990). The benefits of the idiographic approach for this type of empirical investigation are outlined in greater detail in the discussion on the theoretical implications of these studies.

There has been a resurgence of interest with regard to the relationship between self-esteem and psychological well being in recent years that has enhanced both the quality and quantity of research in this area. However, many critical questions remain unanswered. The results from this thesis suggest a number of topics for future studies. Data in support of the importance hypothesis that has emerged suggests that further studies with adult participants who have had significant life experiences might provide valuable insights. In this regard, greater emphasis on qualitative studies or mixed qualitative and quantitative studies might be more informative than the traditional quantitative methodologies that have previously been employed. Participants who have

been the victims of abuse and perpetrators of abuse, together with participants who have had a history of alcohol dependency and eating disorders, may reflect the impact of major life experiences on self-concept and enhance understanding of the extent to which importance is a function of such variables, as well as the role of importance in self-concept. Other participants might include those who have had to cope with the consequences of serious accidents or serious illness such as coronary heart disease or aids.

The support in this thesis for the contribution of a specific domain of self-concept to global self-concept suggests that the construct of importance may be critical to intervention strategies, particularly with adult populations. Domains rated as important may not contribute sufficiently to coping skills and global self-concept, while domains rated as unimportant by the individual may be more relevant to coping skills if the level of importance is modified. Adult life experiences ensure that most adults (unlike children) have had a range of experiences in each of the domains of self-concept that reflect the multidimensional model as proposed by Shavelson, Hubner and Stanton (1976). In many mental health issues (e.g., depression, alcohol dependency, eating disorders) individuals will have negatively appraised their performance in many of these domains with resultant poor self-concept and coping. A study with such adult participants, focussing on the reappraisal of the importance of these domains and assessing whether participation in activities (i.e., self-concept enhancement strategies) to consolidate such importance might enhance self-concept and ultimately improve coping, may prove insightful. Although ethical considerations in a clinical setting may present practical difficulties it may be possible to implement this intervention strategy with participants who present with longstanding issues rather than being in an acute crisis such as the participants in the final

study of this thesis. However, the measurement of the construct of importance has been mainly confined to single-item or two-item scales; such scales are unlikely to capture the abstract and subtle nature of the construct. Future studies should give some consideration to developing more comprehensive measurement techniques. The use of multi-item scales or qualitative techniques may prove fruitful with regard to addressing the inadequacies in the measurement of importance. Finally, with regard to the importance hypothesis, further tests of the discounting hypothesis would be worthwhile. One possible study might be a comparison of the correlations with global self-esteem of domains rated as important with those rated as unimportant in two contrasting groups of participants – one group of participants with high self-esteem could be contrasted with a group of participants with low self-esteem. Those with high self-esteem should be able to discount the importance of domains in which they are not performing competently while those with low self-esteem should be unable to do so and thus experience importance-competence discrepancies.

There is also increasing empirical support for the effectiveness of self-concept enhancement strategies and, from a practical clinical perspective, this area of study could potentially be very fruitful. The results of the study with corporate executives suggest that studies utilising similar participant groups from varying professional backgrounds should be considered. Despite the absence of any evidence that serious injury has a negative impact on the self-concept of injured amateur athletes in the final study, a series of studies contrasting professional and amateur athletes with varying degrees of injury has strong appeal. An interesting elaboration of this particular topic would be a study to determine whether burnout in athletes would be different from injury with regard to the impact on self-concept. Finally, support for the hierarchical structure of self-concept could be further explored by examining the influence of culture, with particular emphasis on

whether there are differences in support between a homogeneous and heterogeneous culture. A homogeneous cultural environment may facilitate a more consistent and acute awareness of some facets of self-concept while a heterogeneous culture may have varying levels of emphasis on different facets.

Self-concept offers unlimited opportunities for research of varying levels of complexity. Like many such constructs, it has waxed and waned in importance throughout the history of psychology but its future relevance to society will probably be determined by the practical application of research outcomes and how beneficial they are in enhancing the performance and well being of the individual. This thesis has sought to strike a balance between the need to have a theoretical framework to guide research and the need to develop practical strategies for the practical use of clinicians so that the evaluation of self-concept will remain a priority for future studies.

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Appendix 1: Interview Guide – Corporate Participant

1. Tell me a little about the company you work for:
    - How long have you been working with this organisation
    - Tell me a little bit about your duties and responsibilities.
    - What are your actual working hours?
    - How important is work to you?
    - Describe your level of involvement in work over the past few years.
    - What level of success/achievement have you experienced at work?
    - What other interests have you – other than work?
    - How much time do you give to these other interests?
    - How important are these other interests?

2. Could you tell me what happened at work that caused you to be stressed and on sick leave?
    - What were the signs of your stress?
    - What were the predominant thoughts you had at that time?
    - What medical services did you require as a result of this stress?
    - Have you had other stressful experiences at work in the past? What?
    - How long are you likely to be on sick leave?

3. You are out of work at the moment, what are your feelings about that?
    - Could you explain the basis for these feelings?
    - How stressful is being out of work?
    - How long do you think these feelings will last?
    - How have they changed since you have been out of work?

4. Describe to me your opinion of yourself – in other words your self-concept – prior to this recent stressful experience?
    - What were the main influences in the development of your self-concept?
    - What was the biggest single shaping influence?
    - Why did....have such a great influence
    - Why were some other areas of your life not as important as other areas with regard to your self-concept?

5. How has being stressed and on sick leave influenced your current self-concept?
    - As an employee? As an individual, as a person?
    - As a parent/spouse/partner/son/ daughter/boyfriend/girlfriend/student?
    - Have your feelings about yourself changed often since you have been out of work? Why?
    - What is your opinion on your capacity to change how you feel about yourself presently?

6. Do you think your feelings about yourself at the moment might influence your ability to cope with the stress you are experiencing presently?
    - What thoughts and feelings do you need to change about yourself so that you can cope?
    - What do you think needs to happen so that you can change these thoughts and feelings about yourself?
    - Is it important for you to get back to work? Why?
    - How would you feel if you could not get back to work? Why?

Appendix 2: Interview Guide – Sport Participant

1. Tell me a little about the sport you are involved in:
   - How long have you been involved in this sport?
   - How important is sport to you?
   - How would you describe your level of involvement in this sport?
   - What level of success/achievement have you experienced?
   - What other interests have you – other than sport?
   - How much time do you give to these other interests?
   - How important are these other interests?

2. Could you tell me about the circumstances associated with your injury?
   - What was the nature and type of injury you experienced?
   - How were you injured (training or competition)?
   - What medical services did you require at the time of injury and subsequently?
   - Have you had previous injuries of a similar nature?
   - How long are you likely to be out for?
   - How has the injury effected your day to day life and activities?

3. Describe to me your thoughts as soon as you realised you were seriously injured:
   - What specifically was it about the injury that made it stressful for you?
   - What were the most worrying thoughts?
   - After the initial thoughts about the injury were there other thoughts that you then had?
   - How did you feel you would cope?

4. What are your feelings now about being injured?
   - Could you explain the basis for these feelings?
   - What other feelings have you experienced since your injury?
   - How stressful is being injured?
   - How long do you think these feelings will last?
   - How have they changed since the injury?

5. Describe to me your opinion of yourself – in other words your self-concept – prior to injury?
   - What were the main influences in the development of your self-concept?
   - What was the biggest single shaping influence?
   - Why did….have such a great influence
   - Why were some other areas of your life not as important as other areas with regard to your self-concept?

6. How has the injury influenced your current self-concept?
   - As an athlete?
   - As an employee/parent/spouse/partner/son/ daughter/boyfriend/girlfriend/student?
   - Have your feelings about yourself changed often since you have been injured?
   - What is your opinion on your capacity to change how you feel about yourself presently?

7. Do you think your feelings about yourself at the moment might influence your ability to cope with the stress of the injury and recovery from it?
   - What thoughts and feelings do you need to change about yourself so that you can cope?

- What do you think needs to happen so that you can change these thoughts and feelings about yourself?
- Is it important for you to get back playing sport? Why?

How would you feel if you could not get back playing sport? Why?