THE DESIGN AND DELIVERY OF STRESS MANAGEMENT IN PROFESSIONAL SPORT

By

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For Mum and Dad,

I stand tall to see the world and all of its possibilities, because you held me up.

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Abstract

The professional arena in which sport performers operate can be a breeding ground for stress. Despite the limited investigation of professional sport performers and their experiences of stress, the research conducted to date suggests that these individuals encounter a range of competitive and organizational stressors that are an inherent aspect of the organization in which they are contracted to operate. These stressors can typically lead to a range of adverse outcomes for well-being and performance if they are not appropriately managed. It is therefore important for psychologists to obtain a stronger evidence-base for understanding these performers' experiences of stress in this organizational setting. By understanding the ways in which these individuals interact and adapt to their professional environment, this can inform the design and evaluation of organizational stress management interventions aimed to optimise performers' well-being and performance. In so far that the evidence base for effective organizational interventions is limited, evaluating the effectiveness of organizational stress management interventions in sport organizations will make a strong contribution to psychologists' knowledge of the conditions by which such initiatives may be effective in this organizational context. To make a contribution to the evidence base in this area, the purpose of this thesis was to examine the management of stress as it is experienced in a professional sport organization.

In Chapter 1, a background introduction is incorporated to provide a contextual setting for the research which was conducted in this thesis. This is followed by an outline of key stress management terms, traditional theories of stress and a literature review of research conducted on stress in sport. Following this, an overview of effective organizational stress management interventions from organizational psychology is provided. This chapter is important for providing the conceptual foundation by which the research in this thesis was conducted. Chapter 2 provides the first systematic review of stress management interventions that have been conducted with sport performers to date. This review of 64 different interventions indicates that multimodal programs, which typically comprise cognitive-behavioural elements, appear to be the most effective for reducing performers' state and trait anxiety and in part competitive performance. A review of the key study characteristics of these interventions identified a number of important gaps in the literature which informed the central purpose of this thesis. Chapter 3 reports the findings of an experience sampling study that was conducted in a professional rugby union academy. This study assessed professional sport performers' patterns of cognitive appraisals, affective responses and coping methods.

The associations between these variables were considered in light of different personal and situational between-person factors. The findings from hierarchical linear modeling analyses were important in demonstrating how the degree to which professional sport performers appraise, respond and cope with daily organizational events may be largely influenced by a person's personality and playing role.

In Chapter 4, the conclusions of a mixed method participatory action research stress audit are reported. These findings provide an insight in to the specific organizational stressors that are encountered in a professional rugby union academy. The most common responses and coping efforts in this organization are also considered in light of individual differences. In addition, participant recommendations for the development of stress management interventions at an individual- and organizational-level are reported. In this way, Chapters 3 and 4 are of primary importance in shaping the design and delivery of organizational stress management interventions.

Chapter 5 reports the findings of two organizational stress management interventions that were delivered across a competitive season to professional performers in a sport organization. Specifically, the effectiveness of an organizational-level intervention (i.e., team building) and a multi-level organization intervention (i.e., coping effectiveness training with team building) were assessed for optimising affect, coping self-efficacy, team cohesion, and performance evaluations. To analyse changes in the outcome variables, linear and quadratic growth curve models were applied. This intervention study revealed that team building was associated with increased positive affective experiences, problem and emotion-focused coping self-efficacy, social cohesion, and performance evaluations from pre- to post-intervention. Although coping effectiveness training with team building was found to increase positive affect, social cohesion and team performance evaluations, the timing of these increased effects were generally found to be delayed and largely occurred from midpoint to 3-month follow-up assessment. To provide further validation for the findings, a process evaluation survey was conducted, which revealed that macro, micro and contextual processes may help to explain some of the significant and non-significant findings for each treatment group. To offer a richer understanding of intervention processes, Chapter 6 provides a reflective diary of the author's experiences of delivering the organizational stress management interventions. Furthermore, an amalgamation of participant perspectives is offered to provide readers with a greater insight and appreciation of the conditions by which the organizational stress management interventions may or may not have been effective in Chapter 5.

Following these chapters, Chapter 7 provides a summary of the studies reported in this thesis. Specifically, the contribution to theory and research is discussed which precedes the offering of practical implications, strengths and limitations, future research directions and some concluding remarks. Overall, this thesis provides a greater understanding of how professional sport performers interact with and adapt to their organizational environment. In addition, the thesis advances the evidence base in both sport and organizational psychology for the effective design and delivery of stress management interventions as they pertain to members of professional sport organizations. Specifically, interventions that aim to modify the environment in which sport performers operate may hold fruitful promise for optimising well-being, functioning and performance in sport organizations.

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Preface: My Interest in Stress Management

Researching the topic of stress management, more generally, is an area that was fuelled by my personal experiences as a former elite discus thrower, a temporary investment banker, and as a postgraduate student at Loughborough University. What follows is a background narrative to provide the varying personal contexts with which my fascination for the area of stress management was formed. At the age of 12, I was introduced to athletic throwing events by my secondary school physical education teacher, who quickly identified that my body frame did not suit that of a sprinter, long distance runner, or jumper. Of little knowledge to my teacher at the time, was that my father John had been a nationally ranked shot putter in his late teens and had coached a thrower who later became the British national shot put coach in the 1980s. Remarkably, I only became aware of my father's previous athletic abilities just three days before representing my secondary school at a town schools athletics championship. Within a few months of winning this competition, I became a nationally ranked under-13 age group shot putter. On reflection, I believe that one of the main reasons for my sharp rise to 'fame' was my father's ability to create playful but challenging competitions in training between the two of us. This was the beginning for me in learning how to perform under 'pressure'.

At the age of 16, I had one of my most successful athletic seasons. Having turned to focus my abilities on discus throwing, I was selected to represent England in an international schools championship competition and had also won the National AAA's UK championships in this event. Having medalled at all of the major regional and national championships that season, I had finished 2nd to the UK number one ranked discus thrower only twice. At the end of the season, my father and I sat down to proudly view the recently published national rankings. However, on distance thrown throughout the season, it was correctly published that I was only ranked 5th in the UK. How could this be? I had thrown further in every major championship than the athletes who were ranked 2nd, 3rd and 4th. I had also beaten the number one ranked athlete at the National AAA's championships. I have the shiny medals to prove it. The conclusion my father and I came to was that perhaps these performers were more capable in distance thrown, but they could not perform to their best at the major championships. Giving these athletes the benefit of the doubt, I began to believe that my medals won during this season were perhaps just a fluke. Although my father tried to reassure me, I believed that in future athletic seasons perhaps it may be the case that I will not enjoy the same fortune of winning medals when competing against the same athletes in future years. As I moved up to

 the under-20 junior age group, this previously described pattern of performances at major championships continued. In fact, my national ranking had dropped further, but I was still beating the 'better' throwers and winning medals at the regional and national championships. What became clear to me at this stage in my athletics career was that I 'thrived' under pressure at the major championships during the season. The pressure was a privilege and something that I enjoyed. My father even used to joke that he needed to 'rent a crowd' of supporters in training to optimise my performance under a degree of pressure.

I realise now that the latter largely explains my learned ability at the time to handle competition pressure. This feeling of 'thriving' under pressure that I had experienced wasn't innate; it was rigorously trained over several years in my naivety. From the age of 12 through to my early teens, my father had placed a great emphasis in training on responding to 'difficult' situations and replicating the competition environment as much as possible. My father made me throw disci in the torrential rain and snow; my father made me throw heavier discus implements; I threw in 'handicap' competitions against training partners during training sessions. We practiced 'what if scenarios' in training to simulate the unpredictable competition environment. I even won a regional competition at junior age grade, which was largely due to my father informing me 5 days in advance that it was going to torrentially rain on the day of the competition. To combat this challenging weather, the night before travelling to the competition I had packed a spare pair of throwing shoes and 6 hand towels to dry the discus circle. The rest is a satisfying memory. Collectively, from this experience of competing as an athlete, I became extremely interested in learning more about sport psychology. In particular, I wanted to know more about arousal / anxiety management strategies that could help me to continue to perform at a national level in my sport.

After completing an undergraduate degree in psychology with sport science, I worked for a large investment banking organization for approximately 2 years to fund my future studies in sport and exercise psychology at MSc level. It was a strange experience for me, because I didn't really have any goals to progress in the organization. I was merely concerned with earning as much money as possible in a short period of time before leaving to undertake an MSc at Loughborough University. As the following will demonstrate, this experience of working in investment banking could have come to a far more premature end if it wasn't for sharp modifications that were made in the direct environment in which I worked. When beginning my new job, it was necessary for me to be trained on various online systems relating to the Bloomberg stocks and shares market for me to adequately complete a number of daily independent valuations for different European clients. For the first two weeks of

undertaking this job, the management team of the department were unable to schedule the appropriate training for me. Subsequently, I had to shadow an experienced team leader to 'learn on the job'. After two weeks of shadowing, I became increasingly less confident in my ability to work in this environment because of a personality clash that was occurring between myself and the team leader that I was shadowing. At this time, the department decided to merge my team of workers with another team to cut costs and move some staff in to other areas. This meant that my previous shadowing of the team leader became somewhat redundant, as I had been moved in to a new role which required a different skill set. In addition, as the team leader was also inexperienced in this new role, he was demoted so that he could shadow the new team leader of the newly merged team. Although at first I enjoyed this new role, despite also not receiving adequate training, it later transpired that I was receiving a significant number of last minute pressurised job requests from my line manager, to complete work that other staff had not completed in time before the end of the working day. Subsequently, although I lacked the training to complete these tasks adequately, I spent a number of late evenings in the office with a couple of other colleagues to make sure that these deadlines were completed. As a result, I felt relieved to complete these tasks, but extremely unsatisfied by the way in which the uncompleted work of others was being delegated to me without adequate training or knowledge of how to complete such tasks. In an attempt to learn more about my role, I was directed by my line manager to ask my previous team leader for help. Despite my personality clash with this previous team leader, it was often the case that I would be directed to this person to solve a new task that had been assigned or delegated to me. Upon attempting to solve new tasks which I lacked training in, the typical response I received from this individual was a theatrical effort to proclaim my lack of knowledge on completing tasks, in front of our team of colleagues in the open plan 200-person department floor in which we worked. I found this both uncomfortable and embarrassing and tried to avoid asking future questions to spare any future anguish. Subsequently, over time I was beginning to perceive (rightly or wrongly) that I was becoming a victim of bullying in the workplace. Partly because of the aforementioned reasons, but also because the previous team leader was beginning to delegate some of his high profile client deadlines to me at relatively short notice, while 'disappearing' to the breakout coffee area for periods of the day. I experienced extremely high levels of anxiety at the time through fear of not being able to meet important client deadlines.

This was undoubtedly a different kind of pressure to that I had experienced when 'thriving' in a competitive sporting context. In trying to manage my levels of anxiety and

frustration, I spoke to close work colleagues about my experiences and in the evenings where I wasn't working late I used weight training as my method of stress release. But these methods did not solve the fundamental problem: a clash of personalities between myself and my previous team leader and my perceptions of being bullied at work. After a few months of tolerating this experience, I decided to leave the organization and wrote a letter to my newly appointed line manager to explain my reasons. Within one week of resigning, my new line manager contacted me to inform me that they had removed my previous team leader from the team that I was working in and had moved him to a different team further up the department floor. I was then asked to rejoin the organization and happily remained there before returning to education to undertake an MSc in sport and exercise psychology. I also took my 'employee of the month' bottle of champagne with me to Loughborough. This experience of the workplace and the challenge of attempting and failing to appropriately manage my own stress experience fuelled my interest in the area of workplace stress more generally.

As I began my MSc in sport and exercise psychology in 2006, my interest in organizational stress was somewhat timely as research on organizational stressors in elite sport was beginning to grow (Fletcher & Hanton, 2003; Hanton & Fletcher, 2005; Woodman & Hardy, 2001). Given my competitive and occupational backgrounds, I was particularly intrigued by the application of organizational stress research to sport environments. Subsequently, I began to research the area of organizational stressors in elite and non-elite sport performers as an unpublished master's dissertation. The findings of which have since contributed to the meta-synthesis of organizational stressors in sport (Arnold & Fletcher, 2012). It was clear from conducting my dissertation that along with the stress that sport performers experience in relation to their competitive environment, elite and non-elite sport performers were encountering a range of demands relating to their sports clubs and 'umbrella' organizations that they compete under. As a result of this research and my earlier experiences in sport and the workplace, I became intrigued to understand how stress management interventions could be applied to both competitive and organizational settings in sport. Furthermore, I was interested to learn to what extent stress management interventions in one environmental setting (e.g., sport competitions) are likely to be just as effective or less effective in another environmental setting (e.g., sport organizations). Upon meeting with Dr. David Fletcher, I had the fortunate opportunity of being offered to undertake a Ph.D. under his and Professor Kevin Daniels' supervision. From several meetings and informal discussions, it soon became apparent that the management of stress in sport organizations is a fruitful and important area which should be investigated and evaluated.

1

Introduction

"Stress is an unavoidable consequence of life and therefore an unavoidable consequence of organizations."

~ Hans Seyle.

1

Introduction

1.1 Background

Participating in competitive sport can be a stressful experience (Neil, Hanton, Mellalieu, & Fletcher, 2011). This may be explained in part by transactional definitions, which acknowledge that stress is a dynamic and ongoing process, that involves individuals continually "transacting with their [sport] environments, making appraisals of the situations they find themselves in, and endeavouring to cope with any issues that may arise" (Fletcher, Hanton, & Mellalieu, 2006, p. 329; adapted from Lazarus, 1999). Inherent in this definition is the notion that sport performers encounter stressors as a result of the training and competition environments in which they operate. In the context of sport, competitive stressors, which refer to the environmental demands associated primarily and directly with performance (Mellalieu, Hanton, & Fletcher, 2006, p. 3), may include a selection of issues relating to athletes' physical and mental preparation for competition, the level of opposition, spectators and expectations to perform (Holt & Hogg, 2002; Gould, Jackson, & Finch, 1993; McKay, Niven, Lavallee, & White, 2008; Noblet & Gifford, 2002; Scanlan, Stein, & Ravizza, 1991). Indeed, it is not uncommon for sport performers to have to manage high levels of anxiety as a result of the stressors that they encounter in their sport environment. Such stressors, as alluded to by the quote of Hans Seyle, may be an unavoidable feature of participating in sport.

It is typically the case that sport psychology consultants who help athletes to prepare for competitions at the highest levels continually have to find ways to address specific stress-related issues. This is problematic as an inability to appropriately manage different stressors in the sport arena could be deleterious not only for sport performers' performances, but also their affective well-being in this area of their lives. Therefore, the effective management of stress in sport environments can play a fundamental role in optimising athletes' preparation and performance in competitive sport, as well as enhancing their affective well-being. Furthermore, since individuals' affective well-being in one life domain can contribute to aspects of well-being in other life domains (Keyes, Shmotkin, & Ryff, 2002), it is likely that

the appropriate management of sport environments may also play an important role in facilitating individuals' overall well-being in life.

Although sport psychologists have developed a range of stress management techniques to be applied with competitive sport performers, the universal management of stress-related issues in sport is challenging for several reasons. The first of which relates to differences in sport performers' ability to evaluate, respond and cope with the stressors that they encounter in their sport environment. Although some athletes will experience stress prior to competition and underperform, other performers will be able to control the emotional states that accompany their perceptions of specific stressors and generate activation states that enable them to perform optimally under pressure. Another issue relates to the nature of the sport in which performers operate. Specifically, it is generally acknowledged that different types of sport often require performers to fine tune different activation states which may be either enhanced or disrupted by specific stressors that they encounter in their sport (Mellalieu et al., 2006). For example, in the context of participating in team sports, such as rugby union, sport performers may encounter general competitive stressors such as the opponents, the crowd, officials and selection (Nicholls, Holt, Polman, & Bloomfield, 2006). However, they may also encounter sport-specific stressors in competition relating to managing injuries, playing out of position and player 'sin bins' (Nicholls, Jones, Polman, & Borkoles, 2009a).

The sport of rugby union is also inherently a 'systems' team game (Hodge, Lonsdale, & McKenzie, 2006) with each performer in a 15-man team having a role to fulfil. Each role comprises a system strategy for both attack and defence, which can also place individual performers under considerable pressure to make the correct tactical decisions in a fast-paced interactive and physically competitive environment (Lane, Rodger, & Karageorghis, 1997). In so far that coaching from the sidelines is prohibited during competitive performance in this sport, the importance of effective leadership and communication between members also becomes a demand of paramount importance (Hodge et al., 2006). These points would suggest that the combination of these sport-specific stressors is likely to make the competitive game a stressful experience. This is supported by research which has shown that professional rugby union players experience higher levels of strain in response to a range of sport-related (e.g., diet, opponents, fitness) *and* non-sport-related (arguments, selection, supplementary work) stressors (Nicholls, Backhouse, Polman, & McKenna, 2009b). This latter point implies that professional sportsmen may not only experience stress as a result of their performance environment but also as a result of the organization within which they operate.

There have also been a number of key structural changes that have occurred in rugby

union over the past two decades which highlight the ever increasing demands that may be encountered in such organizations. For example, in 1996 rugby union was professionalized at the elite level and an increasing number of rule changes since this time have led to a dramatic increase in the speed and pace of the competitive game. As the pace of the game has increased, the time available for decision making in competition has decreased. As consequence, the psychological challenges that are inherent in this sport have rapidly increased (Hodge et al., 2006). In addition, as the professional demands on players to perform have increased, there has been a growth in staff resources. Professional rugby union organizations now benefit from greater coaching, strength and conditioning, nutrition, physiology, performance analysis, and physiotherapy support on a full-time basis. These changes do however reflect the accelerated pressures for professional rugby union players to perform and the increased pressures for staff (e.g., coaches, sport scientists) to 'produce' successful performers. Such changes in personnel and resources have also intensified the important role of interpersonal relationships between players and staff and team dynamics in rugby union organizations.

Another key structural change that occurred can be seen at a national level in England. In 2001, the Governing Body of Rugby Union in England (RFU) and the Premier League Association for professional rugby agreed to introduce 14 full-time professional academies across England[1]. These steps were taken with the aim of fast tracking the development of England's youngest and most talented academy players in to world-class professional senior players (Finn & McKenna, 2010). This change also came at a time where national professional leagues had increased the influx of overseas players in to domestic leagues (and academies), which meant that fewer senior team places are available for English academy players. Although this national agenda is primarily positive for the career development of professional sport performers, there are a number of demands that are likely to occur at an organizational-level as a consequence of these changes in the structure of professional rugby union. Firstly, where professional sport academies in the UK are concerned, only a small proportion of academy sport performers (e.g., $\leq 10\%$) successfully gain senior contracts, which has led to doubts by senior managers concerning the successful functioning of academy organizations (Finn & McKenna, 2010). Consequently, academy organizations are under greater financial and time pressures to develop academy players in to world-class senior team potential. In addition, employed academy staff (e.g., coaches, sport

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[1] For an overview of the set up of England rugby academies, more information can be found at the following RFU webpage: http://www.rfu.com/takingpart/careersinrugby/overview.aspx

scientists) supporting the rapid development of players may also encounter demands relating to regular job performance evaluations and job insecurity. Subsequently, professional sport organizations, such as academies appear to encounter a variety of demands relating to the competitive sport environment, but also a number of training, interpersonal and career development demands that are inherent within a full-time organizational environment.

The aforementioned demands and resultant strain that could be experienced in professional rugby union academies would suggest that individuals participating in these types of environments would benefit from a range of stress management interventions to combat their stress experience effectively. Indeed, the effective design and delivery of stress management could be important for the well-being and functioning of those individuals who operate at different levels in professional sport organizations. Despite this observation, the investigation of individuals operating in professional sport has widely been neglected in the sport psychology literature (Noblet, Rodwell, & McWilliams, 2003).

Taking these points together, the contribution of this thesis is to evaluate the design and delivery of stress management interventions in a professional sport organization. The professional sport lens through which this investigation is reported is through examination of the stress experienced in a professional rugby union academy. To provide a platform for the research that was conducted, the remainder of this chapter contains four sections. The following section on stress management will provide an overview of key terms pertaining to different stress management interventions in non-sport settings. This is followed by a consideration of the most influential conceptualisations of stress which have underpinned stress management interventions to date. The section that follows will provide an overview of how stress has been researched in sport psychology to date. This will then be followed by a summary of the organizational psychology literature pertaining to stress management in organizations. Finally, the introduction will summarise research directions relating to the rationale, contribution and main aims of the thesis.

1.2 Stress Management

Stress management interventions may be broadly defined as any activity which is designed to reduce or eliminate the presence of stressors, or minimize their potentially negative effects on strain and everyday functioning (Le Fevre, Kolt, & Matheny, 2006; Richardson & Rothstein, 2008). It is interesting to note that most published journal articles, book chapters, empirical and self help books on the topic seem to refrain from providing a generic definition of the purpose of stress management. The reasoning for this is important in explaining the nature of stress management. Although researchers and practitioners in this

area have nomothetic (i.e., general) knowledge regarding the use of widely recommended programmes, the application of stress management activities is largely idiographic (i.e., specific to an individual, couple, family, or group case) (Woolfolk, Lehrer, & Allen, 2007). Therefore, in both assessing and treating a particular case, a challenge exists in determining which stress management programmes are likely to wholly align with the needs of the individual case and the degree to which this choice of intervention is likely to have desired effects. In addition, there may be a number of generalities within a chosen intervention that may apply to a particular case, but some generalities which might not. Subsequently, although there is an exhaustive range of general stress management programmes that have been developed over the years, many of these are typically adapted for specific idiographic cases.

Stress management programmes may vary widely in terms of their content, duration and focus (Cartwright & Whatmore, 2005). For example, some programmes may have a single focus, such as relieving tension, whereas other programmes may be multimodal in nature, comprising a range of methods to achieve more than one focus. Typically, the content of stress management programmes is likely to include stress awareness education and some aspects of the following: arousal and anxiety reducing techniques, cognitive-behavioural treatments, and / or interpersonal skills training. This following section will outline and define key stress management interventions that have been traditionally adopted in psychology, to provide a clear understanding of how such programmes may be appropriate for combating individuals' experiences of stress.

1.2.1 Arousal and Anxiety Reduction Techniques

Autogenic training. Autogenic training was first developed by German neurologist Johannes Heinrich Schultz (1932). This technique has been described as a "psycho-physiological self-control therapy" (Pikoff, 1984, p. 620). In this way, although it has been likened to hypnosis and considered to be another form of relaxation training, the main distinct objective is to permit self-regulation through 'passive concentration' on different body sensations. Furthermore, unlike typical relaxation techniques, autogenic training can be bidirectional, such that the technique may be used to reduce excessive autonomic arousal states, or it can be used to raise particularly low levels of an autonomic function (e.g., low heart rate). Typically, relaxation is achieved by sub vocally repeating internal verbal formulas referring to specific body sensations such as heaviness, warmth, heart and breathing regulation (Linden, 2007).

Biofeedback training. Biofeedback is a measurement tool for learning, recognising, and responding to information pertaining to muscle, skin and brain activity. This method teaches voluntary control of physiological functions by providing immediate feedback for variations in physiological activity (Schwartz & Andrasik, 2003). Such feedback is provided in the form of visual and / or auditory signals that come from physiological recording devices. In addition, although the focus is to optimise physiological stress responses such as increased heart rate variability, biofeedback may be used in combination with cognitive programmes or relaxation techniques (Lehrer, 2007).

Progressive muscular relaxation. Progressive muscular relaxation was first developed by American physiologist and clinical psychologist Edmund Jacobson (1938). The technique involves the detailed observation of small kinaesthetic muscular sensations and accompanying feelings of anxiety and strain. Furthermore, progressive muscular relaxation uses systematic pre-recorded exercises consisting of contracting and relaxing different muscle groups to produce greater physiological and mental relaxation (McGuigan & Lehrer, 2007). In this way, the use of pre-recorded instructions and contraction of muscles can be likened to autogenic training, however autogenic training relies more on imagery and suggestions by a present therapist (Feltz & Landers, 1980).

Meditation. Meditation refers to different types of relaxation techniques which have their origins in India, China and Japan, although many forms have been adapted in Westernised societies (Wundke, 2007). Typically, meditation can be classified as 'concentrative' or 'non-concentrative'. Concentrative meditation techniques limit stimulus input and direct attention to a single repetitive stimulus (e.g., a candle flame). A non-concentrative technique, such as mindfulness meditation, expands the meditators attention capacity to include as much of their conscious mental activity as possible. Adopting similar principles to many behavioural therapies, the meditator maintains a positive attitude towards thoughts, visualised images and physiological sensations to allow a state of deep relaxation and wide awake consciousness. In addition to providing deep relaxation though, meditation can also foster 'communication' between the individual and their own self, away from their interpersonal environment, which can satisfy an individual's need for a greater awareness of their self-identity (Carrington, 2007).

1.2.2 Cognitive-Behavioural Treatments

Rational-emotive-therapy[2]**.** The intention of rational emotive therapy is for individuals to learn to recognise their irrational thoughts, to question them and replace them with realistic thoughts. It is based on an ABC model of Albert Ellis (1962) who suggested that it is not an activating external event (A) that leads automatically to a stress reaction (C), but the attitude or belief (B) about the external event. Subsequently, it is believed that stressful situations can be managed by modifying irrational beliefs. Rational emotive therapy comprises three phases. Firstly, individuals are educated about the ABC model. After this point, they identify their own unrealistic thoughts regarding a specific stressor that they have encountered. These irrational beliefs are then modified by the trainer who calls the irrational beliefs in to question and encourages the individual to engage in more realistic perceptions. These realistic beliefs are then practiced in imagination exercises, role-plays and exercises in real situations (Wundke, 2007).

Stress inoculation training. Stress inoculation training (Meichenbaum, 2007) is a flexible, individually tailored, multimodal form of cognitive behavioural training which can be used as on a preventative or treatment basis. It is based on the idea of improving an individual's stress resistance by training individuals to utilise coping behaviours when exposed to particular stressors. The training comprises three overlapping phases. Firstly, during a conceptualisation phase, individuals learn about stress and way to control it by means of different coping strategies. In the second phase, individuals are taught and rehearse coping behaviours. In this way, individuals are introduced to techniques such as cognitive restructuring, self-instruction, problem solving and relaxation. Depending on the idiographic case, other forms of problem- and emotion-focused coping may be integrated. In the final phase, individuals are encouraged to apply the coping skills on a gradual basis on increasing levels of stressors (Wundke, 2007).

Thought stopping. Thought stopping can be considered as a variation to positive thought control. Positive thought control involves the use of self-instruction to signal adaptive behaviours and replace interfering negative thoughts. In comparison, thought stopping focuses more on isolating the negative thought rather than emphasising positive self-instruction. Moreover, thought stopping involves instructing an individual to actively stop a negative thought from further developing. An example instruction may be to visualise any negative thoughts as being compartmentalised in one's mind (Suinn, 2005).

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[2] Cognitive restructuring is a term often used to represent the same intervention purpose. Originally derived from rational-emotive therapy, it attempts to identify and modify specific irrational self-statements that cause an individual to appraise a situation in a stressful manner.

1.2.3 Interpersonal Skills Training Techniques

Assertiveness training. Assertiveness training aims to increase individuals' ability to express personal rights and feelings as a way of resolving conflicts in communication (Jakubowski-Spector, 1973). Such training will typically comprise an evaluation of current patterns of communication, followed by differentiating between aggressive, passive, and assertive styles of communication. In addition, assertiveness training may increase individuals' awareness of commonly mistaken assumptions regarding their assertive rights to express their feelings in social environments. The main goal of assertiveness training is to increase the number and variety of interpersonal situations where assertive behaviour is possible to reduce individuals' feelings of discomfort in difficult interpersonal circumstances (Davis, Eshelman, & McKay, 2008).

Communication. Training in communication concentrates on the ability for individuals and groups to share their own interests, goals and rights in a socially appropriate way, as a means to reduce conflict between individuals (Franz, 2012). Furthermore, the main goal of communication training is to educate individuals' perceptions and understanding of effective vs. non-effective forms of interpersonal communication and interaction. There are a variety of methods that may be used to improve communication and further build trust between individuals, such as active listening, team building activities and communication networks (Thompson, 2009).

Time management. Time management can include developing skills as individuals or as teams in planning, prioritising, delegating and negotiating tasks that need to be completed (Cooper & Cartwright, 1997). Inherent in most time management training is the defining and / or strategic planning to achieve individual or team goals. This training can be an effective strategy for managing competing demands that individuals may encounter. In addition, time management training helps individuals to plan how to effectively utilise the time that is available to them (Dewe, O'Driscoll, & Cooper, 2010).

The stress management technique(s) that a practitioner chooses will undoubtedly depend on the specific individual case being examined. It may also depend on both individual and environmental factors. The starting point for all applied researchers and practitioners, however, is likely to be determined in part by their conceptualization of what 'stress' refers to. The following section therefore considers the main conceptual theories of stress that have underpinned the development and delivery of many of the abovementioned programmes.

1.3 The Concept of Stress

Historically, it is believed that the term stress was first used in the 14th century to denote hardship or adversity (cf. Lazarus, 1999; Woolfolk et al., 2007). By the late 17th century, a physicist-biologist named Robert Hooke (Hinkle, 1973) had formulated a *stimulus-based* definition whereby stress refers to an external load or weight (i.e., pressure) that is applied to an existing structure to deform the structure (i.e., cause strain). Thus, from a traditional engineering perspective, stress was defined as the total number of factors or stimuli that strain a piece of equipment. This stimulus-based definition of stress has since been considered in the 20th century, whereby the goal of researchers is to identify events or stressors that might serve to cause individuals strain or become susceptible to diseases (Holmes & Rahe, 1967). From this perspective, stress is conceived as an environmental or independent variable. In comparison, stress has also been conceptualised from a *response-based* definition whereby stress is considered to be the dependent variable.

1.3.1 Stress as a Response: The General Adaptation Syndrome (GAS)

The origins of response-based definitions of stress can be attributed to the fields of medicine and viewed from a physiological perspective (Hinkle, 1973). It was the work of Hans Seyle in the 1930s and 1940s that marked the beginning of research approaches to studying stress. Seyle was interested in researching the stress response of the body to demands applied to it and believed that this body response was non-specific. In short, Seyle implied that a person's response to stress followed a common invariant pattern to any external or internal demand placed on the body. Seyle termed this invariant response pattern as the General Adaptation Syndrome (GAS). According to Seyle (1956), three stages of response were described in the GAS model. Firstly, the alarm stage is the immediate psychophysiological response to a stressor. In this stage, there is initially a brief period of lowered resistance followed by a time of heightened resistance. At this time, defence mechanisms are activated, forming an emergency reaction known as the "fight or flight" response (Cannon, 1939). The body then prepares itself for a quick response by secreting catecholamines which increase one's heart rate and blood pressure. In addition, glucose in the blood is redirected to the brain and skeletal muscles to prepare for action (Ross & Altmaier, 1994). The second stage is adaptive-resistance. In this stage, immediate responses of the alarm stage are replaced with responses that encourage long-term adaptation for a stressor that is prolonged. Moreover, in the case where a stressor is no longer present, homeostatic processes cause the body to return to a state of equilibrium. The third stage is termed exhaustion / collapse. During this stage, the body becomes unable to continue coping with

stress. According to Seyle, the energy needed for continued adaptation becomes depleted and the individual becomes exhausted or suffers from burnout. The continued depletion of bodily resources makes the individual prone to ill-health, or even death.

The GAS model and other traditional response-based conceptualisations of stress have been challenged by researchers on a number of grounds. Firstly, a number of response-based conceptualisations do not address the issue of psychological responses or conceptualisations of stress. Research has suggested that responses (i.e., corticosteroid secretion) are minimal in the case of physical harms, but are more strongly activated when anticipating a psychological harm or threat (McGrady, 2007). Therefore, physiological responses may be a by product of psychological interpretation (Lazarus, 1999). Secondly, responses to stimuli (i.e., internal or external) do not always follow the same pattern for different individuals. Furthermore, responses to stimuli can be stimulus specific and dependent on the type of hormonal secretion. For example, anxiety responses are associated with adrenalin, whereas noradrenalin is released in response to aggression responses (Cooper, Dewe, & O'Driscoll, 2001). Therefore, the alarm stage, which is analogous to Cannon's (1939) fight or flight response, has the probability of producing at least more than one potential response (i.e., an anxiety or anger response). In addition, if we consider the application of invariant response-based conceptualisations of stress to the sport environment, then this model may be unable to explain different reactions and subsequent behaviours to complex cultural and contextual conditions that may be caused by factors in the sport environment, such as communication issues or role ambiguity.

Another limitation for both stimulus-based and response-based definitions is that if we accept the arguments put forward from either conceptualisation solely, it is only possible to conclude that stimuli have the potential to cause strain, or, that responses may be negative to a stressor. In addition, a stimulus or response should only be regarded as a stressor or strain when the two components are considered in relationship with one another (Fletcher et al., 2006). Taking these two points together, by limiting the definition of stress to only one dimension of the process (i.e., stimulus or response) we are also limiting our understanding of the nature of the process of stress (Cooper et al., 2001). Consequently, to fully understand the nature of stress, exploring the relationship between the person and their environment and the individual psychological processes that influence this relationship is key (Lazarus, 1999). In acknowledging these challenges and limitations, early researchers turned to examine the *interaction* between environmental stimuli and individuals' psychological responses.

1.3.2 Stress as an Interaction

The interactional conceptualisation of stress focuses on the interaction between the person and their environment. Specifically, it is a structural approach which emphasises the examination of statistical relationships (usually correlational) between the stimulus and the response (Cooper et al., 2001; Lazarus, 1999). Therefore, the approach typically investigates cause and effect relationships, whereby the person and the environment lead to psychological responses but still maintain their separate distinctiveness. In this way, the causal variables are still considered as detached components which are invariant and independent of each other during their interaction (Fletcher et al., 2006). One of the main criticisms of this approach to defining (and measuring) stress is that correlational approaches restrict our understanding of whether demands in our environment lead to changes in individual responses, or whether individual responses effect changes in the environmental demands. Furthermore, structural approaches such as the interaction approach cannot identify ongoing changes in stress-related processes, such as how emotions change as a specific encounter develops or from encounter to encounter (Folkman & Lazarus, 1985). These distinct associations alone do not provide a detailed explanation of the ongoing and evolving stress process (Cooper et al., 2001). Therefore, understanding how individuals continually transact with their environment is important for understanding the active nature of stress. In addition to recommending that stress should be considered as a dynamic *transaction* rather than as an interaction, Richard Lazarus (1999) argued the following:

> Although interaction is important, the [relational] meaning a person constructs from relationships with the environment operates at a higher level of abstraction than the concrete variables themselves. Therefore, in addition to interaction, we need to speak of transaction and relational meaning (p. 12).

1.3.3 Stress as a Transaction: Cognitive-Motivational-Relational Theory

In comparison to interactional definitions of stress which focus on the structural features of a person's interaction with their environment, transactional definitions emphasise understanding the dynamism of the psychological processes of cognitive appraisal and coping that underpin a stressful encounter (Lazarus, 1966; 1991a; 1999; Lazarus & Folkman, 1984; Lazarus & Launier, 1978). As part of the cognitive-motivational-relational theory that was developed by Lazarus and colleagues, stress has been viewed as an ongoing transaction between the environmental demands and a person's resources, with strain resulting from an imbalance between these demands and resources (Lazarus & Folkman, 1984). In a separate publication, Folkman & Lazarus (1985) have also defined transactional stress as "a relationship between the person and the environment that is appraised by the person as

relevant to his or her well-being and in which the person's resources are taxed or exceeded" (p. 152). Although the former definition emphasises a dynamic cognitive state reflecting a person's continuous transaction with their environment, the latter definition lends greater weight to the importance of the relational meaning that may be constructed by an individual in terms of the importance of the environmental demands to a person's well-being. However, although each definition infers a different emphasis on either the process of dynamic transactions or relational meaning, both definitions highlight the importance of cognitive appraisal and coping processes in underpinning an individual's transaction with their environment.

The cognitive-motivational-relational theory contends several antecedents, processes and outcomes that encapsulate psychological stress (Lazarus, 1991a). Firstly, antecedents refer to the environmental conditions of a transactional encounter and a person's characteristics which interact to influence appraisals of the person-environment relationship. Environmental conditions may include demands, constraints, opportunities or the culture in which individuals function (Lazarus, 1999). In addition, imminence, uncertainty, and duration may be some of the formal conditions that provide information about what is being encountered. The main personal characteristics which interact with environmental conditions to influence appraisals are a person's goals and goal hierarchies, beliefs about self and world, and personal resources. Each of these personal characteristics will now be outlined.

Goals and goal hierarchies. According to Lazarus (1999), when there is no goal at stake then there is no potential for experiencing stress (p. 70). Emotional responses are believed to be the result of how one appraises an environmental event in relation to the potential to thwart or support the progress towards achieving one's goal. In this way, negative emotions may arise from goals being delayed, thwarted or incongruent (Lazarus, 1991a). On the other hand, positive emotions may arise when one perceives that they are making progress towards achieving goals. It is often the case, however, that individuals have more than one goal at one time and such goals may be in conflict with one another. Therefore, a decision will likely need to be made as to the goals which are the most and least important in any particular situation (Lazarus, 1999). In an environment where attaining a less important goal compromises the achievement of a more important goal to the individual, the person could feel threatened by the implications of not achieving a higher-order goal and subsequently experience greater negative emotions as a result.

Beliefs about self and world. The way we conceive ourselves and our place in the environment shapes what is likely to occur in different situations (Lazarus, 1999). Closely

related to our central beliefs about self and the world include our dispositional levels of self-esteem, our sense of mastery and self-efficacy, and optimism (Lazarus, 1991a). Most of these concepts suggest it is our belief in our ability to master our transaction with the environment and our belief in our ability to cope that can be important moderators of how we appraise our environment and experience particular emotions. Therefore, our beliefs about the self and the world are likely to influence our initial appraisals and emotional responses to the environment. For example, in a situation where an individual is threatened by an environmental encounter, a sense of self-efficacy may be likely to reduce the likelihood of experiencing heightened levels of anxiety (Bandura, 1977). Similarly, in situations where individuals characteristically have positive evaluations of themselves and their functioning in their environment, it is likely that individuals will appraise and respond to situations in a consistently positive manner, especially when people believe they are capable, worthy and in control of their lives (Judge, Van Vianen, & De Pater, 2004, p. 327).

Personal resources. An individual's resources influence what we are able to achieve in attempting to satisfy needs for well-being, attain goals and cope with different environmental conditions (Lazarus, 1999). Personal resources may include a number of dispositional and situational factors, such as a person's intelligence, social skills, money, social economic background, education, support available from family and friends, health and personality traits, to name a few. Although individuals are arguably born with some of these resources whilst others are developed, they are believed to greatly influence not only how individuals respond to environmental encounters, but also their ability to cope with stress. A number of personal resources have been considered as potential moderators of the stress process, many of which are related explicitly or implicitly to perceived control and social support (Cox & Ferguson, 1991). These include: Hardiness (Kobasa, Maddi, & Courington, 1981), locus of control (Rotter, 1966), social support (Cohen, Sherrod, & Clark, 1986), and learned helplessness (Clark & Watson, 1991). Although the context of the environmental situation will still play a role in the production of emotions and coping attempts, it is believed that this combined with personal resources, one's goals, goal hierarchies and beliefs about self and the world are key antecedents that are likely to affect dynamic fluctuations in the processes of cognitive appraisal and coping. Following these antecedent conditions are the mediating processes which are appraisals, action tendencies and coping.

Cognitive appraisals. Cognitive appraisals are the central construct of the cognitive-motivational-relational theory. Appraisals refer to an evaluation of the significance of what is happening in the environment in relation to one's well-being (Lazarus, 1991a). Furthermore,

it is believed that cognitive appraisals are influenced by both environmental and personal antecedents. Cognitive appraisal includes both *primary* and *secondary* appraisals. Through *primary* appraisal a person evaluates whether an environmental encounter is irrelevant, positive, or stressful (Folkman & Lazarus, 1985). Stress appraisals are characterised by threat, challenge, harm-loss, or benefit. Threat appraisals refer to the potential for harm or loss; challenge refers to the potential for growth or mastery; harm / loss refers to injury which has already occurred; and benefit refers to the potential to receive or gain in some way (Lazarus, 1999). In *secondary* appraisals, the person evaluates coping resources and options available, by questioning what they can do to cope. Primary and secondary appraisals are believed to operate interdependently rather than in isolation. For example, where coping resources are able to effectively deal with a threat, the level of perceived threat will diminish. However, an event that could initially appear non-threatening could become threatening if the coping options chosen are unable to counter environmental and personal antecedents (cf. Folkman & Lazarus, 1985). In so far that primary and secondary appraisals are interdependent, the patterns of appraisals are believed to amalgamate in the concept of core relational themes (i.e., an explanatory statement of what a person would be thinking) for experiencing different emotions, which are concerned with the different forms of threat, challenge, harm / loss, and benefit (Lazarus, 1991a, p. 122)[3]. Moreover, it was argued by Lazarus (2000) that the core relational theme identified for each emotion expresses a synthesis of the whole relational meaning underlying each emotion.

Emotional responses. Emotions are by-products of how individuals appraise their ongoing transactions with their environment (Lazarus & Folkman, 1984). In this way, immediate response components of emotions can be seen as short-term stress outcomes to primary and secondary appraisals, through action tendencies, physiological changes and subjective states, which are usually referred to as affects (Lazarus, 1991a, p. 88). Affect refers to the expression of value given to a subjective feeling state and represents the common properties of emotions, such as positive and negative affect (Watson, Clark, & Tellegen, 1988). Short-term emotional states may therefore be important to measure in so far

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[3] To further explain the conditions by which threat, challenge, harm / loss and benefit appraisals lead to a particular core relational theme for each emotion, Lazarus (1991) expanded primary appraisal components to include goal relevance, goal congruence or incongruence and type of ego involvement. In addition, secondary appraisals were expanded to include blame and credit, coping potential and future expectations. Therefore, the core relational themes that Lazarus identified represent the amalgamation of different threat, challenge, harm / loss and benefit appraisals with different appraisal components. For example, for happiness, Lazarus (1991) identified the following core-relational theme, "Making reasonable progress toward the realisation of a goal" (p. 122), which is the amalgamation of challenge appraisals and goal relevance.

that their intensity may indicate the degree to which individuals think they are adequately managing what is personally important to them in any given context (Folkman & Lazarus, 1985). Moreover, as common emotional states (i.e., positive and negative affect) are key indicators of general affective well-being (Diener, Suh, Lucas, & Smith, 1999), measuring individuals' emotional responses to the environment may provide a strong indication of subjective well-being, which is central to psychological well-being more generally (Keyes et al., 2002). Therefore, in considering the dynamism of transactional stress, it is important to consider that as a person's appraisals of the environment change, so too will an individual's emotional responses.

Coping. The final mediator in the transactional stress process is coping, which refers to "constantly changing cognitive and behavioural efforts to manage specific external and / or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). In this way, coping processes attempt to alter the person-environment relationship or individual's appraisal of it, which in turn change the prior emotional state experienced (Lazarus, 1991a). According to Folkman and Lazarus (1980), two main functions of coping exist, which are the regulation of distressing emotions (emotion-focused coping) and doing something productive to change the problem causing distress (problem-focused coping). In the same research undertaken, the researchers concluded from a sample of 1,300 stressful encounters that problem-focused coping was more generally applied to situations which are appraised as changeable / controllable, while emotion-focused coping was more generally applied to situations which are appraised as unchangeable. A range of studies since this time have also identified different types of coping behaviours or strategies used to alter the person-environment relationship (Billings & Moos, 1981; Carver, Scheier, & Weintraub, 1989; Folkman & Lazarus, 1985; Stone et al., 1998), such as seeking social support, planning, denial, self-distraction, wishful thinking, disengagement and self-blame (Carver et al., 1989). In so far that a range of coping behaviours and functions have been identified in the literature, it appears that both may be necessary to alter individual's experiences of transactional stress (Lazarus, 1999).

Outcomes. In terms of the potential outcomes to transactional stress, the degree to which an individual is able to appraise and cope with their relationship with the environment may influence the type of short-term (e.g., action tendencies, physiological changes, affect) or long-term outcomes of stress that may be experienced (Lazarus, 1991a). Although short-term outcomes may relate to immediate affective and physiological responses, long-term outcomes are believed to consist of the prolonged effects of chronic emotional patterns on an

individual's functioning, subjective well-being, and physical health. In comparing the cognitive-motivational-relational theory to other previous approaches to understanding the nature of stress, the main distinctions of this approach from others are its emphasis on understanding the adaptive flow of events and processes over time, the varied meaning construed by individuals, their adjustment to different antecedents and their ability to cope with their personal transaction with the environment (Cooper et al., 2001; Lazarus, 1991b).

The transactional approach put forward by Lazarus and colleagues has been applied to researching a variety of different performance environments, including sport (e.g., Fletcher et al., 2006; Thelwell, Weston, Greenlees, & Hutchings, 2008) and workplace settings (Cox & Mackay, 1981; Mackay, Cousins, Kelly, Lee, & McCaig, 2004). When considering the research that has been conducted in professional sport to date, the findings indicate that professional sportsmen experience stress as a result of their competitive performance environment but also as a result of the full-time workplace in which they operate (Nicholls et al., 2006; 2009a). Therefore, if we consider professional sportsmen as 'employees' who are contracted to develop and perform in their job roles, then it may be prudent to consider contributions from occupational psychology as to how stress has been conceptualised. Although the cognitive-motivational-relational theory has been generalised to a variety of environments, occupational models of stress, such as the demand-control-support model (Johnson & Hall, 1988; Johnson, Hall, & Theorell, 1989; Karasek, 1979) have been developed with the specific purpose of understanding individual's experiences of stress in the workplace. The following section will outline the key features of the demand-control-support model.

1.3.4 Organizational Stress: The Demand-Control-Support Model (DCSM)

The Job Demand-Control-Support Model (DCSM) (Johnson & Hall, 1988; Johnson et al., 1989; Karasek, 1979) is one of the most influential models of psychosocial stress sources in the workplace (Daniels, 2013). The DCSM describes the joint interactive effects of the main job characteristics of a work organization: *demands*, *control* and *social support*. *Demands* refer to the amount of work that an individual undertakes, but also comprises factors such as time pressures and the level of mental and physical effort involved in a job role (Arnold et al., 2010). *Control* includes the components of skill discretion and decision latitude. Skill discretion refers to the extent to which the job role allows an employee to use their skills. Decision latitude is the level of control that an individual has over their work situation. *Social support* refers to the helpful interactions that an individual may elicit or receive from supervisors and co-workers (Daniels, Boocock, Glover, Hartley, & Holland,

2009). In the case of the DCSM model, it is believed that different combinations of these job characteristics (i.e., demands, control, and support) can influence the experience of stress and its negative outcomes for well-being, development and performance. Although the DCSM could be considered as a structural / interactional approach (Arnold et al., 2010), it could also be described as representing some of the most influential aspects of a transactional process. This is because the control that individuals may have in their working environment and the support that individuals seek or receive from others for coping are of key importance to secondary appraisals in the cognitive-motivational-relational model (Cox & Ferguson, 1991). The following statements represent the main theoretical assumptions of the DCSM model of occupational stress (Arnold et al., 2010; Wundke, 2007):

a) Individuals operating in jobs with low demands and high job control will experience 'low-strain jobs'.

b) Individuals operating in jobs with high demands and low job control will experience 'high-strain jobs'.

c) Individuals operating in jobs with high demands, low job control and low social support will experience 'severe strain'.

d) Individuals operating in jobs with high demands and high job control will operate in 'active' jobs which may lead to positive effects, such as increased motivation, learning and personal development.

e) Individuals operating in jobs with high demands, high job control and high social support will be more capable of coping (i.e., solving problems) caused by high demands, which prevents the deterioration of well-being.

Although the DCSM is primarily concerned with the examination of job characteristics, an individual's ability to enact control and support as coping resources plays a key role in two hypotheses which are underpinned by the DCSM model. Firstly, the *strain hypothesis* suggests that the eliciting of control and support to solve problems or express emotions are key buffers (i.e., moderators) that reduce the effect of high work demands on individuals' levels of strain (Daniels et al., 2009). Secondly, the *learning hypothesis* suggests that when individuals are able to elicit control and support to solve problems caused by high demands, individuals can learn how to cope with demands more efficiently, which can subsequently lead to enhanced performance and well-being (Daniels, 2013).

In taking the aforementioned psychosocial conceptualisations of stress together, it seems that for the investigation of sport performers who operate in professional environments, it is necessary to be cognisant of the dynamic ongoing transactions that performers may make when interacting with their environment. Furthermore, from an

idiographic perspective, it is also necessary to appreciate the individual meanings that sport performers may socially construct from their varying interactions with the environment. Finally, in evaluating sport professionals' ability to handle organizational demands, examining the degree to which these individuals are able to elicit control and support for problem- and emotion-focused coping may have important applied implications. These implications are relevant not only for the optimisation of well-being, career development and performance for these individuals, but also for identifying the degree to which stress management in this setting is the responsibility of the individual, the organization, or a joint responsibility. In light of how stress has been conceptualised from a psychosocial perspective, the following section will outline the sport psychology research that has been conducted on stress to date.

1.4 Stress in Sport

Stress continues to be one of the most widely researched areas within the field of sport psychology (Jones, 1995; Mellalieu et al., 2006). Traditionally, interest in the subject stemmed from the identification of demands that athletes encounter within competitive environments and the potential effects that these demands may have on performers' affective responses and subsequent performances (Hanton, Thomas, & Mellalieu, 2009). In the context of understanding the *competitive stress* that may be experienced by sport performers, contemporary conceptualisations have followed a transactional perspective (Lazarus, 1999), such that stress is believed to be an ongoing process comprising the relationship between the environment and a person's resources, which is mediated by appraisal and coping processes (Fletcher et al., 2006; Neil et al., 2011). In applying this transactional conceptualisation to competitive stress processes, the following definitions were developed in sport psychology (cf. Mellalieu et al., 2006, p. 3; Fletcher et al., 2006):

- *Competitive stress*: An ongoing transaction between an individual and the environmental demands associated primarily and directly with competitive performance.
- *Competitive stressors*: The environmental demands (i.e., stimuli) associated primarily and directly with competitive performance.
- *Competitive strain*: An individual's negative psychological, physical and behavioural responses to competitive stressors.

Despite current transactional conceptualisations of competitive stress in sport performers, research in the area has often followed a stimulus-based approach. Specifically, a wide range of research has been conducted using qualitative interviews to identify 'sources of stress' (e.g., Campbell & Jones, 2002a; Giacobbi, Foore, & Weinberg, 2004; Gould, Horn, &

Spreemann, 1983; Gould et al., 1993; Gould, Udry, Bridges, & Beck, 1997a; Holt & Hogg, 2002; James & Collins, 1997; McKay et al., 2008; Noblet & Gifford, 2002; O'Neill, Allen, & Calder, 2013; Park, 2004; Scanlan et al., 1991). Collectively, a range of competitive stressors have been identified, including: the physical and mental preparation of the athlete, the level of opposition, pressures and expectations to perform, the nature of the event, self-presentation, physical danger and social evaluation. These findings lend weight to the observation that the competitive sport arena appears to be a highly demanding environment for those performers who function and perform within it (Mellalieu et al., 2006).

Regardless of this observation, these studies have largely overlooked the degree to which different sport performers may appraise, react and cope differently to the wide array of competitive stressors that they may encounter. In attempting to overcome this challenge, a number of researchers have investigated the distinct components of sport performers' cognitive appraisals, emotional responses, and coping strategies in relation to competition (e.g., Campbell & Jones, 2002b; Crocker & Isaak, 1997; Evans, Hoar, Gebotys, & Marchesin, 2014; Gould, Udry, Bridges, & Beck, 1997b; Kowalski & Crocker, 2001; Nicholls, Holt, & Polman, 2005; Thatcher & Day, 2008; Vallerand, 1987). Although this research has provided sport psychologists with a greater understanding of the ways in which performers may appraise, react and cope in competition environments, by focusing on the distinct components of what is essentially a stress process, research tends to draw greater attention to specific components and ignore the dynamics of the stress process (Fletcher et al., 2006). Furthermore, this understanding only enables researchers to infer that responses may be a negative reaction to competitive stressors, or that coping behaviours may be related to general rather than specific competition stressors.

In recognising the limitations of identifying distinct components of competitive stress, researchers have also investigated interactional relationships between some of the stress components (Anshel, 2001; Kristiansen, Roberts, & Abrahamsen, 2008; Nicholas, Gaudreau, & Franche, 2011; Nicholls, Polman, Levy, Taylor, & Cobley, 2007; Ntoumanis & Biddle, 1998). These studies have mainly focused on investigating the relationships between stressors and coping styles. However, in so far that contemporary research has acknowledged the need to consider stress as a transaction (Fletcher et al., 2006), which is concerned with appraisal and coping processes at the heart of an ongoing process (Lazarus, 1991a), sport psychologists have begun to make greater developments towards their understanding of the competitive stress process in sport performers (Dugdale, Eklund, & Gordon, 2002; Gaudreau, Blondin, & Lapierre, 2002; Holt & Dunn, 2004; Kaiseler, Polman, & Nicholls, 2013; Neil et al., 2011;

Nicholls et al., 2006; Nicholls et al., 2009a).

At this juncture, it is worth noting that although the competitive stress research to date indicates that sport performers are likely to require appraisal and coping abilities to manage a wide range of stressors, it is often the case that previous research has not indicated what strategies are required for managing particular sources of stress (i.e., stressors) in particular environments. For example, the wide variety of studies which have identified sources of stress in competition have also unearthed a large number of stressors that appear to originate from the sport organization within which performers operate, such as: nutrition, injuries, team selection, financial costs, training demands, travel, coaching / managerial leadership and communication, refereeing decisions, tournament organization, negative personal rapport behaviours of coaches, relationships and experiences outside of sport, and negative interpersonal relationships (e.g., Dugdale et al., 2002; Gould et al., 1993, 1997a; McKay et al., 2008; Nicholls et al., 2009b; Noblet et al., 2003; O'Neil et al., 2013; Noblet & Gifford, 2002; Scanlan et al., 1991). This lends support to the notion that the social and organizational environment in which sport performers function imposes numerous and widely varying demands (Fletcher et al., 2006), for which there is little empirical evidence in sport psychology of how these should be appropriately managed. Therefore, to increase sport psychologists' knowledge of the stress that sport performers experience within their organizational environments, a programme of research (Arnold & Fletcher, 2012; Didymus & Fletcher, 2012; Fletcher & Hanton, 2003; Fletcher et al., 2006, Fletcher, Hanton, Mellalieu, & Neil, 2012a; Fletcher, Hanton, & Wagstaff, 2012b; Hanton & Fletcher, 2005; Hanton, Fletcher, & Coughlan, 2005; Hanton, Wagstaff, & Fletcher, 2012; Tabei, Fletcher, & Goodger, 2012) has been undertaken over the past decade to explore sport performer's experiences of organizational stress.

1.4.1 Organizational Stress in Sport

In extending transactional conceptualisations of stress, Fletcher et al. (2006, p. 329) proposed the following organizational stress-related definitions (adapted from Cooper et al., 2001; Woodman & Hardy, 2001):

> *Organizational stress*: An ongoing transaction between an individual and the environmental demands associated primarily and directly with the organization within which he or she is operating.

> *Organizational stressors*: Environmental demands (i.e., stimuli) associated primarily and directly with the organization within which an individual is operating.

> *Organizational strain*: An individual's negative physiological, physical and behavioural

responses to organizational stressors.

In a similar vein to competitive stress research that initially sought to identify sources of stress at the outset, the majority of the organizational stress programme of research to date has been concerned with the development of organizational stressor frameworks. In so far that previous research had identified a number of sources of stress relating to group dynamics, Woodman and Hardy (2001) originally developed a theoretical framework of organizational stress, which was based on Carron's (1982) model of group cohesion. This framework represented the first study of organizational stressors in elite sport performers. By conducting interviews with fifteen elite athletes from the UK, the development of their framework highlighted four main areas: Environmental issues, personal issues, leadership issues, and team issues. The main environmental issues that were identified were: selection, training environment, and finances. The main personal issues identified were: nutrition, injury, and goals and expectations. The main leadership issues were: coaches and coaching styles. The main team issues identified were: team atmosphere, support network, roles and communication. Although this framework was developed with elite performers from a single sport, research sampling elite athletes from a range of sports provided support for the majority of these themes (Fletcher & Hanton, 2003; Hanton et al., 2005). In addition, these studies also identified additional environmental issues, such as: accommodation, travel, competition environment, and safety. Furthermore, the study by Hanton et al. (2005) conducted a qualitative comparison between the quantity of organizational and competitive stressors encountered for each sport performer. The findings suggested that the elite population sampled encountered more stressors (and more varied stressors) which were primarily and directly related to the sport organization in which they operate than in relation to competitive performance.

The identification of organizational stressor themes has provided researchers and consultants with a greater awareness of the wide range of stressors that elite performers may encounter within sport organizations. However, from a theoretical perspective, the application of Carron's (1982) model of group cohesion to understanding organizational stress was believed to be biased towards the identification of interpersonal relationship demands (Fletcher & Hanton, 2003). Subsequently, a conceptual framework was developed for organizational stressors in elite sport performers, which was derived from research developments in organizational psychology (Cooper et al., 2001) and a series of studies that were conducted with elite sport performers (Fletcher & Hanton, 2003; Hanton et al., 2005). The framework consisted of five general dimensions, which were: factors intrinsic to the

sport; roles in the sport organization; sport relationships and interpersonal demands; athletic career and performance development issues; and, organizational structure and climate of the sport (Fletcher et al., 2012a).

Within the general dimension of factors intrinsic to the sport, the following stressors were identified: Training and competition environment; training and competition load; training and competition hours; travel and accommodation arrangements; nutritional issues; technological change; and, exposure to hazards and risk of injury. Within roles in the sport organization, the stressors that were developed were: Role ambiguity; role conflict; role overload; and responsibility. Within the dimension of sport relationships and interpersonal demands, the stressors identified were: personality type; leadership style; and support network. For the dimension of athletic career and performance development issues, the stressors were: Position insecurity; income and funding; and, career goals and performance enhancement. Finally, for the organizational structure and climate of the sport dimension, the stressors identified were: Culture and political environment; coaching and / or management style; lack of participation in the decision making process; inadequate communication channels; no sense of belonging; officials' and referees' decisions; and, media attention.

What is clear from this framework is that there is a plethora of different organizational stressors that sport performers encounter across a range of sports. In addition, although the previous research frameworks developed were primarily applied to elite sport performers solely, the framework developed by Fletcher and colleagues (Fletcher et al., 2012a) was the result of qualitative interviews that were conducted with both elite and non-elite sport performers. Therefore, regardless of competitive standard, sport psychologists need to be aware and sensitive to a wide range of organizational stressors that are encountered by performers of varying abilities (Fletcher et al., 2012a).

A potential limitation of this framework, however, was the influential bias towards the classification of general dimensions which largely parallel that of organizational stressors identified in non-sport occupations (e.g., Cooper et al., 2001). Furthermore, in so far that the general dimensions were developed in non-sport occupations, the transfer of each dimension could be questionable (Arnold & Fletcher, 2012). The framework was also based on research studies that were conducted with elite and non-elite performers, to the neglect of a broader population of sport participants. Therefore, to provide a more comprehensive taxonomy of organizational stressors encountered across a wider range of sport performer populations, Arnold and Fletcher (2012) conducted a meta-interpretation of thirty four qualitative studies that had been conducted on identifying organizational stressors in sport performers. From this

synthesis of studies, the organizational stressors were categorised into the following four main categories: Leadership and personnel issues; cultural and team issues; logistical and environmental issues; and, performance and personal issues. Within leadership and personnel issues, the main subcategories of stressors were: the coach's behaviours and interactions; the coach's personality and attitudes; external expectations; support staff; sports officials; spectators; media; performance feedback; and, governing body. For cultural and team issues, the main subcategories of stressors were: Teammates' behaviours and interactions; communication; team atmosphere and support; teammates' personality and attitudes; roles; cultural norms; and, goals. Within logistical and environmental issues, the main subcategories of stressors were: Facilities and equipment; selection; competition format; structure of training; weather conditions; travel; accommodation; rules and regulations; distractions; physical safety; and, technology. For performance and personal issues, the main subcategories of stressors were: Injuries; finances; diet and hydration; and, career transitions.

A strength of this meta-interpretation of organizational stressors in sport performers is that by incorporating all of the known studies that have been conducted to date, it was possible to identify a greater commonality of stressors across sports, competitive standards, ages, genders, and nationalities. In addition, the synthesis was able to identify the important interface between personal-organizational issues (e.g., career transitions) that may not have been previously identified in earlier organizational stressor frameworks in sport. Therefore, the meta-interpretation provides the most accurate and comprehensive classification of organizational stressors identified in qualitative research to date. Furthermore, this synthesis has since prompted the quantitative development and validation of the Organizational Stressor Indicator for Sport Performers (OSI-SP; Arnold, Fletcher, & Daniels, 2013). Although organizational stressors are an important (and potentially unavoidable) feature of sport performers' experiences in sport organizations, they are only able to reflect one component of the transactional stress process. Furthermore, although it is clear that there appear to be a set of common organizational stressors encountered in sport, the degree to which individuals appraise, respond to, and cope with their environment requires greater attention (Fletcher & Hanton, 2003; Fletcher et al., 2006). At this point, it is worth mentioning the limited research to date that is beginning to investigate the mediating processes (Lazarus, 1991a) involved in sport performers' experiences of organizational stress.

In terms of research that has investigated the appraisals, responses and coping in relation to organizational-related stressors, qualitative research by Neil et al. (2011) identified a number of relationships between organizational demands, appraisals, emotional responses,

further appraisals, and subsequent behaviour. Specifically, the findings indicated that athletes respond negatively to organizational-related demands, although they are able to interpret their emotions in a positive way towards their performances. Although this research was able to distinguish between positive and negative appraisals of organizational demands, the cognitive-evaluative processes were not examined in greater depth so as to understand the transactional alternatives (i.e., threat, challenge, harm) put forward by Lazarus and Folkman (Lazarus, 1991a, 1999; Lazarus & Folkman, 1984). To address these limitations, Hanton et al. (2012) conducted a six-week stress log with 4 international sport performers across a range of sports and found that the organizational stressors that were cited were predominantly appraised as threatening or harmful, with little perceived control, and few coping resources available. In addition, to investigate the situational properties of cognitive appraisals, Didymus and Fletcher (2012) conducted a 28-day diary study with thirteen national standard swimmers. A qualitative content analysis found that the majority of organizational stressors were appraised as a threat or harm. In addition, the property of imminence was associated with the greatest number of threat appraisals.

Research has also investigated coping strategies in relation to organizational stressors and appraisals in elite UK swimmers (Didymus & Fletcher, 2014) and elite Norwegian 'youth' athletes across a range of sports (Kristiansen & Roberts, 2010). In the study by Didymus and Fletcher (2014), the findings indicated that swimmers employ a range of coping strategies for each identified cognitive appraisal of organizational stressors encountered. In comparison, the study by Kristiansen and Roberts (2010) indicated that youth athletes tend to use different types of social support resources (e.g., tangible, informational, emotional) to manage organizational stressors encountered at the European Youth 'Festival' in 2007. What is clear from these findings in relation to the taxonomy of organizational stressors (Arnold & Fletcher, 2012) is that elite sport performers who encounter an array of organizational stressors need to develop a wider range of coping resources to manage their interactions with their organizational environment optimally. Consequently, if the coping strategies used to manage organizational stressors are not currently effective, then athletes may need to learn or be taught other coping resource alternatives (Didymus & Fletcher, 2014; Kristiansen & Roberts, 2010; Nicholls et al., 2006, 2007). In addition, in the case of sport organizations who may be keen to optimise the well-being of their performers, then organizations may also have a responsibility for providing additional resources to help performers to cope and respond positively to threatening and harmful organizational demands (Tabei et al., 2012).

Nonetheless, these limited findings for the mediating processes that underpin the

organizational stress process are relatively encouraging for increasing sport psychologists' knowledge of the idiographic ways in which elite performers may attempt to manage their interaction with organizational stressors in sport. However, future research on organizational stress in sport should attempt to understand these processes in a greater range of sports (e.g., individual vs. team sports), and competitive standards (e.g., professional, Olympic, amateur, recreational). This is because team sports, for example, may display a greater quantity and intensity of organizational demands that relate to group dynamics in comparison to individual sport performers. In so far that performers participating in team sports are likely to be required to work with others to achieve common group goals, it may be likely that these individuals may have greater opportunity in their organization to seek or receive social support from teammates, which may not be so apparent for individuals participating in individual sports. Furthermore, the institutionalisation of sport organizations that may be observed in professional sport organizations may provide a greater understanding of how 'other' performers (e.g., coaches, managers, support staff, administrators) in the organization manage their interactions with their organizational environment, which is likely to vary to sport performers as a result of their diverse occupational roles.

On this point, although no research has investigated the organizational stress experiences of varied populations who operate in a single sport organization (e.g., athletes, coaches, managers, support staff, etc), research has identified that coaches encounter a range of organizational-related stressors, which include a selection of the following: communication issues with athletes; recruiting; role overload; a lack of control over athletes' performances; conflict with the organization; isolation; managing athlete concerns and performance issues; athletes' opponents; selection decisions; finances; travel; administration; organizational management; and, officials (Frey, 2007; Olusoga, Butt, Hays, & Maynard, 2009; Thelwell et al., 2008). In addition, to demonstrate how coaches may respond to and cope with organizational-related stressors, Olusoga and colleagues (Olusoga, Butt, Maynard, & Hays, 2010) identified a range of psychological, behavioural and physical responses that Olympic coaches display in response to some of the abovementioned stressors. These coaches also employed problem-solving (i.e., planning), self-talk, social support, avoidance, learning and confrontation as coping strategies. Support for these findings on coping has also been found in research with professional coaches who operate in a variety of team sports (e.g., county cricket, football, rugby union). Specifically, coaches in these sports were found to predominantly adopt self-talk and expressing emotions (i.e., moaning, showing frustrations) to achieve emotion-focused functions, in managing stressors relating to poor

team performances, poor training, selection, other coaches, and officials (Thelwell, Weston, & Greenlees, 2010).

Although officials may be perceived as a stressor for both elite sport performers and elite coaches, research has also identified that sport officials who function within sport bodies also encounter a range of performance and organizational-related stressors, including: controversial calls, confrontations with coaches, difficulties working with other officials concurrently, and physical abuse (Anshel, Sutarso, Ekmekci, & Saraswati, 2014; Dorsch & Paskevich, 2007; Voight, 2009). Similarly, although personnel such as coaches, managers, and officials may experience stress from interacting *directly* with their organizational environment, research has also suggested that other individuals (e.g., parents, sport fans) may experience stress as a result of their *indirect* interactions with the organizational environment (Knight & Holt, 2013; Harwood, Drew, & Knight, 2010; Harwood & Knight, 2010; Schellenberg, Bailis, & Crocker, 2013). In particular, research by Knight and Holt (2013) has identified a range of positive and negative factors that influence parents' experiences of attending tennis tournaments. Furthermore, in this qualitative study of 40 parents of junior tennis players, a number of organizational-level recommendations were offered to enhance parents' experience of the tournament environments, such as: the organizational enforcement of rules to prevent poor sportspersonship; a need for more tennis umpires at tournaments; and a need for greater provision of psychological support to help parents and tennis players cope at tennis tournaments.

In concluding this section on stress in sport, an overarching message from the research conducted in sport psychology is that the organizational arena in which 'performers' (i.e., athletes, coaches, officials, managers, etc) operate is a breeding ground for stress. Therefore, in attempting to optimise these individuals' ongoing transactions with their organizational environments, sport psychology research needs to consider the development and evaluation of stress management interventions that are targeted at a variety of individuals operating in sport organizations. Based on the research conducted in organizational psychology, the following section provides a framework and practical implications for the development of stress management interventions in sport organizations.

1.5 Organizational Stress Management

The development and evaluation of interventions aimed to prevent or reduce stress in work organizations continues to be a topic of widespread interest in organizational and occupational psychology (e.g., Bond, Flaxman, & Bunce, 2008; Bowling, Beehr, & Grebner, 2012; Flaxman & Bond, 2010; Ivancevich & Matteson, 1987; Newman & Beehr, 1979;

Nielsen, Taris, & Cox, 2010a; Probst, 2013). Organizational stress management interventions have traditionally been defined as "any activity, programme, or opportunity initiated by an organization, which focuses on reducing the presence of work-related stressors or on assisting individuals to minimise the negative outcomes of exposure to these stressors (Ivancevich, Matteson, Freedman, & Phillips, 1990, p. 252). Despite a variety of studies that have evaluated the effectiveness of individually tailored interventions over the years (e.g., Bunce & West, 1996; DeJoy, Wilson, Vandenburg, McGrath-Higgins, & Griffin-Blake, 2010; Elo, Ervasti, Kuosma, & Mattila, 2008; Flaxman & Bond, 2010; Ganster, Mayes, Sime, & Tharp, 1982; Heaney et al., 1993; Mattila, Elo, Kuosma, & Kylä-Setälä, 2006), there have also been a series of Health and Safety Executive (HSE) reports produced (Cox et al., 2000; Parkes & Sparkes, 1998; Rick, Briner, Daniels, Perryman, & Guppy, 2001), scientific and narrative reviews conducted (Bowling et al., 2012; Briner & Reynolds, 1999; Burke, 1993; Dewe, Cox, & Ferguson, 1993; Newman & Beehr, 1979; Richardson & Rothstein, 2008; van der Klink, Blonk, Schene, & van Dijk, 2001) and a number of commentaries offered (Cox, Karanika, Griffiths, & Houdmont, 2007; Reynolds, 2000; Probst, 2013).

Researchers have also developed conceptual frameworks for different types of stress management programmes that could be offered in the workplace, to guide interested researchers and practitioners to the most appropriate interventions in particular work circumstances (Briner, 1997; Cooper & Cartwright, 1997; Cooper et al., 2001; Elkin & Rosch, 1990; Giga, Cooper, & Faragher, 2003a; Ivancevich et al., 1990; Sutherland, 2005). This latter observation is where sport psychologists may wish to begin, in considering a comprehensive framework that is based on a transactional approach (Lazarus 1991b; 1999) and by which interventions could be applied to manage the stress process in sport organizations.

1.5.1 A Conceptual Framework for Organizational Stress Management

According to Cooper and colleagues (Cooper & Cartwright, 1997; Cooper et al., 2001; Dewe et al., 2010; Giga et al., 2003a), it is believed that efforts to manage the stress process can be differentiated by: the level at which an intervention occurs; the scope of the intervention activity; its target; and, the assumptions underlying each intervention. In terms of the levels at which stress management interventions may be implemented, Cooper et al. (2001) have differentiated between *primary*, *secondary*, and *tertiary* interventions. These levels of interventions which will now be outlined in relation to mainstream organizational stress management, before considering how these may apply in sport-related organizations (Fletcher et al., 2006).

Primary interventions are based on the assumption that the most effective way to prevent strain is to eliminate or at the minimum reduce the quantity, frequency and / or intensity of stressors in the work environment. In terms of the scope of primary interventions, this level is believed to be the most proactive and preventative approach to stress management, in so far that the target of such initiatives is concerned with directly modifying the organizational environment (i.e., stressors). Therefore, primary interventions aimed to reduce workplace stressors could include: changing management structures; job redesign; restructuring employee's job roles; increasing employee participation in the decision making process; and, providing greater training and development resources (Dewe et al., 2010; Elkin & Rosch, 1990). In the context of how primary-level interventions could be applied to preventing or reducing organizational stressors in sport organizations, possible examples could include: rule changes; the restructuring and clarification of roles; improving facilities (i.e., organizational restructuring); building cohesive sport teams; performance appraisals (e.g., post-competition debriefs, end-of-season evaluations); and, team development (Fletcher et al., 2006).

Secondary interventions, which have been the most adopted approach in organizational psychology (Richardson & Rothstein, 2008), are concerned with alleviating the impact of the organizational environment on individuals, rather than modifying the characteristics of the job and / or organization. In this way, secondary interventions aim to educate and modify the way in which individuals appraise and respond to organizational stressors. Secondary interventions that have been applied in organizational psychology may for the most part be analogous to what could be offered in sport organizations, since the programmes are targeted at increasing individual's awareness of their stress experience and associated reactions. Therefore, secondary programmes in sport organizations could include: progressive muscular relaxation; cognitive-behavioural treatments; meditation / imagery; time management; assertiveness training; and, diet / hydration awareness.

Tertiary interventions largely reflect a rehabilitative and reactive approach to stress management. This is because interventions at this level are based on treating those individuals who have already experienced organizational strain and require greater support to minimise the potentially damaging consequences of organizational stressors on individuals' well-being and subsequent performance (Cooper et al., 2001). Within the mainstream workplace, the following tertiary interventions have been recommended by researchers: Individual counselling, group therapy, health checks, human resource advice, employee

Table 1.1. *A Framework for Stress Management Interventions in Sport Organizations*

	Primary Interventions	Secondary Interventions	Tertiary Interventions
Scope	Preventative: Reduce the quantity, frequency and / or intensity of stressors.	Preventative and / or reactive: Modify individual's ability to appraise, respond to, and cope with stressors.	Reactive: Minimise the damaging consequences of stressors (after they have already occurred) on well-being and / or performance.
Target	Environments and structures associated directly and indirectly with the organization.	Individuals and groups operating within sport organizations.	Individuals and groups operating within sport organizations.
Assumptions	The most effective strategy is to remove or prevent stressors from occurring.	It may not be possible to remove stressors, therefore strategies should be applied to improve individuals' ability to respond and cope with future stressors.	Resources may need to be provided to support individuals and groups in coping after stressors have already compromised well-being and / or performance.
Examples[4]	Modify organizational characteristics (e.g., communication / management structures); job redesign; restructure job roles; increase participation in decision making; increase the provision of training and development.	Offer workshops on: Relaxation, cognitive-behavioural treatments; stress awareness; meditation; time management; assertiveness; lifestyle advice; health promotion activities.	Offer resources in: Individual counselling; group therapy; health checks; human resource advice; employee assistance programmes.
Examples in sport	Modify rules / regulations; restructure roles; improve facilities; develop cohesive teams; align organizational / individual goals and expectations; integrate regular performance appraisals, optimise communication.	Offer workshops on: Progressive muscular relaxation; cognitive-behavioural treatments; stress awareness; imagery; time management; goal setting; assertiveness; diet / hydration awareness.	Offer resources in: Mentoring programmes; support networks; counselling; psychology referrals; individualised physiotherapy and rehabilitation programmes for injuries.

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[4] The following examples are provided from the stress management interventions conducted and recommendations offered from the organizational psychology literature (Arnold et al., 2010; Briner, 1997; Burke, 1993; Cartwright & Whatmore, 2005; Cooper & Cartwright, 1997; Cooper et al., 2001; Dewe et al., 2010; Elkin & Rosch, 1990; Ivancevich et al., 1990; Newman & Beehr, 1979; Sutherland, 2005).

assistance programmes (Briner, 1997; Dewe et al., 2010). In the context of sport organizations, however, examples of tertiary interventions could include: performance mentoring / assistance programmes, social support networks, clinical counselling, sport psychology referrals, physiotherapy; and individualised rehabilitation programmes to manage sport injuries. To the extent that there are a number of synergies and disparities relating to the primary, secondary, and tertiary interventions that may be appropriate for particular organizational contexts, Table 1.1 presents a proposed framework for stress management interventions in sport organizations, which facilitates knowledge transfer from the organizational psychology literature whilst also considering the specific context of individuals who operate in sport-related organizational environments (Fletcher et al., 2006).

Although primary, secondary and tertiary stress management interventions have been widely acknowledged as a framework in organizational psychology (Briner & Reynolds, 1999; Reynolds, 2000; Richardson & Rothstein, 2008, van der Klink et al., 2001), the recommendations previously offered should in part be accepted with a degree of caution for a number of conceptual and empirical reasons. Firstly, in the organizational psychology literature, there have been inconsistencies reported in the way in which this framework has been adopted (Flaxman & Bond, 2010). For example, a number of stress management treatments have been classified as secondary programmes in systematic reviews conducted (e.g., Richardson & Rothstein, 2008; van der Klink et al., 2001). However, they have also been considered as primary interventions in other reviews (e.g., Reynolds & Briner, 1994). One of the reasons for this confusion may be due to a conflict in categorising the interventions, as a result of the target group participating (e.g., individuals, groups, or the organization) and the purpose for which these programmes aim to serve (e.g., reduce stressors, modify or treat responses). For example, in so far that the training and development of individuals in organizations could be perceived as a primary intervention (i.e., targeted at modifying organizational characteristics), it could also be considered as a secondary initiative that improves individual's ability to appraise, respond to, and cope with organizational demands. In addition, although the term primary intervention is typically reserved for activities which are implemented before strain has occurred (e.g., Richardson & Rothstein, 2008), organizational-level interventions in comparison can be implemented before, during, or after organizational stressors have led to strain or negative outcomes (Bowling et al., 2012).

Secondly, a number of the interventions recommended at different levels are based on anecdotal commentaries and frameworks, for which there may be limited empirical evidence

for optimising different individual (e.g., stress, performance) and organizational (e.g., productivity, turnover) outcomes (Briner, 1997; Bowling et al., 2012). For example, organizational-level interventions, which are typically assumed by many researchers to be primary interventions, are relatively limited in the quantity of intervention studies that have been conducted to date, as well as the degree to which they are effective in managing organizational stress (Richardson & Rothstein, 2008). At this juncture, it is worth reviewing the organizational psychology literature concerning the effectiveness of organizational stress management programmes.

1.5.2 Effectiveness of Organizational Stress Management Interventions

In the most recent systematic review conducted, Richardson and Rothstein (2008) conducted a meta-analysis of 36 studies which consisted of 55 different occupational stress management interventions. These interventions were coded by the authors into either cognitive-behavioural ($n = 7$), relaxation ($n = 17$), multimodal ($n = 19$), alternative ($n = 7$) or organizational interventions ($n = 5$). To explain the nature of these interventions in more detail, cognitive-behavioural interventions referred in the main to problem solving, stress inoculation and other forms of coping training. Relaxation consisted of relaxation (i.e., physical and mental) and meditation techniques. Multimodal interventions consisted of a broad combined range of secondary (e.g., coping) and tertiary (e.g., social support group) techniques. Alternative interventions referred to a range of techniques, such as journaling, exercise, acting learning, biofeedback, classroom management, and personal development training. Organizational interventions consisted of programmes aimed at modifying specific organizational characteristics (e.g., integration of staff meetings and social support groups), role characteristics (e.g., increasing decision making through participatory action research) or task characteristics (e.g., planning to enhance problem-focused coping).

Despite the widely held view that organizational interventions may be the most effective approach to combating organizational stress (Briner & Reynolds, 1999; Burke, 1993; Newman & Beehr, 1979; Reynolds, 1997), Richardson and Rothstein (2008) did not find a significant statistical association between the organizational interventions conducted and a range of psychological, work-related and organizational outcomes ($d = 0.14$, ns). In comparison, interventions targeted at the individual-level, such as cognitive-behavioural interventions ($d = 1.16$, $p < .01$) and relaxation ($n = 17$, $d = 0.50$, $p < .001$), were found to demonstrate the strongest impact for reducing measures of stress and anxiety. These findings provided support for previous reviews (e.g., van der Klink et al., 2001), which have found cognitive-behavioural interventions to be the most effective and organizational-level

interventions to be limited in their effectiveness for a range of individual and organizational outcomes.

Although the findings of these reviews are bleak in considering the development of organizational-level interventions in sport organizations, there are a number of methodological reasons for why these findings may be unfavourable. Firstly, the majority of systematic reviews that have been conducted have focused solely on reviewing the stress management interventions that have employed a randomised control trial design. This means that quasi-experimental control designs, which are generally recommended and adopted for the investigation of field experiments (Cook & Campbell, 1979), have largely been ignored in previous reviews. In addition, given the complexities of designing programmes to modify the organizational environment, it is probable that the time required to comprehensively assess the organizational environment is more time consuming and resource intensive than the development of interventions targeted at an individual-level. This suggests that the systematic, careful and longitudinal assessment of organizational environments and members' associated experiences of stress, is critical in identifying the most appropriate interventions for managing the needs of individuals and organizations (Bowling et al., 2012; Burke, 1993). In doing so, the importance of involving organizational members in the process of developing appropriate interventions should not be underestimated (cf. Fletcher et al., 2006). Contemporary research conducted in mainstream occupational settings suggests that participatory approaches, which treat organizational members as active agents of change, are key antecedents for facilitating the success of organizational interventions (Bond & Bunce, 2001; Bond et al., 2008; Elo et al., 2008; Nielsen, Randall, & Albertsen, 2007; Nielsen, Randall, Holten, & Rial González, 2010b). This is because members who feel that they have greater autonomy and control in the active crafting of their own work environment are more likely to feel motivated to engage in behaviour change (Mikkelsen & Gundersen, 2003).

In light of the foregoing discussion, the next section will present some research directions pertaining to organizational stress and its management in professional sport organizations. These research directions form the basis from which this thesis will make a contribution. The research questions can be categorised under five main areas: (a) stress management interventions in sport performers, (b) within- and between-person relationships of occupational stress, (c) organizational-level stress audits, (d) organizational stress management interventions, and (e) the contribution of organizational psychology. This will be followed by a summary of the aims and contribution of the present thesis.

1.6 Rationale for the Thesis

1.6.1 Stress Management Interventions in Sport Performers

There has been a debate for some time as to the effectiveness of different stress management interventions which have aimed to optimise athletes' experiences of stress in the competitive environment. In addition, the degree to which such interventions can also facilitate sport performers' competitive performance is somewhat unclear. Although a number of psychological skills training reviews suggest that these programmes may be effective for improving competitive performance (Greenspan & Feltz, 1989; Martin, Vause, & Schwartzman, 2005), the prominence of competitive and organizational stress in sport points to the necessity to consolidate our knowledge and evaluate the effectiveness of interventions that have been utilized to combat athletes' stress. Although a wide range of interventions have been implemented over the years to either restructure or reduce athletes' experiences of competitive stress (e.g., Crocker, Alderman, & Smith, 1988; Laurin, Nicolas & Lavallee, 2008; Mellalieu, Hanton, & Thomas, 2009), we know very little about their overall effectiveness, and, the degree to which they may be more or less effective in particular contexts. For example, Thomas, Mellalieu and Hanton (2008) have suggested that reduction techniques may more be suitable for less experienced and younger sport performers in comparison to restructuring techniques which may be more suitable for elite and more mature sport performers. Although this suggestion appears palpable, the effectiveness of stress management interventions in sport performers has not been systematically evaluated in the sport psychology literature. This is important for contributing to sport psychologists' knowledge of the strongest evidence base for applying effective stress management in competitive sport environments. Furthermore, it is likely that the knowledge gained from such a review may also contribute in the future holistic development of interventions that enable sport individuals and groups to manage their experience of both competitive and organizational stress (Thomas et al., 2008, p. 153).

1.6.2 Within- and Between-Person Relationships of Organizational Stress

Although transactional conceptualisations suggest that stress is the result of a dynamic ongoing relationship between environmental demands and a person resources (Lazarus, 1991a, 1999; Lazarus & Folkman, 1984), studies on organizational stress in sport to date have predominantly focused on the qualitative retrospective identification of separate stress components (e.g., appraisals, responses, coping) in sport performers. This observation points to several research directions which collectively highlight the importance of assessing within- and between-person relationships of organizational stress. Firstly, in line with Lazarus'

conceptualisation of stress, future research should move away from the unitary identification of stress components and measure these processes concurrently as they interact in unison with one another (Lazarus, 1999). Secondly, the qualitative exploration of themes and potential relationships between stress components is unable to examine the intensity of cognitive appraisals, responses and coping efforts, which is possible when adopting quantitative methods. However, the utilisation of quantitative methods have largely been neglected to date. The main reason for this is due to a lack of validated measures of organizational stress processes in sport. Furthermore, the retrospective approach previously adopted to identify within-person relationships of stress could be criticised for its inaccuracy in memory recall of organizational events and mediating (i.e., appraisals, responses, coping) processes. If we also consider this latter point in line with the notion that transactional stress is dynamic and adaptational in nature (Folkman & Lazarus, 1985; Lazarus, 1999; Skinner & Brewer, 2002), then this would suggest that future research in sport psychology needs to consider the longitudinal measurement of organizational stress processes using experience sampling designs (Bolger, Davis, & Rafaeli, 2003; Daniels, 2011; Fisher & To, 2012).

Experience sampling designs, which are extremely limited in sport psychology research (e.g., Cerin, Szabo, & Williams, 2001; Didymus & Fletcher, 2012; Thomas, Hanton, & Maynard, 2007a), allow for the measurement of within-person fluctuations over time and can more accurately capture these changes as close as possible to when they occur in the environment (Stone et al., 1998). It should also be noted that the sport psychology research adopting a transactional approach to date has failed to consider the personal and situational characteristics, which are believed to make an influential contribution for influencing within-person relationships of stress (Cox & Ferguson, 1991; Fletcher et al., 2006; Lazarus 1991a, 1999). In considering the need to investigate personal and situational characteristics, it is worth recognising that Lazarus (1999) highlighted a similar future research challenge:

> "Research on the [stress] process requires an intraindividual research design, nested within interindividual comparisons, in which individuals are studied in different contexts and at different times" (p. 114).

Research directed towards addressing these challenges are likely to provide sport psychologists with a greater awareness of how organizational stress processes may vary according to the different environmental contexts in which sport individuals operate, as well as the degree to which these relationships may be more or less apparent for individuals with varying social and dispositional resources. Furthermore, longitudinal research which can develop our understanding of both within- and between-person relationships of these

phenomena may facilitate or determine in part the organizational stress management initiatives that could be employed within specific sport organizations.

1.6.3 Organizational-level Stress Audits

According to the organizational psychology literature, the effectiveness of organizational interventions may be facilitated by two methodological processes. The first of which is the necessity for researchers to carefully but comprehensively 'audit' the organizational environment in which individuals operate (Briner & Reynolds, 1999; Ivancevich et al., 1990; Fletcher et al., 2006; Rick & Briner, 2000). In addition, given the complexities and practicalities of conducting field research in applied settings, researchers interested in organizational research in sport may need to consider a range of diagnostic methods (e.g., interviews, questionnaires, observations) to capture the perspectives of all of the individuals who operate in sport organizations. A mixed method approach may indeed facilitate a more holistic understanding of the degree to which organizational conditions are affecting individuals' well-being and functioning (Nielsen et al., 2010a). The benefit of conducting such an audit in sport organizations is not solely for the purpose of tailoring appropriate interventions at an individual- and / organizational-level. Moreover, the reporting of stress audit findings to sport organizations is likely to play an important educational role. This is because individuals who operate at higher levels of a sport organization (e.g., management, chief executives), for example, may not have been previously aware or 'exposed' to how organizational changes and actions may be affecting those individuals who operate at lower levels (e.g., sport performers, coaches).

Another related stress audit issue is the challenge of how sport psychology researchers can reliably conclude which stress management interventions should be the priority for managing stress in sport organizations. Involving members of a sport organization through participatory action research processes is likely to support the identification of key priorities for particular stress management strategies at varying levels (Brough & O'Driscoll, 2010; Nielsen, et al., 2010a). Indeed, it may be the case that one intervention initiative is necessary for particular individuals or target groups in a sport organization, but not for others. In addition, by promoting member's involvement of perceptions in distinguishing between programmes of priority, this may contribute to a greater motivation for members to actively shape changes in their organization, or modify the way in which they manage their environment (Leka, Griffiths, & Cox, 2005; Nielsen et al., 2007).

1.6.4 Organizational Stress Management Interventions

The investigation of these research directions is likely to fuel the design and delivery of organizational stress management interventions in sport organizations. Indeed, given the wide range of organizational stressors and mediating processes that have been identified to date, it is not surprising that organizational stress management has emerged as a topic worthy of investigation in sport psychology (Didymus & Fletcher, 2014; Fletcher et al., 2006; Thomas et al., 2008). Although organizational-level interventions are beginning to receive attention in sport psychology (e.g., Wagstaff, Fletcher, & Hanton, 2012a; Wagstaff, Hanton, & Fletcher, 2012b), no research has tested the effectiveness of organizational stress management interventions in sport organizations. In so far that multimodal interventions have been frequently employed to reduce strain in both competitive sport (e.g., Hanton & Jones, 1999a) and organizational environments (e.g., Ganster et al., 1982), the examination of multimodal programmes may be an interesting avenue for future organizational stress management research (Bowling et al., 2012). In addition, although a number of organizational stressors in sport are likely to be unavoidable, the examination of primary-level interventions would make a strong contribution to the stress management literature in sport psychology. This is because stress management research in sport has primarily focused on cognitive restructuring or anxiety reduction strategies (Thomas et al., 2008).

Another potential avenue for intervention research in this area follows calls from organizational psychology to examine the effectiveness of *multilevel* stress management interventions (Bowling et al., 2012; Briner & Reynolds, 1999; Kohler & Munz, 2006; van der Klink et al., 2001). This is because a single-level intervention may be unlikely to wholly benefit individuals who are nested in different cohorts, groups or even higher levels of a single organization. Therefore, multilevel interventions in sport organizations could prove to be of greater benefit. For example, if initiatives to modify underlying organizational issues are unsuccessful, then the additional implementation of individual-level programmes may facilitate the ability to respond and cope with unavoidable organizational demands (Nielsen et al., 2010b). Finally, given the plethora of organizational stress research conducted with a range of individual elite athletes, researchers examining stress management in sport institutions may need to consider the examination of professional sport populations who more regularly function on a daily basis in a universally located environment. This is because many elite sport organizations operate as an entity rather than an organizational environment where individuals at different levels interact and function collectively. Therefore, gaining access and intervening with all of the individuals who operate within an elite entity could be a challenge

for researchers interested in the development and evaluation of organizational stress management in sport organizations.

1.6.5 The Contribution of Organizational Psychology to Sport

Sport psychology researchers who are interested in researching organizational stress and its management should continue to acknowledge the strong contribution that organizational and occupational psychology can offer. Despite some contextual differences that may be observed due to the inherent nature of each vocation and their organizational objectives, there are also a number of possible synergies that sport psychologists should consider in widening our understanding of stress in sport organizations. For example, although both fields of applied psychology have embraced a transactional conceptualisation of stress, the consideration of other psychosocial models from organizational psychology may facilitate sport psychologists' understanding of additional ways to appropriately managing stress in organizations. For example, the demand-control-support model (Johnson et al., 1989; Karasek, 1979) places a strong emphasis on the importance of control and support in combating organizational demands. This model may indeed contribute to sport psychologists' knowledge of how individuals in sport organizations may fluctuate in their ability to cope with organizational events over time. In addition, this latter point suggests that sport psychology could learn from a range of methodological approaches that have been more commonly adopted in organizational psychology. For example, in the past decade experience sampling methods have become increasingly popular for understanding variations in daily organizational behaviour (Fisher & To, 2012). It is therefore likely that the adoption of experience sampling technologies, such as the use of electronic diaries may be beneficial for understanding longitudinal relationships of organizational stress processes in sport organizations.

Organizational psychology can also make a number of contributions in relation to the design and delivery of organizational stress management interventions. Indeed, given that sport psychology is yet to have considered the evaluation of interventions aimed at modifying organizational environments (i.e., demands), it is likely that sport psychology can learn a great deal from the stress management frameworks, risk assessments, participatory approaches and field experiments previously conducted by organizational psychologists. To summarise, despite the increasing interest and research being conducted in sport psychology, our understanding of organizational stress and its management in sport organizations is still very much in its embryonic stages. Therefore, research directed in this area needs to consider and learn from the theories, approaches and future research recommendations that are offered

from the field of organizational psychology. In particular, those approaches which relate to the investigation of individuals and groups who operate in pressurised performance environments are certainly worthy of sport psychologists' attention.

1.7 The Aims of this Thesis

In taking all of these research rationales together, this thesis aimed to provide a concerted examination into the management of stress as it was experienced within a professional sport organization. The application of the cognitive-motivational-relational theory of stress (Lazarus, 1991a, 1999; Lazarus & Folkman, 1984) provided the foundational underpinning for the present programme of research. This thesis contributes to sport and organizational psychologists' knowledge of both the within- and between-person explanations for how professional sport performers interact with and adapt to their organizational environment. In addition, the thesis contributes to the sport psychology evidence base for the effective management of competitive and organizational stress processes. *The Design and Delivery of Stress Management in Professional Sport* will enable us to consider how interventions aimed at modifying the organizational environment play an important role in facilitating perceptions of well-being, team functioning and performance for those sport performers who operate in a professional organization.

The broad aims for each of the studies presented within this thesis are detailed below.

Study One (see Chapter 2)

- To systematically review the effectiveness of stress management interventions aimed to combat competitive stress in sport performers.
- To evaluate the effectiveness of these interventions in optimizing sport performers' competitive stress experience and performance
- To identify the highest level of empirically supported stress management treatments.

Study Two (see Chapter 3)

- To examine the within-person relationships between daily appraisals of occupational events and affective responses as they occur for sport performers who operate in a professional rugby academy.
- To examine the within-person relationships between daily affect and coping functions enacted through eliciting coping behaviours, as they occur for sport performers who operate in a professional rugby academy.
- To examine the personal and situational moderators of the above within-person relationships for sport performers who operate in a professional rugby academy.

Study Three (see Chapter 4)

- To conduct a mixed method organizational-level stress audit in a professional rugby academy organization.

- To identify participatory recommendations for future organizational stress management interventions for this organization.

Study Four (see Chapter 5)

- To evaluate the effectiveness of organizational stress management interventions on improving affect, coping self-efficacy, team cohesion and subjective performance over time in a professional sport organization.

- To compare the effectiveness of an organizational-level intervention (e.g., team building) versus an organizational- / individual-level intervention (coping effectiveness training with team building) for improving the above variables over time.

2

Study One

"Don't find fault, find a remedy."

~ Henry Ford.

2

A Systematic Review of Stress Management Interventions with Sport Performers[5]

2.1 Introduction

The competitive sport arena is a highly demanding and potentially stressful environment. Based on a transactional conceptualization, stress is defined as "an ongoing process that involves individuals transacting with their environments, making appraisals of the situations they find themselves in, and endeavouring to cope with any issues that may arise" (Fletcher et al., 2006, p. 329; adapted from Lazarus, 1999). In line with this perspective of stress, it is widely acknowledged that sport performers must manage a wide range of environmental demands and psychological responses if they are to enhance their athletic performance and sport experience. Although some performers are able to manage the various causes and consequences of the stress process, many others struggle, resulting in severe impairments to their performance and health (e.g., burnout, depression, illness). It is for this reason that stress management interventions are important for facilitating athlete's experiences and performances in a range of sport-related settings.

Within the sport psychology literature, it is acknowledged that intervention research should be of paramount importance to better understand the most appropriate approach to manage sport performers' stress (Anshel, 2005; Jones & Hardy, 1990; Thomas et al., 2008). Aligned with this view, researchers have implemented a number of stress management interventions to optimize different aspects of the transactional stress process in typically one

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[5] Peer-reviewed publications and conference proceedings associated with this chapter:

Rumbold, J. L., Fletcher, D., & Daniels, K. (2012). A systematic review of stress management interventions with sport performers. *Sport, Exercise, and Performance Psychology*, *1*, 173-193. doi: 10.1037/a0026628.

Rumbold, J. L., Fletcher, D., & Daniels, K. (2010, October). *A systematic review of stress management interventions in sport performers*. Poster session presented at the 25th annual meeting of the Association for Applied Sport Psychology (AASP), Providence, RI, United States of America.

Rumbold, J. L., Fletcher, D., & Daniels, K. (2013, July). *Recent developments in stress management research in competitive sport*. Paper presented at the 13th International Society of Sport Psychology (ISSP) World Congress of Sport Psychology, Beijing, China.

Rumbold, J. L., Fletcher, D., & Daniels, K. (2013, December). *Stress management research in competitive sport*. Paper presented at the Division of Sport and Exercise Psychology (DSEP) Biannual Conference, Manchester, United Kingdom.

of the following ways: a) a reduction in stressors, b) a modification of cognitive appraisals, c) a reduction in negative affect and an increase in positive affect, or d) to facilitate effective coping behaviours. Hence, for the purposes of this paper, optimization of the stress process involves the interrelation and balance between the components of the stress process to benefit an individual's well-being and performance. However, there is still debate as to the effectiveness of different stress management interventions in optimizing athletes' stress and performance.

This study was the first to synthesize results from across the research literature on the stress management interventions that have attempted to optimize athletes' stress experience and performance. Of the intervention reviews that have been published to date within sport psychology, the emphasis has been placed on evaluating performance enhancing treatments that are solely focused on improving performance-related outcomes. Greenspan and Feltz (1989) reviewed 23 interventions with athletes and concluded that relaxation-based and cognitive restructuring programmes were generally effective in improving athletes' performance. Martin et al. (2005) also reviewed psychological interventions with sport performers, although they had more stringent inclusion criteria than Greenspan and Feltz (1989). They incorporated only 15 studies that employed either single-subject and experimental designs to evaluate performance enhancement. These interventions mainly consisted of cognitive-behavioural-based multimodal programmes. Of the seven single-subject designs that were evaluated by Martin et al. (2005), it was found that five studies reported positive effects for all participants. In addition, eight out of eight experimental designs reported performance improvements for the treatment group in comparison to a control group. Although these reviews (Greenspan & Feltz, 1989; Martin et al., 2005) have provided support for athletes' performance enhancement, psychosocial programmes also play a salient role in contributing towards performers' affective well-being (Miller & Kerr, 2002). In particular, the prominence of stress in athletes' experience of competitive sport indicates that intervention reviews should also assess the extent to which interventions alter athletes' stress experience. However, to date, no reviews have specifically assessed the effectiveness of interventions that aim to optimize athletes' stress experience and performance.

Effective Stress Management

Effectiveness has been referred to as "the applicability, feasibility, and usefulness of the intervention in the local or specific setting where it is to be offered" (American Psychological Association, 2002, p. 1053). Researchers who seek to assess effectiveness generally recommend that manipulation checks are conducted to assess participants'

perceptions of and satisfaction with a specific programme (Greenspan & Feltz, 1989; Vealey, 1994). These checks are generally in the form of quantitative social validation measures or interviews post intervention. Other evaluations of effectiveness include calculating the overall effect size and power of behaviour change for the various stress process component and performance outcomes measured. To date, the sport psychology literature has indicated that stress management interventions may generally be effective in reducing athletes' state and trait anxiety (Thomas et al., 2008). However, anxiety is only one component of the dynamic, ongoing stress process. It is, therefore, important that researchers seek to broaden their understanding of the interventions that are effective in optimizing the wider stress process (e.g., stressors, appraisals, emotions, coping). Establishing the circumstances in which programmes are effective would assist sport psychologists in assessing when treatments are effective for performers of particular age groups and competitive levels. Notwithstanding the importance of assessing effectiveness, in order to accurately reflect a rigorous and robust evidence-base, the treatment efficacy should also be considered.

Treatment Efficacy of Stress Management

As stated in the Criteria for Evaluating Treatment Guidelines (American Psychological Association, 2002), treatment efficacy is the "systematic and scientific evaluation of whether a treatment works" (p. 1053). The difference between efficacy and effectiveness is that efficacy is concerned with effective outcomes that are based on acceptable internal validity. When attempting to reliably estimate the effect of stress management for sport performers, applied researchers should also consider the research designs which are able to infer causality and increase confidence in the strength of an intervention effect. According to the APA framework, such interventions employ randomized controlled trials (RCTs) that include a control or comparison group. The randomization of participants to treatment and control groups allows for causality to be inferred and provides reliable estimates of effects (Martin et al., 2005). Such designs are considered more likely to be classified at the highest level of empirically supported treatments (Chambless & Ollendick, 2001). Other noteworthy evaluations of efficacy include: (a) whether interventions included information descriptions to allow other researchers to replicate studies, (b) whether interventions were carried out in naturalistic settings, and (c) whether manipulation checks and follow-up assessments were conducted.

It is important, therefore, that stress management interventions with sport performers are considered in terms of both their effectiveness and their efficacy. Although the primary focus in this review is the assessment of effective stress management, at the highest level of

empirical support it is necessary to demonstrate efficacy before demonstrating effectiveness. Indeed, for the field of sport psychology to report good evidence-based programmes, researchers need to incorporate designs and validation methods that are robust enough to infer causality, but also, on a more practical level, take into account the personal and situational needs of sport performers (Anshel, 2005; Mellalieu et al., 2006; Thomas et al., 2008). The latter point was illustrated by Mellalieu et al. (2006) who noted that employing certain anxiety reducing programmes (e.g., relaxation training) may not be appropriate in sports that may require higher cognitive and physical activation states prior to performance (e.g., weightlifting). In view of this observation, it is likely that various personal and situational characteristics will act as moderators that influence the relationship between treatments and effects. These moderators, therefore, should be considered prior to designing interventions and when assessing the various types of effective stress management interventions that have been applied with sport performers.

Moderators of Intervention Effects

In assessing the effectiveness of stress management with sport performers, it is important to consider the various study characteristics that may be associated with effective outcomes for athletes' stress experience and performance. Identifying moderating variables could help to explain inconsistencies across findings, improve intervention efficiency, and enhance dissemination of effective evidence-based programmes. Understanding which characteristics may moderate the main effect of treatment is important because this may enable applied researchers to identify who will benefit most from particular treatments. For example, it is possible that different types of treatment (e.g., cognitive, multimodal, alternative) may be an important predictor of change for performers of particular competitive ages or standards. In this way, it is possible that cognitive restructuring techniques may be more beneficial for elite athletes in comparison to non-elite and younger performers who may find stress reduction treatments more effective (Fletcher & Hanton, 2001).

An important message to emerge from this overview is that applied researchers require a greater understanding of the programmes that are effective at managing performers' stress experience. In addition, there is a need to provide practitioners with a greater awareness of the treatments that are deemed to be effective for optimizing competitive athletes' stress and performance. To date, however, there has been no systematic attempt to critically review the effectiveness of stress management interventions or outline their treatment efficacy. The purpose of this research, therefore, was to systematically identify and evaluate the psychosocial interventions used to manage a component of the stress process in competitive

sport performers. The systematic review examined the effectiveness of these interventions in facilitating athletes' stress experience and performance and reported the highest level of empirically supported treatments.

2.2 Method

Design

Through critical exploration, evaluation, and synthesis, a systematic review identifies and summarizes all of the empirical studies that pertain to a research topic (Cooper, 1982; Green et al., 2008). This approach involves a rigorous protocol that reduces reporter bias and random error (Cook, Mulrow, & Haynes, 1997). For these reasons, a systematic review was deemed the most appropriate method to address the research question, because a large number of findings may be evaluated in combination (Mulrow, Cook, & Davidoff, 1997; Murlow, 1994). Systematic reviews can include the statistical methods of meta-analysis if studies provide sufficient data to calculate effect sizes. However, because a large number of studies provided insufficient statistics (e.g., means and standard deviations) to calculate effect sizes, and because some of the studies were qualitative in nature, narrative analysis was undertaken in conjunction with vote counting methods (Cooper, 1998) which involve interpreting intervention results based on their reported significance.

Search Strategy

The procedure for identifying appropriate studies was based on well-established systematic review guidelines reported in the fields of health care (Edwards, Hannigan, Fothergill, & Burnard, 2002; Egger & Davey Smith, 2001), occupational psychology (Cooper, 1982; Cooper, 2003), and sport psychology (Goodger, Gorely, Lavallee, & Harwood, 2007; Nicholls & Polman, 2007). The search strategy adopted three main approaches to gather research evaluating stress management interventions with sport performers. Firstly, between April 2009 and May 2010, research papers were gathered and identified from the following electronic databases: ArticleFirst (1990 to present), Applied Social Sciences Index and Abstracts (1987 to present), MEDLINE (1965 to present), Physical Education Index (1970 to present), PsycARTICLES (1894 to present), PsycINFO (1967 to present), SPORTDiscus (1985 to present), Web of Science (1945 to present), and Zetoc (1993 to present). For each database various keyword combinations were used to identify relevant empirical studies, including: affect regulation, anxiety, appraisals, athletes, biofeedback, burnout, cognitive-behavioural therapy, coping, demands, depression, emotions, goal setting, imagery, interventions, relaxation, self talk, sport, strain, stress, stressors, stress inoculation training, stress management, stress management interventions, stress management

programmes, and well-being. The author contacted eight experts in stress in sport to establish if there were any keywords missing from this list. This resulted in the inclusion of two additional keywords: competition and pressure.

The second search strategy involved conducting a manual search of the following journals from the first issue of publication: International Journal of Sport and Exercise Psychology (2003 to 2010), International Journal of Sport Psychology (1994 to 2010), Journal of Applied Sport Psychology (1989 to 2010), Journal of Clinical Sport Psychology (2007 to 2010), Journal of Sport Behavior (1990 to 2010), Journal of Sport and Exercise Psychology (1979 to 2010), Journal of Sports Sciences (1983 to 2010), Psychology of Sport and Exercise (2000 to 2010), Research Quarterly for Exercise and Sport (2001 to 2010), and The Sport Psychologist (1987 to 2010). Once this strategy was complete, the third search strategy involved citation pearlgrowing (Hartley, 1990), which involved searching reference lists of the full papers that were collected and met the inclusion criteria.

Inclusion Criteria

The literature search was conducted to gather and identify the studies that employed psychosocial interventions used to manage a component(s) of the psychological stress process in sport performers. In this way, psychosocial interventions refer to studies of social influences and their effect in modifying individual behaviour (Frosh, 2003). An example of some typical interventions include cognitive (e.g., imagery, self-talk) and multimodal treatments (e.g., stress inoculation training, progressive muscular relaxation). For research papers to be included in the review, the subjects within each study were required to train and compete regularly in a specific physical activity to be considered authentic *sport* performers. In this way, novice individuals were not considered as sport performers. On the basis of this criterion, a selection of intervention studies were excluded from the review. For example, two studies by Griffiths and colleagues (Griffiths, Steel, Vaccaro, Allen, & Karpman, 1985; Griffiths, Steel, Vaccaro, & Karpman, 1981) that tested the effects of relaxation techniques on anxiety levels of scuba divers were rejected. These studies were not included due to the sample of novice students. Additionally, psychophysiological interventions were not included since they did not measure athletes' psychological stress.

When retrieving the interventions that had been conducted with sport performers, it was also a requirement that the papers were published in peer-reviewed journals and available in the English language. Although this approach represents a publication bias (Egger & Davey Smith, 2001), it is impractical and expensive to obtain copies of unpublished documents and translate foreign written material. In addition, given the limited amount of

information that is provided in published abstracts of conference proceedings, it is unlikely that these studies can be evaluated with sufficient rigour to determine whether an intervention is effective (Scharf et al., 2008).

Sifting of Research Papers

The research papers that were potentially appropriate for the review were assessed by title, abstract, and then full text (see Figure 2.1). At each stage of evaluation, studies were excluded from the sifting process if certain inclusion criterion were not satisfied. To elaborate, studies were required to provide information pertaining to study demographics (e.g., sample size), the experimental study design (e.g., whether the method incorporated a control or comparison group), and the stress component(s) outcome measured (e.g., stressors, appraisals, emotions). These features were important to identify in the systematic review to consider any potential moderators that may influence the relationship between treatments and effects. Moreover, because the review focused on the stress management interventions conducted in sport *performers*, studies of other populations (e.g., sport coaches, managers, parents) were excluded from the analysis. The following descriptive information was extracted and coded from each study: sample size, gender, mean age, type of sport, skill classification, competitive standard, country location, type of intervention, measures used, stress process and performance outcomes measured, the design employed, the duration of intervention, where intervention were conducted, whether treatment manuals were provided, whether manipulation checks and follow-up assessments were carried out.

Dr David Fletcher coded approximately 10% of the original titles (n = 80/845), abstracts (n = 40/417), and full text papers (n = 10/109) to assess inter-coder reliability. On the basis that inter-rata agreement was 95%, the author coded the remaining studies and when necessary, received assistance from Dr David Fletcher to evaluate any ambiguous information. Any discrepancies were resolved through discussion until a consensus was reached. The vote counting procedure adopted meant that studies were coded on the outcome effects reported for each intervention variable. More specifically, statistical significance of effects was used as the criterion for a positive effect. In addition, where computable, effect sizes (Cohen's d) were calculated using comprehensive meta-analysis (CMA) version-2 software, to reduce the likelihood of human error (Borenstein, Hedges, Higgins, & Rothstein, 2005). In the case where qualitative analyses were conducted, outcome effects were coded based on the interpretations of the original authors.

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┌──────────────────────────────┐
│  Potentially relevant papers │
│                              │
│ gathered from initial searches│
│                              │
│         (n = 845)            │
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┌──┐
│ Papers rejected at title (n = 428)   │
└──┘

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┌──────────────────────────────┐
│      Abstracts reviewed       │
│                              │
│         (n = 417)            │
└──────────────────────────────┘
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┌──┐
│ Papers rejected at abstract (n = 308)   │
│   │
│ Rationale for exclusion: │
│   │
│ Abstracts from conference proceedings (n = 14)   │
│   │
│ Duplicate study (n = 1)   │
│   │
│ Exercise intervention of stress (n = 1)   │
│   │
│ Research designs did not include an intervention (n = 156)   │
│   │
│   Correlation studies (n = 80)   │
│   │
│   Qualitative studies of the stress process (n = 17)   │
│   │
│   Reflective studies of Service Delivery (n = 14)   │
│   │
│   Reviews/commentaries of stress and/or interventions (n = 45) │
│   │
│ Research papers were unavailable in English language (n = 7) │
│   │
│ Studies were not published in a peer-reviewed Journal (n = 2)│
│   │
│ The research did not target psychological stress (n = 117)   │
│   │
│   Performance enhancement interventions (n = 88)   │
│   │
│   Studies investigating psychological skills training (n = 29) │
│   │
│ The sample population did not include athletes (n = 10)   │
└──┘

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┌──────────────────────────────┐
│     Full papers reviewed      │
│                              │
│         (n = 109)            │
└──────────────────────────────┘
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┌──┐
│ Papers rejected at full paper (n = 46)   │
│   │
│ Rationale for exclusion: │
│   │
│ The research did not measure psychological stress (n = 13)   │
│   │
│ Duplicate study (n = 1)   │
│   │
│ Insufficient information provided (n = 7)   │
│   │
│ The research was not a stress management intervention (n = 5)│
│   │
│ The sample population did not include athletes (n = 20)   │
└──┘

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┌──────────────────────────────┐
│     Full papers included      │
│                              │
│         (n = 63)             │
└──────────────────────────────┘
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Figure 2.1. Flow diagram of the stages of the systematic review.

2.3 Results

Study Characteristics

Of the original 845 citations that were retrieved, 63 research papers (64 studies) were included in the systematic review.[6] Table 2.1 summarizes the following study characteristics of the interventions that were included: sample size, gender, mean age, type of sport, skill classification of the sport, competitive standard of the athletes, research design employed, type of measures used, stress concept measured, type of intervention implemented, and the duration of intervention. In terms of the sample sizes gathered for each of the studies, 52 studies (82%) recruited between 1-50 participants, and only two studies (2%) had sample sizes over one-hundred (viz., Bakker & Kayser, 1994; Devlin & Hanrahan, 2005). In view of smaller sample sizes, it is possible that any non-significant effects reported are more likely to display insufficient power.

When considering the potential moderators of intervention effects, it was revealed that the mean age of participants ranged from 12-21 years for over half of the intervention research ($n = 38$, 59%). Seventeen of the studies (27%) failed to provide participant age-related data. With regards to the sport classification of studies, the results showed that 26 studies (40%) were classified as team sports, 32 (50%) were classified as individual sports, and only 3 studies (5%) combined both sport types. Fifty-three interventions (83%) included sports that require gross motor skills movements, with only one study sampling a fine motor skilled sport in isolation (viz., Prapavessis, Grove, McNair, & Cable, 1992). Turning to the competitive standard of participants, 20 studies (31%) recruited collegiate performers, while elite ($n = 4$, 6%) and semi-professional populations ($n = 3$%) were largely neglected. Thirteen studies (21%) did not provide sufficient information as to the competitive standard of the participants. An analysis of the research designs revealed that 21 studies (33%) employed true experimental designs, which involved the randomization of participants to an intervention and control or comparison group. Of the remaining studies, 16 (25%) utilized single-subject designs, 16 (25%) used a variety of quasi-experimental designs, and 11 (17%) employed pre- experimental designs. Additionally, the use of predominantly experimental designs meant that 47 studies (74%) implemented quantitative measures, 15 used mixed methods (23%), and only 2 studies (3%) employed qualitative methods exclusively (viz., Mace, Eastman, & Carroll, 1986; Mace, Eastman, & Carroll, 1987).

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[6]63 papers were included in the systematic review. However, a study by Weinberg, Seabourne and Jackson (1982) reported two interventions with separate samples. Thus, this paper was reported as two separate studies.

Table 2.1. Descriptive Analysis of Study Characteristics

Characteristic	Frequency of Studies
Sample size	
1	7 (11%)
2-20	21 (33%)
20-50	24 (38%)
51-100	10 (16%)
101-200	1 (1%)
200+	1 (1%)
Gender	
females only	17 (27%)
males only	19 (29%)
combined	23 (36%)
not reported	5 (8%)
Mean age, years	
12-21	38 (59%)
22-40	8 (13%)
40 +	1 (1%)
not reported	17 (27%)
Type of sport	
team only	26 (40%)
individual only	32 (50%)
combination	3 (5%)
not reported	3 (5%)
Skill classification	
open skilled sport	20 (31%)
closed skilled sport	23 (36%)
combination of open and closed skills	18 (28%)
gross motor skilled sport	53 (83%)
fine motor skilled sport	1 (1%)
combination of gross and fine skills	7 (11%)
sport unclear/not reported	3 (5%)
Competitive standard	
high school	3 (5%)
collegiate	20 (31%)
club (non-professional)	6 (9%)
regional (non-professional)	2 (3%)

national (non-professional)	4 (6%)
semi-professional	2 (3%)
elite (international, Olympic, professional)	4 (6%)
a variety of competitive levels	10 (16%)
not reported	13 (21%)

Design

pre-experimental designs

case study design (posttest only)	6 (9%)
one group design (pretest-posttest)	5 (8%)

single-subject designs

single-subject designs with comparison	2 (3%)
single-subject designs without comparison	14 (22%)

quasi-experimental designs

non-randomized controlled trial (pretest-posttest)	11(17%)
non-randomized trial with comparison (pretest-posttest)	2 (3%)
non-randomized controlled interrupted time-series	3 (5%)

true-experimental designs

randomized controlled trial (pretest-posttest)	16 (25%)
randomized controlled trial (posttest only)	1 (1.5%)
randomized trial with comparison group (pretest-posttest)	3 (5%)
randomized controlled interrupted time series	1 (1.5%)

Measures

quantitative measures (e.g., questionnaires, surveys)	47 (74%)
qualitative measures (e.g., interviews)	2 (3%)
mixed methods	15 (23%)

Type of intervention

cognitive	11 (17%)
multimodal	44 (69%)
alternative	9 (14%)

Duration of intervention

1-5 sessions	9 (15%)
6-12 sessions	4 (6%)
1-4 weeks	5 (8%)
5-8 weeks	20 (31%)
9-12 weeks	4 (6%)
6 months +	11 (17%)
not reported	11 (17%)

A perusal of the stress component outcomes that were measured revealed that 46 interventions assessed state and trait anxiety (72%). When further analyzing the anxiety interventions ($n = 46/64$), imagery ($n = 28$), relaxation ($n = 27$), and self-talk training ($n = 10$) were the most frequently implemented, either in isolation or in combination with other treatments. In terms of the imagery programmes that measured state anxiety ($n =26$), 17 studies (65%) reported a post-intervention reduction in state anxiety, while three out of the total 28 imagery interventions (11%) reported a decrease in trait anxiety. In the main, imagery only produced beneficial effects for anxiety when included as part of a multimodal intervention, of which 35 (76%) were effective. When assessing relaxation techniques, 16 out of 23 (70%) studies reported state anxiety reductions. When imagery and relaxation were both employed with a combination of additional treatments ($n = 18$), the findings showed positive effects for state anxiety in 11 studies (61%). In terms of the self-talk techniques that were utilized exclusively, or as part of a multimodal programme, nine out of the ten studies were effective in reducing state anxiety.

Effectiveness and Efficacy of Stress Management Interventions

When assessing the overall effectiveness for interventions that measured both stress and performance outcomes, 22 out of 39 studies (56%) provided evidence for combined positive effects. In addition, when evaluating the effects for performance only, 30 of the 39 studies (77%) reported positive effects. However, when evaluating the effects for stress component outcomes only, it was found that positive effects were reported for 52 out of the 64 studies (81%). Conversely, when establishing treatment efficacy for the highest level of empirical support, a total of only 21 RCTs and two single subject designs with a comparison group (36%) were evaluated. Of these studies, 22 out of 23 studies (96%) altered performers' stress experience beneficially. When turning attention to these programmes that measured both stress and performance outcomes (13 out of 23 studies), the findings were mixed, with only seven studies (54%) providing evidence of positive effects for both variables. To assess the effectiveness of stress management programmes in more depth, the interventions that shared common techniques were grouped into cognitive, multimodal and alternative interventions. When accounting for the number of treatments within each intervention category, 11 of the 64 studies employed cognitive treatments (17%), 44 comprised a combination of different multimodal programmes (69%), and nine implemented alternative interventions (14%). The following sub-sections detail the programmes employed in these treatments and their effects on various components of the stress process and performance. In addition, the treatment efficacy of these interventions is outlined.

Cognitive interventions. Within cognitive intervention studies (n = 11, 17%), the content of treatments consisted of: cognitive-behavioural therapy, coping, goal-setting, hypnosis, imagery, rational-emotive therapy, and self-talk. Table 2.2 illustrates the summary of effects for cognitive interventions on various stress component and performance outcomes. The summary of study effects revealed that there were 23 positive effects, six null effects, and one negative effect for stress components and performance. When considering the competitive level, it was found that 13 out of the 23 (57%) positive effects were reported in studies that sampled collegiate performers. Six out of the 11 studies measured stress and performance, of which four reported combined positive effects (66%) for both outcomes (viz., Barker & Jones, 2008; Burton, 1989; Hamilton & Fremouw, 1985; Hatzigeorgiadis et al., 2009). Although the interventions ranged in duration from one session to one season, studies that implemented treatments over a two month period have provided support for prolonged positive effects for different components of the stress process (viz., Barker & Jones, 2008; Burton, 1989; Maynard, Smith, & Warwick-Evans, 1995; Mellalieu et al., 2009) and performance (viz., Barker & Jones, 2008; Burton, 1989). In terms of the research methods adopted, only two studies employed RCT designs (viz., Arathoon & Malouff, 2004; Hatzigeorgiadis et al., 2009), which both enhanced positive affect and reduced cognitive anxiety respectively. However, although these studies had comparatively large samples sizes ($n \geq 68$), the intervention lengths were only between 1-5 sessions. Of the remaining nine studies, two utilized non-RCTs, six employed single-subject designs, and one used a one group design. An examination of the cognitive interventions revealed that five studies were conducted within the training environment and two were delivered before or after competition. Furthermore, interventions produced nine out of the 23 positive effects (39%) for stress and performance outcomes when delivered in training environments. In addition, six studies (55%) supplied standardized treatment manuals and five (45%) provided manipulation checks. No follow-up assessments were carried out.

Multimodal interventions. Within multimodal interventions ($n = 44$, 69%), the content of treatments consisted of a combination of the following: arousal control, attentional training, centering, cognitive control, cognitive and somatic relaxation training, concentration, COPE therapy, energising, goal setting, hypnosis, imagery, meditation, motivation, pre-performance routines, positive thinking, self-talk, stress inoculation training, team building, thought stopping, and visuo-motor behaviour rehearsal. These studies assessed a wide variety of grouped treatments, stress components, and performance measures.

Table 2.2. Summary of Effects for Cognitive Stress Management Interventions ($n = 11$)

Outcome	Positive Effect (+)	No Effect (0)	Negative Effect (-)	No of Studies	Summary of Study Effects		
					+	0	-
Appraisals							
positive thoughts	25			1	1	0	0
thought listing	21			1	1	0	0
Affective responses							
anxiety perceptions	49 (.43)			1	1	0	0
cognitive anxiety	9 (.63), 16 (1.38), 21, 28 (.67)	49 (.09)		5	4	1	0
cognitive anxiety direction	44 (2.07), 46			2	2	0	0
cognitive anxiety intensity		44 (0.00)		1	0	1	0
negative affect	5, 46	45		3	2	1	0
positive affect	3 (.59), 5, 45, 46			4	4	0	0
somatic anxiety	16 (2.04), 28 (.46)	21, 49 (-.14)		4	2	2	0
somatic anxiety direction	44 (2.07), 46			2	2	0	0
somatic anxiety intensity			44 (-.94)	1	0	0	1
Performance	5, 9 (.25), 25, 28 (.54)	21, 44		6	4	2	0
Stress components and performance	5, 9, 25, 28	21*, 44*		6	4	2*	0

Note. Parentheses indicate effect sizes (Cohen's *d*) where calculable, * = mixed effects for stress components and performance

Study reference numbers: 3 = Arathoon & Malouff (2004); 5 = Barker & Jones (2008); 9 = Burton (1989); 16 = Cumming, Olphin, & Law (2007); 21 = Elko & Ostrow (1991); 25 = Hamilton & Fremouw (1985); 28 = Hatzigeorgiadis, Zourbanos, Mpoumpaki, & Theodorakis (2009); 44 = Maynard, Smith, & Warwick-Evans (1995); 45 = McCarthy, Jones, Harwood, & Davenport (2010); 46 = Mellalieu et al. (2009); 49 = Page, Sime, & Nordell (1999).

Table 2.3 illustrates the summary of effects for multimodal interventions on various stress component and performance outcomes. The summary of study effects revealed from 44 studies that there were 86 positive effects, 36 null effects, and six negative effects for various stress components and performance. When considering the competitive level, it was found that 27 of the 86 (32%) positive effects were reported in studies that sampled collegiate performers. In addition, 25 out of the 85 (29%) positive effects were reported from studies that did not provide information as to the competitive level. Thirty studies (68%) measured both stress process and performance outcomes, of which 16 reported positive effects (53%), with 13 (43%) reporting mixed effects and one (3%) reporting no effect for both variables. In addition, when evaluating the effects for performance only ($n = 30$, 68%), 23 studies (77%) reported positive effects and seven studies reported null effects. When considering the efficacy of these interventions, a large number of studies provided treatment procedures ($n = 33$, 75%), however, a smaller proportion included manipulation checks ($n = 17$, 39%) or follow-up assessments ($n = 6$, 14%). These programmes were conducted in training ($n = 10$, 23%), competition ($n = 9$, 20%), and laboratory environments ($n = 13$, 30%), although 12 studies (27%) did not report this information. In addition, interventions produced 33 positive effects (38%) when delivered in laboratory environments.

Alternative interventions. Within alternative interventions ($n = 9$, 14%), the content of treatments consisted of the following: anger awareness, applied relaxation, biofeedback, music interventions, personal goal management, and progressive relaxation training. Table 2.4 illustrates the summary of effects for alternative interventions on stress component and performance outcomes. The summary of study effects showed that there were 15 positive effects, 11 null effects, and no negative effects for stress components and performance. When considering the competitive level, it was revealed that 3 out of the 15 (20%) positive effects were reported in studies that sampled high school, national, semi-professional performers, and a mixture of competitive levels. Three studies measured both stress process and performance outcomes, of which two reported positive effects (viz., Bishop et al., 2009, Lanning & Hisanga, 1983). These studies were conducted over a wide range of intervention time periods and appear to provide mixed findings for optimizing performers' stress experiences in particular. For example, the findings from two randomised controlled trials provided contradictory support for reducing anger within team sports (viz., Brunelle, Janelle, & Tennant, 1999; Simpson & Karageorghis, 2006). Using anger awareness as a treatment, Brunelle et al. (1999) found no effect for state anger, but a positive effect for reducing angry behaviour.

Table 2.3. Summary of Effects for Multimodal Stress Management Interventions ($n = 44$)

Outcome	Positive Effect (+)	No Effect (0)	Negative Effect (-)	No of Studies	Summary of Study Effects		
					+	0	-
Stressors							
athletic stressors	32 (.80)[SI]			1	1	0	0
athletic & life stressors	32 (.89)[SI]			1	1	0	0
Appraisals							
benign appraisals	35 (.33)[SI]			1	1	0	0
challenge appraisals	35 (.18)[SI]			1	1	0	0
irrelevant appraisals		35 (.08)[SI]		1	0	1	0
negative thoughts	23 (.79)[VM]	14 (.34)[CA], 15 (-.52)[CA]		3	1	2	0
positive thoughts	15 (.21)[CA], 38[SI]	14 (.31)[CA]		3	2	1	0
threat appraisals	35 (.69)[SI]			1	1	0	0
Affective responses							
affect reactions	2			1	1	0	0
anxiety	64 (1.21)			1	1	0	0
cognitive anxiety	15 (.85)[CA], 20 (1.19), 29, 31, 50, 53, 54, 55, 58 (.08)	10 (-.63), 11(.-88), 14 (-.38)[CA], 41(-.12)	13 (-.52)	14	9	4	1
cognitive anxiety direction	24 (.77), 27, 40, 42 (.73), 60	1 (-.58)		6	5	1	0
cognitive anxiety intensity	1 (.93), 24 (.77), 42 (.94), 60	27, 47		6	4	2	0
negative affect	56 (.53)			1	1	0	0
negative emotions	59 (.64)			1	1	0	0
positive affect	56 (.64)			1	1	0	0
somatic anxiety	15 (.60)[CA], 20 (1.09), 29, 39[SI], 50, 51 (1.02), 53, 54, 55	10 (-.63),11(-.28), 14 (.24)[CA], 41 (-.20), 58 (-.21)	4, 13 (-1.15)	16	9	5	2
somatic anxiety direction	24 (.77), 27, 40, 42 (1.04), 60	1 (-.66)		6	5	1	0
somatic anxiety intensity	1 (1.06), 24 (.77), 42 (.18), 60	27, 47		6	4	2	0
state anxiety	37[SI], 48 (1.09), 62[VM], 63[VM], 52 (.24)[SI]			5	5	0	0

stress reaction		22 (.27)		1	0	1	0
tension			30 (-.85)	1	0	0	1
trait anxiety	26 (.15), 61 (.18)^{VM}, 62^{VM}, 63^{VM}	14 (-.41)^{CA}, 15 (.01)^{CA}, 18, 35 (-.23)^{SI}, 47	33 (-1.04)^{SI}	10	4	5	1
Coping							
adaptive coping		26 (-.37)		1	0	1	0
approach coping		47		1	0	1	0
avoidance coping		47		1	0	1	0
control over emotions	2			1	1	0	0
coping with negative thoughts	17			1	1	0	0
maladaptive coping	26 (.33)			1	1	0	0
negative thinking coping	35 (1.03)^{SI}			1	1	0	0
positive thinking coping		35 (-.04)^{SI}		1	0	1	0
wishful thinking coping			30 (-1.47)	1	0	0	1
Performance	4, 10, 14 (.57)^{CA}, 17, 18, 23^{VM}, 27, 29, 33 (.12)^{SI}, 35^{SI},38^{SI}, 39^{SI}, 40, 48 (.97), 50, 51 (1.17), 53, 54, 56 (.85), 59 (.36, .49, .64), 60, 61 (.11, .17, .24)^{VM}, 63^{VM}	1 (-.29, -.36), 13, 15 (.04)^{CA}, 20 (.24), 22, 62^{VM}, 64		30	23	7	0
Stress components and performance	17, 23^{VM}, 29, 38^{SI}, 39^{SI}, 40, 48, 50, 51, 53, 54, 56, 59, 60, 61^{VM},63^{VM}	1*, 4*, 10*, 13*, 14^{CA}*, 15^{CA}*, 18*, 20, 22*, 27*, 33^{SI}*, 35^{SI}*, 62^{VM}*, 64*		30	16	1, 13*	0

Note. Parentheses indicate effect sizes (Cohen's *d*) where calculable, ^{CA} = Cognitive Affective Stress Management, ^{SI} = Stress Inoculation Training, ^{VM} = Visuo-motor behavioural rehearsal, * = Mixed effects for stress components and performance Study reference numbers: 1 = Abouzekri & Karageorghis (2010); 2 = Anshel & Gregory (1990); 4 = Bakker & Kayser (1994); 10 = Carter and Kelly (1997); 11 = Cogan & Petrie (1995); 13 = Crocker (1989a); 14 = Crocker et al. (1988); 15 = Crocker (1989b), follow-up to Crocker et al. (1988); 17 = Davis (1991); 18 = Daw & Burton (1994); 20 = Edwards & Steyn (2008); 22 = Fournier, Calmels, Durand-Bush, & Salmela (2005); 23 = Gravel, Lemieux, & Ladouceur (1980); 24 = Hale & Whitehouse (1998); 26 = Haney (2004); 27 = Hanton & Jones (1999a); 29 = Holm, Beckwith, Ehde, & Tinius (1996); 30 = Johnson (2000); 31 = Jones (1993); 32 = Kerr & Goss (1996); 33 = Kerr and Leith (1993); 35 = Larsson, Cook, & Starrin (1988); 37 = Mace & Carroll (1986); 38 = Mace, Eastman, & Carroll (1986); 39 = Mace, Eastman, & Carroll (1987); 40 = Mamassis & Doganis (2004); 41 = Maynard & Cotton (1993); 42 = Maynard, Hemmings, Greenlees, Warwick Evans, & Stanton (1998); 47 = Mesagno, Marchant, & Morris (2008); 48 = Owen & Lanning (1982); 50 = Prapavessis, Grove, McNair, & Cable (1992); 51 = Robazza, Pellizzari, & Hanin (2004); 52 = Ross & Berger (1996); 53 = Savoy (1993); 54 = Savoy (1997); 55 = Savoy & Beitel (1997); 56 = Sheard & Golby (2006); 58 = Terry, Coakley, & Karageorghis (1995); 59 = Thomas & Fogarty (1997); 60 = Thomas, Maynard, & Hanton (2007b); 61 = Weinberg, Seabourne, & Jackson (1981); 62 = Weinberg, Seabourne, & Jackson (1982a); 63 = Weinberg, Seabourne, & Jackson (1982b); 64 = Wojcikiewicz & Orlick (1987).

Table 2.4. Summary of Effects for Alternative Stress Management Interventions (*n* = 9)

Outcome	Positive Effect (+)	No Effect (0)	Negative Effect (-)	No of Studies	Summary of Study Effects		
					+	0	-
Affective responses							
anger		57		1	0	1	0
angry behaviour	8 (1.18)			1	1	0	0
arousal	7 (1.38)			1	1	0	0
cognitive anxiety direction		19 (.11), 43 (-.36)		2	0	2	0
cognitive anxiety intensity	43 (.24)	19 (.11)		2	1	1	0
confusion		36 (.05)		1	0	1	0
depression	36 (.60)	57		2	1	1	0
fatigue	36 (.56)			1	1	0	0
hostility		36 (-.78)		1	0	1	0
mood	6			1	1	0	0
pleasantness	7 (1.5)			1	1	0	0
somatic anxiety direction	43 (2.81)	19 (.22)		2	1	1	0
somatic anxiety intensity	43 (.41)	19 (.12)		2	1	1	0
state anger		8		1	0	1	0
state anxiety	12			1	1	0	0
tension	36 (.42)			1	1	0	0
trait anxiety	34			1	1	0	0
vigour		36 (.53)		1	0	1	0
Performance	7 (.40), 34, 57 (1.36)			3	3	0	0
Stress components and performance	7, 34	57*		3	2	1*	0

Note. Parentheses indicate effect sizes (Cohen's *d*) where calculable, * = mixed effects for stress components and performance. Study reference numbers: 6 = Bishop, Karageorghis, & Loizou (2007); 7 = Bishop, Karageorghis, & Kinrade (2009); 8 = Brunelle, Janelle, & Tennant (1999); 12 = Costa, Bonaccorsi, & Scrimali (1984); 19 = Devlin & Hanrahan (2005); 34 = Lanning & Hisanaga (1983); 36 = Laurin et al. (2008); 43 = Maynard, Hemmings, & Warwick-Evans (1995); 57 = Simpson & Karageorghis (2006).

On the other hand, Simpson and Karageorghis (2006), who used synchronous music treatments, found that anger remained the same from pre- to post-intervention. When considering the efficacy of alternative interventions, seven of the nine studies provided at least some description of a standardized treatment procedure and only one study (viz., Bishop et al., 2009) conducted a manipulation check. Five studies were conducted within the training environment and three were delivered before competition. Also, programmes produced five out of 15 positive effects (33%) for stress and performance when delivered in training environments. No follow-up assessments were conducted.

2.4 Discussion

This systematic review extends stress research by identifying the psychosocial interventions that measured a component(s) of the stress process and performance outcomes in sport performers. In addition, the evidence for the effectiveness of stress management interventions was evaluated and their treatment efficacy reported.

Effective Stress Management Interventions

The evidence from cognitive, multimodal, and alternative stress management interventions appears to indicate that, for the most part, stress components were optimized in one of the following ways: a) stressors were reduced, b) cognitive appraisals were modified, c) negative affect states were reduced and positive affect states increased, and d) effective coping behaviours were facilitated. More specifically, our results offer initial support for an overall positive Cohen's d treatment effect of stress management interventions on various components of the stress process. Tables 2 to 4 illustrate the range of effect sizes reported over the 30 years of stress management interventions with competitive sport performers. The evidence in favour of optimized stress and performance, on the other hand, appears to be weaker than the effectiveness of all interventions that measured the stress process solely. This was most apparent in relation to the multimodal interventions employed. Therefore, reducing athletes' stress in certain sporting situations may not necessarily result in improved performance. This supports the salience of considering appropriate activation states prior to designing interventions, to increase the chances of athletes performing optimally (Mellalieu et al., 2006). When examining the stress management interventions in more detail, the results reveal that a large number of programmes measured sport performers' anxiety. A closer inspection of these interventions showed that self-talk, when employed within a cognitive or multimodal intervention seem to be the most effective technique at reducing state anxiety. Moreover, it appears that multimodal interventions were most effective in reducing cognitive and somatic anxiety when self-talk and imagery were employed. The findings also revealed

that relaxation techniques seemed to be generally effective at reducing state anxiety, either in isolation or when combined with imagery. However, in the main, imagery only appeared to produce positive effects as part of a multimodal programme.

Multimodal interventions, therefore, may be the most effective approach to stress management for competitive athletes, which supports previous narrative reviews for performance enhancement (Greenspan & Feltz, 1989; Martin et al., 2005). However, in contrast to these reviews, the findings from this systematic review seem to indicate that these programmes were generally effective for optimizing the stress process, and to a lesser extent, performance. Although multimodal interventions may help to reduce both cognitive and somatic symptoms (Jones & Hardy, 1990), it is also possible that these programmes serve the purpose of optimizing various components of the stress process in succession (e.g., appraisals, affect, coping). For example, a multimodal programme may be effective in enabling a performer to appraise competitive stressors in a challenging way, which acts as a condition for more adaptive emotional responses, and facilitative coping.

Treatment Efficacy

Despite this systematic review's findings, that suggest that stress management interventions with sport performers may be generally effective, it is worth exercising a degree of caution in light of the results regarding the treatment efficacy of these programmes. As proposed in the Criteria for Evaluating Treatment Guidelines (American Psychological Association, 2002), only research designs that provide comparison to another group should be evaluated at the highest level of empirically supported treatment. Based on this criterion, approximately less than one-third of the interventions ($n = 23$) would be considered at this level of empirical support in reporting positive effects for optimizing performers' stress experience. Of these studies, 22 out of 23 studies (96%) altered performers' stress experience beneficially. When assessing the programmes that measured stress and performance outcomes ($n = 13$), seven empirically supported treatments reported positive effects (54%). Although a large number of studies did not conduct randomized or controlled experiments, the interventions in these studies should not necessarily be deemed ineffective, it is simply not possible to infer causality (American Psychological Association, 2002).

Approximately a third of all studies (23 out of 64) provided a manipulation check to assess whether participants felt that the programmes were effective. However, less than half of these programmes (10 out of 23) provided extracts from case studies or segments from social validation data. In her review of sport psychology interventions, Vealey (1994) concluded that one of the weaknesses of many interventions was the lack of appropriate

manipulation checks to evaluate participants' perceptions of treatment. Indeed, the value of manipulation checks should not be underestimated in supplementing the objective outcomes of each intervention. Over 15 years on and the findings of this review suggest that it is still an issue within stress management research. More extensive assessment is therefore needed to provide greater confidence in treatment effects and support for validity. These checks are important in contributing to our knowledge of empirically supported treatments for future replication. One of the most salient findings from the overall analysis was that only six multimodal studies carried out follow-up assessments of intervention effects (viz., Crocker, 1989a; 1989b; Gravel, Lemieux, & Ladouceur, 1980; Haney, 2004; Hanton & Jones, 1999a; Jones, 1993). These evaluations are critical for identifying which treatments have enduring effects and assessing when these effects subside. On this point, it is believed that interventions should be assessed after at least a season/twelve months for any sustainable behaviour change to be validly confirmed (Martin et al., 2005).

Another issue regarding treatment efficacy relates to the assessment of programmes that were conducted in highly 'transferable' environments. It has been argued that interventions conducted in laboratory or training settings cannot be considered as a satisfactory evidence-base for providing treatments for athletes in competition (Hale & Whitehouse, 1998; Martin et al., 2005). For the most part, in this review, the interventions failed to expose athletes to competitive performance environments. Certainly, one of the challenges for intervention researchers is to assess whether athletes require exposure to stressful competitive settings, to test the likelihood of enhanced performance under competitive pressure. Research by Holahan and Moos (1990) suggests that individuals are more likely to strengthen their adaptive resources and personal growth from confronting highly stressful environments. Therefore, where logistically possible, psychologists should attempt to deliver interventions within a competitive sport environment, to strengthen the ecological validity of any positive performance effects. The findings also highlight a need to provide internal validity through strong research designs, with the controls required to infer causality.

Moderators of Intervention Effects

In the knowledge that stronger research designs will allow for inference of greater causality, there are a number of additional factors that may moderate the relationship between treatment and effect. Firstly, the competitive level of the athletes is important to consider when designing and evaluating a stress management intervention. To elaborate briefly, Fletcher and Hanton (2001) suggested that stress reduction strategies may be more

appropriate when working with non- and sub-elite performers. However, in contrast, elite and professional athletes may benefit more from techniques which aim to positively reappraise how they view their stress experience (Hanton & Jones, 1999b). The results from this review indicated that stress management interventions were most effective for collegiate sport performers, but 21% of the total studies did not provide information relating to performers' competitive level. Published research should be clear about this moderator for consultants to assess which interventions are most effective for particular clientele in various sports.

Another important finding to emerge from the review was that for 59% of the studies, the mean age ranged from 12-21 years of age. Although it appears that stress management interventions are generally effective with this age group, it should also be noted that 27% of studies did not provide age-group data. Age is an important consideration, as research by Warr (1992) has identified a U-shape curve between age and affective well-being (e.g., anxiety) across a wide range of occupations, whereby individuals in their 20s and 30s report lower well-being in comparison to younger and older workers. In light of this research, it appears that age could moderate the outcome of stress management interventions. Further, the current findings suggest that more interventions need to be assessed with older performers to examine the moderating effect of age.

The type of intervention employed is also considered a key moderator of programme effects. Researchers have indicated that in order for a multimodal treatment to be implemented, the intervention will likely require a larger period of time to be set aside by the practitioner, athletes and sport organization, in comparison to a unimodal treatment (Maynard, Hemmings, Greenlees, Warwick-Evans, & Stanton, 1998; Prapavessis et al., 1992). Therefore, the time taken to administer an intervention may indeed influence how enduring any effects are for optimizing stress and performance. Moving to review the various components of the stress process that were measured, the results indicated that the majority (75%) of studies focused on changing anxiety levels. Therefore, other salient aspects of the stress process should be examined more extensively. For example, only two studies measured competitive stressors (viz., Kerr & Goss, 1996; Savoy, 1993). Moreover, cognitive appraisal, which is considered to be at the core of the transactional stress process (Fletcher et al., 2006), has also received little intervention attention. This is an important area for further investigation, because appraisal research will provide a greater understanding of when competitive stress may be facilitative, rather than debilitative towards performance. Undoubtedly, the component of stress measured will impact on the relationship between programme and outcome effects as these variables are particularly important in determining

the stress management techniques and designs used. In addition, when evaluating the effectiveness of stress management on performance, it is acknowledged that the wide variety of ways in which performance was operationalized may explain some of the differences between outcome effects for stress and performance.

Gaps in the Literature

An examination of the intervention characteristics gave rise to a number of gaps in the stress management literature in sport to date. Firstly, it was observed that there were relatively few elite samples in the review. Although the shortage of elite athletes has historically been a challenging issue for the field of sport psychology (cf. Greenspan & Feltz, 1989), research has demonstrated that the stress-related phenomena is experienced by elite and professional athletes in a variety of competitive environments (Dugdale et al., 2002; Fletcher & Hanton, 2003). Certainly, this population may well be the most vulnerable to experiencing stress due to the close proximity and involvement with the sport organizations in which they operate. It was noted in the current review that all of the interventions measured athletes' *competitive* stress experience. When considering the numerous organizational-related demands that may be imposed on individuals within the sport environment, it is evident that interventions need to be employed to measure sport performers' experiences of *organizational* stress. This term has been defined as "an ongoing transaction between an individual and the environmental demands associated primarily and directly with the organization in which he or she is operating" (Fletcher et al., 2006, p. 329). In recognizing the potential impact of organizational stress in sport, it is likely that practitioners may need to consider broadening their competencies to assist sport performers in managing their overall stress experience (Hanton & Fletcher, 2005). For example, within the current review, there were few interventions that used team building as a method of stress management (Cogan & Petrie, 1995). Team building could indeed be a useful technique for practitioners to implement when attempting to optimize organizational stress-related issues, such as poor communication channels and team cohesion. However, to date, no interventions within sport psychology have attempted to manage this type of stress. It should also be noted that athletes are individuals whose personal stress experience may impact on how they manage stress in sport. For example, an athlete who may cope ineffectively when arguing with his/her parents may also be prone to ineffective coping with disagreeing with his/her sport coach. Therefore, the management of athletes' personal stress may also facilitate their management of competitive and organizational stress in sport.

Future Research

This review has highlighted a number of gaps in the stress management literature. These gaps provide a base to generate future research in this area. Future interventions should attempt to account for the potential factors (e.g., research design, stress component measured, skill level) that may influence the effects of different treatments. For example, the component of stress measured will likely impact on the relationship between the programme and outcome effects as the variables measured should determine the treatment that is implemented. However, intervention research based on the tenets of the transactional perspective should attempt to manage the stress process more holistically, encompassing the demands that performers experience, their appraisals, emotional responses, and subsequent coping strategies (Fletcher et al., 2006). Indeed, Lazarus (1999) stated that stress, emotion, and coping should exist in a part-whole relationship and that "separation distorts the phenomena as they appear in nature" (p. 37). Another research endeavour that is lacking is the assessment of interventions for other performers in the sport environment (e.g., coaches, parents, and support staff). The current review has focused on stress management in competitive athletes, but researchers have also shown that coaches, parents, and sport psychology practitioners are prone to a wide range of competitive and organizational stress (Fletcher, Rumbold, Tester, & Coombes, 2011; Fletcher & Scott, 2010; Harwood & Knight, 2009). An important future research consideration is the assessment of theoretically guided multimodal interventions. Although multimodal programmes appeared to be the most effective treatments in this review, the vast amalgamation of treatments made it hard to establish which combinations may lead to better outcome effects.

Limitations

Although contemporary definitions adopt a transactional perspective of stress (Lazarus, 1999), it was evident in this systematic review that studies were ambiguous in reporting a theoretical and conceptual basis for intervention. Therefore, it was not possible to assess whether different conceptually-based programmes were effective for particular components of the stress process. To improve the theoretical credibility for future interventions, researchers should clearly report their conceptual underpinnings of stress. In addition, drawbacks to the vote counting procedure adopted were recognized. Namely, studies are interpreted in terms of their reported significance, rather than their effect size. Although our systematic review has provided a comprehensive and heterogeneous number of stress management intervention effects, meta-analyses could focus on the overall effect size for specific components of stress and performance. Because this is the first systematic review

in sport psychology to report effect sizes for stress management interventions, it was not possible to interpret the effect sizes in "explicit, direct comparison with the prior effect sizes in the related literature" (Thompson, 2002, p. 28). Therefore, in line with Thompson's recommendations for reporting effect sizes, we strongly advocate that future researchers who conduct meta-analyses should compare their effect sizes to the effects reported in the previous literature and not by interpreting against Cohen's benchmarks for "small," "medium," and "large" effects. The rigid use of benchmarks for effects prevents readers to consider that small effects with important outcomes may be more noteworthy than large effects with less important outcomes. Finally, although the challenges of obtaining unpublished studies have been acknowledged, future reviewers should also consider contacting researchers who have published on a particular research area to increase the likelihood of obtaining unpublished manuscripts.

Conclusion

In summary, stress management interventions appear to be generally associated with optimized stress in competitive sport performers. This is particularly apparent when only evaluating the interventions' effects on the stress process. However, the findings for optimizing both stress and performance were relatively weak. Our findings could represent a publication bias of only significant outcomes (Egger & Davey Smith, 2001), and our approach may in fact strengthen the estimation of performance effects. Nonetheless, these results suggest that psychologists need to consider developing interventions that are in line with athletes' optimal activation and emotional states for improving performance. An important finding to emerge from the systematic review was that multimodal programmes appeared to be the most effective technique employed. However, more studies need to investigate the moderating factors (e.g., type of treatment adopted, stress component outcome measured, age, competitive level) that affect the relationships between interventions and effects. Also, these moderators need to be considered prior to intervention design. Finally, the systematic review indicates that future researchers must find a better balance between attending to athletes' personal and situational needs, at the same time as delivering strong experimental research designs, with the controls required to infer causality.

3

Study Two

"...it is not so much friends' help that helps us as the confident knowledge that they will help us..."

~ Epicurus.

3

Appraisals, Affect, and Coping in Early Career Sport Professionals: The Moderating Role of Core Self-Evaluations[7]

3.1 Introduction to Study Two

Chapter two synthesised the research on stress management interventions in competitive sport performers to date. Although the main findings suggested that multimodal interventions are generally the most effective for optimising different components of transactional stress, there were a number of gaps in the literature which provide the basis for the remaining applied research conducted in studies two, three and four of this thesis.

Firstly, the systematic review identified that most interventions to date have only attempted to address the management of a single component (e.g., stressors, appraisals, emotional responses, coping) of competitive stress. According to Lazarus (1999), because the stress components operate in unison and in part-whole relationships, researchers tackling competitive stress should attempt to evaluate whether their interventions are most effective in eliminating or removing competitive stressors (i.e., primary stress management), or whether interventions aimed at reducing the potentially harmful effect of stressors on strain and ability to cope are more effective (i.e., secondary and tertiary stress management).

Secondly, the systematic review identified that competitive stress management interventions with professional sport performers have been extremely limited (i.e., < 6% of all studies reviewed). This is a significant finding in so far that competitive sport for this population is a full-time career where performers are contractually obliged to develop and

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[7] Conference proceedings associated with this chapter:

Rumbold, J. L., Daniels, K., & Fletcher, D. (2011, September). *Examining the organizational stress process within a professional rugby union academy: An experience sampling study*. Paper presented at the 26th annual meeting of the Association for Applied Sport Psychology (AASP), Honolulu, HI, United States of America.

Rumbold, J. L., Daniels, K., & Fletcher, D. (2012, July). *Organizational stress as it is experienced within a professional rugby union academy: Examining the role of personal and situational moderators*. Paper presented at the International Convention on Science, Education and Medicine in Sport (ICSEMIS), Glasgow, Scotland, United Kingdom.

meet particular competitive performance expectations. Indeed, this observation cannot be said for sport performers of other competitive standards, not even international / Olympic amateur sport performers in their entirety. Furthermore, in comparison to other performers of different competitive standards, professional sport performers operate and function on a day-to-day basis within a structured sport institutional environment. As a result, their ongoing experience of stress could be intensified due to the combination of scheduled and varying daily activities that they are contractually required to complete (Nicholls et al., 2009b). Therefore, sport performers of this competitive standard may be the most prone to experiencing stress when transacting with their organizational environment. Subsequently, the investigation of effective stress management interventions for performers operating in professional sport may require support with the optimal management of organizational stress processes. However, as identified in the systematic review, no organizational stress management interventions have been conducted in sport organizations to date. According to organizational psychology researchers (Bowling et al., 2012; Rick & Briner, 2000), the decision to implement organizational stress management interventions should be evidence-based and founded on a diagnosis of stress that, at a minimum, determines that there is a relationship between the organizational environment encountered and any strain experienced. To gain stronger evidence of causation, it is also generally recommended that stress processes are measured repeatedly over time (Briner & Reynolds, 1999; Daniels, 2011; Lazarus, 1999).

Taking these points together, study two sought to gain access to a professional sport organization and investigate sport performers' experiences of organizational stress processes within their organization. Furthermore, study two utilised an experience sampling design over a six-week period to investigate the relationship between daily cognitive appraisals of organizational events and emotional responses, and, the relationship between emotional responses and coping behaviours and functions. Moreover, a number of individual and situational differences were considered to investigate how these within-person relationships may vary between sport performers.

3.2 Review of Literature

Professional sports are becoming increasingly important for the worldwide economy. In the United States and other industrialized countries, up to 3% of gross domestic product (GDP) per capita is generated by sport (Hambrecht, Hambrecht, Morrissey, & Taylor, 2011). As financial rewards are gained from achieving performance targets, the pressure to maintain maximum levels of sport performance is extremely high (Jones, 1995; Totterdell, 2000). In the context of early career sport professionals, these individuals are expected to manage

performance-related pressures by developing appropriate emotional and coping skills. As such, coping skills are an important resource for facilitating career adaptation to work stress (Fouad & Bynner, 2008). It is generally accepted by work stress scholars that affective well-being and coping are shaped by an individual's appraisal of his or her environment (Webster, Beehr, & Love, 2011). However, surprisingly few studies have explored the varying roles of appraisals in shaping adaptation to stress, particularly in early career sport professionals.

The challenge stressor-hindrance stressor framework is a recently developed model for studying appraisals (LePine, Podsakoff, & LePine, 2005; Podsakoff, LePine, & Lepine, 2007). Based on Lazarus' cognitive-motivational-relational theory (Lazarus, 1991a; 1999), the framework provides a justification for relationships between the work environment and indicators of well-being. Specifically, Podsakoff et al. (2007) contended that stressors can be consistently categorized as either a challenge or a hindrance. Although this framework has provided valuable information, work stressors in this case are assumed as proxies for appraisals (Webster et al., 2011). In addition, by their very nature, cognitive appraisals are rapid and adaptational (Lazarus, 1999; Skinner & Brewer, 2002). Also, the challenge stressor-hindrance stressor framework does not indicate how *directly* measured appraisals may vary and shape coping with work stress. Lazarus and Folkman (1984) asserted that there are variations in how events are appraised and how they influence affect and coping. Such variations may be due to the pre-existing beliefs or core self-evaluations that a person possesses.

The contributions of this study are as follows: (a) to readdress the importance of cognitive appraisals in workplace stress, which have largely been neglected in the sport and organizational psychology literatures (Fletcher et al., 2006; Webster et al., 2011); (b) to apply experience sampling methods (ESM) to investigate the unique dynamism of daily appraisals and how they facilitate affect in early career professionals (Dreher & Bretz, 1991; Lent et al., 2002); (c) to extend work stress models by examining how daily affect predicts daily coping; and (d) to examine core self-evaluations as an important moderator that may facilitate adaptation. The vehicle we use to test these relationships is Lazarus' (1991a; 1999) influential cognitive-motivational-relational model.

Conceptual Background

Lazarus' cognitive-motivational-relational model is based on three main stress components: cognitive appraisals of events, emotions, and coping (Lazarus, 1999). Cognitive appraisals are the evaluations a person makes in terms of the significance for one's affective well-being and goals (Lazarus & Folkman, 1984). Appraisals also consist of primary and

secondary processes (Lazarus, 1991a; 1999). According to Lazarus, negative affect occurs when an event is primarily appraised as threatening or harmful (i.e., hindering) to one's well-being and attainment of goals. Similarly, positive affect results when events are appraised as challenging or progressing well (Lazarus, 1999). Therefore, if what is occurring is evaluated as a condition of stress, a person will appraise such events as a threat, challenge or harm.

Cognitive Appraisals and Affective Responses

In so far that this study is concerned with early career professional sportsmen's adaptation to organizational stress, it is essential to understand how distinct appraisals are associated with affective responses, to provide an indication of what individuals adapt to in a new career. For example, Rodell and Judge (2009) found that hindrance-related stressors for employees were associated with anger and anxiety. Although threat and harm appraisals were not *directly* measured, these findings support the notion that key basic emotions for affective well-being are direct responses to anticipatory threats and concrete offences to achieving a person's valued outcomes (Lazarus, 1991a). It seems likely therefore, that early career professionals who anticipate daily events as a threat to their goals and development would more likely express negative affect. Equally, those who perceive future failure of one's daily goals should exhibit higher levels of negative affect.

In terms of the hypothesized relationship between challenge appraisals and positive affect, we are unaware of any organizational research that has directly tested these relations. In addition, research to date has not investigated these relationships using ESM methods which map onto the dynamism of appraisals and workplace affect. Although little research has been conducted in organizational settings, Skinner and Brewer (2002) found associations between students' challenge appraisals and positive emotions, such as happiness. Challenge appraisals also provide individuals with greater enthusiasm for learning (Smith & Ellsworth, 1985). Therefore, we expected early career professionals who display greater challenge appraisals to exhibit higher levels of positive affect. This parallels transactional stress theory which states that challenge appraisals lead to positive emotions which are associated with satisfaction from progressing towards the attainment of one's goals (Lazarus & Folkman, 1984).

Affective Responses, Coping Functions and Behaviours

After theorizing that appraisals trigger affective responses, according to the cognitive-motivational-relational theory, affect influences how a person copes (Lazarus, 1991a; 1999). Lazarus and Folkman (1984) defined coping as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as

taxing or exceeding the resources of the person" (p. 141). Since effective coping is important for long-term well-being and career success (Dreher & Bretz, 1991; Lent et al., 2002), coping is an appropriate dependent variable to investigate. Although the research investigating coping as a predictor of affective well-being is well-established, it is evident that researchers have tended to overlook coping as a consequence of affective reactions (Daniels, 2011). This is important since negative affect may result in certain types of coping, which may be maladaptive for well-being, career and performance advancements. Equally, positive responses, which have largely been ignored in the stress literature (Folkman, 2008) may lead to eliciting certain coping resources to adapt to a new vocation.

One of the major challenges in investigating affect-coping relationships is the way in which coping is measured in line with organizational stress theories. Since coping is conceptualized as the cognitive and behavioural efforts to adapt to or regulate the affective impact of an event (Lazarus, 1999), coping then, consists of functions, resources, and behaviours. Functions represent the goals of coping, and broadly relate to problem-focused and emotion-focused coping (Lazarus & Folkman, 1984). One unique form of emotion-focused coping is emotional-approach coping, which involves the active expression of emotions (Baker & Berenbaum, 2007). This function is believed to have emotional benefits in supportive social environments (Rimé, 2009). Coping functions are achieved by enacting specific coping behaviours. In work stress models, such as the demands-control-support model (DCSM; Karasek & Theorell, 1990), coping behaviours include using job resources, such as the execution of job control or elicitation of social support (cf., Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). In essence, job control and social support enable individuals to perform coping behaviours (Daniels, 2011). Hence, problem-focused and emotional-approach coping can be achieved by executing job control or eliciting social support. Importantly, coping should be measured so that coping functions and behaviours are assessed simultaneously in an explicit way to establish which behaviours are enacted and for what function (Daniels et al., 2009).

In so far that early career professionals may experience negative affect within their new vocation, we expected problem solving to be enacted by executing job control over tasks and/or by eliciting social support. Firstly, problem focused coping is believed to be highest at the outset of coping and when perceptions of control are highest (Lazarus & Folkman, 1984). Secondly, social support is an important buffer of work demands' effect on well-being which may replenish depleted resources under stress (Cohen et al., 1986). In this study, we operationalized job control used to solve problems as the extent to which sportsmen "change

aspects of their work activities to solve problems" (CHA-SP; Daniels et al., 2009). In addition, we operationalized social support used for solving problems as the extent to which early career professionals "discuss problems with others to solve problems" (DIS-SP; Daniels et al., 2009). We argue that positive affect is less likely than negative affect to lead to executing job control or eliciting support to solve problems for early career professionals. Positive affect represents satisfaction from progressing towards attaining goals; therefore, early careerists are unlikely to actively change events that they are satisfied with. Similarly, since the function of problem-focused coping is to resolve or remove problems caused by events (Folkman & Lazarus, 1985), individuals are unlikely to require support to deal with events that they experience contentment from.

We also hypothesized that both positive and negative affect may lead to emotional-approach coping enacted by executing job control. For example, if an employee perceives that they are unable to regulate their emotions whilst carrying out a particular work task, then changing work tasks to express affect may provide opportunities to vent emotions and allow them to diminish in intensity (Daniels, Beesley, Cheyne, & Wimalasiri, 2008). It is also probable that both positive and negative emotions may lead to emotional-approach coping enacted through eliciting support from others. This may occur if early careerists perceive that they do not have the personal resources to regulate their emotions by themselves, and therefore seek support and advice from colleagues to either promote positive well-being or shield against negative well-being (Cohen et al., 1986). However, emotional-approach coping enacted through eliciting support could have mixed implications for adaptation to a new vocation. For example, talking to others to express negative affect in the workplace may not be appropriate or consistent with organizations' emotional display rules (Diefendorff, Erickson, Grandey, & Dahling, 2011). In emotionally charged sporting environments, the inappropriate management of emotions could also be deleterious for achieving team goals and performance (Robazza & Bortoli, 2007). In contrast, expressing positive affect amongst colleagues may be beneficial for establishing social bonds, improving group identities and reorganizing team goals (Rimé, 2009). In line with previous research, we operationalized using job control to express affect as the extent to which early career professionals "change work tasks to express affect" (CHA-EA; Daniels et al., 2009). In addition, we operationalized eliciting support to express affect as the extent to which sportsmen "talk to others to express affect" (TAL-EA; Daniels et al., 2009).

The Moderating Role of Core Self-Evaluations

Lazarus (1991a; 1999) asserted that stress is influenced by learned beliefs about the

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self and the world. In line with Lazarus' proposition, researchers have suggested that core-self-evaluations (CSE) play an important role in organizational stress and coping processes (see Kammeyer-Mueller, Judge, & Scott, 2009). CSE is an evaluative trait that comprises self-esteem, locus of control, general self-efficacy, and emotional stability. Furthermore, CSE represent subconscious evaluations or schemas that people make about themselves in terms of their worthiness, competence and capabilities across a range of situations (Judge, Locke, & Durham, 1997). These bottom-line evaluations influence future appraisals of the self and one's ability to function in the world (Judge, Locke, Durham, & Kluger, 1998). In the context of early career adaptation, it seems likely that those who exhibit positive CSE will believe that they are more capable of responding to workplace events which are appraised as challenging, which is likely to result in more positive affective and behavioural responses (Kammeyer-Mueller et al., 2009). Equally, having a positive self-regard in the face of threatening workplace events should buffer against any negative responses.

These relationships can be explained through dual cognitive processing mechanisms (Power & Dalgleish, 2008). Dual processing theory indicates that appraisals are made on the basis of automatic or controlled cognitive processes. An automatic cognitive process has been defined as the activation of a sequence of thoughts and responses that are "activated automatically without the necessity for active control or attention by the subject" (Schneider & Shiffrin, 1977, p. 2). In comparison, Schneider and Shiffrin (1977) have defined controlled cognitive processes as "a temporary sequence of nodes activated under control of, and through attention by, the subject" (pp. 2-3). In addition, automatic processes are highly reliant on pre-existing memory schemas (Schneider & Chein, 2003). Pre-existing schemas may be particularly important for professional sportsmen who are new to their career and are required to perform in unusual and fast-paced situations. Because early career professionals may encounter novel situations, it is likely that individuals will rely on automatic pre-existing schemas, such as their generalised self-efficacy and locus of control (i.e., CSE) to influence their subsequent affective responses to work events. Moreover, CSE may be the basis on which daily appraisals lead to more or less intense affective responses. In order to adapt efficiently, they may also draw further on pre-existing schemas (i.e., CSE) about themselves to influence coping efforts.

Since early career professionals may rely more on mental models than new and ambiguous environmental information, we expected CSE to moderate the impact of affect on coping. However, the extant research linking CSE, affect and coping appears to suggest mixed findings. For example, a meta-analysis by Kammeyer-Mueller et al. (2009) found that

high CSE was related to more problem solving coping and less emotion-focused coping. On the other hand, a follow-up daily diary study by the same researchers found a positive relationship between CSE and emotion-focused coping (e.g., positive reappraisal and emotional support) and not problem-focused coping (Kammeyer-Mueller et al., 2009). Although the linear relationships between CSE and coping are somewhat inconclusive, in this particular working context (i.e., early-career professionals) the dual process model of appraisals (Power & Dalgleish, 2008) provides a stimulus to suggest that CSE may moderate affect-coping relationships. For example, where early careerists are inexperienced in managing their workplace emotions, they may be less likely to consciously process information from the environment to strengthen the use of certain coping resources and functions. Subsequently, in managing particular workplace emotions, these individuals may rely on pre-existing mental models, reflected in CSE, to buffer the enactment of both coping behaviours and functions.

The Present Study

To capture the dynamism of cognitive appraisals, research should apply methods that map these phenomena as they occur in the workplace. However, previous organizational stress research has neglected to capture the dynamism of appraisals over time. Experience sampling methods (ESM) are appropriate for measuring appraisals, affect and coping, since data can be captured within working contexts and close to changes in phenomena (Bolger et al., 2003). This method provides greater accuracy than can be obtained through retrospective recall (Stone et al., 1998). Therefore, the purpose of the present study was to examine the within-person relationships between daily appraisals of organizational events and affective responses, and between daily affect and coping functions enacted through eliciting behaviours, as they related to early career professional sport performers. Furthermore, we investigated whether CSE moderated these relationships. We illustrate our hypothesized model in Figure 3.1. Our hypotheses outline the predicted linear relationships and CSE as a moderator. These hypotheses were tested in an experience sampling study of early career professional rugby union players across a 6-week training and competitive period during the playing season.
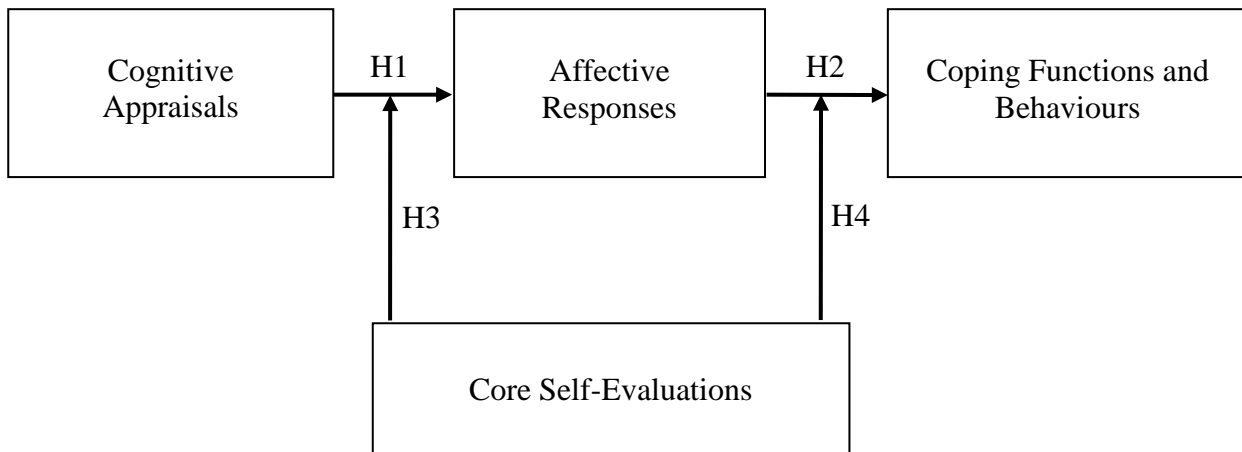
Figure 3.1. Hypothesized model of the organizational stress process and core self-evaluations. H1 = Hypothesis 1; H2 = Hypothesis 2; H3 = Hypothesis 3; H4 = Hypothesis 4.

3.3 Method

Participants and Procedure

The academy manager of one of Europe's most successful professional rugby union teams was contacted and informed of the study purpose. Following institutional ethical approval, academy players were recruited via the manager's request for volunteers from the squad. The sample consisted of male rugby union players (n = 39) with an average age of 17.23 years (SD = .87). Participants had been involved at the organization for an average of 22.24 hours per week (SD = 13.99) and the average length of tenure was 10 months (SD = 7.97). Data collection involved the distribution of a background questionnaire which was followed by the utilisation of personal digital assistants (PDAs). The PDAs administered questions twice daily over one working week (Monday-Friday), for a period of six weeks. Participants were given a presentation on how to use the PDAs prior to them being distributed. Due to the varied training and working schedule of the participants, the PDAs were programmed to 'run on command'. Notwithstanding this, they were asked to complete the PDAs in the morning and late afternoon between the working hours of 10am and 5pm.

The PDAs were distributed to participants between 9.30am and 10.00am on the first day of each working week and collected between 3.30pm and 5.30pm at the end of each week. In the weeks preceding PDA data collection, a background questionnaire was distributed to participants, which assessed core self-evaluations and some control variables. Participants provided PDA data on 1010 out of a possible 1880 occasions (after omitting work absence, such as senior and international selection, and prolonged absence due to injury). This gave an overall compliance rate of 53.7% which is in line with previous studies that have reported relatively low rates for adolescents completing experience-sampling

methods compared to adult samples (Hektner, Schmidt, & Csikzentmihalyi, 2007).

Measures

Appraisals during the ESM period. Appraisals were assessed by asking participants to indicate to what extent they rated academy-related events in the past hour as a challenge, harm, or threat (e.g., 'In the past hour, to what extent did events prevent you from performing well?'). Each item was rated on a five-point scale (1 = 'Not at all', 5 = 'Very much so'). A single item measure for each appraisal was deemed acceptable, given the specific nature of the questions and the narrow time frame in which participants were required to recall occurrences (Frese & Zapf, 1988). Furthermore, the use of a single item is less of a reliability risk in experience-sampling whereby repeated measurement takes the place of multiple items (Fisher & To, 2012; Hektner et al., 2007).

Affect during the ESM period. Affect was assessed by asking participants to indicate how they felt in response to academy-related events (e.g., 'In the past hour, how worried did you feel about being able to deal with these events?'). The four items that measured affect were 'worried' (anxiety), 'frustrated' (anger), 'down' (sadness), and 'happy' (happiness). Anxiety, anger, sadness and happiness represent a set of basic emotional states by which threat, harm and challenge appraisals have been theorized to be associated (Lazarus & Folkman, 1984; Power & Dalgleish, 2008). A principal components analysis revealed a two-dimensional solution. Subsequently, emotions were split into negative and positive affect. This is consistent with research that has identified negative and positive affect as the two major dimensions of affective well-being (Watson & Tellegen, 1985). Negative affect was assessed with the items 'worried', 'frustrated', and 'down'. Internal consistency was acceptable for negative affect (α = .70). Positive affect was assessed using the item 'happy'. A five-point scale was used (1 = 'Not at all', 5 = 'Very much so') to score the items.

Coping during the ESM period. Coping was assessed by asking participants to indicate how they coped with academy-related events that they had experienced in the past hour. Participants rated items on a 5 point scale (1 = 'Not at all', 5 = 'Very much so') and two items were used to evaluate each form of problem-focused and emotional-approach coping. These items were adapted from measures used in previous research (Daniels et al., 2009). Furthermore, each coping function reflected ways of either executing job control or eliciting social support from others. Example items for each scale included the following: 'In the past hour, did you change your behaviour to help solve problems?' (CHA-SP, α = .76), 'In the past hour, did you talk to people to help you solve problems?'(DIS-SP, α = .86), 'In the past hour, did you change the tasks you do to help you get emotions off your

chest?'(CHA-EA, α = .71), and 'In the past hour, did you confide in others to help you get emotions off your chest?'(TAL-EA, α = .80). Previous research has indicated that a four-factor structure of the items in these scales provides a better fit than a two-factor model (Daniels, Beesley, Wimalasiri, & Cheyne, 2013; Daniels et al., 2009). The interpretability of PDA items was assessed by providing an opportunity to trial the PDAs after the initial presentation. This allowed for participants to clarify any uncertainty over the items. Further, the participants were provided with contact details of the author to ask questions throughout data collection.

Core self-evaluations. The 12-item Core Self-Evaluations Scale (CSES; Judge, Erez, Bono, & Thoresen, 2003) was administered via a background questionnaire and prior to the ESM period to measure each participant's CSE. This scale comprises a five-point Likert scale ranging from 1 ('strongly disagree') to 5 ('strongly agree'). The CSES measures a single factor that combines self-esteem, locus of control, generalized self-efficacy, and emotional stability. Example items are 'I am satisfied with myself', 'I determine what will happen in my life', 'I am confident I get the success I deserve in life', and 'There are times when things look pretty bleak and hopeless to me'. The internal consistency was α = .94.

Control variables. To establish incremental validity of the CSES, we included a selection of control variables in the background questionnaire for testing our theoretical model. CSE contains emotional stability as a subdomain and partially captures an individual's negative disposition. Although CSE functions as a unified construct, emotional stability may function differently in specific contexts of stress and coping (Kammeyer-Mueller et al., 2009, p. 183). Therefore, we included facet-level measures of neuroticism, to ensure that cross-level interactions between level 1 relationships and CSE were not confounded by the effect of specific negative dispositional traits. Participants rated their facet levels of neuroticism via the background questionnaire by responding to 40 items from the International Personality Item Pool (IPIP: Goldberg et al., 2006) version of the revised NEO personality inventory (NEO-PI-R: Costa & McCrae, 1992). These facets of neuroticism included: *anger* (10 items, α = .92), *anxiety* (10 items, α = .88), *depression* (10 items, α = .88), and *self-consciousness* (10 items, α = .87). Extant research has shown facet anxiety and depression to be the purest markers of neuroticism (Costa & McCrae, 1995). Participants were asked the extent to which each statement described them accurately on a five-point scale (1 = 'strongly disagree', 5 = 'strongly agree').

Lazarus (1991a) argued that situational contexts shape emotions and coping. Thus, we

also included a dummy control variable for playing position[8]. In addition to position, we controlled for key decision makers[9] in the playing squad. A key decision maker was defined to the professional coaches as someone who demonstrated leadership on and off the rugby field and made considerable decisions for the team. After which, the manager and assistant coach identified their key decision makers ($n = 5$) from the playing squad.

Data Analysis

Hierarchical linear modeling (HLM) with restricted maximum likelihood was used to analyze the data (HLM6; Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2004). A two-level model was used to investigate how the relationship (i.e., regression slope) between two variables at level 1 varies as a function of another variable at level 2. The choice of centering was based on theoretical processes and the research question being investigated (Cohen, Cohen, West, & Aiken, 2003). In line with Lazarus' (1999) theoretical assumptions, it was important to provide an accurate and unbiased estimate of within-person slope variability at level 1 uncontaminated by between-person (e.g., CSE) effects (Hofman & Gavin, 1998). Therefore, all of the appraisal and affect variables were person mean centered (i.e., centering within cluster, CWC; Enders & Tofighi, 2007; Kreft, de Leeuw, & Aiken, 1995) and entered as predictors in the level 1 equation of the model. For example, to test Hypothesis 1, negative affect was entered as the level 1 outcome, and threat, challenge, and harm appraisals were person mean centered as the level 1 predictor variables (random slopes). Equations at level 1 were also estimated for appraisals as a predictor of positive affect and affect as a predictor of coping scales. At a conceptual level, CWC is recommended at level 1 units if cross-level interactions are also of interest.

To check for significant variation in regression slopes at level 1, a forward stepwise approach was used, which involved entering predictor variables in sequential steps (Cohen et al., 2003). For each step, slopes were allowed to vary across individuals. Where slopes had non-significant variance components ($p > .10$) or low reliabilities ($<.05$), they were fixed to be invariant across participants (Raudenbush & Bryk, 2002). The step was repeated to check for further invariance in slopes. This approach was continued until only random slopes were

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[8] In a 15-man rugby union team, players are categorized as either forwards ($n = 8$) or backs ($n = 7$). Forwards are physically and verbally involved in the center of a 230ft wide rugby pitch. Backs are positioned in a defensive position behind the forwards, waiting in a line across the outer wings to receive the ball to attack with.
[9] There are between 5-7 key decision makers who fulfill a number of important decisions during games. For example, 'fly half' back players (who are similar to quarter backs in American football), are crucial to a team's game plan. They are the first player to receive the ball centrally from forwards. Therefore, fly halves are decisive with what actions are taken and are effective at communicating with other players. The remaining key decision makers included: an 'inside center' back who coordinates the defense, a 'lock' forward who organizes throw ins, and a forward 'hooker' who throws the ball from throw ins and chooses the point of offence.

left to vary between participants in the equation at that step. Following this stage, neuroticism facets and CSE were entered to test the explanatory effect of specific dispositional traits. This was followed by entering key decision makers and playing position as controls. All control and dummy variables were grand mean centered at the overall mean of the sample (Hofmann & Gavin, 1998). To test cross-level interactions, CSE was entered at level 2 and grand mean centered to provide meaning to the intercept, while allowing level 1 slopes to vary with random slopes. For example, to test Hypothesis 3, negative affect was entered as the level 1 outcome variable, appraisals were person-mean centered as level 1 predictors and CSE was grand mean centered at level 2.

3.4 Results

Table 3.1 shows the means, standard deviations, reliabilities, and correlations for the PDA variables, CSEs, and control variables respectively.

Multilevel Regressions of Appraisals on Affect

Table 3.2 shows the results of the multilevel regression analyses of appraisals on affect and cross-level interactions. The findings revealed that threat appraisals were associated with negative affect ($B = 0.61$, $p < .001$). Harm appraisals were also associated with negative affect ($B = 0.77$, $p < .001$). To examine the cross-level interactions of the appraisal-affect relationship, CSE was controlled for and then entered at level 2 to each regression slope within the model. The results showed that CSE was marginally inversely associated with negative affect as a main effect ($B = -0.04$, $p \leq .07$) and did not moderate any of the relationships between appraisals and negative affect. In addition, negative affect was also marginally associated with playing position ($B = 0.65$, $p \leq .07$).

When investigating the relationships between appraisals and positive affect, it was found that challenge ($B = 0.16$, $p < .001$) and harm appraisals ($B = -0.13$, $p < .01$) were both associated with positive affect. In addition, the relationship between threat appraisals and positive affect was negatively moderated by CSE ($B = -0.03$, $p < .01$). The relationship between challenge appraisals and positive affect was positively moderated by CSE ($B = 0.01$, $p < .05$). Facet depression ($B = -0.96$, $p < .01$), key decision makers ($B = 0.42$, $p < .05$), and playing position ($B = -0.38$, $p < .07$) all had significant main effects on positive affect.

Multilevel Regressions of Affect on Coping

Table 3.3 shows the results of the level 1 regressions of affect on coping and CSE as a moderator. The findings for problem-focused coping are shown in the two left columns. The analyses revealed that there was a positive association between negative affect and CHA-SP ($B = 0.12$, $p < .001$).

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Table 3.1. Means, Standard Deviations, Internal Consistencies, and Correlations

	M	SD	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Threat appraisals	1.65	.97	-	-	.04	.42	.51	-.10	.16	.13	.25	.20							
2. Challenge appraisals	3.23	1.50	-	.04	-	-.02	.03	.36	.05	.03	.12	.09							
3. Harm appraisals	1.50	.86	-	.42	-.01	-	.48	-.16	.18	.13	.20	.16							
4. Negative affect	1.67	.79	.71	.52	.06	.47	-	-.24	.22	.16	.26	.21							
5. Positive affect	3.25	1.30	-	-.11	.34	-.18	-.22	-	.03	.08	.04	.12							
6. CHA-SP	2.85	1.46	.76	.27	.01	.32	.35	-.04	-	.63	.62	.46							
7. DIS-SP	3.10	1.70	.85	.22	-.03	.22	.24	.01	.57	-	.46	.66							
8. CHA-EA	3.44	1.70	.65	.37	.08	.29	.36	-.02	.57	.40	-	.53							
9. TAL-EA	3.76	2.02	.78	.28	.04	.22	.28	.08	.45	.61	.54	-							
10. Core self-evaluations	41.26	10.54	.68	-.05	.04	-.05	-.16	.08	-.10	.01	-.07	.02	-						
11. Facet anger	2.53	.81	.84	-.00	.03	.08	.04	.05	.08	.02	-.02	-.02	-.22	-					
12. Facet anxiety	2.43	.70	.66	.04	.15	.03	.13	.08	.04	-.04	.01	-.09	-.47	.48	-				
13. Facet depression	2.00	.63	.81	.17	-.14	.13	.24	-.21	.04	-.10	.13	-.00	-.67	.15	.44	-			
14. Facet self-consciousness	2.35	.69	.74	.08	.01	.08	.16	-.11	-.02	-.14	.01	-.06	-.41	.10	.26	.52	-		
15. Key decision makers	.13	.34	-	.02	-.06	-.02	-.01	.16	.05	.28	.12	.26	.02	-.15	-.02	-.05	-.25	-	
16. Playing position	.56	.50	-	.08	-.05	.20	.13	-.15	.15	.08	.24	.18	.23	.03	-.19	-.05	.04	-.15	-

Note. $N = 39$; N of observations = 1010. CHA-SP = changing aspects of work activities to solve problems; DIS-SP = discussing problems with others to solve problems; CHA-EA = changing aspects of work activities to express affect; TAL-EA = talking to others to express affect. Correlations aggregated for the experience sampling methodology (ESM) and questionnaire data are shown below the main diagonal. Significance tests are inappropriate for repeated measures data.

Table 3.2. Multilevel Regressions of Appraisals on Affect with CSE as a Moderator

	Negative affect		Positive affect	
	B	*SE*	*B*	*SE*
Threat appraisals	0.61***	.10	-0.00	.05
CSE*threat appraisals	0.02	.02	-0.03**	.01
Challenge appraisals	0.11	.06	0.16***	.04
CSE*challenge appraisals	-0.01	.00	0.01*	.00
Harm appraisals	0.77***	.13	-0.13**	.05
CSE*harm appraisals	0.00	.03	-0.01	.01
[c] CSE	-0.04†	.02	-0.00	.01
[c] Facet anger	-0.35	.33	0.19	.17
[c] Facet anxiety	0.62	.58	0.36	.30
[c] Facet depression	0.76	.61	-0.96**	.27
[c] Facet self-consciousness	-0.00	.49	0.09	.24
[c] Key decision makers	0.19	.48	0.42*	.20
[c] Playing position	0.65†	.34	-0.38†	.20
Variance components	VC		VC	
Intercept	1.68***		0.45***	
Threat appraisals	0.14***		0.04**	
Challenge appraisals	0.07***		0.04***	
Harm appraisals	0.30***		0.01†	

Note. $N = 39$, number of observations = 991. [c] = control variables. † $p \leq .07$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

Table 3.3. Multilevel Regressions of Affect on Coping with CSE as a Moderator

| | Problem-focused coping | | | | Emotional-approach coping | | | |
| | CHA-SP | | DIS-SP | | CHA-EA | | TAL-EA | |
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Negative affect	0.12***	.03	0.09**	.03	0.14***	.03	0.14***	.04
CSE*negative affect	0.00	.00	0.00	.01	0.00	.01	0.00	.01
Positive affect	0.04	.03	0.01	.04	0.09*	.04	0.11*	.05
CSE*positive affect	-	-	-	-	-	-	-	-
[c] CSE	0.03	.04	0.03	.04	0.03	.04	0.03	.04
[c] Facet anger	-0.11	.40	-0.19	.42	-0.18	.40	-0.07	.41
[c] Facet anxiety	-0.08	.47	-0.18	.42	-0.10	.54	-0.77	.49
[c] Facet depression	0.35	.50	0.50	.55	0.40	.45	0.72	.56
[c] Facet self-consciousness	-0.33	.43	-0.36	.48	-0.24	.46	-0.23	.49
[c] Key decision makers	0.12	.56	1.50	.86	0.76	.52	1.46*	.73
[c] Playing position	-0.07	.49	0.05	.47	0.23	.49	0.42	.47
Variance components	VC		VC		VC		VC	
Intercept	1.97***		2.11***		1.89***		2.24***	
Negative affect	0.03***		0.02***		0.01**		0.02**	
Positive affect	Fixed		Fixed		Fixed		Fixed	

Note. *N* = 39, number of observations = 992. [c] = control variables. CHA-SP = changing aspects of work activities to solve problems; DIS-SP = discussing problems with others to solve problems; CHA-EA = changing aspects of work activities to express affect; TAL-EA = talking to others to express affect. †$p \le .07$, * $p \le .05$, ** $p \le .01$, *** $p \le .001$.

In contrast, positive affect was not related with CHA-SP ($B = 0.04$, $p = .31$). There were no cross-level interactions between CSE on negative affect and CHA-SP. Identical findings are shown for DIS-SP, whereby negative affect was significantly related ($B = 0.09$, $p < .01$), and CSE did not moderate this relationship ($B = 0.00$, $p = .86$). For emotional-approach coping, both negative ($B = 0.14$, $p < .001$) and positive affect ($B = 0.09$, $p < .05$) were positively associated with CHA-EA. However, there were no cross-level interactions. Similarly, negative ($B = 0.14$, $p < .001$) and positive affect ($B = 0.11$, $p < .05$) were associated with TAL-EA. Also, TAL-EA was associated with key decision makers as a main effect ($B = 1.46$, $p < .05$).

3.5 Discussion

Theoretical Implications

The present experience sampling study extends our understanding of: (a) how daily cognitive appraisals of workplace events relate to affective responses, (b) how affect relates to adaptive coping functions through behaviours, and (c) the intra-individual processes (i.e., CSE) that moderate the relationships between one's appraisals and affective responses and between one's affect and coping. The results indicated support for Hypothesis 1 whereby threat and harm appraisals were associated with negative affect, and harm was inversely associated with positive affect. Moreover, challenge appraisals were associated with positive affect. These findings are consistent with stress appraisal frameworks (Lazarus, 1991a; 1999; Lazarus & Folkman, 1984; LePine et al., 2005; Podsakoff et al., 2007) which suggest that positive affect may be experienced when events are appraised as challenging or progressing in terms of one's goals, and strain may be experienced when goals are perceived to be threatening or harmful. In addition, when the appraisal-negative affect relationship was controlled for, CSE marginally predicted negative affect as a main effect, which provides support for the notion that factors related to trait individual differences are partly responsible for associations with strain (Kammeyer-Mueller et al., 2009).

It is well-established that emotionally unstable individuals who are unable to control their emotions are less likely to experience positive affective states in response to events (Watson & Clark, 1984). Our findings extend these assertions by identifying the specific facets of neuroticism that exert stronger influences on affective well-being in early career professionals: When appraisal-affect relationships were controlled for, facet depression predicted positive affect (inversely) as a main effect. The specific facet depression, by which we mean a general susceptibility to sad affect rather than a clinical disorder, represents a negatively biased schema in relation to core beliefs about the self, the world and the future

(Beck, 1970). Although depressive biases towards increased negative feelings are expected, research has shown a dual-valence bias whereby decreased positive affect may also be the result of depressive thoughts (Clark & Watson, 1991). In the context of early career sportsmen, one possible explanation for this finding is that high levels of facet depression might accentuate common physical, relational, and emotional strains that are linked with a transition to a new profession and institution (Fouad & Bynner, 2008). For example, during this transition, early career professional athletes may encounter higher than normal intensities of training and competition as well as relational conflicts with teammates and staff.

Although personality dispositions are clearly important in the development of cognitions and emotions (Clark & Watson, 1991; Watson & Clark, 1984), the organizational stress process is also highly contextual (Cooper et al., 2001). Our findings showed that both key decision makers in the team and playing position (viz., back players) were associated with positive affect as a main effect. Conversely, playing position (viz., forward players) was marginally associated with negative affect. As alluded to earlier, Lazarus (1991a; 1999) suggests that affective responses may be determined by stable beliefs about the world and prior learning. In the case of key decision makers, adaptation to a new working environment may be characterised by learning a set of emotional display rules that are shaped by organizational norms and practices (Diefendorff et al., 2011). Such display rules (i.e., the expression of positive affect) may have previously been evaluated as being associated with personal and organizational benefits, such as the attainment of goals, team socialization, and long-term recruitment (Diefendorff et al., 2011). An alternative explanation is that key decision makers and 'back' players have greater physical and verbal control over managing their environment compared to 'forward' players. This is evident within training and game environments whereby 'backs' have an active decision making role in coordinating and achieving change (i.e., scoring points). According to models of job control and strain (Karasek & Theorell, 1990; Wall, Jackson, Mullarkey, & Parker, 1996), negative affect can be reduced and job satisfaction enhanced if workers have the power to make decisions in their role. Moreover, research has shown that stronger perceptions of control over events are related to higher levels of positive affect (Karasek & Theorell, 1990).

Our findings provided support for Hypothesis 2 such that negative affect was strongly related to all coping functions enacted by all behaviours. These results support previous research which emphasizes that individuals simultaneously employ a range of control and support seeking behaviours to solve problems and express affect (Daniels et al., 2013; Daniels et al., 2009). Although our research has shown that affect may drive coping efforts

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(rather than vice-versa), these results are unable to indicate which methods of coping are most adaptive for career progression or long-term well-being. Previous research has suggested that problem solving is adaptive when events are perceived to be controllable (Lazarus & Folkman, 1984). Furthermore, positive affect may lead to greater support seeking behaviours and problem solving through a broadening of attention and behavioural resources (Isen, Daubman, & Nowicki, 1987); though our findings did not provide support for this assertion. Research has indicated that expressing affect may also be beneficial for adaptation. For example, talking to others to express negative affect may serve the functions of sharing reciprocal affective experiences, building trust, empathy, and social cohesion amongst colleagues (Rimé, 2009). In addition, controlling behaviours that involve removing oneself from work events to vent in private may be constructive for well-being in the long-term (Daniels, 2011).

We also found that positive affect was related to CHA-EA and TAL-EA. In so far that expressing positive affect through changing tasks may provide opportunities to regulate oneself in relation to one's goals (Daniels, 2011), we believe that this method of coping is likely to be adaptive in the long term. Similarly, talking to colleagues to share positive affect may enhance social bonds through celebrating and reorganizing team goals, and, further boost longer term positive well-being (for a review, see Rimé, 2009). Furthermore, our research showed that key decision makers predicted positive affect and TAL-EA as a main effect, which suggests that eliciting social support to express affect is adaptive for enhancing team goals and career progression.

Results also indicated support for Hypothesis 3 whereby CSE moderated relationships between challenge appraisals and positive affect, and between threat appraisals and positive affect. Although it has also been argued that individuals displaying positive CSE are more likely to perceive jobs as challenging and react more positively to work demands (Kammeyer-Mueller et al., 2009), the current study is the first to demonstrate the importance of CSE as a moderator of appraisal-affect relationships. This supports transactional stress theory whereby beliefs about the self are important predictors of the variance between appraisals and affective responses (Lazarus, 1999). Our research also suggests that facets of emotional stability (e.g., facet depression) and situational mechanisms (e.g., key decision makers, playing position), that provide physical or perceived control over events, are also associated with affective responses as well as primary appraisals and CSE. According to our findings, in this specific work context, facet depression is a greater predictor of affective well-being than the influence of CSE. This supports the notion that emotional stability may

function differently in specific stress contexts (Kammeyer-Mueller et al., 2009).

One surprising finding was that CSE did not moderate any relationships between affect and coping functions enacted by behaviours. This is contrary to research that has found direct relationships between CSE and coping (Kammeyer-Mueller et al., 2009). Although we hypothesized that individuals may draw on autonomous mental models (e.g., CSE) to strengthen affect and coping relationships, it is possible that affect-coping relationships may be influenced to a greater extent by novel situational contexts. At this stage of the stress process, perhaps more deliberate, conscious modes of cognitive processing are required to evaluate coping options to support adaptive functions.

Strengths, Limitations and Future Research Directions

One of the strengths of this research was the use of ESM to investigate the dynamic processes that vary within organizational stress. Using electronic diaries, it was possible to provide greater measurement accuracy and internal validity than other measures used in field research, which can improve power estimates (Bolger et al., 2003). This is contrary to previous research on organizational stress processes that has used single time point methods (Webster et al., 2011). The ESM data collection over a 6 week period was also a key strength, providing a total of 1010 observations from a special sample of sports professionals. The ability to estimate sufficient power for cross-level interaction effects was however influenced by our relatively small sample size (Mathieu, Aguinis, Culpepper, & Chen, 2012). In the present study, after running a power calculator post-data collection[10], and in line with the recommendations of Aguinis, Gottfredson, and Culpepper (2013), it was found that our cross-level interaction power was poor and ranged from .11 to .16 ($\alpha = .10$ level). Therefore on this basis, the results obtained from cross-level interaction effects appear inconclusive, due to an insufficient level of power to detect an existing effect.

There were also limitations in relation to sampling. Firstly, although ESM procedures have the advantage of collecting data over a long period of time, the varied working schedule of the participants precluded the instruction for individuals to complete the PDAs at specific daily time points. Therefore, we were unable to control for the time of day. In addition, as with any correlational data, causality inferences cannot be made with certainty. This could have implications for the findings relating to Hypothesis 2, whereby coping could have a stronger causal influence on affect than vice-versa. Although this alternative ordering of causation has been suggested in previous research (Daniels et al., 2009), Lazarus' (1991a)

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[10] We collected data before a power calculator for cross-level interactions (see Mathieu et al., 2012) was publically available.

transactional model suggests that the causal ordering of affect and coping is justified. Further, although Daniels et al. (2009) assessed momentary affect at the end of a working hour following assessments of hourly coping, we assessed hourly affect alongside hourly coping, which supports the original function of affect; to motive coping efforts (Ortony, Clore, & Collins, 1988). Future researchers should continue to test the adaptive influence of affect in predicting particular coping functions enacted by eliciting behaviours. Also, future researchers could investigate a wider range of coping functions enacted by job resource behaviours. For example, avoidance coping could be enacted by delegating tasks to avoid solving problems.

Another potential limitation was that we did not explicitly measure the mechanisms by which affective responses are related to secondary appraisals. Transactional stress theory suggests that affect influences coping through evaluation of coping resources and potential (Lazarus, 1999). As such, any variance left unexplained in the stress process may be explained by secondary appraisals. In addition, in so far that cognitive appraisals may draw on stable evaluations of oneself and beliefs about the world, researchers could test whether CSE predicts primary and secondary appraisals during busy working schedules and across different occupations. Finally, it was not possible in this study to objectively measure whether specific appraisals, affective responses and coping were indicative of positive adaptation for career development and long-term well-being. Future research could consider conducting longitudinal time-series designs to test whether these variables predict employment, performance and well-being over time. Studies of professional sport academies are suitable for long-term follow-up assessments since career success can be observed through external archives. For example, a number of participants from the present study have been released from the academy and a small selection of performers ($n = 4$) have since been signed for their professional senior team for the 2012/2013 competitive season.

Implications for Practice

The results of this study have important implications for managers, head coaches and applied practitioners who operate within sport organizations. First, we established that for early career professional sportsmen, threat and harm appraisals of organizational events are linked to negative affect. This suggests that sport organizations should encourage newer employees to develop planned responses to potentially threatening events in the future, to promote more proactive methods of coping. One of the ways in which this practice is vital is when players are informed during the season that they may not be retained and when there are regular annual changes in personnel (i.e., players and staff leaving and new jobs within

the organization), which will likely result in uncertainty. Therefore, developing a range of adaptive coping abilities could be especially beneficial for newer employees who are trying to effectively cope with work transitions. Indeed, adaptive coping abilities will have implications for the career development of sportsmen, as head coaches will only likely retain those performers who are better at coping with the physical and psychological demands of professional sport. In terms of our findings on dispositional influences on affective responses, those in charge of recruiting early career sportsmen could consider selecting individuals who share high levels of emotional stability and a general proneness to regulate and share positive emotions, as part of a larger talent identification programme. Being aware of sportsmen's dispositions may assist organizations in identifying and developing those who will most likely appraise events as challenging and respond positively during busy training schedules.

Finally, this study has demonstrated that organizational stress management within professional sport is important for developing early career adaptation to new working environments and sustaining long-term employment. Surprisingly, organizational stress management interventions have yet to have been applied in sport psychology research (study one). Stress management in this vocational setting will likely require a multimodal approach whereby primary, secondary and tertiary-level interventions are aimed at achieving a variety of organizational and individually-focused objectives. Such research will improve our knowledge of the effectiveness of multi-level stress management interventions in this profession and test the conditions through which organizational stress intervention models are applicable in elite performance contexts.

Conclusion

The cognitive-motivational-relational model (Lazarus, 1991a; 1999) is one of the most influential theories of organizational stress. Surprisingly, cognitive appraisals, which shape affect and subsequent coping, have largely been neglected in organizational stress research. Using ESM, it was possible to map daily relationships between appraisals, affect and coping functions enacted by eliciting behaviours, as they occurred for early career professional sportsmen. In addition, our findings demonstrate that core self-evaluations are an important evaluative trait by which daily appraisals and affect are moderated. Finally, the research demonstrates how daily affect may lead to the simultaneous enactment of coping behaviours (using job resources) to fulfil particular coping functions; both of which may be adaptive for long-term well-being and career success.

4

Study Three

"...I have always endeavoured to listen to what each and every person in a discussion had to say before venturing my own opinion. Oftentimes, my own opinion will simply represent a consensus of what I heard in the discussion."

~ Nelson Mandela.

4

An Organizational-level Stress Audit within a Professional Sport Organization[11]

4.1 Introduction to Study Three

Chapter three found that for academy rugby union players who operate within a professional sport organization, their daily cognitive appraisals of organizational events were significantly related to daily affective responses. In addition, these affective responses were associated with the enactment of coping functions through coping behaviours. Moreover, this experience sampling study highlighted how players' transactions with their organizational environment may vary according to personality, academy role and playing position.

In diagnosing the organizational stress experience of these sport performers, these findings provided a stimulus for considering the tailoring of stress management interventions for this professional academy rugby union squad. However, in setting the background to study three, there are a number of contextual, operational, and epistemological considerations which were necessary for further auditing stress prior to the development of stress management interventions. Firstly, in the context of this organization, it is important to note that the playing squad comprises three different cohort year groups, who may adapt differently to organizational stress. This is because older academy year groups will have been based at the organization for a longer duration. Therefore, they may have developed a greater range of coping resources in comparison to younger year groups who may be making a transition to joining the organization. Secondly, the academy players are contracted to a three-year professional contract. At the conclusion of this contract players are either retained, promoted to the professional senior team, or are (for the most part) released. Therefore, tailoring interventions based solely on the findings from study two would be inapt, as many of the playing squad have since been released and many more have joined the organization.

When considering the development of organizational stress interventions for this

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[11] Conference proceeding associated with this chapter:

Rumbold, J. L., Fletcher, D., & Daniels, K (2014, October). *Organizational stress management in professional sport: Recommendations from a stress audit*. Poster session presented at the 29th annual meeting of the Association for Applied Sport Psychology, Las Vegas, NV, United States of America.

organization, it is critical to firstly understand the sociocultural environment in greater detail. Although study two inferred causal relationships and tested some individual differences, it neglects to explain how these associations are embedded within a wider range of complex social and political contexts (Griffiths, 2000). Furthermore, in keeping with Lazarus' (1999) sociocultural explanation of stress in organizations, the way in which the playing squad collectively copes with organizational stressors should not enable researchers to explain how particular *individuals* or *subgroups* within this organization cope. This perspective is also relevant for coaches and staff who operate in this organization, as they are also "performers in their own right" (Thelwell et al., 2008). Subsequently, these individuals may encounter analogous *and* different organizational stressors to academy rugby players, and may also enact different coping behaviours and functions. This has clear practical implications for the development of stress management interventions for different organizational members and groups.

From an operational perspective, while study two identified the transactional stress relationships that exist in this sport organization, there is now a greater need to describe why and how such relationships might operate for different 'performers' and to what extent there are common issues for specific individuals and target groups (Briner & Reynolds, 1999). Study three therefore utilises interviews and focus groups to provide a richer description of these relationships and the degree to which they vary for different individuals and groups. Furthermore, in an attempt to optimise the organizational environment for greater well-being and productivity, it is important to gain the participation and views of all members (i.e., players, coaches, management) regarding their experiences of stress and how best to manage their environment. This is because organizational members have an important role, individually and collectively, in shaping the development of interventions which are aimed to prevent and reduce the existence of stressors, and their resultant effects on strain (Daniels, 2011).

Using a participatory action research (PAR) approach, study three involves an organizational-level stress audit to facilitate understanding of: (a) the organizational stress experienced within the context of this organizational setting (Dollard, Le Blanc, & Cotton, 2008), and (b) what members and researchers can do collectively to improve the organizational environment. To achieve the latter, study three utilises mixed methods (i.e., qualitative and quantitative) to gain a comprehensive identification of members' recommendations for stress management interventions. Furthermore, the decision about which types of intervention to use should be based on a thorough assessment of the specific

organizational situation (Briner & Reynolds, 1999). Indeed, studies two and three jointly represent a comprehensive and holistic stress audit of the professional sport organization over approximately a 12 month period. Collectively, these assessments parallel Lazarus' (1999) post-positivist position to understanding transactional stress: "We must be open to diverse methodologies. No longer is it reasonable over the long term to seek single, or even a few causes, to understand the complex phenomena in which we are interested" (p. 23).

4.2 Review of Literature

The growing body of literature concerning organizational stress suggests that it may be a critical factor in determining individuals' well-being and performance development in sport. Based on a transactional conceptualisation (Lazarus & Folkman, 1984), organizational stress in sport has been defined as "an ongoing transaction between an individual and the environmental demands associated primarily and directly with the organization within which he or she is operating" (Fletcher et al., 2006, p. 329). This conceptualization encompasses the stressors that a person encounters within their sport organization, the cognitive appraisals that they make in relation to their goals and well-being, their subsequent emotional responses to organizational stressors, and their attempts to cope with any organizational issues that may arise. For those '*performers*' who operate within sport organizations (i.e., athletes, coaches, support staff), it is likely that the successful management of stress processes may not only facilitate the optimisation of well-being and performance development at an individual-level, but it is also likely to support the effective functioning of teams and institutions at an organizational-level (Fletcher & Wagstaff, 2009; Wagstaff et al., 2012a).

Organizational-level stress management interventions, which aim to improve the psychosocial working environment and optimise the well-being of personnel in a constant way (Giga et al., 2003a; Kompier, Cooper, & Geurts, 2000; Mattila et al., 2006; Nielsen et al., 2010b) are extremely limited in sport psychology research (study one). Subsequently, this limited evidence-base is problematic for advancing sport psychologists' knowledge of how best to develop effective organizational stress management interventions in sport. Within the organizational psychology literature, there is a strong consensus that organizational-level interventions could be the most effective and practical solution for optimising the stress experience of those who individuals who operate in organizations (Briner & Reynolds, 1999; Richardson & Rothstein, 2008). One of the explanations for this is that organizational-level interventions aim to eliminate or reduce the number and intensity of organizational stressors that are encountered by altering organizational conditions and structures. This preventative approach is believed to be more proactive than individual-level interventions, which aim to

either modify individuals' responses to stressors or help individuals to cope once organizational issues have occurred (Cooper et al., 2001).

Although a number of organizational psychology researchers have argued in favour of organizational-level interventions, surprisingly, research supporting their effectiveness has been equivocal. A number of narrative and systematic reviews have concluded that very few organizational stress management interventions in occupational settings have been found to be effective (Reynolds, 2000: Richardson & Rothstein 2008; van der Klink et al., 2001). According to researchers, one of the key ingredients for increasing the likelihood of effective organizational-level stress management interventions is the systematic and careful assessment of stress processes prior to intervention development (Bowling et al., 2012; Burke, 1993). To reliably understand the context and nature of organizational stress as a means to inform appropriate stress management initiatives, it is necessary to conduct an organizational-level stress audit; one that is able to identify the needs of individuals and groups who operate in an organization (Giga et al., 2003a; Nielsen et al., 2010a; Sutherland & Cooper, 2000).

A stress audit is traditionally a generic term which describes a number of broadly analogous approaches[12] which aim to identify potential stressors, assess which have the greatest negative impact and identify any individuals and groups who are most at 'risk' (Rick, Briner, Daniels, Perryman, & Guppy, 2001; Sutherland & Davidson, 1993). Although there have been a range of measures and frameworks that have been adopted for auditing stress in organizational settings (e.g., Biron, Ivers, Brun, & Cooper, 2006; Clarke & Cooper, 2000; Faragher, Cooper, & Cartwright, 2004; Houdmont, Randall, Kerr, & Addley, 2013), it has been long acknowledged that a comprehensive audit, based on a transactional stress conceptualization (Lazarus, 1999), should reflect the sequence of events and stress processes that occur across personnel in transacting with their organizational environment (McGrath, 1976). This has been a challenge for the field of sport psychology to date, whereby separate organizational stress processes (e.g., stressors, appraisals, emotional responses, coping strategies) have predominantly been identified in auditing elite performers (Arnold & Fletcher, 2012; Fletcher et al., 2012b; Hanton et al., 2012; Kristiansen, Murphy, & Roberts, 2012) and coaches in isolation (Fletcher & Scott, 2010; Olusoga et al., 2009; Rhind, Scott, & Fletcher, 2013; Thelwell et al., 2010). To this effect, based on the extant organizational psychology literature, it is believed that an organizational-level stress audit should incorporate the following: the identification of organizational stressors, stressor outcomes

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[12] Stress audits have also been referred to in the organizational psychology literature as 'psychosocial risk assessments', 'risk management', 'stress diagnosis' and 'stress analysis'.

(e.g., affective responses, performance indicators), strategies for coping, individual differences (e.g., age, organizational roles), target groups at risk of stress and individual attitudes to the options available for stress management (Dewe et al., 2010; Leka et al., 2005; Rick & Briner, 2000).

Despite this, there has been a large focus in organizational psychology on quantitative stress audits (e.g., questionnaires, surveys) used to identify stressors and strain responses; which fail to consider the importance of cognitive appraisal and coping processes (Harris & Daniels, 2007; Nielsen et al., 2010a). In addition, to account for the often highly political and socially complex environment that is inherent in organizations, researchers have for some time called for greater inclusion of qualitative approaches, to allow for a more in-depth understanding of the ways in which individuals and target groups perceive and manage their organizational environment (Kompier et al., 2000; Mazzola, Schonfeld, & Spector, 2011; Nielsen et al., 2010a; Nielsen et al., 2010b; Rick & Briner, 2000).

One of the benefits of incorporating qualitative methods in a stress audit is to gain an understanding of in-depth feelings, attitudes and goals from individuals and groups whose occupational roles may differ (Mazzola et al., 2011). This is also important for establishing the existence of frequently stressful incidents within identifiable groups. This supports the prioritization of solving common problems for particular individuals and target groups in an organization (Bowling et al., 2012; Briner & Reynolds, 1999). Although qualitative stress audits may be a time consuming challenge for researching large organizations (Wall, 1999), the use of methodologies such as focus groups are believed to be advantageous in researching smaller organizations or departments (Biron et al., 2006). Furthermore, the use of focus groups enables individuals to participate as 'working groups' in identifying and communicating their needs to other organizational members (Kohrer & Munz, 2006). Such an approach is important in developing stress management interventions at an individual and organizational level, since members of an organization will have both individual and collective attitudes, preference and motives (Kompier et al., 2000). Such attitudes and opinions are likely to influence the relationship between intervention development and effectiveness. For these reasons, participatory action research methods have becoming increasingly popular in developing organizational-level interventions (Nielsen et al., 2010a).

In so far that organizational stress management is the responsibility of the organization and the individuals who operate within it (Dewe et al., 2010), participatory action research involves researchers and personnel working together in a joint problem-solving process whereby different views can be declared and varying interests accommodated

(Heaney et al., 1993). The focus of participatory action research is getting organizational members to collectively identify specific issues of concern and contribute to the design of solutions. Without the participation and experience of various personnel, a suitably tailored intervention for tackling organizational stress cannot be appropriately designed (Elo et al., 2008). Indeed, several studies have identified that participatory approaches, which treat organizational members as active agents of change, are a key mechanism for the success of organizational stress management interventions (Bond & Bunce, 2001; Bond et al., 2008; Mikkelsen & Gundersen, 2003; Nielsen et al., 2007). Subsequently, to combat the challenges of understanding the perspectives and recommendations of varying organizational members, researchers have called for more utilization of mixed methods (Elo et al., 2008; Nielsen et al., 2010b; Mazzola et al., 2011) that facilitate greater triangulation and complementarity of findings (Greene, 2008; Moran, Matthews, & Kirby, 2011). This is important for exploring the existence of common organizational stress processes and stress management recommendations that may not be easily achieved from the adoption of either quantitative or qualitative methods alone.

Despite the growing body of sport psychology literature that has emphasized the importance of managing organizational-level issues in sport organizations (Fletcher et al., 2006; Fletcher & Wagstaff, 2009; Wagstaff et al., 2012a), organizational-level stress management interventions are extremely scarce. Recently, Wagstaff and colleagues tailored a 9-month action research intervention within a national elite sport organization to develop organizational members' emotion abilities and regulation strategies (Wagstaff et al., 2012b). Although this research was effective in increasing emotion abilities and regulation strategies for 25 members of a large elite sport organization, the research highlights a number of challenges and gaps in relation to organizational-level research in sport. For example, organizational-level interventions should aim to target as many members of the organization as possible (Dewe et al., 2010). One of the difficulties when developing participatory organizational-level interventions in elite sport is that many members (e.g., administrators, athletes, coaches, sport scientists) may not necessarily operate within a universally located and institutionalized physical environment. This raises a number of issues in relation to gaining maximal participation from members of an elite organization, as well as the degree to which external members are aware of the most commonly existing issues that are present in their institution's environment. Indeed, according to Kohler and Munz (2006), maximal participation in the planning stages and the institutionalizing of an intervention are key facets to determining the likely success of an organizational stress management intervention.

Consequently, it may be that professional sport, which has been a largely overlooked population in sport psychology research (cf. Nicholls et al., 2006), more appropriately lends itself to the participative auditing and management of stress processes that occur in a universally operated sport institution.

In summary, a challenge for advancing organizational-level stress management research in sport is that there is currently no framework in sport psychology for conducting organizational-level stress audits. Despite a greater wealth of organizational psychology research conducted in this area, there remain calls from researchers who advocate that "research should give more attention to developing techniques used to diagnose the need for stress interventions" (Bowling et al., 2012, p. 79). Therefore, the purpose of this study is to conduct a mixed method organizational-level audit of transactional stress within a professional sport organization. In addition, by following a participative approach to stress auditing, a secondary purpose is to identify recommendations for future stress management interventions for particular members and groups who operate within a professional sport organization. In fitting with a post-positivist view of transactional stress (Lazarus, 1999) and current approaches to organizational stress management (Dewe et al., 2010; Nielsen et al., 2010a), the exploration of stress processes and stress management recommendations will facilitate the tailored prioritization of individual- or organizational-level initiatives for all members operating in a professional sport organization. It is hoped that this organizational-level stress audit may provide researchers and practitioners with a mixed method framework from which stress management interventions in sport organizations can be tailored, designed and advanced.

4.3 Method

Participants and Sport Organization

To address the study aims a purposive sampling technique was employed to select participants who operated within a sport organization. Following institutional ethical approval, managers and head coaches of sport organizations in the United Kingdom were contacted by email. This form of communication informed them of the purposes of the study, the requirements for each participant and requested for the organization to participate. On receipt of one of the communications, the author was invited to meet and present to a team of core staff (manager, assistant manager, head of strength and conditioning, head of physiotherapy, and the educational welfare officer) who worked for a professional rugby union academy. Following this meeting, the staff concluded that members of the organization would participate in the study. Arrangements were then made within the organization to

provide information and consent letters to the parents of rugby players who were aged under 18. The information letter further outlined the study purpose and requested participation from each performer within the sport organization.

The organizational sample ($N = 47$) was composed of professional academy staff (manager, assistant manager, sport science support and administrative staff, $n = 7$) and the entire male rugby union playing squad ($n = 40$). The ages of staff and players ranged from 22 to 56 years ($M = 36.71$, $SD = 11.35$) and 15 to 19 years ($M = 17.13$, $SD = 0.97$) respectively. The predominantly male sample (i.e., 98% male) represented multiple job roles and ages of individuals who operated within the professional sport organization on a full-time basis.

Data Collection

The processes of data collection followed a concurrent triangulation mixed methods design, such that qualitative and quantitative data collection was conducted at the same time (Creswell & Plano Clark, 2011). Data collection began prior to the beginning of pre-season training in June 2011. This represented a period whereby the majority of the playing squad had not yet returned from the previous end of season break. Subsequently, individual interviews ($n = 13$) were conducted with the professional academy staff ($n = 7$) and key players ($n = 6$) from the playing squad who had returned early to the organization for pre-season conditioning. The benefit of this approach was that exclusive input was gained from key subgroups and decision makers (e.g., the head coach) who operate in distinct roles and hold the greatest influence in planning, implementing and committing to an organizational-level stress management intervention (Bachiochi & Weiner, 2004; Fletcher et al., 2006). Due to time constraints on players' training schedules, it was not possible to complete individual interviews for each of the remaining 34 participants upon their return to pre-season training. Indeed, time constraints are a common challenge for conducting qualitative stress audits in organizational populations (Wall, 1999). At this stage of data collection, it was identified that the remaining participants represented three specific age sub-groups in the squad (e.g., under-17, under-18, and under-19 age groups). Such sub-groups are important for delimiting particular stress management interventions for those most at risk of organizational stressors (Sutherland & Davidson, 1993). Furthermore, the existence of organizational stressors and outcomes may be identifiable for particular target groups (Briner & Reynolds, 1999) who may share similar personal and developmental needs.

Hence, to analyze a stress audit for particular year groups of players, and, to gain a holistic understanding of the organizational processes that sub-groups encounter (Biron et al., 2006; Morgan, 1997), three focus groups were conducted with the remaining 34 participants.

All interviews and focus groups were conducted face-to-face by the author who had experience in qualitative interviewing. Before each interview, participants were provided with written and verbal information about the purposes and outcomes of the study. Following assurances of voluntary participation, anonymity, and the freedom to withdraw at any stage, participants had the opportunity to ask questions about the study before completing an informed consent form (cf. Krueger & Casey, 2009).

Interview guide. A semi-structured interview guide (see Appendix 4) was used to facilitate each session. Each interview and focus group took place at the professional academy training ground clubhouse in a private meeting room. The content of the interview guide was generated from a range of sources. Firstly, in line with previous stress audits that have been conducted in organizational psychology (Biron et al., 2006; Cox et al., 2000; Heaney et al., 1993; Leka et al., 2005; Newman & Beehr, 1979; Sutherland & Cooper, 2000), the main components of the stress audit included: an exploration of organizational stressors, stressor outcomes, coping behaviours, individual differences, and attitudes towards stress management recommendations. In addition, the content of questions were supplemented from organizational stress research conducted in sport (Arnold & Fletcher, 2012; Fletcher et al., 2006) and organizational psychology (Cooper et al., 2001).

The interview guide began with introductory questions (e.g., "Could you tell me about something that happened last season that went really well for you?"). These questions intended to build rapport, set the organizational context and provide some time for the participant to consider the area in question (Rubin & Rubin, 2005). The main questions focused on exploring staff and players' experiences of organizational stressors within the professional environment and suggestions for improving academy functioning and performance. In addition, where relevant during discussion, a number of probes were included to explore the following: outcomes of the organizational stressors previously encountered (e.g., "How did you feel about these demands at the time?" / "What effect did that have?"), how the participant attempted to cope with any issues that arose (e.g., "How did you deal with that at the time?" / "were you able to do anything to prevent the problem or manage the problem better?"), and any potential individual differences within and between participants (e.g., "What do you tend to think about when these issues occur?" / "what do other staff and players think about these issues?"). A final section of the interview encouraged participants to summarize their views and elaborate on any personally relevant organizational issues. In addition, the author clarified the participants' recommendations for stress management and requested for feedback on the interview process.

Prior to the interviews being conducted, the guide was piloted with an amateur elite athlete who operated in a separate sport organization. Subsequently, several questions were reworded to enhance their clarity (Silverman, 2011). Furthermore, some additional interview questions for staff and players were incorporated after several themes emerged from a meeting with various academy staff (viz., manager, assistant manager, strength and conditioning coach, and educational welfare officer) in the professional sport organization (cf. Liamputtong, 2011). These themes related to communication, social support, decision making and time management. The individual interviews ranged from 52 to 96 minutes in duration ($M = 69.30$, $SD = 11.86$) and the focus groups ranged from 63 to 79 minutes in duration ($M = 71.90$ min, $SD = 8.16$) respectively. All interviews were digitally recorded in their entirety and transcribed verbatim.

Stress management survey. At the end of each interview and focus group, and to corroborate individuals' attitudes towards stress management interventions, participants were asked to complete a short stress management survey (Bradley & Sutherland, 1994) which had been adapted for the sport organization. The survey presented a list of 14 possible stress management programmes and asked staff and players to choose one of three responses (yes / no / don't know) to each of the following four statements: (1) I feel I would personally benefit; (2) I would personally participate; (3) I feel that the academy would benefit; and (4) I would recommend the academy to participate. The survey list was generated from previous organizational stress research conducted in professional sport (study two), the pre-interview meeting with academy staff, and the stress management intervention literature in sport (for a review, see study one). Participants also had the opportunity to suggest any programmes that were based on their recommendations from the interviews.

Data Analysis

A content analysis was the most appropriate approach for interpreting the qualitative data for several reasons. Firstly, content analysis allows the exploration of interview transcripts for recurrent instances in relation to research questions, and, the generation of inductive knowledge through the emergence of themes (Patton, 2002; Neuendorf, 2002; Silverman, 2011). Secondly, this method of analysis is recognized in sport and organizational psychology for analyzing both interviews and focus group data and has been employed effectively when exploring organizational processes (e.g., Bachiochi & Weiner, 2004; Wagstaff et al., 2012a). Thirdly, due to the multi-method nature of data collection, a method of analysis was required to yield a 'typology' (see Creswell & Piano Clark, 2011) that could be employed as a framework to corroborate and further supplement the interpretation of

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categorical data from both the interviews and the stress management surveys conducted (Greene, 2008; Teddlie & Tashakkori, 2009).

During the first stages of content analysis, the interviewer immersed themselves in the data by adopting a reflective approach. This approach involved the following: re-reading post-interview notes that had been taken at the time of interviewing, listening to each of the interview recordings to gain clarification of participant tones and meanings, reading and re-reading the written transcripts and noting down initial ideas. Following this, segments of quotes that represented similar meanings were inductively coded as raw-data themes. In addition, raw-data codes which represented interpretable and common themes were grouped into lower-order themes before clustering these into higher-order themes. Finally, due to the influence of the researchers' pre-existing knowledge of organizational stress models (e.g., Arnold & Fletcher, 2012; Fletcher et al., 2006) and stress management processes (Leka et al., 2005; Sutherland & Cooper, 2000), the higher-order themes were then deductively clustered into general dimensions. Finally, to consolidate and supplement the interpretation of findings from the stress management surveys, a frequency analysis was conducted to both sets of data to illustrate the number of participants mentioning each theme.

Methodological Quality and Rigour

A variety of steps were taken to optimize the quality and rigour of the mixed methods and emerging data. Moreover, trustworthiness of mixed method research requires a strong audit trail and reflexive stance to be presented (Bergman, 2011; Bryman, 2007). These steps are in line with the eight "big tent" criteria for excellent qualitative research outlined by Tracy (2010), which relate to: (a) worthy topic, (b) rich rigour, (c) sincerity, (d) credibility, (e) resonance, (f) significant contribution, (g) ethics, and (h) meaningful coherence. The current study might be considered a worthy topic because of its relevance, timeliness and significance to individuals within the professional organization sampled and of interest to applied researchers in the field of psychology. The rigour of the research can be characterized by the rich complexity and variety of transactional stress theory constructs and data sources collected. In addition, the appropriateness of the organization sampled and audit conducted provides rich face validity. Furthermore, the author was diligent in devoting significant time, effort and thoroughness in conducting the interviews and debriefing participants through presentation of the findings and member checking. Sincerity was achieved by completing a self-reflexive diary throughout the data collection and by using "critical friends" to monitor any changes in researchers' approach to data collection. Moreover, transparency is reflected in the author's honest disclosure about the research process (Tracy, 2010).

Credibility is concerned with the trustworthiness and plausibility of the data presented (Lincoln & Guba, 1985). To reduce a biased understanding of organizational issues, the author used a multivocality of participant quotes and provided a range of emerging hierarchical themes through content analysis; which can be tracked back to the raw data that was coded. In addition, the process of crystallization (Ellington, 2008); which relates to gathering multiple types of data, enabled a more complex, in depth understanding of organizational issues. Resonance explains the ability to meaningfully affect an audience such that they can empathize, resonate and identify with the research, despite a possible lack of experience of the topic. Through presentation of visual data and evocative writing, we attempted to promote resonance in a way that encourages the reader to read a range of quotations from different individuals within the organization and decide on the extent to which they have experienced similar events in parallel or divergent arenas (Tracy, 2010).

In judging the significance of the current study, the theoretical contribution to organizational stress management research in sport should be considered, along with the extent to which the research is heuristically and practically significant for empowering readers and organizational members to engage in action or change. Throughout the data collection and presentation of findings to the organization, attempts were made to meet a number of ethical obligations: adherence to institutional and organizational ethics procedures, situational reflection on the contextual scene, methods conducted and data worth exposing, self-consciousness of one's actions and the consequences for members of the organization, and, the diplomacy of presenting findings to the organization. Finally, in assessing meaningful coherence, we feel that the study achieved its purpose of conducting a stress audit within a professional sport organization and exploring recommendations for organizational stress management. To achieve this purpose, we adopted a critical realist ontology and post positivist paradigm (Burrell & Morgan, 1979) when employing mixed methods and participatory practices that parallel understanding transactional stress theory (Lazarus, 1999).

4.4 Results

A total of 822 raw data themes emerged from the interview and focus group transcripts, which were inductively abstracted into 208 lower-order themes, and 91 higher-order themes. These higher-order themes then formed 17 general dimensions which were deductively categorized under one of the following components of the organizational-level stress audit: organizational stressors, organizational stressor outcomes, coping behaviours, individual differences, and stress management recommendations. In view of the quantity and wide ranging themes to emerge from the stress audit, space precludes an exploration of all

themes and their complexity. Therefore, a selection of quotes and hierarchical content trees with frequencies for each theme are provided for each component of the stress audit.

Organizational Stressors

Figures 4.1 to 4.4 illustrate the lower-order, higher-order themes and general dimensions of the organizational stressors encountered by professional rugby union academy players and staff. In line with a recent research synthesis of organizational stressors encountered by sport performers (Arnold & Fletcher, 2012), the four general dimensions of organizational stressors were: leadership and personnel issues, cultural and academy issues, logistical and environmental issues, and performance and personal issues.

Leadership and personnel issues. Leadership and personnel issues, which were the most frequently cited organizational stressors for players and staff, consisted of the stressors that were related to the direction and support of the organization (see Figure 4.1). The higher-order themes within this dimension were: *external expectations*, *feedback*, *line management*, *referees*, *retention*, *support staff*, *the coaches' behaviours and interactions*, and *the coaches' personality and attitudes*. Within *external expectations*, "coaches' expectations" ($P = 14$; $S = 6$) for players to work hard was a regular source of conflict when this expectation was not consistently achieved; particularly as 'work ethic' was considered to be the organization's core value. In addition, within *feedback*, a common issue that contributed to a range of negative outcomes for players and staff was "receiving negative feedback from others" ($P = 10$; $S = 4$). The following quote by a third year academy player provides an insight into how negative feedback from a coach can be destructive for a player's decision making and team morale, and, how game reviews may help to manage feedback more appropriately:

> Silly errors cost us the game. In the changing room, at half time, the coaches scream and shout but it doesn't help if they pick out individuals because the individuals are just going to think about that [making mistakes] the next time they go out. Every decision the players make … Like [the head coach] was just saying "all forwards played really well. Backs were f*****g s**t". But if you are going to win the game, you [the coaches] are going to have to encourage all of your players. Like, yeah, have a scream and shout, kick a few bottles around but then talk about the game properly. Rather than [the coaches] just picking out individuals. And I think people [players] after that game were pretty dejected and down for a couple of weeks. I think we should have had a team debrief afterwards, to realize what we have done wrong and pick out the main bits [to improve]. (Participant 10)

P	S	Lower-order theme	Higher-order theme	General dimension

P	S	Lower-order theme
14	6	Coaches' expectations
7	2	Players' expectations
4	1	Expectations from others
0	3	Staffs' expectations
10	4	Receiving negative feedback from others
5	0	Inadequate performance reviews
4	1	Conflicting styles of feedback
0	3	Inadequate line management
0	2	Micromanagement
0	1	Poor job appraisals
0	1	Poor referee and judge decisions
1	2	Job uncertainty
0	2	Turnover of staff
0	1	Job complacency
0	1	Being released from the programme
3	1	Ambiguous injury diagnoses
0	2	Lack of support staff
1	1	Mismanagement of injuries
0	1	Preferential support for certain players
4	2	Conflicting coaching styles
0	5	Authoritarian leadership
3	2	The manager's moods
2	1	Coaches' preferential treatment of players
4	1	Outcome oriented over development
2	3	Hard-nosed personalities

Higher-order themes: External expectations, Feedback, Line Management, Referees, Retention, Support staff, The coaches' behaviours and interactions

General dimension: Leadership and Personnel Issues

4	0	Unapproachable coaches
1	3	Judgmental staff
0	2	Insecure manager

The coaches' personality and attitudes

Figure 4.1. Organizational stressors encountered by academy players (*P*) and staff (*S*): Leadership and Personnel Issues.

Cultural and academy issues. Cultural and academy issues comprised the stressors that were associated with the atmosphere and behavioural norms in the organization (see Figure 4.2). The higher-order themes within this dimension were: *academy atmosphere and support*, *players' behaviours and interactions*, *communication*, *cultural norms*, *players' personality and attitudes*, *roles*, and *politics*. Within *academy atmosphere and support*, two commonly cited raw data themes related to "academy hierarchies" (*P* = 9; *S* = 4) in the squad and year group "cliques in the squad" (*P* = 9; *S* = 1). Such issues were believed to be closely associated with a "bullying culture" (*P* = 6; *S* = 2) within the academy and "poor communication between staff and players" (*P* = 2; *S* = 2). The following quote by a coach illustrates how academy hierarchies have created fear amongst the less senior academy players, which prevents effective communication in training:

> I think the general openness of the culture needs to improve. There is too much of a fear culture and you don't put your hand up and speak out of turn, in fact, don't speak at all is a lot of their [higher management] mantra, you know, and that's completely wrong. You know, I think that's one of the biggest issues that we have to address here is that it's not "the third years are top dogs and you know your place as a first year player" and "you know your place as a second year player" and, err, "you stay there" [at the bottom of the hierarchy]. If you've got something to say because you're in a better [playing] position, you're more perceptive or whatever as a first year player then you should be able to say it [to the players and coaches], but they won't and they don't [because of fear]. (Participant 6)

Logistical and environmental issues. Logistical and environmental issues encapsulated the stressors that were associated with the organization's management of training and competition (see Figure 4.3). The higher order themes within this dimension were: *training environment*, *competition environment*, *facilities and equipment*, *selection*, and *travel*. Within *training environment*, the most commonly cited lower-order themes were "lack of individual development sessions" (*P* = 11; *S* = 1), "high training intensity" (*P* = 7; *S* = 3), "longer training sessions" (*P* = 5; *S* = 1) and "poorly structured training sessions" (*P* = 3; *S* = 2).

P	S	Lower-order theme	Higher-order theme	General dimension

P	S	Lower-order theme
9	4	Academy hierarchies
9	1	Cliques in the squad
2	5	Clashes of personality
0	5	Lack of trust and respect
0	1	First team losses
0	6	Immature players
0	4	Lack of professionalism
0	3	Players manipulating staff
0	3	Players lacking independence
1	1	Unfriendly teammates
0	1	Peer pressure from released players
1	6	Poor communication between staff
3	2	Poor communication between players
2	2	Poor communication between staff and players
6	2	Bullying culture
1	2	Conformity
0	2	Drinking culture
0	1	Negative motivational climate
0	2	Outcome oriented over development
1	1	Lacking motivation
0	1	Lack of first team accountability
0	3	Role ambiguity
1	1	Poor role models
0	1	Politics in signing new players

Higher-order themes:
- Academy atmosphere and support
- Players' behaviours and interactions
- Communication
- Cultural norms
- Players' personality and attitudes
- Roles
- Politics

General dimension: Cultural and Academy Issues

Figure 4.2. Organizational stressors encountered by academy players (*P*) and staff (*S*): Cultural and Academy Issues.

P	S	Lower-order theme	Higher-order theme	General dimension

P	S	Lower-order theme
11	1	Lack of individual development sessions
7	3	High training intensity
5	1	Longer training sessions
3	2	Poorly structured training sessions
2	1	Varying training schedules
0	2	Training a large squad

Training environment

4	4	Fluctuating game preparation
3	0	Game overload
3	0	Playing at the first team stadium
0	1	Change of competition structure

Competition environment

8	1	Inadequate changing rooms
1	3	First team having priority
0	1	Organizing facilities and equipment

Facilities and equipment

6	2	Fierce competition for selection
2	1	Not being selected
1	1	Call ups at short notice

Selection

0	3	Long away game journeys
2	0	Travelling long distances to the academy

Travel

Logistical and Environmental Issues

Figure 4.3. Organizational stressors encountered by academy players (*P*) and staff (*S*): Logistical and Environmental Issues.

From conducting the focus group with second year academy players, it emerged that the coaches' emphasis on team development versus individual player development in training was of great concern to each player in terms of the potential implications for being retained or released at the first team level:

> It [the academy] is not developing us as individuals; it's developing a team isn't it? (Participant 33) Yeah, for example, I'm quite light and I need to be heavier but they [the coaches] still make me do fitness and CV [cardiovascular training], but they could put me in the gym and get me doing like leg weights or upper body, and the same with the bigger lads if they [the coaches] want them [the heavier players] to lose weight then get them out and do CV don't put them in the gym (Participant 34) ... like [Participant 33] is built differently to [Participant 29] isn't he? They need different things [developmental needs]. (Participant 36) And that could mean you being kept on or you being sacked [released]. For a prop, it could mean "you're too fat, you're not fit enough", goodbye [player being released]. Or for me, "you're too light", and if they kind of change that [offer more individualized training sessions] it could help a lot of people. (Participant 34)

Performance and personal issues. Performance and personal issues consisted of the stressors that related to an individual's professional career and personal development (see Figure 4.4). The higher-order themes within this dimension were: *academy transitions*, *workload and work-life interface*, *diet and recovery*, *player injury*, and *finances*. Within *academy transitions*, "moving to the academy to work" ($P = 7$; $S = 3$), "transition to a higher standard of rugby" ($P = 8$; $S = 0$), and "transition to a higher training intensity" ($P = 1$; $S = 3$) were seen to be key issues that were related to advancing or compromising a player's career development. The following strength and conditioning coach describes the difficulties that a new academy player can face when making the transition to joining the academy:

> As a 16 year old kid coming in, you've probably never been put through some of the things that we'll [the coaches] put you through. I think initially it [joining the organization] is a massive shock to the system across everything. Typically these lads [players] go from training 2 nights a week with their clubs to 5 days or 7 sessions a week here … the contact time across the week is around 25 hours across all of the components [academy processes]; the medical pre-screening, the strength and conditioning, the [training] volume going through the roof, the intense rugby skills and fierce team environment, because there's lots of talented players all in the same place [organization] whereas they come from environments [other rugby clubs] where they've been number one [the best player]. So you chuck all the best players in a pot and then they are expected to adapt to what it takes to be a very good [professional] player and be on the first [senior] team. So that first year at the academy is always quite difficult for the players. (Participant 2)
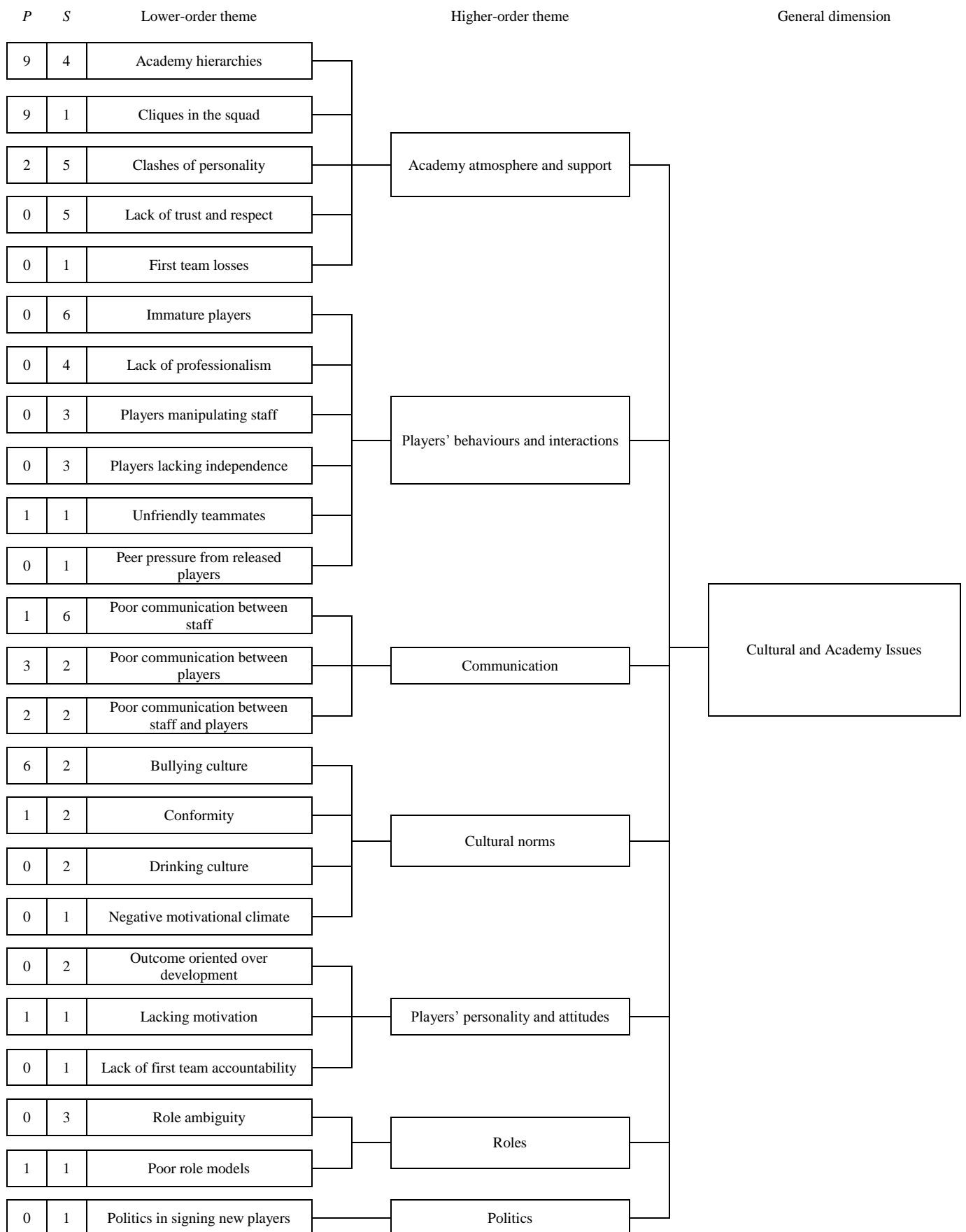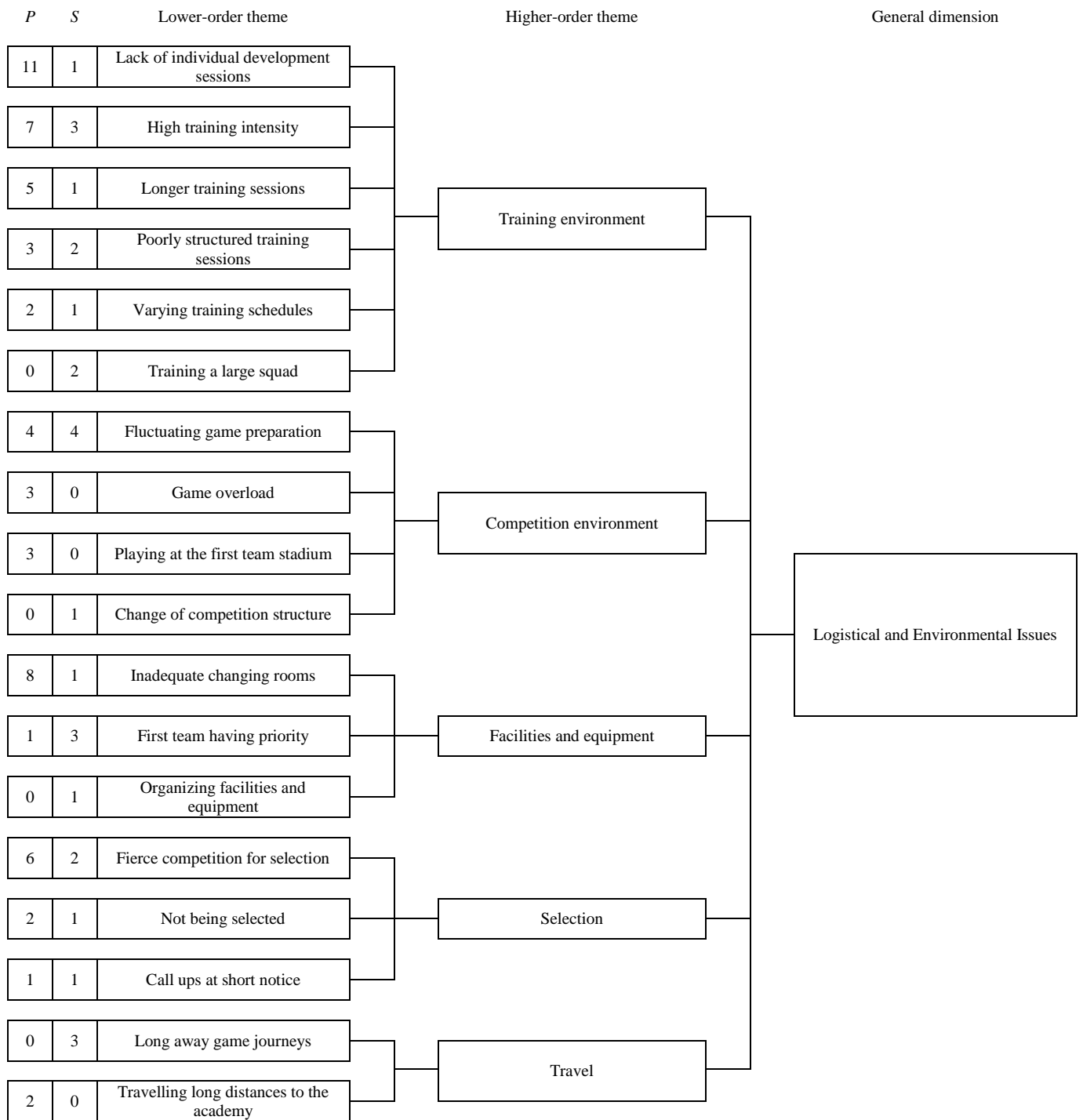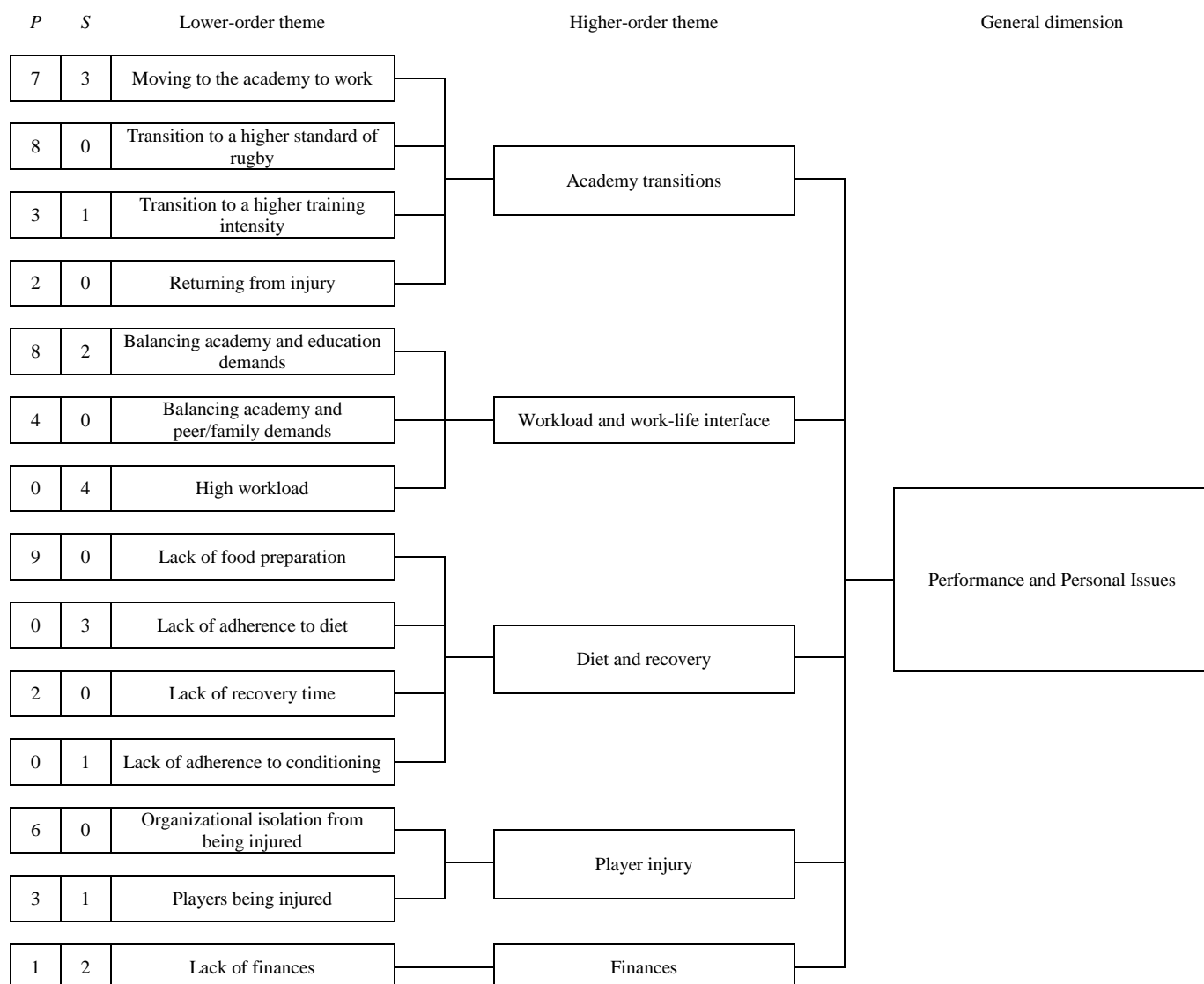
Figure 4.4. Organizational stressors encountered by academy players (*P*) and staff (*S*): Performance and Personal Issues.

Organizational Stressor Outcomes

Figure 4.5 presents the lower-order, higher-order and general dimensions of the organizational stressor outcomes that were experienced by professional rugby union academy players (*P*) and staff (*S*). Organizational stressor outcomes refer to the 'symptoms' of exposure to particular organizational stressors. The four general dimensions of organizational stressor outcomes were: emotional responses, interpersonal outcomes, intrapersonal outcomes, and performance-related outcomes. A frequency analysis revealed that emotional responses were the most commonly cited stressor outcomes by academy players and staff.

Emotional responses. Emotional responses consisted of a wide range of *negative emotions* and *positive emotions*. The most highly cited lower-order themes were "anxiety" (*P* = 24; *S* = 5), "anger" (*P* = 20; *S* = 6), and "fatigue" (*P* = 9; *S* = 3).

P	S	Lower-order theme	Higher-order theme	General dimension
24	5	Anxiety		
20	6	Anger		
9	3	Fatigue		
5	0	Sadness		
2	3	Shock	Negative emotions	
2	3	Boredom		
1	0	Guilt		
1	0	Jealousy		
0	1	Tension		Emotional Responses
0	1	Negative emotional contagion		
2	0	Arousal		
1	0	Enjoyment	Positive emotions	
1	0	Satisfaction		
2	0	Reduced team communication	Communication	Interpersonal Outcomes
0	1	Reduced staff and player communication		
5	1	Reduced confidence	Confidence	
2	0	Improved confidence		
5	1	De-motivated	De-motivated	Intrapersonal Outcomes
5	0	Reduced concentration	Concentration	
1	1	Poor decision making	Decision making	
9	0	Reduced skill development		

5	0	Making mistakes

4	0	Improved individual performance

1	0	Performance plateaus

Individual performance

2	0	Reduced team performance

Team performance

0	1	Players being released

Retention

1	0	Lack of sleep

Sleep

Performance-related Outcomes

Figure 4.5. Organizational stressor outcomes experienced by professional academy players (*P*) and staff (*S*).

From the interview transcripts, it was evident that the organization had bred a culture of fear amongst the academy players, with anxiety being a typical response to "receiving negative feedback from others" ($P = 10$; $S = 4$) and the formation of "academy hierarchies" ($P = 9$; $S = 4$). In addition, it was reported that players typically experienced intense anxiety from selection stressors such as "call ups [to the senior team senior squad] at short notice" ($P = 1$; $S = 1$), as one of the more experienced academy players illustrates:

> It happened to me last year, where I was with the academy for 2 or 3 weeks and all of a sudden you need to be on the bench for the first [senior] team or whatever and then you've got 5 or 6 days to learn all of the calls and you think "f*****g hell". (Participant 13)

The frequency analysis of emotional responses showed that there were more negative emotional responses to organizational stressors than positive emotional responses. However, one of the academy coaches also explained that negative emotions (e.g., anxiety, anger) were not always experienced in response to organizational stressors, but rather, as a by-product of the senior team's "negative emotional contagion" ($P = 0$; $S = 1$), as the following quote suggests:

> In terms of the [organizational] environment, we [the academy staff] work in close proximity to the first [senior] team squad, so that whole high performance environment rubs off across the academy as well so ... I mean as you can imagine when things are going well for the first [senior] team [higher management] then everyone's happy; when the first [senior] team aren't going well it tends to affect everybody else. (Participant 7)

Interpersonal outcomes. Interpersonal outcomes referred to the consequences for relationships between individuals within the organization. The higher-order theme within this general dimension was communication. Although communication as a stressor outcome was only *directly* mentioned by a few participants, "poor communication between staff" ($P = 1$; $S = 6$), "poor communication between players" ($P = 3$; $S = 2$), and "poor communication between players and staff" ($P = 2$; $S = 2$) were all mentioned by players and staff as organizational stressors (see Figure 2). Inevitably, however, communication was further reduced as a result of poorly managed stressors that were associated with the following: *feedback*, *the coaches' personality and attitudes*, *academy atmosphere and support*, *cultural norms*, *facilities and equipment*, and *player injury*. The following quote from a third year player demonstrates how poor facilities, such as "inadequate changing rooms" ($P = 8$; $S = 1$) may negatively impact on communication between players of different year groups during competitive games:

> I think something that is quite bad is our [academy] changing rooms, you've got a first year [group] changing room, a second year [group] changing room, a third year [group] changing room and there's no one [squad] together and it's been like that since I was a first year and now it's very much three separate changing rooms ... it doesn't have a massive effect [on communication] but there's little bits like, it comes to a game situation where a first year [player] needs to tell a third year [player] something or vice versa and they're a bit hesitant to say it or something like that. So maybe it does have a negative effect. (Participant 9)

Intrapersonal outcomes. Intrapersonal outcomes consisted of the organizational stressor responses that were associated with a player's cognitive functioning. The higher-order themes within this general dimension were: *confidence*, *de-motivated*, *concentration*, and *decision making*. Both players and staff suggested that "reduced confidence" ($P = 5$; $S = 1$) is experienced primarily by first year players, who are attempting to adapt to various *academy transitions* (e.g., "moving to the academy to work") and *cultural norms* (e.g., "negative motivational climate"). However, one of the organization's more experienced players (Participant 13) identified that some of the players who are higher in ability are also prone to reduced confidence in situations where they may be goaded by coaches for achieving international selection at age grade level. In addition, the following quote by a coach illustrates the collective consequences of a negative motivational climate ($P = 0$; $S = 1$) for players, which can lead to heightened levels of anxiety, reduced confidence and de-motivation[13]:

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[13] The full interview transcript for this participant has been made available in Appendix 5 (pp. 292-316).

> We've got two small guys [players] and the [negative] motivation [from the head coach] is constantly, "You're too small for this game, I don't know why you're here, you might as well go home now", and it is [the head coach's] form of psychology, you know [the head coach] feels it works and the lads [players] just cower like this [shy away] and don't say anything back to [the head coach] ... it's not the way that those lads [players] at that stage of their development should be motivated. So that's why when it comes to situations which need somebody to be confident and speak up they [players] won't do it because they fear they'll just get ridiculed. When things have been shouted at them on the touchline you can see it [in their body language], just like, "oh s**t", heads down, it really affects them, they won't turn around and say, "Okay, I made a c**k up [a mistake] but I'll put it right" in response to "You're f*****g coming off if you do that again, Rah! Rah! Rah! [shouting]" Wow. (Participant 6)

Performance-related outcomes. The higher-order themes within this general dimension were: *individual performance*, *team performance*, *retention*, and *sleep*. Within *individual performance*, "reduced skill development" ($P = 8$; $S = 1$) was considered by players to be a key consequence from training-related stressors, such as a "lack of individualized sessions" ($P = 11$; $S = 1$) and "longer training sessions" ($P = 5$; $S = 1$). In addition, players also spoke of making mistakes ($P = 5$; $S = 0$) such as technical and tactical errors in training due to a fear of receiving further negative feedback from coaches, and errors in games due to a fear of playing at the senior team's stadium in front of a large crowd of spectators. One of the more experienced academy players felt that the organization could do more to prevent staleness and "performance plateaus" ($P = 1$; $S = 0$) that can occur from repetitive training programmes. The following quote explains the player's recommendation to modify the strength and conditioning programme during periods in the competitive season, to prevent performance plateaus and maintain players' morale and motivation in training:

> I think there's got to be different stimulus [training] at times to be honest. If you do the same things for 3 years you're naturally going to hit a [performance] plateau. You're going to get down about it. You're not going to improve yourself, so ... to keep the lads [players] going [motivated] and to keep encouraging them, you've obviously got to do different things that are going to make them a little bit better. I can only tell you what I've been through, especially the strength and conditioning, I've probably done quite a lot of the same thing for 2 or 3 years. And I felt, you know, the last couple of months I've hit a stage where I feel, I can probably do something different. Just to mix it up if you like. Mm, so, yeah I think, you can do [different] things and then come back to it, instead of just doing the same thing every week. (Participant 13)

Coping Behaviours

Figure 4.6 presents the lower-order, higher-order and general dimensions of the coping behaviours that were used by the professional academy players (*P*) and staff (*S*).

The five general dimensions were: problem-focused coping, emotion-focused coping,
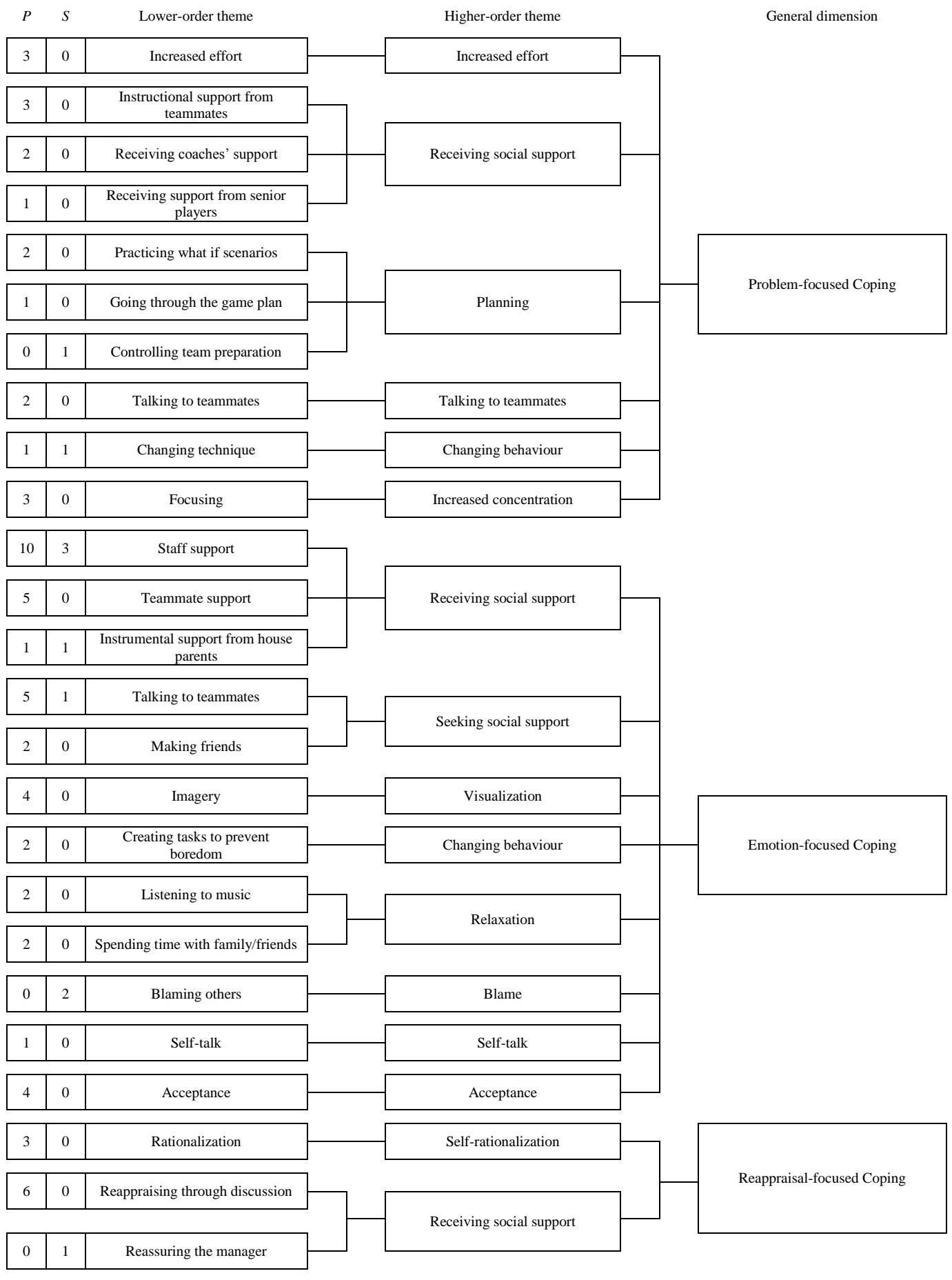
reappraisal-focused coping, avoidance coping, and not coping. These general dimensions served the purposes or functions of coping for participants, which were achieved by initiating lower- and higher-order coping behaviours. In addition, the frequency analysis revealed that academy players were more likely to employ a wide variety of coping behaviours to achieve the function of expressing emotions in comparison to eliciting coping behaviours to achieve other functions of coping (e.g., problem solving, reappraisal, avoidance).

Problem-focused coping. Problem-focused coping consisted of the coping behaviours that were elicited by participants to solve problems. The higher-order themes within this general dimension were: *increased effort*, *receiving social support*, *planning*, *talking to teammates*, *changing behaviour*, and *increased concentration*. One third year player explained how eliciting *planning* through "practicing what if scenarios" ($P = 2$; $S = 0$) in training was particularly effective in solving problems against strong opponents during a game:

> We [the playing team] knew we had a good line out [during the game] because we had some good [prior training] sessions drilling the line out and working [hard] within a [practice] game environment. So people [teammates] were coming in, trying to take you down [tackle] and stuff like that. I think those [training] sessions were good because when we played [international club], they needed a drop goal to win and they had about 8 scrums. It was just the mentality [of working hard under pressure]. If you train like that, you'll play like that. The other teams would hit like 10 scrums in training and then be like "right the scrum sessions is over". I think me and [teammate] hit 55 scrums one after the other, in one session. So stuff like that is good and players will know what they can do [under pressure]. (Participant 10)

Emotion-focused coping. Emotion-focused coping encapsulated the most frequently cited coping behaviours that were elicited by participants to manage emotions. The higher-order themes within this general dimension were: *receiving social support*, *seeking social support*, *visualization*, *changing behaviour*, *relaxation*, *blame*, *self-talk*, and *acceptance*. The most commonly higher-order theme was *receiving social support*, which consisted of "staff support" ($P = 10$; $S = 3$), "teammate support" ($P = 5$; $S = 0$) and "instrumental support from house parents" ($P = 1$; $S = 1$). It emerged from the focus group with third year players that they particularly felt a sense of duty as role models to offer support to younger players to help them manage their emotions, as the following quote demonstrates:

> You've got to set an example [of supporting first year players] haven't you? (Participant 41) If you saw that one of them was a bit panicky or a bit nervous, you'd just tell them that they're here because they're good enough [to be selected] or whatever. (Participant 42) I think I got [received] that [support] actually, when I was a first year. (Participant 44) Yeah, in our first year there were a lot of third years for us to [receive] get help from. Like, if you looked nervous they would sit down and say "don't worry you'll be fine, you're here for a reason, they [the coaches] wouldn't have chosen you otherwise" sort of thing. (Participant 41)

P	S	Lower-order theme	Higher-order theme	General dimension
3	0	Increased effort	Increased effort	
3	0	Instructional support from teammates	Receiving social support	
2	0	Receiving coaches' support		
1	0	Receiving support from senior players		
2	0	Practicing what if scenarios	Planning	Problem-focused Coping
1	0	Going through the game plan		
0	1	Controlling team preparation		
2	0	Talking to teammates	Talking to teammates	
1	1	Changing technique	Changing behaviour	
3	0	Focusing	Increased concentration	
10	3	Staff support	Receiving social support	
5	0	Teammate support		
1	1	Instrumental support from house parents		
5	1	Talking to teammates	Seeking social support	
2	0	Making friends		
4	0	Imagery	Visualization	
2	0	Creating tasks to prevent boredom	Changing behaviour	Emotion-focused Coping
2	0	Listening to music	Relaxation	
2	0	Spending time with family/friends		
0	2	Blaming others	Blame	
1	0	Self-talk	Self-talk	
4	0	Acceptance	Acceptance	
3	0	Rationalization	Self-rationalization	
6	0	Reappraising through discussion	Receiving social support	Reappraisal-focused Coping
0	1	Reassuring the manager		

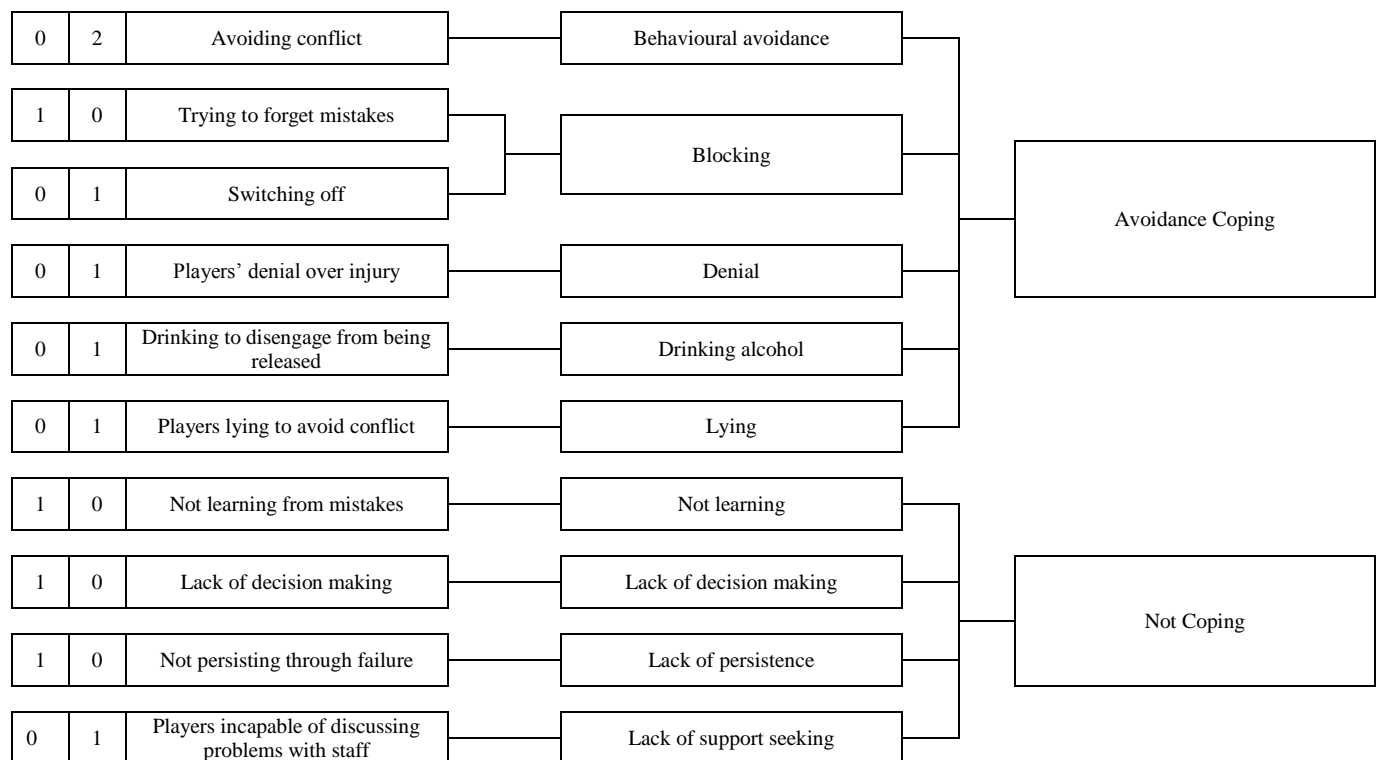|					
0	2	Avoiding conflict	Behavioural avoidance		
1	0	Trying to forget mistakes	Blocking		Avoidance Coping
0	1	Switching off			
0	1	Players' denial over injury	Denial		
0	1	Drinking to disengage from being released	Drinking alcohol		
0	1	Players lying to avoid conflict	Lying		
1	0	Not learning from mistakes	Not learning		
1	0	Lack of decision making	Lack of decision making		Not Coping
1	0	Not persisting through failure	Lack of persistence		
0	1	Players incapable of discussing problems with staff	Lack of support seeking		

Figure 4.6. Coping behaviours of professional academy players (*P*) and staff (*S*).

Reappraisal-focused coping. Reappraisal-focused coping consisted of the coping behaviours that were elicited by participants to reappraise the relevance and importance of organizational stressors. The higher-order themes within this general dimension were *self-rationalization* and *receiving social support*. The following quote illustrates the combined adaptive effect of self rationalization and receiving support, whereby second year players support one another in rationalizing the frequent negative feedback that is received from the coaches:

> We started taking the p**s out of each other because of how they [the coaches] shouted (Participant 33). It's not a bad thing [the shouting], it's just, you just get used to it, it doesn't really matter. (Participant 29)

Avoidance coping. Avoidance coping consisted of the coping behaviours that were elicited by participants to avoid solving problems or managing emotions. The higher-order themes within this general dimension were: *behavioural avoidance*, *blocking*, *denial*, *drinking alcohol*, and *lying*. Academy staff primarily reported players' avoidance coping behaviours. The following quote by a physiotherapist illustrates the issue of "players lying to avoid conflict" ($P = 0$; $S = 1$) with staff. Ironically, the quote also suggests that staff may avoid tackling the issue of player dishonesty:

> I don't think you ever get true honesty with players at this age, you'll get 1 or 2 who are

honest enough but you'll always have some who won't be honest, also, the problem is how do you then address it? Because you can't confront the players about it because they'll all just go, "Nothing to do with me" they'll just take the group mentality won't they? And just hide behind the group identity. (Participant 3)

Not coping. Not coping consisted of examples where participants demonstrated an inability to cope with organizational stressors. The higher-order themes within this general dimension were: *not learning*, *lack of decision making*, *lack of persistence*, and *lack of support seeking*. From the earlier identified intrapersonal outcomes, it was evident that poor decision making was a consequence of stressors relating to the training and competitive environment. However, decision making is also an important coping behaviour for solving problems under pressure. The following quote from a previous academy team captain (a current senior team squad player) explains how "playing at the first team stadium" in front of a large crowd can test a player's ability to make effective decisions under pressure:

> It may be just the information coming towards them [teammates]; the bigger crowd, playing at [senior team stadium] and knowing the importance of the game, with it [the opponents] being [national age grade team] ... All of that rolled in to one, just, the decisions [made], you think "do I risk this? Do I do that?" Maybe when you're just playing [rugby club] you'd think "well, I could give that off load [pass] but, no, I'll keep it." You know, "there's no point in giving that offload". You just have your head a bit more glued on [than when playing a national age grade team]. You're not all lost [distracted] in the hype of the big game. (Participant 12)

Individual Differences

Figure 4.7 illustrates the lower-order, higher-order and general dimensions of the individual differences of professional rugby union academy players (*P*) and staff (*S*). These individual differences refer to the variations that occur psychologically and environmentally in terms of one's ability to manage organizational stressors. Therefore, the two general dimensions of individual differences were: psychological differences and social environmental differences.

Psychological differences. The higher-order themes within this dimension were: *cognitive appraisals*, *confidence*, and *personality*. The main psychological differences were *cognitive appraisals* of organizational stressors. Specifically, players and staff directly and indirectly highlighted that players feel threatened (*P* = 4; *S* = 7) by a wide range of stressors, including: "receiving negative feedback from coaches", "academy hierarchies", "unfriendly teammates", "transition to a higher training intensity", and "players being injured".

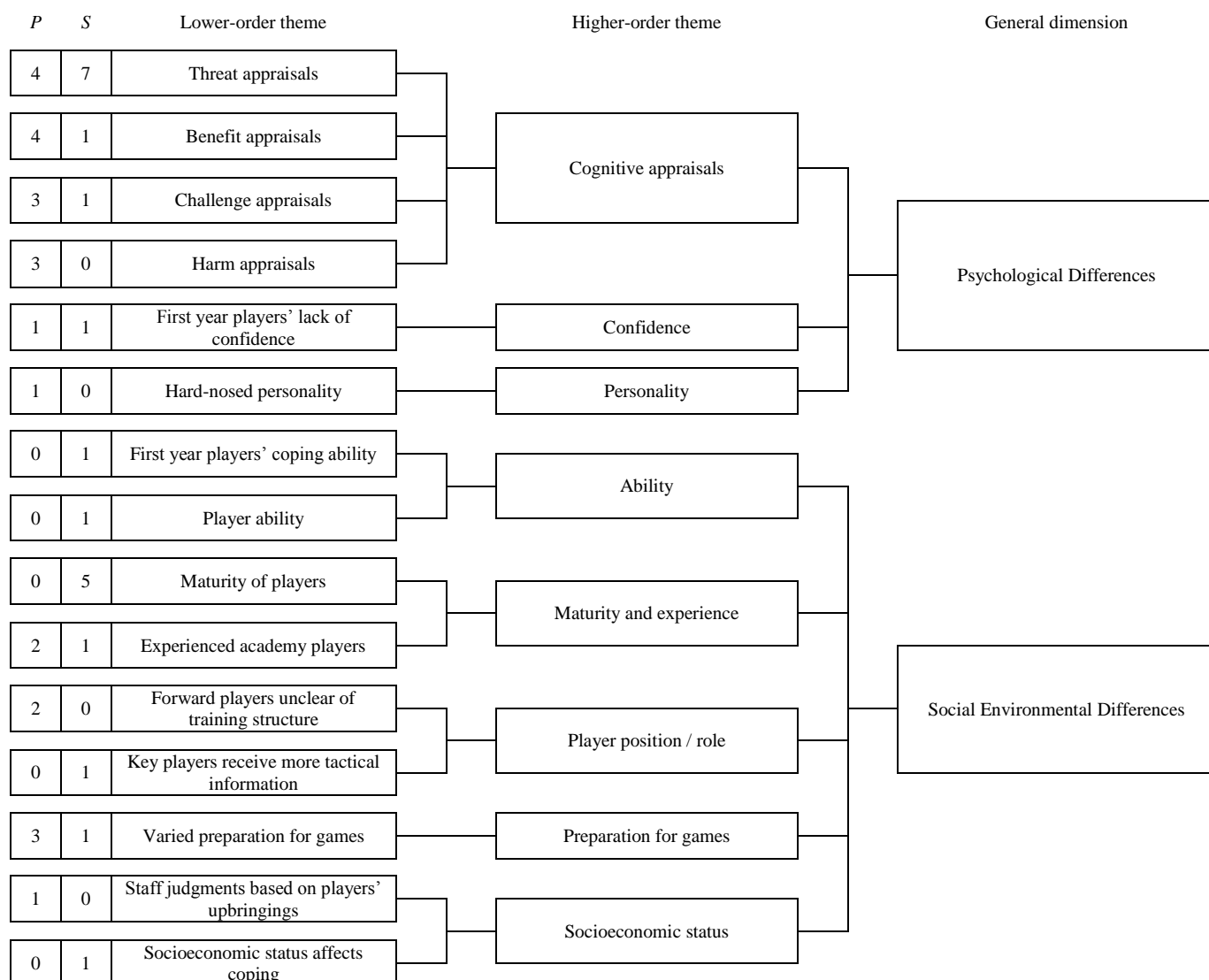| P	S	Lower-order theme	Higher-order theme	General dimension

Figure 4.7. Individual differences of professional academy players (*P*) and staff (*S*).

The following quotes by a third year player and assistant head coach illustrate players' threat appraisals of training with physically more mature teammates and fierce competition between players for selection, respectively:

> When you start [at the academy], it is, err, intimidating. The first [training] session I did was when I was still 16 years old and just walking out there [on to the academy training ground] and going from being the biggest [physically] in your school to the smallest in the academy is really, really intimidating. There was also a lot of third years when I was a first year as well. A lot of big, physically big players, so that was probably the toughest bit; overcoming the size difference. (Participant 9)

> There is definitely a positional thing that "if he's [teammate] going to be my threat, I'm going to make sure I knock him down and keep him down as long as possible". (Participant 6)

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Social environmental differences. The higher-order themes within this dimension were: *ability*, *maturity and experience*, *player position / role*, *preparation for games*, and *socioeconomic status*. The following quote by the head coach emphasizes the difficulty of identifying whether or not particular first year players will adapt to the conditions of the professional environment. Furthermore, it is suggested that players from less favorable upbringings could be better at dealing with organizational stressors and resultant conflict from the outset of joining the academy:

> It is difficult [to manage players' coping behaviours] because they all arrive at that identification point at the same time with varying degrees of ability to be able to cope with the academy environment. You know it's water off a duck's back to some of these lads [players] … but they've got to learn to cope or have coping strategies in place before they walk through the door. But they've got to evolve and get on very quickly. You still can't replicate walking into the changing room for the first time and a 6 foot 6 [tall], 120 kg third year player throwing your kit bag out saying, "that's my seat. I sit there." Erm, its anecdotal evidence but the guys [players] who come from the socially deprived backgrounds tend to be better tooled up [capable] for coping with that [conflict] than lads [players] from other environments.(Participant 7)

Stress Management Recommendations

The stress management recommendations that emerged from the interviews and focus groups were categorised into two general dimensions. These general dimensions were: individual-level (see Table 4.1) and organizational-level recommendations (see Table 4.2).

Individual-level recommendations. Table 4.1 presents the individual-level stress management recommendations that were suggested by the professional rugby union academy players (P) and staff (S), along with a target group for each recommendation. The eight higher-order themes within this dimension were: *coping*; *appraisals*; *mentoring*; *coach feedback*; *goal setting*; *senior team exposure*; *trust*; and, *parental education*. Within these higher-order themes, the most commonly cited lower-order recommendations were to: encourage problem solving and decision making to first year players ($P = 4$; $S = 3$), modify negative appraisals for first and second year players ($P = 11$; $S = 0$), raise coach awareness of providing varying methods of feedback to players ($P = 4$; $S = 1$), and optimize confidence for first year players ($P = 2$; $S = 2$).

Organizational-level recommendations. Table 4.2 presents the organizational-level stress management recommendations that were suggested by the professional rugby union academy players (P) and staff (S), along with a target group for each recommendation.

Table 4.1. Individual-level stress management recommendations from interviews and focus groups

P	S	Lower-order themes	Higher-order themes	Target groups
4	3	Encourage problem solving and decision making	Coping	First year players
1	1	Accept mistakes		
0	1	Improve player assertiveness		
2	0	Encourage coach support for injured players		Coaching staff
11	0	Modify negative appraisals	Appraisals	First and second year players
4	1	Encourage player mentoring	Mentoring	First and final year players
0	2	Encourage mentoring from senior players		
4	1	Raise coach awareness of providing varying methods of feedback	Coach feedback	Coaching staff
1	0	A tailored approach to coach feedback		
1	0	Feedback on non-selection		
2	2	Optimise confidence	Goal setting	First year players
0	1	Maintain motivation		
0	1	Set individual targets to develop		
0	2	Expose more players to the first team playing environment	First team exposure	Players of high ability
1	0	Strengthen trust in teammates	Trust	First year players
0	1	Educate players' parents on appropriate methods of support	Parental education	Players' parents

Note. P = the number of individual-level recommendations offered by academy players. S = the number of individual-level recommendations offered by academy staff.

Table 4.2. Organizational-level stress management recommendations from interviews and focus groups

P	S	Lower-order themes	Higher-order themes	Target groups
24	1	More team socials	Team cohesion	All academy players
6	0	More team building		and staff
10	1	Incorporate occasional varied training sessions	Training structure	All academy players, coaching and
8	0	Consider more flexible training sessions around college exams		support staff
5	0	Incorporate more individualized skills development training sessions		
5	4	Encourage communication between players and staff	Communication channels	All academy players, academy
5	2	Encourage communication between academy and first team staff		and first team staff
2	2	Encourage player communication		
1	0	Raise coach awareness of communication with injured players		
11	0	More regular team analysis of games	Game reviews	All academy players and
5	0	More game analysis as a team than as individuals		coaching staff
2	0	Analysis of both good and bad team performances		
0	1	More individual analysis of games		
1	0	More pre- and post-game reviews		
9	0	Food preparation for home and away games	Preparation for games	All academy players
1	0	Eating together before a game		and staff
9	0	More regular player work appraisals	Work appraisal systems	Board of directors, first team and academy staff
0	1	More regular staff work appraisals		
3	3	Optimise time management	Time management	All players and staff
1	0	Spend more time on diet and recovery		Academy players
5	0	Restructuring of the players' changing rooms	Facilities management	The organization and staff

2	0	Team performance profiling	Team goal setting	All academy players
1	1	SWOT analysis of academy functioning		
1	0	Improve motivation against 'lesser' opposition		
0	2	Revisit the talent identification process	Talent identification	Academy and first team coaching and support staff
0	1	Consider the developmental needs of the organization	Organizational development	Academy and first team staff
0	1	Educating player professionalism	Professionalism	All academy players
0	1	Encourage individual reflective practice	Reflective practice	All academy players and coaching staff
1	0	Simulate 'managing chaos' in training sessions	Team problem solving	All academy players

Note. P = the number of organizational-level recommendations offered by academy players. S = the number of organizational-level recommendations offered by academy staff.

The 14 higher-order themes within organizational-level recommendations were: *team cohesion*; *training structure*; *communication channels*; *game reviews*; *preparation for games*; *work appraisal systems*; *time management*; *facilities management*; *team goal setting*; *talent identification*; *organizational development*; *professionalism*; *reflective practice*; and, *team problem solving*. Within these higher-order themes, the most frequently suggested lower-order proposals were to: organize more team socials for all players and staff to attend (P = 24; S = 1), integrate more regular team analysis of games, involving all players and coaching staff (P = 11; S = 0); incorporate occasional varied training sessions involving the commitment of all players, coaching and support staff (P = 10; S = 1); and, encourage communication between the players and all academy and senior team staff (P = 5; S = 4).

Stress management survey. To corroborate and supplement the qualitative stress management recommendations, Table 4.3 presents the findings of the stress management survey recommendations that were completed by academy players and staff after each interview. For academy players (n = 40), the most commonly cited stress management recommendations were: team building (98%); building confidence (81%); coping with pressures (78%); problem solving (76%); and, relaxation training (75%). These percentages reflect the average proportion of players that believed they would benefit from and participate

Table 4.3. Survey recommendations for stress management

	I feel I would personally benefit from…	I would personally participate in…	I feel that the academy would benefit from…	I would recommend the academy to use…
Team building	$38^P, 2^S$	$40^P, 4^S$	$40^P, 3^S$	$39^P, 4^S$
Building confidence	$28^P, 3^S$	$34^P, 4^S$	$34^P, 5^S$	$34^P, 5^S$
Coping with pressures	$26^P, 1^S$	$32^P, 4^S$	$35^P, 5^S$	$31^P, 5^S$
Problem solving	$28^P, 4^S$	$28^P, 5^S$	$33^P, 4^S$	$32^P, 4^S$
Relaxation training	$29^P, 3^S$	$32^P, 4^S$	$32^P, 4^S$	$26^P, 4^S$
Team performance appraisals	$29^P, 1^S$	$28^P, 5^S$	$33^P, 4^S$	$28^P, 4^S$
Time management	$26^P, 1^S$	$29^P, 4^S$	$32^P, 4^S$	$28^P, 4^S$
Assertiveness training	$25^P, 3^S$	$28^P, 4^S$	$33^P, 3^S$	$28^P, 3^S$
Managing emotions positively	$24^P, 4^S$	$29^P, 5^S$	$30^P, 4^S$	$24^P, 3^S$
Psychology rehabilitation for injured players	$25^P, 2^S$	$29^P, 3^S$	$30^P, 4^S$	$26^P, 4^S$
Challenging stressful thinking	$24^P, 3^S$	$28^P, 5^S$	$31^P, 3^S$	$25^P, 3^S$
Self-regulating teams	$25^P, 1^S$	$28^P, 3^S$	$28^P, 2^S$	$25^P, 2^S$
Improved social support	$21^P, 1^S$	$23^P, 4^S$	$30^P, 2^S$	$25^P, 3^S$
Resolving conflict	$18^P, 3^S$	$24^P, 4^S$	$26^P, 3^S$	$23^P, 3^S$
More socials	$4^P, 0^S$	$4^P, 0^S$	$4^P, 0^S$	$4^P, 0^S$
Educating professionalism	$0^P, 1^S$	$0^P, 1^S$	$0^P, 1^S$	$0^P, 1^S$
Managing expectations	$0^P, 1^S$	$0^P, 1^S$	$0^P, 1^S$	$0^P, 1^S$
Pre-performance routines	$0^P, 1^S$	$0^P, 1^S$	$0^P, 1^S$	$0^P, 1^S$

Note. $N = 45$, ^{P} = the number of recommendations from academy players ($n = 40$); ^{S} = the number of recommendations from academy staff ($n = 5$)

in the abovementioned programmes. In addition, the players felt that the academy organization would benefit from and should implement such initiatives. For academy staff who completed the survey ($n = 5$), the most commonly cited stress management recommendations were: building confidence (85%); problem solving (85%); managing emotions positively (80%); coping with pressures (75%); and, relaxation training (75%). Although some of the staff felt that they would not personally benefit from such programmes, five out of five staff recommended that the organization should implement building confidence and coping with pressures as stress management strategies.

4.5 Discussion

The primary purpose of the current study was to undertake an organizational-level stress audit within a professional sport organization. Based on a transactional stress conceptualization (cf. Lazarus & Folkman, 1984), this stress audit explored the organizational stressors that are encountered by professional rugby union players and staff in a single sport organization. Furthermore, the stress audit examined the organizational stressor outcomes that are experienced by these individuals, in addition to the identification of coping behaviours employed, and consideration of individual differences in members' experiences of organizational stress. The results suggest that there are a number of common organizational stressors that are encountered by both sport performers *and* staff who operate in this professional sport institution. These findings support the identification of comparable organizational stressors that have been found to be prevalent in elite athletes (Arnold & Fletcher, 2012; Fletcher et al., 2012) and sport coaches (Rhind et al., 2013; Thelwell et al., 2010) in isolation.

From the participants' responses and frequency analysis conducted, the main organizational stressors deemed to cause strain were principally related to Leadership and Personnel, and Cultural and Organizational issues. Specifically, for players and staff, managing expectations from one another and receiving inadequate forms of feedback on performance were considered to be key environment demands in this sport organization. In addition, it was clear from player and staff responses that poor communication was a key stressor that needed to be managed at an organizational-level. For the professional rugby union players in particular, training environment was a frequently cited stressor. Although previous research has identified training environment as a stressor that is regularly encountered by elite athletes (see Arnold & Fletcher, 2012), the highly contextualized nature and function of this professional sport organization suggests that training environmental demands are a by-product of sport performers making an early-career transition from leaving

amateur rugby to joining a professional rugby institution. The context of managing players' transitions to professional sport appears to be an important one, when considering practical implications for the development of stress management interventions for this organization.

The organizational stressors identified played a considerable role in contributing to emotional, interpersonal, intrapersonal, and performance-related outcomes. It was clear from the identification of stressor outcomes is that the majority of players and staff respond negatively to a wide range of organizational stressors. In particular, players and staff typically demonstrate negative emotional responses which include anxiety, anger, fatigue and sadness. Furthermore, some players acknowledged that negative emotional responses in training and competition environments have subsequently led to different negative intrapersonal (e.g., reduced confidence, decision making) and performance outcomes (mistakes, reduced team performance). Although the current study has identified a range of outcomes in response to organizational-related issues, the common identification of anxiety, anger and mistakes as stressor outcomes is consistent with previous research that has been conducted with elite athletes (Neil et al., 2011) and specifically professional rugby union players in training and post-competition settings (Nicholls et al., 2006; Nicholls et al., 2009b).

When interpreting the coaching behaviours that were identified, it was evident that some players enact a range of coping behaviours and draw on resources to achieve the coping functions of either: solving problems, expressing emotions, reappraising or avoiding the management of organizational stressors. This supports organizational psychology research in occupational settings, which has found that coping behaviours, resources, and functions should be conceptualised as combinations (Daniels et al., 2013). In the current study, a common coping resource for professional rugby players was receiving social support from teammates, coaches, and other individuals, which also supports the relatively scare findings reported on coping with organizational-related issues in professor soccer players (Kristiansen et al., 2012). This is an important coping behaviour for managing organizational stressors, since social support is an important buffer of the negative effect of stressors on well-being (Cohen et al., 1986). In the current study, however, academy staff identified that a number of the less experienced rugby players rely heavily on *receiving* social support to deal with organizational stressors. Subsequently, it is believed that the players in question lack the ability and confidence to *seek* social support from teammates and staff. Hence, in light of these findings, it is likely that rugby union players in this organization may benefit from the development of greater individual coping abilities to confidently manage organizational stressors and overcome negative stressor outcomes. In addition, given the range of coping

strategies identified in this study, the education and understanding of coping effectiveness for players and staff in particular organizational contexts is likely to be important (Bowling et al., 2012). This is because the behaviours enacted to achieve coping functions such as avoidance and expressing emotions may be adaptive for functioning in given contexts, but maladaptive in others (Daniels et al., 2013).

A wide range of stress management recommendations were also identified for specific target groups who operate in this sport organization. Using a mixed method approach, a key overarching message was that the organization would participate in a combination of organizational- *and* individual-level stress management initiatives. At an organizational level, it was perceived that the institution should proactively integrate initiatives to enhance team cohesion, to vary training stimulus, to improve communication channels and to incorporate competitive game analysis. These initiatives were considered important by the participants due to earlier identified stressors relating to poor communication between all members of the organization, high training intensities and fatigue, the existence of academy hierarchies and cliques in the playing squad, and, inadequate performance reviews.

Although organizational-level interventions, which aim to change working conditions and structures, may be considered to be the most proactive and practical solution to stress management (Briner & Reynolds, 1999; Richardson & Rothstein, 2008), it is important to consider the goals of the institution and the organizational context. Within the current study, the purpose of the organization in question is to develop early-career professional academy rugby players into performers who can adapt and develop in to senior professional players. When interpreting this organizational goal alongside the strong identification by participants of a 'bullying culture', the findings also support the integration of individual-level stress management initiatives, which are concerned with offering educational programmes to help different target groups to respond and cope with organizational stressors (Cooper et al., 2001). For example, the education of effective coping strategies for less experienced players was deemed important by both players and staff in the organization. The recommendation was explained in so far that 'first year' players, who are making an early-career transition to professional rugby perceive the professional academy environment to be "intimidating" and struggle to cope with the 'bullying culture', in addition to perceived 'high training intensities', and 'receiving negative feedback from others'.

The stress management survey conducted largely corroborates the abovementioned recommendations at an organizational level (e.g., team building and team performance appraisals) and individual level (e.g., coping with pressures and problem solving). However,

an interesting observation from the collection of interview and survey data was that although staff and players believed that the organization would benefit from integrating coping training, the staff demonstrated little in the way of coping strategies to manage their organizational stress experience. Furthermore, according to the survey only a limited number of staff believed that they would individually benefit from some form of taught coping strategies. This is an important practical consideration for the development of stress management interventions, since the effectiveness of such initiatives may be largely dependent on the evidence of key decision makers' readiness for change and support for interventions (Bowling et al., 2012; Nielsen & Randall, 2009).

Practical Implications

From an applied perspective, the present organizational-level stress audit highlights a number of practical challenges to consider when conducting organizational-level research in sport. When applying organizational stress audits that are based on a transactional stress conceptualization (cf. Lazarus & Folkman, 1984), psychologists should attempt to identify the stress processes (i.e., stressors, appraisals, responses, coping strategies) and common issues that need solving for those individuals and groups who need the most support (Bowling et al., 2012; Nielsen et al., 2010a). This is vital for prioritizing whether organizational-, individual-level interventions, or an amalgamation of the two is most important (Giga et al., 2003a). For example, in the current study the recommendations would suggest that organizational-level interventions may be the priority for removing a 'bullying culture' and improving communication channels. However, in the short-term it is likely that modifying individuals' appraisals of such issues may be more important for well-being and performance development in the short term. Subsequently, in some circumstances a multi-level approach is likely to be necessary (Kohler & Munz, 2006) as individuals' stress experience may be the consequence of feeling unable to achieve the existing goals and expectations from within the organization. Although some of the current findings may be able to transfer to other sport organizations, the specific culture, context and demands of each organization are likely to be different. Therefore, applied researchers and practitioners need to elicit a degree of caution, in so far that the findings of this case study are unlikely to be generalisable to other sport organizations.

The current study, using a participatory action research approach, lends support to the utilization of qualitative and mixed methods for gaining organizational members' views and recommendations for future stress management. Indeed, qualitative methods also offer a valuable insight in to the cultural norms and political hierarchies that may exist within an

organization. Practitioners need to be cognisant of such political issues when attempting to support specific stress management programmes at an organizational level. This is important since stress management is the responsibility of all members of an organization (Dewe et al., 2010). Furthermore, as part of a stress audit, practitioners may need to educate key decision makers who operate at higher levels, that stress management is not simply an individual 'problem'. Given the in-depth insight that is possible from qualitative and mixed methods, a challenge for applied psychologists is how to incorporate these methods in to organizational-level audits of larger sport organizations, with members operating at a variety of levels. Researchers using this approach may also need to educate key decision makers at the outset of the value of conducting such lengthy audits, as these individuals may expect immediate solutions to often highly complex organizational issues.

Strengths and Limitations

Although this is the first organizational-level stress audit conducted in a professional sport organization, it is important to recognize some of the strengths and limitations. A major strength of the study relates to the sampling of varying members (i.e., players, managers, sport scientists and administrative staff) of a single professional sport organization, where previous research in sport psychology has only identified separate organizational stress processes with elite athletes (Fletcher et al., 2012a; Hanton et al., 2012; Kristiansen et al., 2012) and coaches in isolation (Fletcher & Scott, 2010; Olusoga et al., 2009; Rhind et al., 2013; Thelwell et al., 2010). The findings from the present professional sport organization suggest that members who operate in distinct occupational roles may encounter similar organizational stressors and experience common responses. However, they appear to appraise and attempt to cope with stressors and strain in a variety of adaptive and maladaptive ways. Another strength of this mixed method study was the sample size of 47 participants, which was relatively large compared to previous organizational-level research conducted in sport psychology (Wagstaff et al., 2012a; 2012b). Despite these strengths, a potential limitation was that the number of participants taking part in some of the focus groups was arguably too many (i.e., $n = 15$), which could have compromised an appropriate level of contribution from every participant. Previous research suggests that the range of participants for focus groups should comprise between $8 - 10$ participants to aid participant interaction (Bachiochi & Weiner, 2004).

One of the challenges for conducting qualitative organizational-level stress audits in the past has been the time required to achieve this research (Wall, 1999). In addition, decision makers of an organization could perceive that the time taken to conduct lengthy interviews

with small focus groups could compromise the usual running of day-to-day work processes. Although we were mindful of adhering to focus group guidelines in terms of recommended participants per group, the applied organizational context (i.e. time factors) meant that we had to interview all participants at times that were most convenient to the organization. Although conducting large focus groups could have compromised the quality and richness of participant responses, we felt that saturation had mainly been realized after the individual interviews had been conducted; but required every participant within the organization to take part. Another potential limitation of the focus groups was that members (e.g., players, coaches) who operate in distinct roles were largely interviewed separately. It is possible that the development of 'steering groups' comprising a mixture of organizational members may be beneficial for identifying clearly agreed attitudes and motives for organizational stress management at different levels. In addition, such steering groups may also serve the constructive purpose of communicating and rectifying particular organizational issues (e.g., negative feedback, academy hierarchies). However, given the identification by rugby players of an "intimidating environment", it is possible that this approach may have been counterproductive. In addition, conducting interviews with particular sub-groups is believed to be important for delimiting particular stress management interventions for target groups who may be at most risk of organizational stressors (Briner & Reynolds, 1999; Sutherland & Davidson, 1993).

Future Research Recommendations

The findings from this study suggest that organizational stress management in professional sport organizations is an area worthy of future research. While attempting to advance efforts towards mixed method approaches to understanding organizational stress in sport organizations, the current author concurs with Bowling et al. (2012) who advocate that "research should give more attention to developing techniques used to diagnose the need for stress interventions" (p. 79). Future studies considering a mixed method approach to stress auditing should consider a longitudinal examination using a combination of regular steering group meetings, interviews, diaries, observations, and surveys. A blend of these approaches will likely result in greater exposure to the organization environment and may capture a more accurate 'reality' of day-to-day functioning, as well as the common organizational issues of priority to manage. In this way, using such methods as part of an ethnography may be a fruitful way of exploring the organizational stress across a competitive season to identify 'pockets' of key periods during the year where individual-level and / or organizational-level stress management may be important and practically feasible for particular target groups.

Such methods may be more time consuming but are a more tailored and proactive approach than traditional quantitative stress audits (Biron et al., 2006). Nonetheless, for organizational-level stress management to be successful within a professional sport organization, a participative, multi-method assessment is likely to be required, to provide a clearer understanding of how to appropriate address the various transactional complexities of organizational stress, for all members.

Conclusion

In conclusion, individual and organizational efforts to modify stressors or reduce their impact on health and well-being are likely to be more effective if a comprehensive stress audit is adopted and integrated within an organization's overall management strategy (Murphy & Sauter, 2003). Although there are significant challenges for undertaking such an audit, the responsibility for the prevention and management of organizational stress is a joint participative responsibility. A responsibility that may indeed hold promise for substantial benefits to individual well-being and performance, and organizational productivity.

5

Study Four

*"... Men often become what they believe themselves to be.
If I believe I cannot do something, it makes me incapable of
doing it. But when I believe I can, then I acquire the ability to
do it even if I didn't have it in the beginning."*

~ Mahatma Ghandi.

5

The Impact of Organizational Stress Management Interventions in Professional Sport

5.1 Introduction to Study Four

Prior to the delivery of interventions aimed at preventing and reducing organizational stress in a professional sport organization, it was necessary to conduct a comprehensive organizational-level stress audit (see Chapter four). This assessment facilitated greater insight in to the complex organizational environment and those individuals operating within it (Briner & Reynolds, 1999; Giga et al., 2003a). Specifically, it examined whether the main underlying issues were inherent within the organizational environment or within the individuals' resources (Daniels, 2011; Nielsen et al., 2010a). From conducting the stress audit in the previous chapter, it was identified by both professional rugby union players and staff that the main organizational stressors encountered within their organization were: managing expectations, receiving inadequate forms of feedback, and poor communication. Furthermore, players and staff suggested that organizational-level initiatives such as the integration of socials during the season in addition to team building and goal setting activities would support the reduction of the abovementioned stressors.

The organizational context of managing players' transitions to professional sport was also identified as a key organizational stressor for players in their first year of joining the organization. Subsequently, it was recommended that first year players at an individual-level would benefit from being taught coping behaviours (e.g., problem solving, seeking social support) to confidently deal with a range of organizational stressors and overcome negative stressor outcomes. In addition, perhaps more important than the teaching of coping behaviours, was the need to develop first year players' understanding of which coping behaviours are most effective for these individuals in given organizational contexts.

In line with recommendations from organizational psychology (Nielsen et al., 2010a; Wall, 1999), and prior to the implementation of the intervention, the key findings of the participative stress audit were presented during a staff meeting to all of the staff who participated in study three (see Appendix 6). At which stage, a selection of the recommendations that were raised by the academy players did not find favour with some of the staff. For example, staff chose not to action the integration of player and staff socials, nor the modification of training sessions to reduce staleness. It was also at this participatory stage of developing interventions that staff chose not to actively participate, as it was believed that the professional rugby players of different target groups should be the main priority for psychological support. Indeed, a lack of commitment from all organizational members, particularly middle managers, is a common constraint for research on stress management interventions in organizations (Kompier et al., 2000). Despite this degree of non-commitment to participate, staff remained involved during regular meetings with the lead researcher to discuss, agree and adapt the schedule and content of intervention sessions for the entire academy playing squad and first year players throughout the season.

Therefore, through the identification of participatory recommendations and in consultation with the organization's management team of staff, this provided the setting for developing an organizational-level intervention (e.g., team building) *and* a combined individual-/organization-level intervention (e.g., coping effectiveness training with team building), to evaluate their separate effects on professional academy players' well-being (i.e., affect, coping self-efficacy) and individual-level outcomes (i.e., group cohesion, subjective performance) across a 10-month competitive academy rugby union season.

5.2 Review of Literature

Stress is increasingly becoming a concern for professional sport organizations. This is because sport performers and teams who operate in such environments encounter a range of unavoidable demands that are analogous to other occupational environments, including: job insecurity, selection, communication issues with others, and contractual pressures to achieve developmental and performance targets (Arnold & Fletcher, 2012; Fletcher et al., 2006; Reeves, Nicholls, & Mckenna, 2011; study three). As performers are rewarded for achieving developmental and performance targets, the pressure to attain high performances is also exacerbated by organizations' expectation of individuals to form cohesive sport teams to work towards achieving team and organizational performance goals (Carron, Colman, Wheeler, & Stevens, 2002). The organizational development of high performing professional sport teams is also of importance for the economy, as up to 3% of gross domestic product

(GDP) per capita is generated by sport in developed western countries (Hambrecht, Hambrecht, Morrissey, & Taylor, 2011).

An issue for professional sport organizations is that the development of high performing teams can often become impaired during the processes of team member socialisation (Franz, 2012). Unlike some occupations, it is habitual for performers operating in professional sport teams to regularly change, in so far that many team members may be promoted to other teams, become injured, or be released from the organization. In addition, it is common for new team members to join a professional sport team during a competitive sport season. This regularly evolving process of socialisation for new and current members of a sport team can be a significant cause of organizational stress (study three), requiring performers to continually manage their individual interactions with other members and adapt to the goals of the team and organization. Despite the increasing prevalence of organizational issues in sport (Arnold & Fletcher, 2012; Fletcher et al., 2012a; Hanton et al., 2012; Kristiansen et al., 2012), the aforementioned highlights the need to implement and evaluate the effectiveness of stress management interventions that have the potential to improve the well-being and functioning of both individuals and teams that operate within professional sport organizations.

The central contribution of the current study is to evaluate the effectiveness of organizational-level stress management within a professional sport organization, which to date, has received no attention in sport psychology. We begin by reviewing the literature on the effectiveness of stress management interventions in organizations. We then position the implementation of multilevel stress management interventions as a suitable approach to comprehensive organizational stress management. As part of this multilevel approach, we position team building and coping effectiveness training (CET) as suitable interventions for the multilevel management of organizational stress in professional sport organizations.

Effective Stress Management in Organizations

Organizations have implemented a variety of stress management interventions to either prevent or reduce the stress that is experienced by its members. From an occupational psychology perspective, a stress management intervention can be broadly conceptualised as any activity or programme which focuses on either reducing or eliminating the presence of stressors, or minimizing the negative outcomes associated with exposure to stressors (Burke & Richardson, 2000; Richardson & Rothstein, 2008). The adoption of particular stress management interventions designed to combat organizational stress have typically followed a transactional stress framework (Lazarus & Folkman, 1984), which draws attention to the

interaction between the person and their organizational environment and the types of individual appraisal and coping efforts that shape a person's interaction with their environment. In line with this theoretical framework of occupational stress, researchers have generally implemented interventions that either attempt to remove or modify the organizational conditions that cause individuals stress (organizationally targeted interventions), or change the way individuals appraise, respond and cope with stressors (individually targeted individuals).[14] This distinction between interventions targeted at an organizational- or individual-level outlines the two main types of interventions that have been conducted to combat stress in organizational settings.

Traditionally within the organizational psychology literature, it was believed that organizational-level interventions may be a more effective approach to combating stress than individual-level interventions (Burke, 1993; Murphy, 1984; Newman & Beehr, 1979; Landsbergis & Vivona-Vaughan, 1995; Reynolds, 1997). This is because organizational-level interventions that are able to successfully optimise specific organizational characteristics (e.g., communication structures, training and development, selection), role characteristics (e.g., reducing role conflict, increasing participation in decision making), or task characteristics (e.g., job redesign, training to increase capacity to complete tasks) are likely to reduce the level of negative states and behaviours experienced and result in positive outcomes (e.g., greater performance) for both individuals and organizations (Briner & Reynolds, 1999; Giga et al., 2003a; Newman & Beehr, 1979). However, a number of research reviews conducted to date have provided weak support for their effectiveness.

In a meta-analysis of 36 studies comprising 55 different occupational stress management interventions (Richardson & Rothstein, 2008), it was found overall that organizational interventions ($n = 5$) did not have a statistical association with psychological, work-related and organizational outcomes ($d = 0.14$, ns). However, in the same review, specific individual-level interventions such as cognitive-behavioural interventions ($n = 7$, $d = 1.16$, $p < .01$) and relaxation ($n = 17$, $d = 0.50$, $p < .001$), were found to demonstrate the

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[14] In line with Flaxman and Bond (2010), we have refrained from using the terms *primary*, *secondary*, and *tertiary* (Cooper & Cartwright, 1997) to categorise these levels of stress management. This is due to the inconsistency with which these terms have been aligned in parallel to individual- and organizational-level stress management interventions. Although most individual-level interventions are generally categorised as either secondary or tertiary forms of interventions (e.g., van der Klink et al., 2001), they have also been classified as primary interventions in previous research (e.g., Reynolds & Briner, 1994). In addition, the term primary intervention is typically reserved for activities which are implemented before strain has occurred (e.g., Richardson & Rothstein, 2008). However organizational-level interventions, which are mostly labelled as primary interventions in the extant literature, can be implemented before, during, or after organizational stressors have led to strain or negative outcomes (Bowling et al., 2012).

strongest impact for reducing measures of stress and anxiety. Although the evidence base for effective organizational-level interventions appears to be weak (Richardson & Rothstein, 2008), this finding may be due in part to the limited number of studies that have closely examined the *processes* by which organizational-level interventions are effective for improving desired outcomes (Nielsen & Randall, 2013). According to Nytrø and colleagues, intervention processes refer to the perceptions of individuals, groups and management pertaining to the actions that were taken when implementing interventions and their subsequent influence on outcomes (Nytrø, Saksvik, Mikkelsen, Bohle, & Quinlan, 2000, p. 214). In a review of organizational interventions by LaMontagne and colleagues, it was concluded that intervention studies which have evaluated effectiveness have largely neglected the inclusion of process evaluation data (LaMontagne, Keegal, Louise, Ostry, & Landsbergis, 2007). Such information is fundamental in explaining the implementation and / or discrete conditions by which interventions may be effective and why this may be the case (Randall, Cox, & Griffiths, 2007). A closer inspection of process issues will likely strengthen the evidence base by identifying the underpinning factors that influence the outcomes of organizational- and individual-level stress management interventions (cf. Nielsen & Randall, 2013).

Multilevel Stress Management Interventions

Although organizational and individual interventions have mainly been evaluated in terms of their statistical effectiveness in isolation, it should be acknowledged that organizationally targeted interventions may benefit from being accompanied by an individually targeted approach (Bowling et al., 2012; Callan, 1993; Ganster et al., 1982; van der Klink et al., 2001). Indeed, from an ethical perspective, it has also been argued that it is unethical to deliver individual-level interventions (e.g., teaching coping skills) to organizations solely, only for those individuals participating to return to a potentially 'toxic' organizational environment (Flaxman & Bond, 2010; Giga, Noblet, Faragher, & Cooper, 2003b). Consequently, to maximise the effectiveness of stress interventions in organizations, there is an important role for evaluating the effect of combining individual-level stress management alongside organizationally focused interventions (Flaxman & Bond, 2010; Kohler & Munz, 2006). In so far that when organizational-level interventions are ineffective in modifying the organizational environment, it may be additionally worthwhile to implement individual-level interventions to modify the way in which members respond to and cope with organizational characteristics (Nielsen et al., 2010b). In addition, to maximise individuals' capabilities of utilising enhanced organizational resources, individuals may firstly need to

receive some training to use these resources effectively (Daniels, 2011; Nielsen, Randall, & Christensen, 2010c).

When multilevel interventions are well matched to issues at an organizational- and individual-level, they may produce effects beyond that found when only a single intervention is used at one level. Such incremental effects may be apparent when different initiatives address different underlying issues that are present in an organization (Bowling et al., 2012; Briner & Reynolds, 1999). One possible explanation for combining interventions targeted at different levels is that individuals who receive support at an individual-level may become more able to handle the challenging demands of changing organizational characteristics (LaMontagne et al., 2007). This has been supported by research that has indicated that organizational members with more adaptive coping skills and styles obtain the most benefit from organizational-level interventions (Bond & Bunce, 2003; Bond et al., 2008; Nielsen, Randall, Brenner, & Albertsen, 2009). Although researchers have recommended that future research should consider the evaluation of combined interventions delivered at more than one level (Biron & Karanika-Murray, 2014; Bond et al., 2008; Bowling et al., 2012; Giga et al., 2003b; Kohler & Munz, 2006; LaMontagne et al., 2007; Mattila et al., 2006; Nielsen et al., 2010b; Richardson & Rothstein, 2008), research to date has given less attention to this recommendation. Furthermore, the effectiveness of combining multilevel interventions is likely to depend on the nature of organizational characteristics that are causing negative states and behaviours, and, the confidence with which people are able to manage the effect of organizational demands on well-being and performance.

Stress Management in Sport Organizations

In the context of professional sport organizations, performers make a number of career transitions and are contracted to function in teams to achieve performance targets. For these reasons, it seems likely that the implementation of multilevel interventions may be beneficial. In so far that interventions to modifying the organizational environment may optimise team functioning and performance, the additional teaching of adaptive coping behaviours is likely to be an important resource for facilitating positive responses and career adaptation to the organizational environments (Fouad & Bynner, 2008). This is particularly the case in organizational contexts in which management may be unable or unwilling to make the organizational environment less stressful for its employees (cf. Bowling et al., 2012).

At an organizational-level, team building may be an important mechanism for modifying organizational characteristics in sport organizations. This is because characteristics such as team cohesion, which has been frequently used as a measure of team functioning and

is associated with greater sport performance (Carron, Colman, Wheeler, & Stevens, 2002), often becomes impaired during the processes of team member socialisation (Franz, 2012). This is an important organizational characteristic to optimise, since the evolving process of team socialisation can determine performance and member adjustment in organizations (Major, Kozlowki, Chao, & Gardner, 1995). The central purpose of team building is to "promote an increased sense of unity and cohesiveness and enable the team to function together more smoothly and effectively" (Newman, 1984, p. 27). Along with improving the cohesion and subsequent performance of teams, team building programmes that incorporate goal setting, interpersonal relations and problem solving approaches (Buller & Bell, 1986) could be implemented to improve individuals' well-being and the ability to cope with their organizational environment.

Since goal progress is critical to well-being (Daniels, 2011), team building interventions can allow individuals to identify their goals in a group environment and enable team members and staff to identify ways in which the organization can support the alignment of individual and team goals (Daniels, Harris, & Briner, 2004). Secondly, interpersonal relation approaches that emphasize teamwork and effective communication are also likely to provide individuals with the opportunity to receive greater support from team members and promote the sharing and expression of emotions, which in turn can enhance social integration within teams (Rime, 2009). Similarly, team building approaches which identify organizational issues and encourage teams to draw plans of action are likely to make teams more able to collectively utilise greater problem solving skills (Buller & Bell, 1986). Since transactional stress is considered to result from the imbalance between environmental demands and an individual's coping resources (Lazarus & Folkman, 1984), such development of coping resources will undoubtedly be important at both a team and individual-level.

At an individual-level, the belief or confidence that sport performers have in their ability to perform specific coping behaviours is likely to be an important prerequisite to changing individual's coping behaviours (Bandura, 1997). Cognitive-behavioural interventions such as coping effectiveness training (CET: Chesney, Folman, & Chambers, 1996), which are based on social cognitive theory (Bandura, 1997) and transactional stress theory (Lazarus & Folkman, 1984), attempt to increase individuals' ability to appraise the controllability of a particular environmental stressor and match the most effective coping behaviour (i.e., problem-focused versus emotion-focused) to improve affective responses to stressors. Furthermore, an additional key component of CET interventions in comparison to

traditional cognitive-behavioural programmes is the optimisation of eliciting social support to combat environmental demands (Chesney et al., 1996). These key components of CET (i.e., eliciting control and support to manage demands) are in line with the demands-control-support model of occupational well-being and work performance (Karasek & Theorell, 1990), that indicates that control and support can enable organizational members to engage in problem solving to enhance positive well-being and performance.

Although CET interventions have not been evaluated in organizational settings, research in this domain suggests that the daily eliciting of control and support for affective expression and problem solving may be associated with combating unavoidable organizational demands (Daniels et al., 2009; Daniels, Glover, & Mellor, in press). Moreover, individual-level interventions that utilise the tenets of CET to increase performers' efficacy beliefs in eliciting controllability and social support may also assist in the accomplishment of team tasks (Heaney et al., 1993) and the promotion of social cohesion (Martin, Paradis, Eys, & Evans, 2013). Therefore, we expect that sport professionals who participate in multilevel interventions (CET with team building) will benefit from an amplified effect for improving the aforementioned individual outcomes (i.e., well-being, coping, cohesion, performance), in comparison to performers who participate in a team building intervention solely. This is based on previous research which suggests that organizational members who receive training to cope at an individual-level may be the most likely to benefit from organizational-level changes (Bond & Bunce, 2003; Bond et al., 2008; Nielsen et al., 2009b).

Hypothesis 1a: Participating in organizational interventions will be associated with greater changes in affective states, in comparison to a control group.

Hypothesis 1b: These organizational intervention effects will be greater for individuals who participate in a CET with team building programme.

Hypothesis 2a: Participating in organizational interventions will be associated with greater increases in coping self-efficacy, in comparison to a control group.

Hypothesis 2b: These organizational intervention effects will be greater for individuals who participate in a CET with team building programme.

Hypothesis 3: Participating in organizational interventions will be associated with greater increases in group cohesion, in comparison to a control group.

Hypothesis 4: Participating in organizational interventions will be associated with greater increases in subjective evaluations of individual and team performance, in comparison to a control group.

The Present Study

This study evaluates the effects of two stress management interventions (i.e., individual-organizational and organizational-level) that were conducted in a professional sport organization and compared with a non-equivalent control organization. The overall intentions of these interventions were to: (a) modify the organizational environment for a professional sports team by improving members' cohesion to other group members and in turn improve performance; (b) strengthen members' coping self-efficacy to serve as a buffer for reducing the future impact of organizational demands on well-being; and (c) promote members' well-being to potentially counter any negative effects of organizational stress. We controlled for the number of competitive game appearances that sport performers were selected for during the season. This served to control for any differences between the intervention and non-equivalent control groups. Given the potential nonlinear relationships that may occur for groups over time (Grimm, Ram, & Hamagami, 2011), we considered linear and quadratic effects of the interventions on the dependent variables over time.

5.3 Method

Research design

A quasi-experimental design (Cook & Campbell, 1979) was adopted where the effects of an organizational-level intervention (consisting of two experimental conditions) was compared to a non-equivalent control group. In addition, the effects of each experimental condition were compared. The two experimental conditions, which were conducted in a single professional institution, consisted of a team building programme (organizational-level) for one experimental condition and the combination of coping effectiveness training with team building (individual-level and organizational-level) for the other experimental condition. The nature of the experimental programmes was developed as a result of an earlier participatory stress audit of this professional institution in study three. This stress audit involved interviews with the manager of the organization and coaching staff, in addition to all of the participants who took part in the experimental conditions. Although participatory interventions may infer the possibility of a self-selection bias (Bunce & West, 1996), this bias was reduced by participants being encouraged to take part by their line managers, who made the final decisions regarding the components of each experimental condition. Furthermore, the content and timing of workshops were developed over a series of meetings between the author and coaching staff of organization. These meetings took place at the beginning of and midway through the competitive season. Both experimental programmes were conducted simultaneously across a 10-month period, with data for the non-equivalent control group

being gathered concurrently. Figure 5.1 outlines the design of the season-long intervention programme.

Participants and Procedure

Following institutional ethical approval, the participants who took part in the organizational-level intervention were professional male rugby union academy players ($n =$ 40), who operated within one of Europe's most successful rugby union teams. The mean age of these participants was 17.71 (SD = 0.90, range 16-19).[15] These players trained on average for 5 hours per day for 5 days per week, and competed in a schedule of 25 games[16] across an 8-month competitive season. The participants who took part in the non-equivalent control group were male rugby union academy players ($n =$ 17) from a separate sport organization. The mean age was 17.72 (*SD* = 1.46, range 16-21). These players trained on average for 3 hours per day for 2 days per week, but did not benefit from a structured competitive game schedule across the season. On average, participants from the organizational-level and non-equivalent control groups had trained in their academy institutions for 12.7 months (range 1 - 29) and 10.4 months (1 - 36) respectively.

To recruit the participants for the organizational-level intervention, the academy manager was initially contacted 6 months prior to the intervention and informed of the nature of a participative organizational-level research programme. Specifically, the organization, which can be characterized as a 'cohort with cyclical turnover' (Cook & Campbell, 1979, p. 126), agreed to take part in a participatory stress audit, which provided the opportunity for playing and coaching staff to offer recommendations to enhance organizational functioning. The key findings from these recommendations were that participants would both benefit and participate in the following organizational programmes: team building, building confidence, coping with pressures, problem solving, and relaxation. The author reported the findings of the participatory recommendations to the coaching and managerial staff ($n =$ 8), who authorized the content for particular target groups and delivery of the organizational-level programme.[17] Following this, the playing staff were then encouraged by the manager and the coaching staff to continue their participation in the season-long programme.

Within this organization ($n =$ 40), participants were assigned to an experimental 'target group' condition, based upon the outcome(s) of the participatory stress audit that was

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[15] The mean age however varied between experimental conditions. The mean age for the team building group was 18.15 years (*SD* = 0.61, range 17-19). The mean age for the coping effectiveness with team building group was 16.70 years (*SD* = 0.53, range 16-18).

[16] The number of scheduled games excludes junior or senior international or senior club selections.

[17] At this stage, the coaching staff decided to opt out of taking part in the organizational-level intervention.

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Competitive season		Start of the season							End of the season				Pre-season
Coping effectiveness with team building ($n = 12$)	PAR: Qual Audit	PAR: Feedback to coaches & workshop planning		T1, C1, C2	Winter Break	PAR: Feedback to coaches & workshop planning	T2, C3, C4	C5, C6	Cr, T3				T4
Team building ($n = 28$)				T1, TB1			T2, TB2	TB3	TBr, T3				T4
Non-equivalent control ($n = 17$)				T1			T2		T3				

Note. PAR: Participative Action Research, Qual Audit = Qualitative organizational-level audit with players ($n = 40$) and staff ($n = 7$), T1 = Baseline measurement ($n = 53$), T2 = Midpoint measurement ($n = 46$), T3 = Post-intervention measurement ($n = 56$), T4 = 3-month follow-up measurement ($n = 18$), C = Coping workshop, TB = Team building workshop, r = Recap session.

Figure 5.1. Outline of the season-long organizational-level intervention

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conducted in study three. Specifically, for two of the three cohort groups ($n = 28$, age range 17-19), they had operated in the institution for between one and two years in duration. From the stress audit interviews conducted, these two cohorts emphasized a need for greater cohesion amongst teammates and a need for the playing squad to share common group goals during the competitive season. Subsequently, all three cohorts of players ($n = 40$) were assigned to a monthly team building workshop programme. In addition, the senior cohorts ($n = 28$) along with the coaching staff ($n = 7$) explained that a younger cohort of players ($n = 12$, age range 16-18 years) generally experience high levels of strain during their first year of joining the organization. Furthermore, it was emphasized by the senior players that the younger cohort are expected by the coaches to adapt quickly to authoritative leadership and threatening conditions (e.g., older squad players' and coaches' intimidation) in order to progress successfully through the cohort system. In addition, it was revealed by both senior players and coaches that the youngest cohort make a number of significant physical and mental transitions (e.g., adapting to higher intensity training, moving home to be based in close proximity to the organization, undertaking further education) upon joining the professional institution.

Therefore, based on the participatory recommendations from players and staff, the youngest cohort of players ($n = 12$) were assigned to a coping effectiveness training programme, to improve their ability to cope with their occupational transition to a professional rugby union organization. In addition, to reduce the potentially intimidating atmosphere between new and more senior academy players, the coping effectiveness training group also took part in the team building programme alongside the remaining cohorts of squad players ($n = 28$). Participants in the experimental groups completed questionnaires at the beginning of the first team building session (time 1), midway through the season prior to team building session two (time 2), at the end of the season (time 3) after the team building recap and 3-months post-intervention (time 4). Data was collected from the non-equivalent control group during the same training week as the experimental groups.

Intervention Content

In line with the stress management recommendations that were received from the professional academy players and staff, and in separate consultation with the coaching staff, two contrasting programmes were designed to target the issues raised from the organizational-level stress audit. All sessions were delivered by the author and took place in the squad social room at the training ground of the professional organization.

Coping effectiveness. An adapted version of Coping Effectiveness Training (CET;

Chesney, Folkman, & Chambers, 1996) was developed to suit the needs of the professional rugby union players that were taking part ($n = 12$), and in line with the context of the sport academy setting. Each workshop lasted up to 60 minutes in duration. The first two sessions were scheduled two weeks apart, and following a winter break and participatory workshop planning, the remaining sessions were scheduled two weeks apart from one another. The adapted CET programme, which was based on Lazarus and Folkman's (1984) theory of stress and coping, consisted of seven sessions. In the first session, the concept of transactional stress was introduced. In addition, attempts were made to normalize stress by raising participants' awareness of typical stress symptoms (e.g., physical, emotional, behavioural, cognitive), where they might have occurred in the past (e.g., during academy training, during games, at home), and how they personally appraised and coped with these situations.

The second session was conducted on an individual basis and encouraged each player to reflect on a stressor scenario that they had recently encountered in the organization. The author and participant then worked through each scenario and considered how the player could appraise and cope with the stressor based on Folkman's (1984) goodness of fit approach to coping. One of the main organizational stressors to be identified during the second session was 'work-life interface' (Cooper et al., 2001). Therefore, the third session applied time management techniques as a method of problem-solving to plan for particular 'work-life' scenarios of concern to the participants. Such techniques included scheduling time for relaxation and interpersonal activities (e.g., seeing friends and family). Session four involved applying the goodness of fit approach to coping (Folkman, 1984), whereby participants identified recently encountered stressors and associated any 'uncontrollable' stressors with different methods of emotion-focused coping. Following this, participants were taught a strategy for tailoring the most appropriate method of emotion-focused coping. Participants were then guided through a method of progressive muscular relaxation.

In session five, participants continued to apply the goodness of fit approach to coping (Folkman, 1984) by matching different methods of problem-focused coping to recently identified stressors which were appraised as 'controllable'. Furthermore, after discussing a range of 'what if scenarios' that may occur within the organization, the participants then applied a strategy (taught in session four) for choosing the most effective method of problem-focused coping. The session concluded with a role playing exercise, which encouraged participants to re-enact a previously encountered stressor and discuss ways in which the issue could have been solved. In session six, participants were taught how to increase social support resources, by matching different types of support (e.g., emotional, informational,

tangible) to organizational personnel (e.g., coach, teammate, physiotherapist) who can provide effective support. Session seven acted as a recap of the main CET content and provided participants an opportunity to briefly cover any content that players found difficult to apply. Following this, the session concluded with a discussion of personalized self-enhancing statements (i.e., positive self-talk) to supplement both problem- and emotion-focused methods of coping.

Team building. A team building programme was developed from previous intervention research that has been conducted in sport (Nicholls & Callard, 2012; Voight & Callaghan, 2001) and this was tailored to the rugby union academy context. The first team building workshop (TB1) was delivered before the first year cohort had received any CET sessions. Following a winter break and workshop planning in collaboration with coaching staff, the remaining three sessions were scheduled 4 weeks apart from one another. Each workshop lasted up to 60 minutes in duration. In the first session, participants took part in two rapport building warm-up games which were based on improving communication[18]. Following this, the group was broken down into smaller subgroups and each group was asked to complete a brief SWOT analysis (i.e., strengths, weaknesses, opportunities, threats) of the playing squad using pens and flipchart paper. Subsequently, this led to a full squad discussion on agreed team goals for players to work towards until the end of the competitive season. One of the agreed goals was for players to schedule team socials away from the organization at appropriate times during the season. In the second session, the author re-presented the SWOT analyses that had been conducted in session one and used this as a base for mid-season team evaluation. This led the players to amend and agree some new team goals for the remainder of the season. In addition, as a final team building exercise in this session, participants were asked to anonymously write down the strengths of a team member, such as why they are respected within the squad, and what qualities the individual contributes to the academy team.

In session three, players developed their own personal career goals, by creating a ten-year plan and discussing as a group what each individual would have liked to have achieved each year. Following this, players were educated on how to set themselves different types of goals (process, performance and outcome) in relation to these career aspirations. At the end of the session, the strengths of each player were anonymously handed to each player. The

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[18] To provide some context, the first session was delivered one day after the squad's first loss of the season by two points to a rival organization. A further contextual account of this is provided via a reflective diary (see Chapter 6 pp. 186-188).

final fourth session, which coincided with the final two weeks of the competitive season, acted as recap of the main content which had been delivered across the season. Specifically, the squad reflected on individual and team achievements in relation to the original SWOT analysis that was conducted. In addition, the players were encouraged to discuss their planned individual goals for the forthcoming pre-season. Furthermore, at this stage, the squad had become aware of which players were going to be released or retained at the end of the competitive season. Subsequently, this provided an opportunity for the author and teammates to provide support to the released players and for them to discuss their future career goals with the squad. Each workshop was supported by the use of homework assignments and summary handouts of the main points covered. Participants were also asked not to discuss the workshop content with anyone in their organization for the duration of the competitive season.

Measures

   Positive and negative affect. The 20-item Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) was used to measure each participant's affect across time points using a five-point likert scale ranging from 1 ('not at all') to 5 ('extremely'). Positive and negative affect were assessed by asking participants to indicate to what extent they had felt specific emotions in the past few weeks. The 10 items that measured Positive Affect (PA) were: attentive, interested, alert, excited, enthusiastic, inspired, proud, determined, strong, and active. The 10 items that measured Negative Affect (NA) were: distressed, upset, hostile, irritable, scared, afraid, ashamed, guilty, nervous, and jittery. Previous research has found internal consistency for PA and NA to be acceptable (α = .87, .87; Watson et al., 1988).

   Coping self-efficacy. The Coping Self-Efficacy Scale (CSES; Chesney, Neilands, Chambers, Taylor, & Folkman, 2006) was used to measure participants coping self-efficacy using an 11-point scale, ranging from 0 ('cannot do at all') to 10 ('certainly can do'). The scale measures the extent to which the participants feel confident in performing a behavior that is important for effective coping. The participants were asked to respond to the following statement, 'when things aren't going well for you, or when you're having problems, how confident or certain are you that you can do the following?' The reduced 13-item scale measures three dimensions: problem-focused coping (PCSE; e.g., 'find solutions to your most difficult problems'), stop unpleasant emotions and thoughts (ECSE; e.g., 'make unpleasant thoughts go away'), and get support from family and friends (SCSE; e.g., 'get emotional support from friends and family'). In a validity and reliability study of CSES, Chesney et al. (2006) found strong reliabilities for problem-focused coping (α = .91), stop unpleasant

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emotions and thoughts (α = .91), and get support from family and friends (α = .80).

Team cohesion. The 18-item Group Environment Questionnaire (GEQ; Carron, Widmeyer, & Brawley, 1985) was used to measure participant's cohesion using a nine-point likert scale ranging from 1 ('strongly disagree') to 9 ('strongly agree'). The scale measures four dimensions: Individual Attractions to the Group – Task (ATG-T), Individual Attractions to the Group – Social (ATG-S), Group Integration – Task (GI-T), and Group Integration – Social (GI-S). In this way, the subscales measure each participant's views of what personally attracts them to the group (individual attraction to the group), how the group functions as a unit (group integration), and how these views might be based around on task (i.e., group goals) and social aspects (i.e., social relationships). Participants were asked to rate their level of agreement with each of the 18-item statements. Previous research (Carron, Brawley, & Widmeyer, 1998) has reported adequate reliabilities for each subscale: ATG-T (α = .75), ATG-S (α = .64), GI-T (α = .70), GI-S (α = .76).

Subjective performance satisfaction. Two 2-item scales were devised to measure participants' individual performance satisfaction and team performance satisfaction. Using a nine-point likert scale ranging from 1 ('strongly disagree') to 9 ('strongly agree'), the participants were asked to rate their level of agreement with each of the following statements: 'I have been satisfied with my performances in training', 'I have been satisfied with my performances in matches', 'I have been satisfied with the team's performances in training', 'I have been satisfied with the team's performances in matches'. Test-retest reliabilities were adequate for individual performance (α = .75) and team performance (α = .70) satisfaction. In addition, a principal components analysis was conducted on the both 2-item scales with orthogonal rotation (varimax). The Kaiser-Meyer-Olkin (KMO) measure verified that the sample size was minimally adequate, KMO = .50, and all values for the items were equal to .50, which is the minimal acceptable limit (Field, 2009).

Objective performance indicators. For all experimental and control groups, information was obtained on the number of competitive games that participants were selected for. This is an important indicator because selection for games may help to explain any variance in well-being across time points which may not be explained from the intervention effects. Moreover, the number of games players were selected to compete in throughout the season may act as an explanatory process variable, in so far that players who are less selected during the season may be less engaged in the psychology sessions being delivered.

Process evaluations. Three scales were devised to measure process evaluations at mid-point (time 2) and post-intervention (time 3), to socially validate the effects of the two

organizational-level interventions that were conducted in the professional organization. *Macro* processes measured participants' perceptions of the organizational-level interventions in relation to the design, delivery and maintenance of the psychology sessions implemented (4 items, e.g., 'I have been satisfied with the frequency of sessions delivered'). *Micro* processes measured participants' appraisals of the interventions in relation to impact, sustainability, participant motivation to participate and readiness for change (5 items, e.g., 'I think the sessions will lead to some lasting changes for myself and my teammates'). *Contextual* processes measured participants' perceptions of discrete contexts and factors present in the organizational environment in which the interventions were implemented (2 items, e.g., 'I think organizational factors have affected how and when the sessions are implemented').[19] Using a 5-point likert scale which ranged from 1 ('strongly disagree') to 5 ('strongly agree'), participants evaluated the psychology sessions by rating their level of agreement with each statement. Given the small sample sizes at midpoint ($n = 29$) and post-intervention ($n = 39$), the test-retest reliabilities were generally acceptable for Macro ($\alpha = .63$), Micro ($\alpha = .81$), and Contextual ($\alpha = .62$) process evaluations.

Principal components analyses were also conducted for Macro and Micro process evaluations.[20] For Macro process evaluations, the KMO measure verified that the sample size was adequate, KMO = .71, and all values for the items were > .69 except for item 1 ('I have had a say in the type of sessions I have received', .28), which loaded onto a separate component and was removed from any further statistical analyses. For Micro process evaluations, the KMO measure verified that the sample size was adequate, KMO = .71, and all KMO values for the items were > .69. However, item 2 ('I think some changes could be made to improve the sessions') loaded onto a separate component and was subsequently removed from any further statistical analyses.

Data Analysis

Preliminary analyses were conducted to assess post-intervention change using a series of 3 (Group) x 3 (Time) mixed design Analyses of Variance (ANOVA) tests. Group (organizational-level programme vs. control and CET with team building vs. team building) served as the between-subjects factor and Time (baseline, midpoint, post-intervention) served as the within-subjects factor. To assess any change from post-intervention to 3-month follow-

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[19] Items for each scale were developed based on previous process evaluations of organizational-level research (Arnold et al., 2010; Cox et al., 2007; Nielsen et al., 2007, 2010a; Randall et al., 2007, Randall, Nielsen, & Tvedt, 2009).

[20] Bartlett's test of sphericity was non-significant for contextual process evaluations, indicating that sample size is inadequate for conducting principal components analysis.

up for the experimental conditions (CET with team building vs. team building), a series of 2 (Group) x 2 (Time) mixed design ANOVAs were conducted.[21]

From running the ANOVAs, it was identified that behaviour change across the four time points was non-linear. In addition, due to the winter break period during the competitive season for the professional organization (see Figure 5.1), time points from pre-intervention to follow-up were unevenly spread and missing data was identified at different time points for different participants. Although mixed design ANOVAs require balanced 'time-structured' data and the same number of participants for each time point within intervention subgroups, hierarchical linear growth models allow for unequal numbers of participants and unbalanced spacing of time points (Raudenbush & Bryk, 2002). Furthermore, given the hierarchical structure of data (i.e., data nested within persons and between groups), intervention effectiveness over time was subsequently examined with multi-level growth curve modeling using the HLM 7.01 statistical package (Raudenbush et al., 2011). In contrast to ANOVA, growth modeling provides insights into psychological processes at both individual and group levels. In particular, ANOVA assumes that the mean response is representative of all individuals within a group and differences among individuals within groups are considered error. In comparison, growth curve modeling is a more idiographic approach, and assumes that an average group-level response is unlikely to represent the response pattern of a particular individual within this group (Kristjansson, Kircher, & Webb, 2007, p. 728).

The goal of the multi-level growth curve modeling analyses was to test the statistical significance of the treatments (e.g., organizational-level programme vs. control and CET with team building vs. team building) by Time (baseline, midpoint, post-intervention, and follow-up) interaction across each of the outcome variables. Specifically, a growth curve model was tested to investigate whether there was a nonlinear change within and between the experimental groups in the outcome variables over time. Due to the nonlinear change patterns of the ANOVA, both linear and quadratic higher order polynomial components were included in the model. Quadratic growth models allow for a specific type of nonlinearity in the pattern of behaviour change. For example, where linear slopes represent a constant rate of change, a quadratic slope represents the degree to which rate of change is accelerated across groups (Grimm et al., 2011). Therefore, larger absolute values of the linear slope indicate a faster rate of behaviour change and larger absolute values of the quadratic slope indicate the rate of change is accelerating or decelerating, producing a greater curve in the trajectory of the

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[21] Exploration of the data showed normal distributions and no violations of assumptions for the ANOVA tests.

outcome variable and indicating a delayed effect towards the end of the intervention.

The analyses for all dependent variables were conducted in a similar format at three levels: an individual level (Level 1), between individuals level (Level 2) and between groups (Level 3). At Level 1, time (linear) and time squared (quadratic) were incorporated as predictors. Time was coded as a dummy variable whereby participant responses from pre-intervention at time 1 were coded as 0, midpoint responses at time 2 were coded as 1, post-intervention responses at time 3 were coded as 2, and 3-month follow-up responses at time 4 were coded as 3. In addition, the dummy coding of the higher-order quadratic polynomial component of time was squared, such that participant responses from pre-intervention were coded as 0, midpoint responses were coded as 1, post-intervention responses were coded as 4, and 3-month follow-up responses were coded as 9. Using 0 to represent pre-intervention scores meant that responses would represent the baseline value of the outcome variable (DeJoy et al., 2010). Time and time squared were not centered so that the intercept would be interpreted as the value of the dependent variable at baseline time point (pre-intervention). If time had been mean centered then the intercept would be interpreted as the value of the dependent variable at the middle time point (Biesanz, Deeb-Sossa, Papadakis, Bollen, & Curran, 2004).

To account for individual variability in the outcome variables across time and time squared, the number of competitive games that participants had been selected for during the season was entered as a control variable at Level 2 and group mean centered (i.e., centering within cluster; Enders & Tofighi, 2007). The treatment groups as predictors were then entered uncentered at Level 3. Specifically, to test the effectiveness of the organizational intervention vs. the control group, team building ($n = 40$) was dummy coded 1 and the non-equivalent control group ($n = 17$) were dummy coded 0. Assigning a zero to the control participants means that they acted as the baseline condition. Furthermore, to test the effectiveness of the organizational-level (i.e., team building) vs. the individual- / organizational-level (i.e., CET with team building) interventions, the individual- / organizational-level group ($n = 12$) were coded 1 and the remaining participants (i.e., team building and the control group) were coded 0. This coding allows for the examination of group x time interactions, whilst controlling for the number of competitive games that participants were selected for during the season.

For the aforementioned directional hypotheses outlined, these were evaluated with asymmetric two-tailed tests for linear growth models, to allow for the probability of detecting a relationship in the opposite direction to that originally expected (Daniels, Wimalasiri,

Cheyne, & Story, 2011). Therefore, for an overall Type I error of α = .05, the probability of Type I error for the hypothesised direction was set to α = .045. The probability of Type I error for the unexpected hypothesised direction was subsequently set to α = .005 (Nosanchuk, 1978). Otherwise, symmetric two-tailed tests were used.

5.4 Results

Table 5.1 displays the group means and standard deviations at pre-intervention, mid-point, post-intervention, and 3-month follow-up for each variable subscale and for each intervention group. Table 5.2 shows the correlations for study variables between pre- and post-intervention time points. The majority of correlations (73%) between pre- and post-intervention for each dependent variable were significant ($p < .05$). Only positive affect, group integration to social activities, and player evaluations of team performance did not display significant correlations between pre- and post-intervention. Participants' typical levels of positive affect at post-intervention were correlated with participants' evaluations of individual and team performance post-intervention (range of rs = .31-.57, $p < .01$).

In addition, positive affect at post-intervention was also strongly correlated with problem-focused coping, group integration to social activities, group integration to tasks, individual attraction to group social activities post-intervention (range of rs = .38-.55, $p < .01$), and mean macro process evaluations inversely ($r = -.43$, $p < .01$). Typical levels of problem-focused coping post-intervention were positively correlated with stopping unpleasant emotions and thoughts, getting support from family and friends, group integration to social activities, individual attraction to group social activities, evaluations of individual and team performance at post-intervention (range of rs = .31-.51, $p < .05$). Average levels of group integration to social activities post-intervention were significantly associated with group integration to tasks, individual attraction to group social activities, individual attraction to group tasks, and player evaluations of individual and team performance post-intervention (range of rs = .32-.66, $p < .05$). Mean micro process evaluations were found to be associated with a number of post-intervention variables, including: negative affect (inversely, $r = -.31$, $p < .05$), problem-focused coping, stopping unpleasant emotions and thoughts, getting support from family and friends, and player evaluations of individual performance (range of rs = .33-.48, $p < .05$). In addition, mean contextual process evaluations were found to be inversely associated with post-intervention levels of negative affect and player evaluations of team performance (range of rs = .32-.42, $p < .05$). Table 5.3 shows the results of the multilevel growth curve analyses of time (linear and quadratic), intervention group and time x group interactions for each outcome variable.

Table 5.1

Means and Standard Deviations at Pre-, Mid-Point, Post-Intervention and Follow-Up

Variable	Group		
	Team building group	CET and team building	Non-equivalent control
PA			
Time 1	3.59 (0.39)	3.79 (0.44)	3.79 (0.27)
Time 2	4.03 (0.42)	3.46 (0.40)	3.02 (0.24)
Time 3	3.75 (0.30)	3.70 (0.38)	3.19 (0.21)
Time 4	3.94 (0.50)	4.04 (0.46)	-
NA			
Time 1	1.94 (0.40)	1.94 (0.61)	1.79 (0.38)
Time 2	2.02 (0.36)	2.01 (0.44)	1.81 (0.27)
Time 3	1.81 (0.39)	1.78 (0.47)	1.68 (0.32)
Time 4	2.06 (0.66)	1.70 (0.51)	-
PCSE			
Time 1	6.16 (0.99)	6.73 (0.92)	6.02 (0.74)
Time 2	6.81 (1.11)	5.78 (1.27)	5.62 (0.66)
Time 3	6.94 (1.11)	6.49 (1.35)	5.58 (0.70)
Time 4	6.92 (1.57)	7.02 (1.55)	-
ECSE			
Time 1	5.74 (2.25)	6.58 (2.10)	6.46 (2.20)
Time 2	5.79 (1.67)	7.10 (2.09)	5.84 (2.06)
Time 3	6.38 (1.87)	6.60 (1.70)	5.87 (2.11)
Time 4	5.84 (2.13)	7.43 (1.50)	-
SCSE			
Time 1	7.35 (1.53)	8.00 (1.22)	7.14 (1.34)
Time 2	7.07 (1.95)	6.73 (1.76)	6.80 (1.35)
Time 3	7.28 (1.67)	7.33 (2.03)	6.76 (1.38)
Time 4	6.63 (1.65)	7.20 (2.11)	-
GI-S			
Time 1	5.48 (0.70)	5.46 (0.64)	5.21 (0.49)
Time 2	5.69 (0.76)	5.80 (0.79)	4.04 (0.86)
Time 3	5.79 (0.89)	5.83 (0.76)	4.06 (0.92)
Time 4	5.63 (0.89)	6.30 (0.66)	-
GI-T			
Time 1	6.01 (0.84)	6.15 (0.86)	5.64 (0.70)
Time 2	6.05 (0.53)	6.36 (0.29)	5.40 (0.49)
Time 3	6.23 (0.76)	6.43 (0.74)	5.35 (0.54)

Time 4	5.95 (0.78)	6.10 (1.02)	-
ATG-S			
Time 1	5.37 (0.73)	5.35 (0.76)	5.11 (0.47)
Time 2	5.34 (0.66)	5.93 (0.69)	4.31 (0.94)
Time 3	5.40 (0.52)	5.52 (0.94)	4.25 (0.76)
Time 4	5.60 (0.52)	5.21 (0.71)	-
ATG-T			
Time 1	5.53 (1.03)	5.65 (0.97)	5.30 (0.79)
Time 2	5.42 (1.10)	6.22 (0.59)	5.20 (0.73)
Time 3	5.74 (0.84)	5.76 (0.93)	4.93 (0.85)
Time 4	4.95 (0.87)	5.33 (0.98)	-
Individual performance			
Time 1	6.04 (1.19)	6.29 (0.84)	6.19 (1.00)
Time 2	6.61 (0.81)	5.65 (1.16)	5.78 (0.80)
Time 3	6.77 (0.73)	6.67 (0.54)	6.32 (0.92)
Time 4	7.00 (0.76)	6.90 (0.94)	-
Team performance			
Time 1	6.26 (0.45)	6.43 (0.69)	6.05 (0.45)
Time 2	7.39 (0.74)	7.80 (0.63)	5.15 (0.79)
Time 3	7.47 (0.73)	7.69 (0.58)	5.12 (0.88)
Time 4	7.16 (0.97)	7.68 (0.45)	-
Macro processes			
Time 2	3.26 (0.44)	3.78 (0.51)	-
Time 3	3.53 (0.43)	3.83 (0.34)	-
Micro processes			
Time 2	3.36 (0.32)	3.50 (0.54)	-
Time 3	3.30 (0.60)	3.43 (0.60)	-
Contextual processes			
Time 2	3.18 (0.63)	3.35 (0.53)	-
Time 3	3.54 (0.59)	3.38 (0.48)	-

Note. Time 1 = Baseline measurement (n = 53), Time 2 = Midpoint measurement (n = 46), Time 3 = Post-intervention measurement (n = 56), Time 4 = 3-month follow-up measurement (n = 18), PA = Positive affect; NA= Negative affect; PCSE = Problem focused coping; ECSE = Stop unpleasant emotions and thoughts; SCSE = Get support from family and friends; ATG-T = Individual attraction to group tasks; ATG-S = Individual attraction to group social activities; GI-T = Group integration to tasks; GI-S = Group integration to social activities.

Table 5.2.

Correlations between Study Variables between Pre- (Time 1) and Post-Intervention (Time 3)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. PA	(-.08)	.22	.51**	.09	.10	.54**	.38**	.55**	.19	.31*	.57*	-.07	-.43**	.02	-.17
2. NA	-.11	(.27*)	-.07	-.26	-.29*	-.08	-.24	-.11	-.06	-.13	.07	.26	-.25	-.31*	-.42**
3. PCSE	.09	.03	(.39**)	.51*	.45*	.44**	.25	.31*	.25	.36**	.42**	-.02	-.25	.33*	.11
4. ECSE	.17	.03	.48**	(.57**)	.51**	.20	.15	.15	.16	.13	.15	-.23	.04	.36*	.27
5. SCSE	.04	.06	.15	.14	(.69**)	.20	.25	.04	.05	.29*	.11	.04	.21	.38*	.26
6. GI-S	.05	.08	.10	-.00	-.07	(.17)	.48**	.57**	.32*	.35**	.66**	-.05	.11	.06	-.15
7. GI-T	.13	-.23	.19	.07	.14	.18	(.34*)	.39*	.01	.25	.58**	-.05	.25	.22	.19
8. ATG-S	.10	-.18	.27	.02	.31*	.06	-.03	(.41*)	.29*	.07	.53**	-.27	.05	.23	-.06
9. ATG-T	.04	-.21	.21	-.02	.15	.32*	.22	.29*	(.42**)	.01	.23	-.43**	-.13	-.17	.12
10. Individual performance	.12	-.07	-.07	-.15	.29*	.11	.17	-.03	.11	(.65**)	.30*	-.02	.03	.48**	.04
11. Team performance	.32*	-.12	.08	-.20	.02	-.07	.08	-.01	-.18	-.10	(.23)	.25	.26	.14	-.32*
12. Appearances	-.26	.45**	-.36*	-.00	.06	-.42*	-.16	-.20	-.51**	-.13	.03	-	.00	-.14	-.18
13. Mean Macro Processes‡	.15	-.03	-.02	.21	.30	-.01	.12	-.01	.12	-.13	.07	.00	-	-	-
14. Mean Micro Processes‡	-.01	-.24	.28	.15	.38*	.29	.12	.18	.28	.22	.01	-.14	.33*	-	-
15. Mean Contextual Processes‡	.43**	.10	.12	-.12	-.01	.01	-.26	-.06	.11	.04	.09	-.18	.11	-.12	-

Note. $N = 52$, Time 1, $n = 52$, Time 3. Time 1 correlations are presented below the diagonal, and Time 3 correlations are presented above the diagonal. Time 1-Time 3 correlations for each variable are presented in parentheses along the diagonal. ‡ These variables were only measured at mid-point (time 2) and post-intervention (time 3) for the intervention groups and not the control group. * Correlation is significant at the 0.05 level (two-tailed). ** Correlation is significant at the 0.01 level (two-tailed).

Table 5.3

Multilevel Growth Curve Analysis of Time*Group and Time Squared*Group Interactions

Variable	B	SE	t-ratio	df
PA				
Main effects				
Team building	-0.18	0.12	-1.49	2
CET	-0.04	0.13	-0.28	2
Appearances[c]	0.04	0.06	0.79	51
Team building	-0.05	0.06	-0.82	51
CET	-0.06	0.06	-0.97	51
Time	-1.22***	0.22	-5.69	99
Time*Team building	1.51***	0.25	6.10	99
Time*CET	0.84**	0.27	3.13	99
Timesq	0.46***	0.10	4.42	99
Timesq*Team building	-0.54***	0.11	-4.80	99
Timesq*CET	-0.29**	0.12	-2.51	99
NA				
Main effects				
Team building	0.16	0.13	1.23	2
CET	0.16	0.15	1.08	2
Appearances[c]	0.04	0.07	0.52	51
Team building	-0.01	0.07	-0.09	51
CET	-0.01	0.07	-0.11	51
Time	0.07	0.22	0.35	99
Time*Team building	-0.24	0.25	-0.95	99
Time*CET	0.02	0.27	0.07	99
Timesq	-0.07	0.10	-0.66	99

Timesq*Team building	0.12	0.11	1.09	99
Timesq*CET	-0.01	0.12	-0.07	99
PCSE				
Main effects				
Team building	0.17	0.31	0.55	2
CET	0.68	0.37	1.84	2
Appearances[c]	0.39†	0.20	1.96	51
Team building	-0.41*	0.20	-2.07	51
CET	-0.42*	0.20	-2.09	51
Time	-0.59	0.45	-1.31	99
Time*Team building	1.43**	0.52	2.77	99
Time*CET	-0.50	0.56	-0.89	99
Timesq	0.19	0.21	0.89	99
Timesq*Team building	-0.40	0.23	-1.69	99
Timesq*CET	0.26	0.24	1.06	99
ECSE				
Main effects				
Team building	-0.91	0.59	-1.53	2
CET	0.21	0.70	0.30	2
Appearances[c]	1.00*	0.40	2.48	51
Team building	-1.05**	0.41	-2.60	51
CET	-1.00*	0.41	-2.44	51
Time	-0.89	0.72	-1.23	99
Time*Team building	1.48†	0.84	1.77	99
Time*CET	0.70	0.91	0.77	99
Timesq	0.29	0.35	0.85	99

Timesq*Team building	-0.41	0.38	-1.09	99
Timesq*CET	-0.15	0.39	-0.37	99
SCSE				
Main effects				
Team building	0.29	0.50	0.58	2
CET	0.83	0.60	1.38	2
Appearances[c]	0.42	0.35	1.19	51
Team building	-0.43	0.36	-1.21	51
CET	-0.36	0.36	-1.00	51
Time	-0.47	0.56	-0.84	99
Time*Team building	0.18	0.65	0.28	99
Time*CET	-0.66	0.70	-0.94	99
Timesq	0.16	0.27	0.59	99
Timesq*Team building	-0.09	0.29	-0.30	99
Timesq*CET	0.19	0.31	0.62	99
GI-S				
Main effects				
Team building	0.21	0.24	0.85	2
CET	0.23	0.28	0.81	2
Appearances[c]	0.08	0.13	0.64	51
Team building	-0.09	0.13	-0.71	51
CET	-0.10	0.13	-0.80	51
Time	-1.84***	0.42	-4.36	99
Time*Team building	2.27***	0.49	4.67	99
Time*CET	2.00***	0.53	3.78	99
Timesq	0.62**	0.20	3.07	99

Timesq*Team building	-0.75***	0.22	-3.41	99
Timesq*CET	-0.60**	0.23	-2.61	99
GI-T				
Main effects				
Team building	0.30	0.21	1.39	2
CET	0.51	0.25	2.05	2
Appearances[c]	-0.25	0.12	-2.16	51
Team building	0.23	0.12	1.95	51
CET	0.25	0.12	2.06	51
Time	-0.38	0.35	-1.08	99
Time*Team building	0.73†	0.41	1.78	99
Time*CET	0.62	0.44	1.40	99
Timesq	0.12	0.17	0.71	99
Timesq*Team building	-0.23	0.19	-1.22	99
Timesq*CET	-0.17	0.19	-0.89	99
ATG-S				
Main effects				
Team building	0.27	0.22	1.23	2
CET	0.32	0.25	1.27	2
Appearances[c]	0.16	0.13	1.19	51
Team building	-0.17	0.13	-1.32	51
CET	-0.19	0.13	-1.40	51
Time	-1.16***	0.33	-3.51	99
Time*Team building	1.12**	0.38	2.93	99
Time*CET	1.68***	0.41	4.06	99
Timesq	0.37*	0.16	2.36	99

Timesq*Team building	-0.34†	0.17	-1.93	99
Timesq*CET	-0.57**	0.18	-3.17	99
ATG-T				
Main effects				
Team building	0.19	0.26	0.71	2
CET	0.42	0.30	1.40	2
Appearances[c]	-0.15	0.14	-1.06	51
Team building	0.07	0.14	0.47	51
CET	0.08	0.14	0.55	51
Time	-0.03	0.44	-0.08	99
Time*Team building	0.49	0.51	0.97	99
Time*CET	0.61	0.55	1.11	99
Timesq	-0.07	0.21	-0.33	99
Timesq*Team building	-0.11	0.23	-0.49	99
Timesq*CET	-0.17	0.24	-0.71	99
Individual performance				
Main effects				
Team building	-0.10	0.27	-0.38	2
CET	0.03	0.32	0.11	2
Appearances[c]	-0.33	0.17	-1.92	51
Team building	0.30	0.18	1.73	51
CET	0.37	0.18	2.11	51
Time	-0.90*	0.37	-2.47	99
Time*Team building	1.60***	0.42	3.76	99
Time*CET	0.34	0.46	0.73	99
Timesq	0.50**	0.18	2.84	99

Timesq*Team building	-0.64***	0.19	-3.32	99
Timesq*CET	-0.18	0.20	-0.90	99

Team performance

Main effects

Team building	0.25	0.22	1.14	2
CET	0.43	0.25	1.75	2
Appearances[c]	-0.14	0.11	-1.29	51
Team building	0.17	0.11	1.51	51
CET	0.12	0.11	1.06	51
Time	-1.40***	0.38	-3.67	99
Time*Team building	2.69***	0.44	6.13	99
Time*CET	2.81***	0.48	5.89	99
Timesq	0.47**	0.18	2.55	99
Timesq*Team building	-0.81***	0.20	-4.05	99
Timesq*CET	-0.82***	0.21	-3.96	99

Note. $N = 57$, team building ($n = 40$), CET = coping effectiveness training and team building ($n = 12$), non-equivalent control group ($n = 17$). Timesq = time squared (quadratic). Maximum number of level-1 units = 165, maximum number of level-2 units = 57, maximum number of level-3 units = 3. [c] = control variable. PA = Positive affect; NA= Negative affect; PCSE = Problem focused coping; ECSE = Stop unpleasant emotions and thoughts; SCSE = Get support from family and friends; ATG-T = Individual attraction to group tasks; ATG-S = Individual attraction to group social activities; GI-T = Group integration to tasks; GI-S = Group integration to social activities. † $p < .08$, * $p \le .05$, ** $p \le .01$, *** $p \le .001$.

Affect

For Positive Affect (PA), there was a linear decline on average for all experimental groups over time ($B = -1.22$, $SE = 0.22$, $p < 0.001$). However, significant time x group interactions were found. Figure 5.2 displays the form of time x group relationships. The team building group significantly increased in PA from time 1 to time 4 ($B = 1.51$, $SE = 0.25$, $p < 0.001$). In addition, the CET with team building group increased in PA from time 1 to time 4 ($B = 0.84$, $SE = 0.27$, $p < 0.01$). This suggests that both interventions were effective in improving PA over time in comparison to the control group. In addition, a quadratic time effect for PA was found to significant. In particular, on average all groups showed a delayed and accelerated increase in PA from time 2 to time 4 ($B = 0.46$, $SE = 0.10$, $p < 0.001$). This delayed increase from time 2 to time 4 was not observed as strongly for the team building group in comparison to the other groups ($B = -0.54$, $SE = 0.11$, $p < 0.001$). Similarly, although the CET with team building group showed a constant improvement in PA from time 2 to time 4, the team building and control group combined showed a greater accelerated increase in PA from time 3 to time 4 ($B = -0.29$, $SE = 0.12$, $p < 0.001$), For Negative Affect (NA), no significant time (linear or quadratic) or time x group interactions were found.
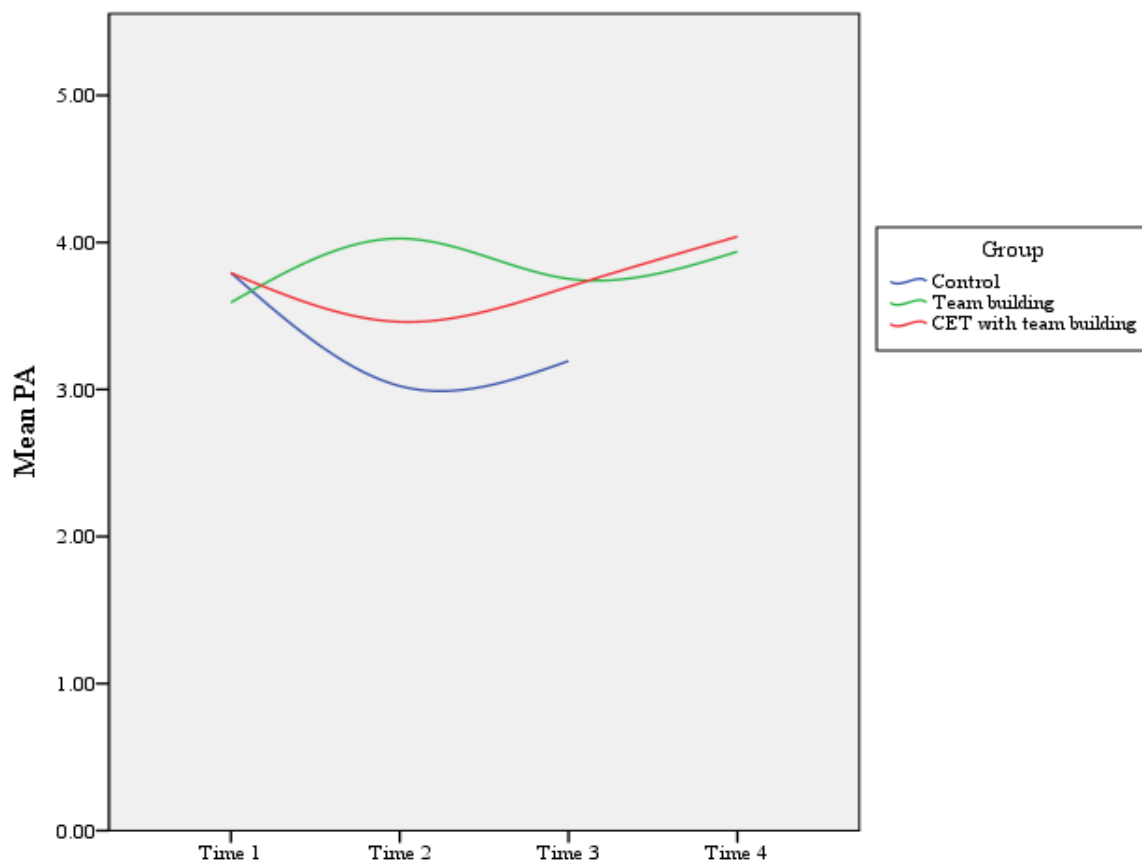
Figure 5.2. Time x group interactions for positive affect (PA).

Coping Self-Efficacy

For problem-focused coping self-efficacy (PCSE), a marginally significant relationship was found when controlling for the number of competitive games that participants had been selected for during the season. Specifically, those participants who had been selected for more games during the season had higher scores for PCSE ($B = 0.39$, $SE = 0.20$, $p < 0.06$). This relationship was also found to be stronger for the CET with team building and control groups combined than for the team building groups ($B = -0.41$, $SE = 0.20$, $p < 0.05$). Similarly, this relationship was also stronger for the team building and control groups combined than the CET with team building group ($B = -0.42$, $SE = 0.20$, $p < 0.05$). Although a significant time effect for PCSE was not found, there was a significant time x group interaction. Figure 5.3 displays the nature of time x group relationships. Specifically, the team building group significantly increased in PCSE from time 1 to time 3 ($B = 1.43$, $SE = 0.52$, $p < 0.01$), in comparison to the CET with team building group and control groups who had both decreased. Furthermore, although the CET with team building group showed an accelerated increase from time 2 to time 3, the curve from time 3 to time 4 suggests that any increases were beginning to slow down. Therefore, the time squared x group interaction was not significant. This suggests that the team building intervention was effective in increasing PCSE over time in comparison to the CET with team buiding intervention and control groups.

For stopping unpleasant emotions and thoughts (ECSE), a significant relationship was found when controlling for the number of competitive games that participants had been selected for during the season. Specifically, those participants who had been selected for more games during the season had higher scores for ECSE ($B = 1.00$, $SE = 0.40$, $p < 0.05$). This relationship was found to be stronger for the CET with team building and control groups combined than for the team building group ($B = -1.05$, $SE = 0.41$, $p < 0.01$). In addition, this relationship was also found to be stronger for the team building and control groups combined than the CET with team building group ($B = -1.00$, $SE = 0.41$, $p < 0.01$). Although no significant time (linear or quadratic) effects were found, a linear time x group interaction was found to be marginally significant. Figure 5.4 displays the nature of the time x group interactions. The team building group significantly increased in ECSE from time 1 to time 3 in comparison to the other groups who decreased ($B = 1.48$, $SE = 0.84$, $p < 0.08$). Although the CET with team building intervention showed improvements to ECSE at 3-month follow-up (i.e., time 4), the results suggest that the team building intervention was most effective in increasing ECSE from pre- (i.e., time 1) to post-intervention (i.e., time 3) in comparison to

the CET with team buiding and control groups. For getting support from family and friends (SCSE), no significant time (linear or quadratic) or time x group interactions were found.
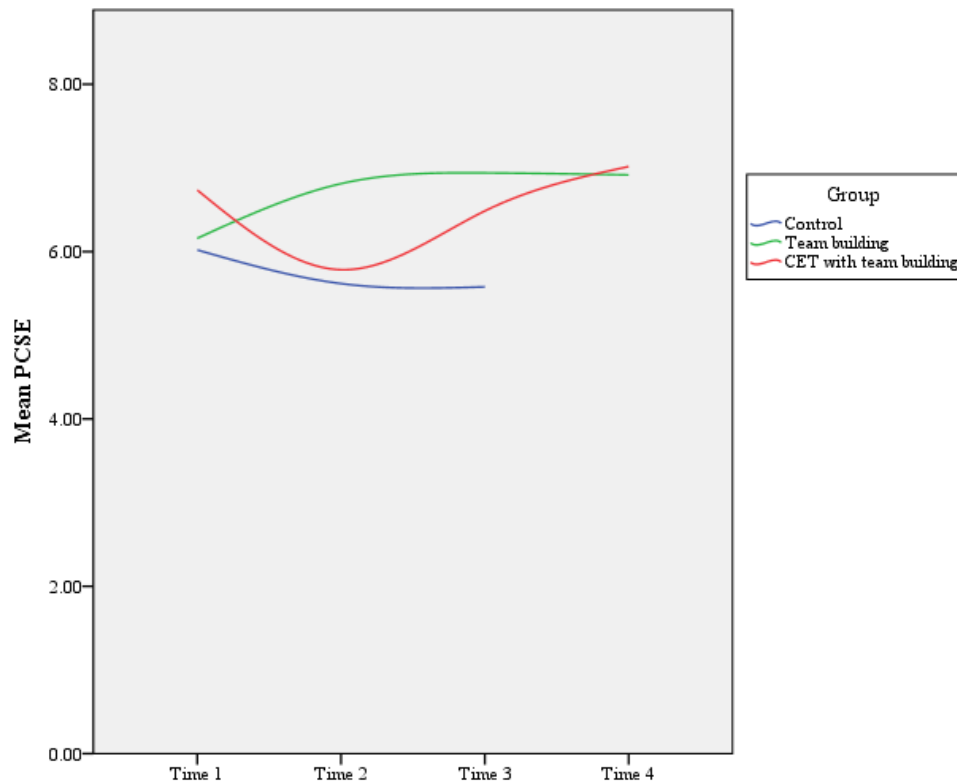

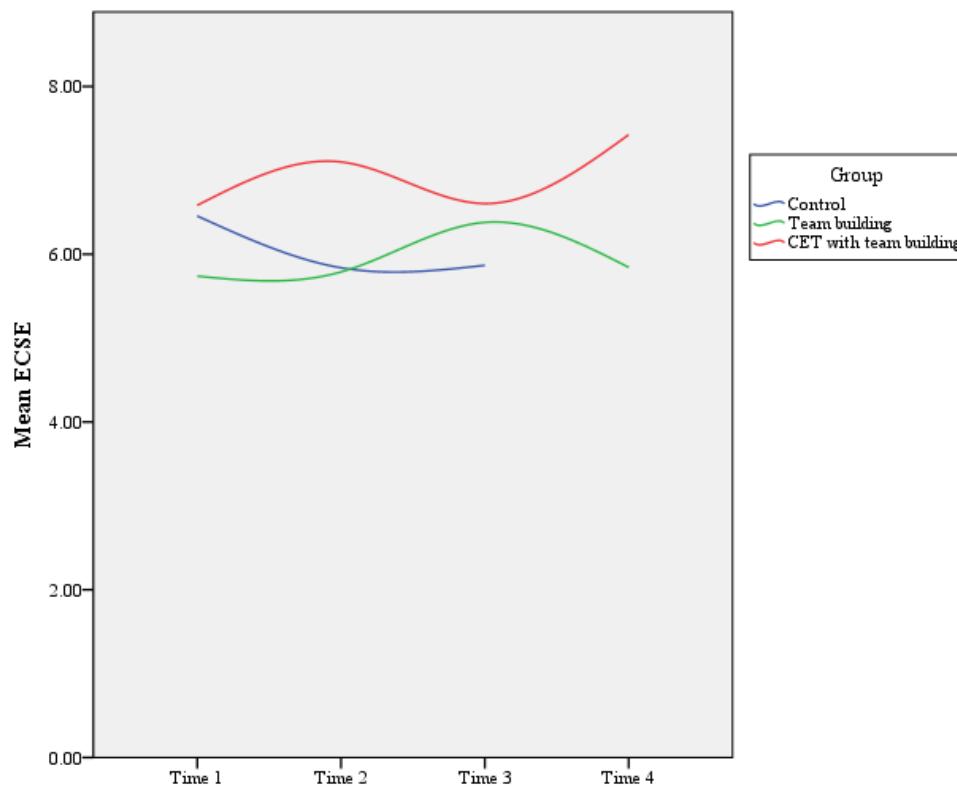*Figure 5.3*. Time x group interactions for problem focused coping self-efficacy (PCSE).

Figure 5.4. Time x group interactions for stopping unpleasant emotions and thoughts (ECSE).

Group Cohesion

For group integration to social activities (GI-S), there was a significant linear decline on average from time 1 to time 4 for all groups ($B = -1.84$, $SE = 0.42$, $p < 0.001$). Significant time x group interactions were also found. Figure 5.5 shows the form of the time x group relationships. It was found that the team building group had significantly increased their perceptions of GI-S from time 1 to time 3 in comparison to the other groups who had declined on average ($B = 2.27$, $SE = 0.49$, $p < 0.001$). In addition, the CET with team building group showed an increase in perceptions of GI-S from time 1 to times 3 and 4 ($B = 2.00$, $SE = 0.53$, $p < 0.001$). These results suggest that both interventions were effective in improving GI-S over time in comparison to the control group. On average all groups increased in GI-S from time 3 to time 4 ($B = 0.62$, $SE = 0.20$, $p < 0.01$). This increase in GI-S was beginning to decelerate for the team building group from time 3 to time 4 in comparison to the other groups who were beginning to increase on average ($B = -0.75$, $SE = 0.22$, $p < 0.001$). Additionally, although the CET with team building group were increasing in perceptions of GI-S from time 2 to time 4, the team building and control group on average showed a slower improvement from time 2 to time 4 ($B = -0.60$, $SE = 0.23$, $p < 0.001$).
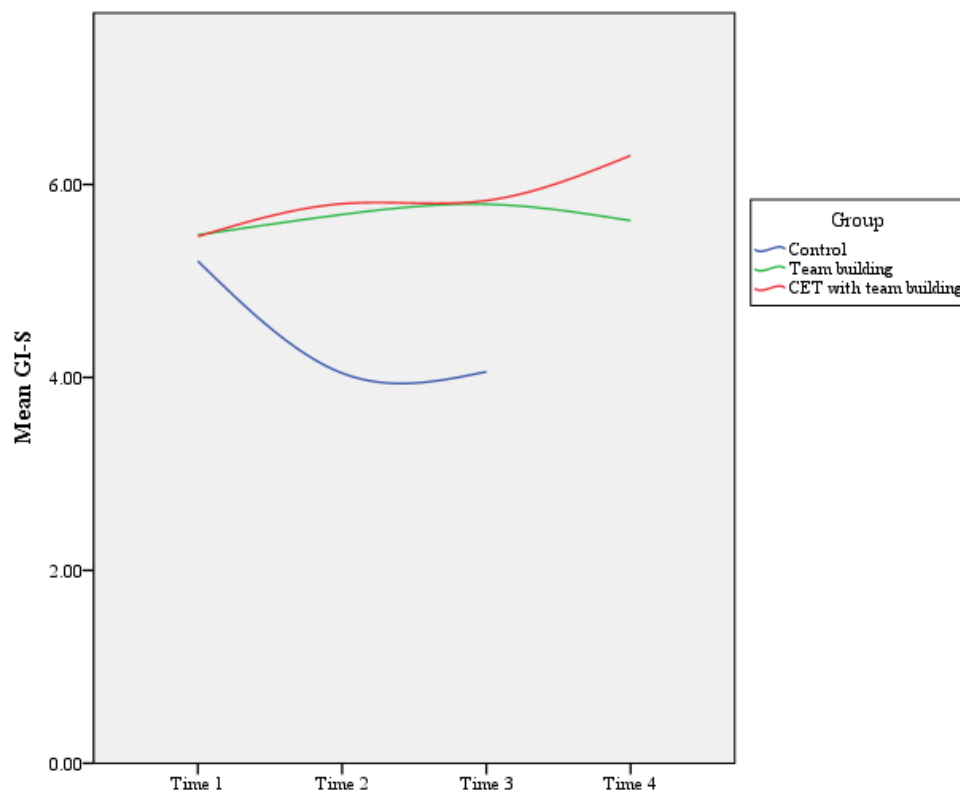
Figure 5.5. Time x group interactions for group integration to social activities (GI-S).

For group integration to tasks (GI-T), no time effects were found to be significant.

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However, Figure 5.6 shows a marginally significant linear time x group interaction. Specifically, the team building intervention was more effective in improving GI-T from time 1 to time 3, in comparison to the other groups who were largely unchanged on average ($B = 0.73$, $SE = 0.41$, $p < 0.08$).

For individual attraction to group social activities (ATG-S), there was a significant linear decline for all groups on average from time 1 to time 3 ($B = -1.16$, $SE = 0.33$, $p < 0.001$). However, there were significant linear time x group interactions. Figure 5.7 displays the nature of time x group relationships. The team building group increased in ATG-S from time 1 to time 4 ($B = 1.12$, $SE = 0.38$, $p < 0.01$). In addition, the CET with team building group increased in ATG-S from time 1 to time 3 ($B = 1.68$, $SE = 0.41$, $p < 0.001$). These results suggest that both intervention groups were effective in increasing ATG-S over time in comparison to the control group. A significant quadratic time effect also showed a slow improvement on average for all groups from time 3 to time 4 ($B = 0.37$, $SE = 0.16$, $p < 0.05$).

However, when comparing the groups across time, the quadratic effect showed that the team building group ($B = -0.34$, $SE = 0.17$, $p < 0.06$) and the CET with team building group ($B = -0.57$, $SE = 0.18$, $p < 0.01$) had an accelerated decrease in perceived ATG-S from time 3 to time 4, in comparison to the control group who demonstrated a delayed increase from time 2 to time 3. For individual attraction to group tasks (ATG-T), no significant time (linear or quadratic) or time x group interactions were found.

Subjective Performance

For player evaluations of individual performance, there was a significant linear decline on average over time ($B = -0.90$, $SE = 0.37$, $p < 0.05$), whereby player evaluations were seen to reduce from time 1 to time 2 before slowing increasing towards the end of the season at time 3. Figure 5.8 illustrates the nature of time x group relationships. A significant time x group interaction showed that the team building group displayed a strong increase from time 1 to time 3 ($B = 1.60$, $SE = 0.42$, $p < 0.001$) in comparison to the other groups who declined from time 1 to time 2 before slowly improving. The quadratic time effect was also significant whereby all groups showed an accelerated increase in subjective evaluations of individual performance from time 2 to time 4 ($B = 0.50$, $SE = 0.18$, $p < 0.01$). This accelerated increase from time 2 to time 4 was sharper for the CET with team building and control groups than the team building group who showed a more linear improvement ($B = -0.64$, $SE = 0.19$, $p < 0.001$). These results suggest that the team building intervention was the most effective in improving player evaluations of individual performance , in comparison to
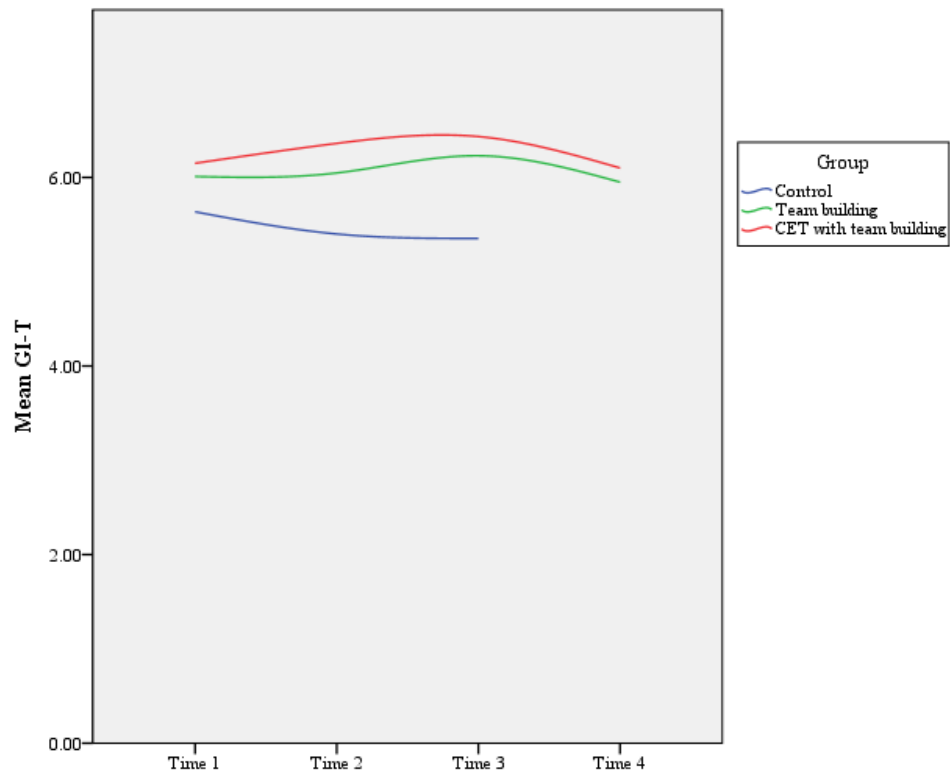
Figure 5.6. Time x group interactions for group integration to tasks (GI-T).
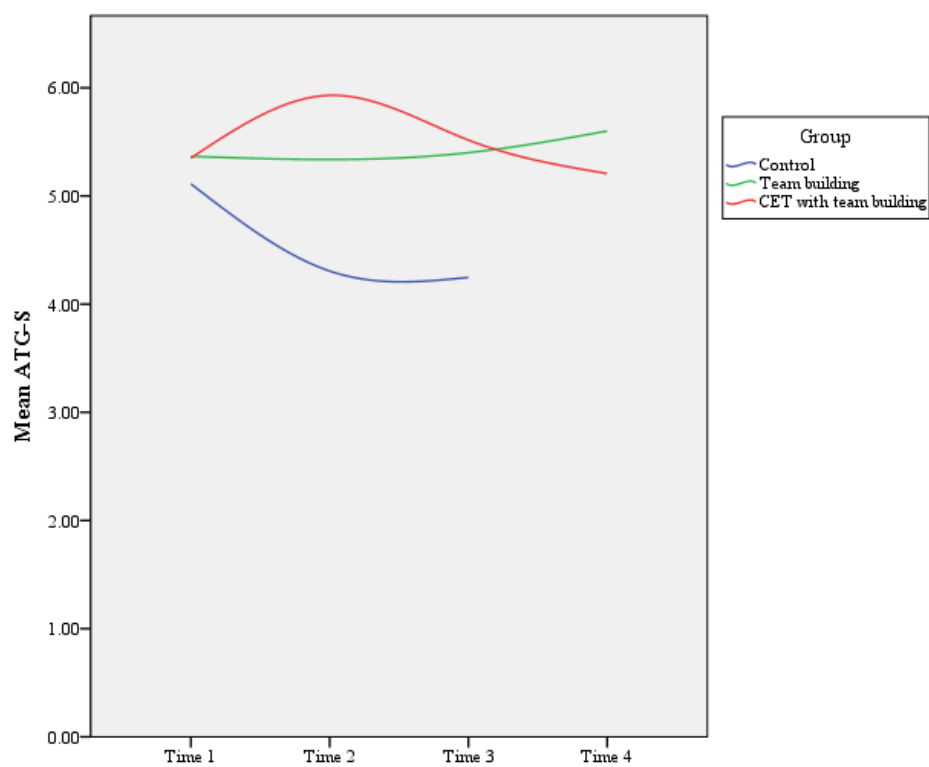

Figure 5.7. Time x group interactions for individual attraction to group social activities (ATG-S).

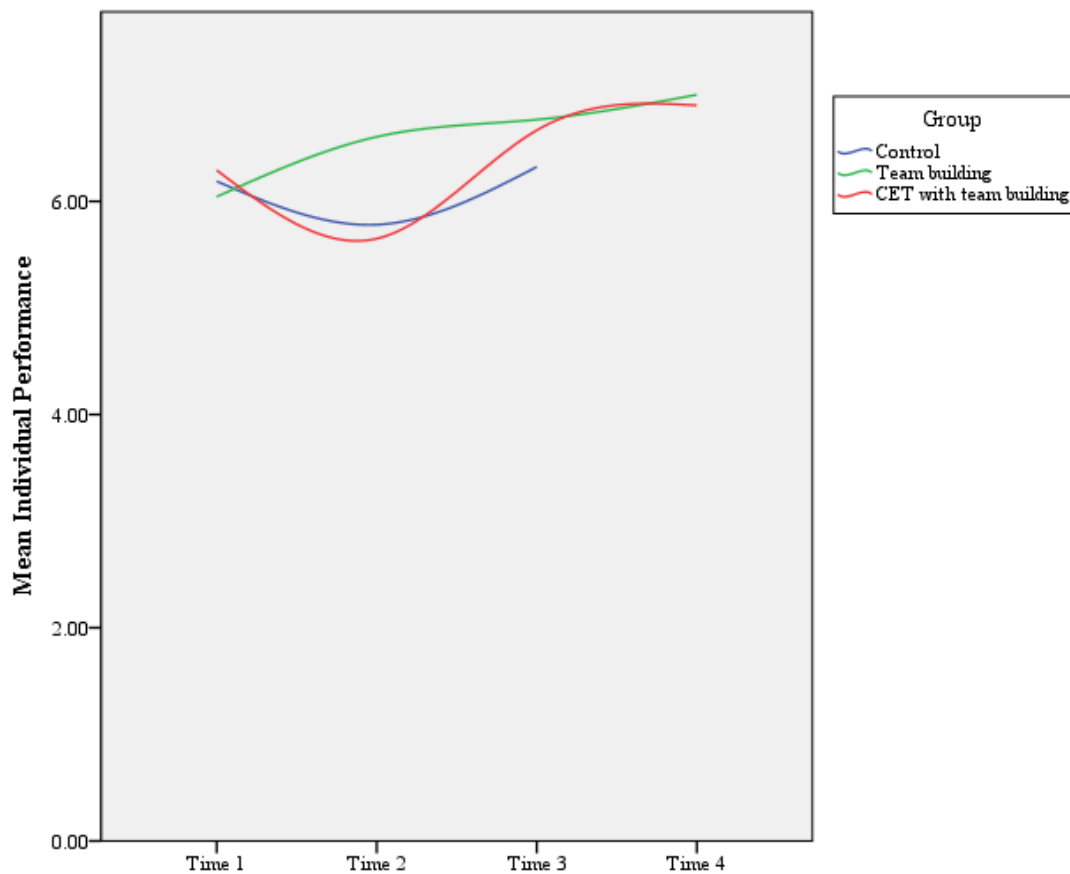the CET with team building intervention and control group.

Figure 5.8. Time x group interactions for subjective evaluations of individual performance.

For player evaluations of team performance, there was a significant decline on average for all groups over time, which could be seen from time 2 to time 3 and 4 (B = -1.40, SE = 0.38, $p < 0.001$). Figure 5.9 illustrates the patterns of time x group relationships. A significant linear time x group interaction was found, whereby the team building group had increased from time 1 to time 4 (B = 2.69, SE = 0.44, $p < 0.001$). However, this increase from time 1 to time 4 was found to be greater for the CET with team building group (B = 2.81, SE = 0.48, $p < 0.001$). Therefore, although both interventions were effective in improving player evaluations of team performance in comparison to the control group, the CET with team building group was more effective than the team building intervention. The quadratic time effect also showed a significant delayed increase from time 3 to time 4 for all groups on average (B = 0.47, SE = 0.18, $p < 0.01$). However, when observing the trajectory time curve for different groups, it was found that the team building group (B = -0.81, SE = 0.20, $p < 0.001$) and the CET with team building group (B = -0.82, SE = 0.21, $p < 0.001$) showed a deceleration in player evaluations of team performance from time 2 to time 4 in comparison

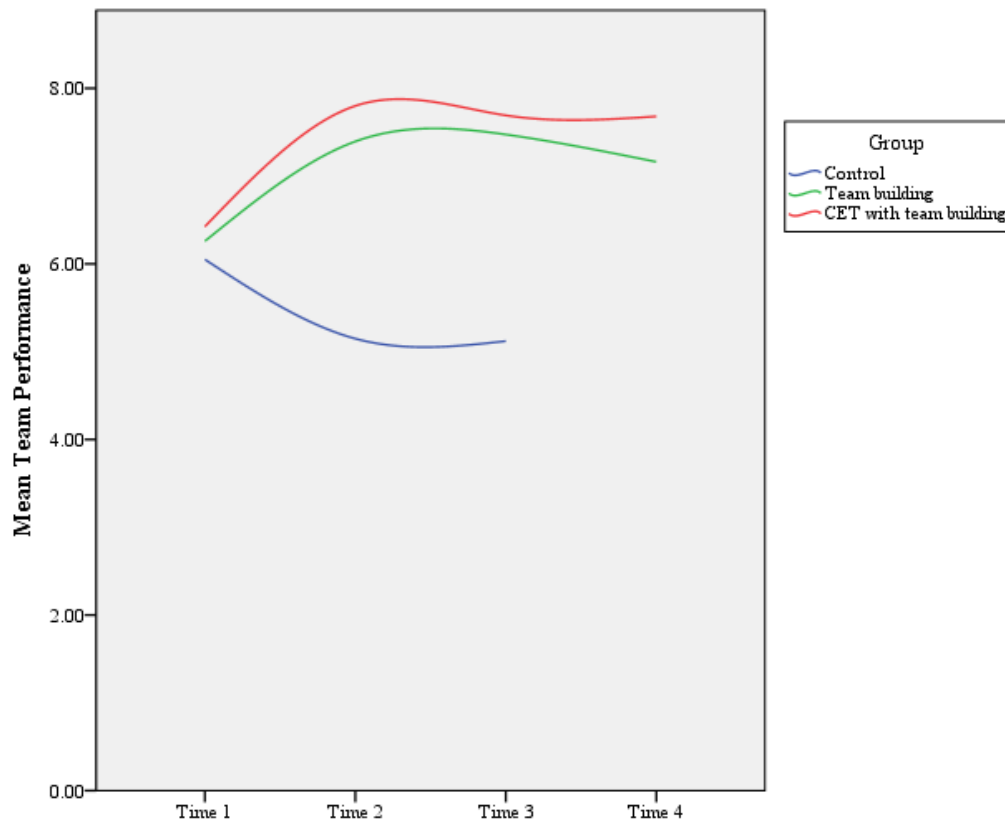to the control group who were largely unchanged.

Figure 5.9. Time x group interactions for subjective evaluations of team performance.

Process Evaluation Survey

Table 5.4 presents the process evaluation ratings for the organizational-level (team building) and the individual- / organizational-level (CET with team building) intervention groups at midpoint and post-intervention. For macro process evaluations, ANOVA found a significant main effect for group, $F(1, 27) = 13.62$, $p < 0.001$, $\eta_p^2 = 0.34$, $d = 0.72$, such that the coping group had higher macro process evaluations than the team building group. For example, at midpoint and post-intervention, the CET with team building group had higher scores for feeling they had contributed towards the type of psychology sessions they received, in contrast to the team building group. Also, the CET with team building group was generally more satisfied with the frequency and maintenance of psychology sessions than the team building group. While macro process evaluation ratings were seen to increase for both groups from midpoint to post-intervention, no significant main effect for time was found, $p > .05$.

Table 5.4

Process Evaluations of the Organizational-level Programmes at Midpoint and Post-Intervention

	Midpoint (*n* = 29)		Post-intervention (*n* = 39)	
	Team building (*n* = 19)	CET (*n* = 10)	Team building (*n* = 27)	CET (*n* = 12)
Macro processes				
I have had a say in the type of sessions I have received				
Strongly agree	0%	10%	3.7%	0%
Agree	21.1%	30%	22.2%	50%
Neutral	42.1%	20%	55.6%	25%
Disagree	26.3%	40%	14.8%	16.7%
Strongly disagree	10.5%	0%	3.7%	8.3%
I have been satisfied with how the sessions have been delivered				
Strongly agree	0%	10%	7.4%	25%
Agree	63.2%	60%	74.1%	66.7%
Neutral	26.3%	30%	18.5%	8.3%
Disagree	10.5%	0%	0%	0%
Strongly disagree	0%	0%	0%	0%
I have been satisfied with the frequency of sessions delivered				
Strongly agree	0%	10%	7.4%	16.7%
Agree	42.1%	90%	51.9%	66.7%
Neutral	42.1%	0%	25.9%	16.7%
Disagree	15.8%	0%	14.8%	0%
Strongly disagree	0%	0%	0%	0%
I have been satisfied with how well the sessions have been maintained				
Strongly agree	5.3%	10%	3.7%	16.7%
Agree	42.1%	90%	59.3%	66.7%
Neutral	52.6%	0%	37%	16.7%
Disagree	0%	0%	0%	0%
Strongly disagree	0%	0%	0%	0%
Micro processes				
I think that the sessions have had an impact				
Strongly agree	0%	10%	7.4%	8.3%
Agree	47.4%	50%	48.1%	66.7%
Neutral	47.4%	30%	40.7%	16.7%
Disagree	5.3%	10%	0%	8.3%
Strongly disagree	0%	0%	3.7%	0%
I think some changes could be made to improve the sessions				
Strongly agree	5.3%	10%	11.1%	8.3%
Agree	26.3%	0%	18.5%	0%
Neutral	42.1%	60%	33.3%	50%
Disagree	26.3%	30%	33.3%	41.7%
Strongly disagree	0%	0%	3.7%	0%
I think the sessions will lead to some lasting changes for myself and my teammates				
Strongly agree	0%	10%	3.7%	0%
Agree	36.8%	20%	40.7%	50%
Neutral	52.6%	70%	48.1%	41.7%
Disagree	10.5%	0%	3.7%	8.3%
Strongly disagree	0%	0%	3.7%	0%
I am motivated to participate in each session				

Strongly agree	15.8%	20%	7.4%	8.3%
Agree	31.6%	50%	37%	50%
Neutral	42.1%	30%	33.3%	41.7%
Disagree	10.5%	0%	18.5%	0%
Strongly disagree	0%	0%	3.7%	0%
I have tried to apply aspects of the session worksheets provided				
Strongly agree	0%	10%	3.7%	8.3%
Agree	52.6%	50%	55.6%	50%
Neutral	42.1%	40%	18.5%	33.3%
Disagree	5.3%	0%	14.8%	8.3%
Strongly disagree	0%	0%	7.4%	0%
Contextual processes				
I think academy factors have affected how and when the sessions are implemented				
Strongly agree	5.3%	20%	11.1%	16.7%
Agree	36.8%	50%	63%	58.3%
Neutral	52.6%	30%	14.8%	25%
Disagree	5.3%	0%	7.4%	0%
Strongly disagree	0%	0%	3.7%	0%
I think academy factors have reduced how effective the sessions could be				
Strongly agree	5.3%	0%	3.7%	0%
Agree	15.8%	20%	40.7%	25%
Neutral	47.4%	40%	48.1%	41.7%
Disagree	31.6%	40%	3.7%	25%
Strongly disagree	0%	0%	3.7%	8.3%

For micro process evaluations, ANOVA found no significant main or interaction effects, although a reduction in micro processes was observed for the team building group in comparison to an increase for the coping group from midpoint to post-intervention. When comparing the experimental groups' ratings for some of the micro process questions, the CET with team building group were found to have higher ratings for believing that the psychology sessions have had an impact and for feeling motivated to participate in each session. In contrast, the team building group had higher ratings for believing that some changes could be made to improve the psychology sessions. For both groups, higher ratings for motivation to participate in each session decreased from midpoint to post-intervention. In addition, up to 60% of participants in total had acknowledged that they had tried to apply aspects of the homework worksheets that were provided after each session.

For contextual process evaluations, ANOVA revealed a significant main effect for time, $F(1, 27) = 6.68$, $p < 0.05$, $\eta_p^2 = 0.20$, $d = 0.41$, whereby both experimental conditions had increased their evaluations of contextual processes from mid-point to post-intervention. In addition, although no interaction effects were found between groups, a steeper increase in contextual process evaluations was observed for the team building group in comparison to the coping group. In particular, 63% of the team building group at post-intervention agreed that organizational factors had affected the timing of how and when psychology sessions were

implemented, in comparison to 37% that agreed at midpoint. Similarly, 41% of the team building group at post-intervention agreed that organizational factors had reduced how effective the sessions could have been, in comparison to 16% that agreed at midpoint.

5.5 Discussion

The present study, to the author's knowledge, is the first to evaluate the effect of an organizational-level intervention conducted in a professional sport organization. This study extends our understanding of the impact of organizational- (i.e., team building) and individual-organizational-level (i.e., CET with team building) programmes on (a) changing organizational characteristics to improve sport professionals' team cohesion and performance, (b) strengthening coping self-efficacy to manage the effects of organizational demands on well-being, and, (c) promoting sport professionals' well-being to potentially counter any negative effects of organizational demands.

The results indicated partial support for hypothesis 1a, whereby both intervention groups were effective in improving levels of positive affect over time in comparison to the control group, but not for negative affect. These findings are consistent with stress management frameworks that are based on transactional stress theory (Lazarus & Folkman, 1984), which suggest that successfully optimising organizational characteristics and providing individuals with resources to cope with their environment may result in positive psychological outcomes (Briner & Reynolds, 1999; Giga et al., 2003a; Newman & Beehr, 1979). These findings may be due in part to the nature of team building activities (e.g., goal setting) that were delivered, whereby the formation and achievement of goals is likely to lead to greater positive well-being (Daniels, 2011; Lazarus, 1999). In addition, by increasing sport performers' ability to match the controllability of demands to effective coping behaviours, this may result in greater positive affective responses (Chesney et al., 1996; Karasek & Theorell, 1990).

Contrary to our prediction, there were no significant changes in negative affect over time, or between intervention groups. One possible explanation for this could come from a positive psychology perspective (Meyers, van Woerkom, & Bakker, 2012). Organizational-level interventions, which are largely preventative in nature, are concerned with improving environmental conditions that have not necessarily caused strain for members in the past, but are implemented to maximise resources and improve health and well-being (Nielsen et al., 2010). The findings for negative affect also support previous meta-analysis findings for team building conducted with sport teams, which has found non-significant associations with reducing negative affective states (Martin, Carron, & Burke, 2009). Another explanation can

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be observed from inspection of the means and standard deviations at different time points for all groups (see Table 5.1). It is more likely that the reporting and expression of negative affect would be atypical of an organization's emotional display rules. In comparison, the expression of positive affect may be evaluated as being associated with greater attainment of goals, team socialization, and long-term recruitment (Diefendorff et al., 2011; study two).

Our findings also provided support for Hypothesis 1b in relation to positive affect. Although both intervention groups were seen to improve from time 1 to time 4, the relationship originally expected was detected in the opposite direction, such that sport professionals participating in the team building programme displayed greater increases in positive affect over time. Furthermore, the CET with team building intervention showed a slower rate of improvement than the team building group alone. One explanation could be that where interventions are time and resource intensive (i.e., CET with team building), it may compromise the ability of individuals to learn additional components effectively (Bowling et al., 2012; Richardson & Rothstein, 2008). Subsequently, the implementation of an organizational-level intervention may work to the detriment of more complex individual components such as CET. Although limited multilevel interventions have been conducted to date, a review by van der Klink et al. (2001) did find that although multimodal interventions have generally been found to be effective for a range of individual and organizational outcomes, this finding has not been found to be significant in relation to improving employees' psychological responses and resources.

Similarly, results indicated partial support for Hypotheses 2a and 2b, by illustrating that the team building intervention was effective for improving problem solving coping self-efficacy and stopping unpleasant emotions and thoughts. In contrast, the CET with team building group began to improve towards the end of the intervention and at 3-month follow-up, although these effects were not statistically significant. Therefore, a relationship for Hypothesis 2b was detected in the opposite direction than that expected. The findings suggest that team building in isolation may be more effective than combining CET with team building for improving self-efficacy to use problem solving and stop unpleasant emotions and thoughts. Previous research on team building suggests that participatory approaches which address current strengths, weaknesses and opportunities to improve collectively are likely to improve problem solving abilities and increase individuals' perceptions of control over organizational demands (Buller & Bell, 1986; Mikkelsen & Gundersen, 2003). In addition, participation in team goal setting sessions may provide individuals with a greater opportunity to *receive* emotional support from team members (DeJoy et al., 2010), which in turn may

provide a greater resource for stopping emotions and unpleasant thoughts. This is in comparison to CET workshops which focused on the ability to *seek* emotional support.

The findings also suggested that selection (i.e., the number of game appearances during the season) is an important predictor of coping self-efficacy in a competitive sport context, in so far that individuals who were selected the most often had greater coping self-efficacy on average for using problem solving and stopping unpleasant emotions and thoughts. In this context, it is likely that performers learn how to confidently use coping behaviours during regular exposure to a performance environment. Players participating in more competitive games are more frequently exposing themselves to / and making repetitive evaluations of stressors that accompany their occupational roles (Meichenbaum, 2007). Therefore, these individuals are provided with a greater opportunity to apply coping behaviours in a competitive environment and develop greater perceptions of control. This would suggest that selection is adaptive for improving coping behaviours through an indirect stress inoculation process. This is an important findings in so far that indirect stress inoculation in professional sport environments may be important for developing generic coping behaviours to manage other stressors in a performer's life (e.g., organizational, personal; study one).

For enhancing team cohesion, our results partially supported hypothesis 3, such that both team building and CET with team building interventions were effective in increasing levels of *social* cohesion (i.e., GI-S and ATG-S) from time 1 to time 3, while *task* cohesion measures (i.e., GI-T and ATG-T) for the most part did not improve for either intervention group. This supports previous research which has identified that team building in sport teams is generally associated with greater social cohesion but not associated with task cohesion (Martin et al., 2009). There are a number of possible explanations for how social cohesion could be development by either team building or CET with team building. Team building which encourages information sharing between individuals in the 'forming stage' of team development is likely to improve social interactions as part of a team (Tuckman, 1965). In addition, the effects of CET with team building on social cohesion can be explained as follows. According to Rimé (2009), talking to others to share emotions could help to build trust and empathy and enhance social cohesion through the celebrating and reorganizing of team goals. Moreover, individuals who are encouraged to engage in self-disclosure of emotion tend to be more liked by their colleagues.

For subjective evaluations of individual and team performance, our findings provided support for hypothesis 4, such that both intervention groups showed increased evaluations of

individual and team performance from time 1 to time 3. However, only the team building intervention was effective for increasing both individual and team performance over time. In addition, although CET with team building was not statistically associated with higher ratings of individual performance over time, it was strongly associated with increased ratings of team performance from time 1 to time 3. Although team building has traditionally been found to be associated with greater levels of sport performance through increased team cohesion (Martin et al., 2009), there is limited evidence to support the effectiveness of coping interventions on improving team performance in organizations (Richardson & Rothstein, 2008). However, the findings do support previous CET interventions in sport settings that have also reported performance improvements (Reeves et al., 2011). This may indicate that the teaching of coping effectiveness training has the potential to improve evaluations of performance. Another possible explanation is that this relationship may be mediated by increased perceptions of social cohesion as a result of both interventions, which in turn is more strongly associated with performance evaluations in team settings. However, more comprehensive and objective measures of performance are required to provide stronger conclusions of these intervention relationships with performance.

The process evaluations of intervention effects indicated that the CET with team building group had significantly higher ratings for macro processes than the team building group. This is likely to be due to individuals in the CET with team building group receiving a greater number and frequency of workshop sessions (see Figure 5.1). In addition, because the nature of CET is personalised to encourage participants to match the appraisal of controllability of stressors with effective coping behaviours, it is possible that these participants may have felt that they had greater participation in the way in which session content was delivered. In addition, for the team building group, due to a winter break in the competitive season there was a long delay between the first and second workshop sessions. This may explain why participants in this group at midpoint (i.e., time 2) felt that sessions were not being well maintained. This supports previous organizational-level process evaluations which indicate that maintaining sufficient intensity and frequency of intervention sessions over many months is particularly challenging. This is particularly the case where other organizational priorities demand greater attention and resources (Cox et al., 2007), where organizational members are regularly competing for selection and where the schedule of organizational events (e.g., training) is often unpredictable (DeJoy et al., 2010).

An evaluation of micro processes indicated that the team building group showed a reduction in motivation to participate from midpoint (i.e., time 2) to post-intervention (i.e.,

time 3). This may have been due to ongoing changes and discrete events (Cox et al., 2007) that occurred within the organization after time point 2. Specifically, sport professionals in the team building group at this time were informed of the specific performers who will have their professional contrasts withdrawn and be released at the end of the competitive season (i.e., time 3). The CET with team building group showed an increase in perceived micro processes from midpoint to post-intervention. Specifically, these participants largely believed that the programme sessions had had an impact and believed that the programmes will lead to some lasting changes. One possible explanation for this was that at midpoint, from providing participant evaluations and feedback to supervisory staff, some changes were made to the interventions from midpoint to post-intervention. Therefore, participants' awareness that changes had been made to benefit the intervention effects may have improved members' appraisals of impact (Randall, Griffiths, & Cox, 2005). In addition, the correlation data between average ratings for process evaluations and dependent variable scores at post-intervention revealed that micro process evaluations for both intervention groups were correlated with negative affect (inversely), all coping self-efficacy variables, and subjective evaluations of individual performance. This may suggest that when organizational members perceive the impact of interventions to be positive and of benefit to them, they may be more likely to engage in intervention-related activities (Nielsen et al., 2010b) and subsequently display lower negative affective states, higher beliefs about their coping capabilities and greater subjective evaluations of their performances.

An inspection of contextual process evaluations revealed that both intervention groups increased their perceptions of the degree to which organizational factors may have compromised how and when intervention programmes were delivered and the degree to which these factors may have compromised the impact of the interventions. Most of the intervention workshop sessions were arranged by management to be delivered late in the evening after sport performers had completed physical training. Therefore, it is likely that concentration and motivation to engage in sessions may have been compromised for many participants.

Strengths, Limitations and Future Research Directions

One potential limitation of our research design is that by using a non-equivalent control group that did not receive an intervention, and by evaluating the effects of two interventions that were delivered in a single organization, a Hawthorne effect could easily have occurred (Bond et al., 2008). However, in attempting to initiate behaviour change through combining individual-level programmes with organizational-level programmes, this

should be considered a strength of the study. Indeed, previous research has suggested that individuals with greater coping abilities at an individual-level tend to obtain the greatest benefit from organizational-level interventions (Bond & Bunce, 2003; Bond et al., 2008; Nielsen et al., 2009). Although the small sample size across time provides an insufficient level of power to detect an existing effect, it was possible to assess whether intervention effects were being diluted or obscured by the number of competitive games that sport performers were selected for, which would have also undermined the possible presence of a Hawthorne effect (Cook & Campbell, 1979). In addition, the identified relationship between process evaluations and post-intervention data assisted in interpreting some of the reasons for changes in outcome variables. However, it was not possible to control for process evaluations in so far that the control group did not complete this data. This was because the control group operated in a different sport organization and were unaware that they were participating in an intervention. Future research should consider using designs (e.g., RCT with crossover) that enable process evaluations to be controlled for, as it may be possible that these processes can explain some of the variance in outcomes between intervention groups across time.

Another potential limitation could have been the timing of the measurements that were taken. For example, individuals participating in the CET with team building group displayed higher levels of coping-self efficacy at baseline and 3-month follow-up, which are likely to be periods during the season when individuals experience the least amount of stress. Furthermore, at midpoint some sport professionals were informed that they would be released at the end of the season, which might explain the decline in some of the outcomes variables at post-intervention (i.e., the end of the season) and 3-month follow-up (i.e., pre-season). Future research should employ longitudinal designs prior to interventions to identify the periods during a competitive season when individuals experience the most organizational strain. Moreover, longitudinal interventions which staggered follow-up assessments may enable the identification of when improvements begin to subside and when booster workshops may be needed (Bowling et al., 2012). This is important because individuals may adapt to the effects of an intervention, which would support the notion that the effects of organizational interventions on well-being often dissipate with time (Griffiths, 1991).

A major criticism of organizational-level research suggests that future research needs to measure a combination of objective individual (e.g., performance) and organizational outcomes (e.g., retention, productivity). Sport organizations are suitable for providing longitudinal objective data from historical archives of competitive games and for identifying

the number of selection 'caps' that early career professionals may attain for senior and international teams in the future. However, due to the nature of the intervention groups in the present study, which were considered as cohort groups with cyclical turnover (Cook & Campbell, 1979)[22], this meant that the analysis of intervention effects for retaining sport professionals in the organization was not reliable. Future organizational research in sport institutions should also attempt to intervene and measure other members of the sport organization who operate in different roles (e.g., coaches, managers, physiotherapists, conditioning staff, administrative staff, talent identification officers) and whose stress experience in this performance environment may differ to professional sport performers.

Applied Implications

The results of this study have important implications for applied researchers as well as the decision makers (e.g., managers, head coaches) who operate within sport organizations. Firstly, contrary to reviews that suggest that organizational-level interventions are generally not effective for a range of outcomes (Richardson & Rothstein, 2008; van der Klink, 2001), the present study suggests that for smaller and specialised organizational contexts, such as professional sport institutions, changing organizational characteristics (e.g., improving communication channels, goal setting) may be associated with greater positive affect, coping self-efficacy, social cohesion and participant evaluations of performance over time. These effects may occur for organizations where team socialisation (Franz, 2012) is a habitual occurrence and process.

For applied researchers and organizations who may be tempted to tackle organizational stress 'comprehensively' (e.g., Giga et al., 2003a), our findings would suggest that multilevel interventions being delivered concurrently may not add many, if any, incremental positive effects. Rather, the effects of one intervention could be diluted by the effects of another (Bowling et al., 2012; Briner & Reynolds, 1999). Further to this point, in the case whereby sport performers' coping self-efficacy fluctuates over the course of a season, it may be more prudent to implement CET interventions during 'pockets' of the most stressful periods of a competitive season, rather than throughout an entire competitive season. This would support research that suggests that shorter programmes which are easier to implement are more effective than programmes of longer duration (Richardson & Rothstein, 2008). Therefore, it may be the case that multilevel interventions could be effective in

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[22] To provide some additional explanation, professional academy rugby players are usually contracted for 2-3 years, therefore players in the first year or second year of their contracts are highly unlikely to be released from the sport organization.

organizations where tailored participatory interventions are delivered sequentially and in response to the evaluations of one another. This may support the integration and maintenance of organizational stress management interventions in organizational structures and policies. Where organizational interventions are supported by decision makers (e.g., managers, head coaches) to be integrated in to organizational policy, it may then be possible to adopt randomised control crossover designs for cohorts and teams, so that it is possible to evaluate intervention effects in comparison to 'active' control groups.

Although process evaluations can sometimes contradict the findings of intervention effects, our findings along with the non-participation of supervisory staff would suggest that micro factors such as ongoing organizational changes and contextual factors such as the perceived level of managerial / supervisory support and involvement may in part determine the effectiveness of organizational stress management interventions. This would support previous research that has identified the level of managerial support or involvement as a key factor in determining the effectiveness of organizational-level interventions in European organizations (Kompier, Cooper, & Geurts, 2000; Nielsen et al., 2010c). This highlights the value of gaining the full trust of management and educating them of the important role they play in the evaluation of effective outcomes. Although the following could be an elusive aim within competitive performance environments, applied researchers should acknowledge participants' concerns regarding the processes that may compromise intervention effects and find a constructive way to feedback these concerns to relevant management. If the full trust of management has been gained, then this may enable using process evaluation information to inform and improve subsequent interventions (Flaxman & Bond, 2010).

Conclusion

To the author's knowledge, the present study is the first to test the conditions through which organizational stress management intervention models are applicable in professional sport performance contexts. In addition, evaluating the effects of multilevel programmes, which has been widely recommended as a future research necessity (Biron & Karanika-Murray, 2014; Bowling et al., 2012; Giga et al., 2003b; Kohler & Munz, 2006; LaMontagne et al., 2007) has largely been neglected in organizational research. Our findings make a contribution to both sport and organizational psychology literatures by demonstrating that organizational-level interventions may be effective in optimising psychological outcomes and performance evaluations for sport teams who operate in professional sport organizations. Furthermore, organizational-level initiatives such as team building interventions in this organizational context generally appear to be more effective than the combined effect of

individual- and organizational-level initiatives. Although the findings may produce more questions than answers for understanding the processes behind successful organizational stress management, these findings at least hold some promise for enhancing the future well-being and functioning of those performers and teams that operate within professional sport organizations.

6

A Reflective Diary

"To every complex problem there is a simple solution – startling in its simplicity, piercing in its clarity – and hopelessly and completely wrong."

~ Gore Vidal

6

Reflections on the Impact of the Stress Management Interventions: Researcher and Participant Perspectives

6.1 Background

Chapter five found that the organizational-level intervention (i.e., team building) that was delivered in a professional rugby organization was largely effective for enhancing academy rugby players' positive affect, coping self-efficacy, social cohesion, and subjective evaluations of performance. In addition, delivering a combination of coping effectiveness training (CET) with team building sessions was found to be less effective for improving psychological outcomes and performance evaluations. The process evaluation surveys that were conducted at midpoint (i.e., time 2) and post-intervention (time 3) also provided evidence to suggest that macro, micro and contextual processes may help to explain some of conditions which facilitated or compromised the likelihood of positive intervention effects for the abovementioned outcome variables.

The following chapter provides a narrative diary account of the author's experiences of delivering the stress management interventions over the course of the competitive season. The diary accounts highlight a number of obstacles and events that were encountered along with the perspectives that were immediately formed by the author shortly after delivering each session. Following this diary account, a brief summary of qualitative process evaluations is offered from the intervention participants who made a series of comments during completion of the process evaluation surveys at midpoint and post-intervention.[23] These descriptive accounts serve the purpose of crystallising (Ellington, 2008) evaluations from a selection of different perspectives. Furthermore, these perspectives are presented to provide a more in-depth and richer understanding of the complex processes involved during the

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[23] A further process evaluation account is provided from a brief interview that was conducted with one of the participants at 3-month follow-up stage. This sport performer participated in the CET with team building intervention (see Appendix 8, pp. 324-337).

implementation of the season-long organizational stress management intervention. In addition, it is hoped that through presentation of these evocative accounts, this chapter may encourage the reader to empathise, resonate with the material presented (Tracy, 2010) and form their own opinions on the processes that may have aided or hindered the effectiveness of the organizational stress management interventions conducted.

The author's diary account begins in October of the competitive season (see Figure 5.1), when planning the content and scheduling of interventions sessions in participation with the organization's staff.

6.2 'Snapshot' Reflections of Developing and Delivering Stress Management Interventions in a Professional Rugby Union Academy

Reflections of Study Three Feedback Meeting: 13/10/11

I probably should have done this immediately after the meeting, as my memory recall would probably have been better than now. Having said that, I also think I'm in more of a less emotional state than I was when I went into and came out of the meeting. One thing was for sure, I won't forget that feeling of relief when I left the [organization] on Friday 13th. Gaining access to a professional academy can be hard – in the case of the [organization], it was quite straightforward. But maintaining access is bloody hard. You need regular contact (phone or in person) and communication. E-mails will suffice but they are restricted, I think, in terms of maintaining rapport, as well as getting a sense for what is going on in the [organization] when you send an e-mail. For example, over the summer months after collecting interview and focus group data (study three), I tried to arrange a time in August to feedback and get a baseline measure completed at the end of the month. I heard nothing back via e-mail for 2-3 weeks. I tried to calling the manager and assistant managers' phones but no-one was picking up. In these moments, I didn't know what the situation was. Had they given up on the idea? Were they just busy? Has there been a turnover of managerial jobs? Had the part-time sport psychology consultant interfered? I had no idea. I had to continue to analyze the data and collate the intervention recommendations, even though I had no idea if the [organization] were still interested in my involvement! August and September were challenging months for these reasons!

Prior to some of these communication issues, there was a communication breakdown antecedent. The manager had spoken (without my knowing) to his part-time sport psychology consultant. Having spoken to other members of staff during study three interviews, it was clear to me then that the consultant was a very irregular fixture in the academy. In other words, they were not readily available, and they were not regularly based at the

[organization]. In fact, there was even ambiguity about whether they were the '[organization] sport psychology consultant.', or whether [consultant] just consulted with a few players and the manager here and there. This was very ambiguous to me (and some of the other coaches). In addition, when I provided my study two report findings to the staff five months back, [consultant] was not there - nor did anyone suggest that [consultant] should be involved in the subsequent 'staff' interviews. Therefore, to me, it appears that [consultant] was external to the staff group and not directly involved with the functioning of the [organization].

On the 17th August, I received a text message (of all possible communication options) from [consultant], who I hadn't briefly spoken with for almost 4 months. '[manager] has said you are keen to add value to [organization]. Let's plan. 2nd Sept I'm in. Can u do? [typo intended].' Having received no response from the [organization] staff, I thought that this was a challenge but also a really positive sign that the [organization] are keen to maintain applied research links. However, given the consultant's complete lack of involvement in previous studies (studies two and three), I felt it was important to establish the research that had been conducted and our intention (i.e. coaches and myself) to deliver an intervention. Therefore I responded with the following:

'Hi [consultant]. I'm afraid I'm away from the 1st - 30th September (attending an international conference) so won't be able to meet up then. However, I'm happy to present some feedback to [manager] and co. in the next ten days or so and plan some group workshops to start in October. So would be great if you'd be able to attend. I'll cc you in my e-mails to [manager] and [assistant manager] so you're kept in the loop.'

The response I received was a very unpleasant phone call from the consultant who was not happy with the tone of my text message, because it sounded like I was going to deliver workshops without his say so. That actually was the case, because throughout the process of my involvement with the academy, [consultant] had not endeavoured to be involved despite initially declaring interest and value at my first staff meetings in October last year. Because my intervention was planned to be participative, I wanted the consultant to have an input into the design of the intervention, but [consultant] has not made himself / herself available other than this one date on the 2nd Sept.

> 'if you think you're going to do some work without consulting with me, then that's not gonna' fly buddy' [personal communication from the consultant during phone call].

Throughout our phone call, it was clear that [consultant] felt threatened and I did my best to diffuse the situation by apologizing for any misunderstanding from the text message communication, and that I wanted to work together and valued his input. I think the big issue

was that he / she felt it was their responsibility to say whether I could have any involvement in the [organization] – which he / she was happy with, but on his / her terms. I think my reassurance that I wanted his / her input and involvement in the new design of workshops was not comforting. Clearly, to me it was an issue of power. The consultant wanted me involved in the [organization], rather than me wanting the consultant involved. To me, this was a great example that the consultant wanted to make it clear that I am the outsider to the [organization] and this is how he /she would like it to stay. What was the real antecedent behind the phone call? In my opinion, job security. The consultant offers reactive 'fire-fighting' support at a price. I am trying to offer preventative approaches (for free, because it is part of my PhD research, not an opportunity for me to make money). I still plan to keep the consultant informed as much as possible, but I still fear there may be a problem down the line.

Going back to reflect on the 13th October feedback meeting, as usual I had some anxiety about what the staff might choose to do. Internally, I always create contingency plans for the potential unexpected or negative events that could occur: The staff could have asked me to present the interviews and focus group findings to all of the players and staff; They could have asked me to present to the senior management (staff) team and academy staff.

In addition, prior to the feedback session, the assistant manager had told me that I would only have 30 minutes to pitch my findings and recommendations. My initial thoughts based upon the issue with my experiences in August were that this may be my last session with the organization, after which they may not pursue my research intervention.

When I arrived at the [organization], the manager and assistant manager were still on the pitch coaching players. Some of the other staff (physiotherapist, strength and conditioning coach) were not around. I saw the education and welfare officer outside the main staff office, so I saw this as a timely opportunity to talk with him / her, build rapport with them and ease my anxiety about the meeting. I also had a hunch that he /she may be in the feedback session, so getting him / her 'on-side' may be important for creating 'allies' in the feedback session. I thought at the time that he / she could be an important person to value my intervention, as teaching players adaptive coping is an important life skill, which I thought he / she may support within the [organization].

I also started things off by asking the welfare officer what the atmosphere has been like recently at the [organization] – In light of the fact that during the [international cup championships], the senior team were missing twelve of the key fifteen first team players for several weeks and the senior side sat in **th place (out of **) in the [professional national

rugby league], a massive 19 points behind the leaders and 10 points off 4th (European Qualifying spot) after six games. One win and five losses. I thought by asking about the current atmosphere, I would get a feel for what has been going on, and why I had not received much correspondence from the coaches about my previous research (studies two and three).

The response was that things had generally been a bit depressing, but staff had tried to see the bright side because the senior side should be back to full strength as [nation] and a few other [national] were knocked out of the [international cup championships] at quarter-final stage. Knowing this, I felt a little reassured that the coaches have probably just been very busy over August, and obviously I was away for September. Staff began to arrive which made me think that I would be providing feedback to all of the staff. The consultant was nowhere to be seen.

After being offered coffee and cake… A big surprise to me was that I was being included as part of the [organization]'s regular weekly staff meeting. Furthermore, the manager asked me if it was ok for me to sit throughout their meeting and provide feedback at the end of their meeting. I was very surprised by this, and frankly, quite honoured to be involved in their meeting. I think this showed an incredible amount of trust because they were disclosing information about the players – injuries, strength and conditioning, college issues, parental concerns, plans for the next few games, decisions about what players may be released, who's developing well. It was a fantastic insight – one you'd want as a full-time sport psychology researcher / consultant. I would have liked to make frantic notes about which players were injured, what problems there were, etc, because my intervention could attempt to support some of these issues. As it happened, I made a few subtle notes throughout the meeting because, it was as much a learning process for me about the current day-to-day functioning of the [organization], but also, I wanted to show attentiveness and interest in their experiences. It also gave me ideas for how to 'tee-up' my feedback and recommendations in relation to what was being encountered within the [organization].

When I delivered my feedback, I tried to initially focus on the positives of what the [organization] do well. I'm not entirely sure how well this went down, but I thought it would get the feedback off to a good start. I also tried to emphasize that the [organization] already implement a lot of good programmes and initiatives. I used the example of the SWOT analysis that the assistant manager and strength and conditioning coach implemented a couple of times last season, and the players that took part found it very beneficial for understanding behaviours of coaches and what they are trying to achieve from working with the players.

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The coaches in the meeting responded well to this and I encouraged this to be done more often, possibly in post-match debriefs.

The manager demonstrated that he / she has a 'bee in his bonnet' about players that have come from better upbringings (e.g. private sector education) and there was a slight mention in the meeting about players who are sometimes less educated and tend to have better coping strategies (i.e., are more resilient). I used this information to strengthen my rationale for the need for 1st year and perhaps more 'educated' players to develop coping strategies. This seemed to be very well supported by the strength and conditioning coach, the welfare officer, manager and physiotherapist. Not so sure about the assistant manager and administration assistant.

At the end of the meeting, after the manager had offered his / her full backing, I chose to raise the issue of [consultant]. In this way, I mentioned my concerns for not wanting to step on [consultant]'s toes and whether he / she could have any issues with the proposed intervention. The manager said that he / she would talk to [consultant] and that 'it won't be a problem'. The staff will say that they want me to deliver the interventions and that it is part of their ACE programme (mentoring for students). I just need to keep [consultant] in the loop about what's going on.

Team Feedback Session 1 – October

Given the 6pm slot again - How am I going to be able to wake them up! Another 6pm start, as put forward by the manager. I knew I couldn't turn it down because they might not offer me another time. Given it's now the end of October, and I wanted to start my intervention at the beginning of October, I'm already 3 weeks behind. Much of this has been due to staff taking their time to respond to e-mails and phone calls. I'm certainly not, in my opinion, in a position to suggest different times and days particularly because I don't want to have to wait another week or two to start baseline data and intervention delivery.

I think Ray Randall's research suggests that *when* interventions are implemented could have a big effect on successful outcomes, but I guess this is another example of a threat to internal validity. It is virtually impossible to control for the time when the intervention is delivered. I will try to keep a tab on the threats to delivery as much as possible, because in this line of field research, it feels like there are so many threats.

About 2 hours ago, I was sat in [coffee shop] drinking a latte in [county], 5 minutes' walk from the [organization]. It was very dark; a typically miserable [nation] winter evening. Pouring with rain and cold. I sat sipping on my latte thinking; 'those players would have been outside training a couple of times in that weather today, at college during some of the day and

probably in the gym a couple of times in the day as well. Would I want to sit through completing a questionnaire for 15 minutes and then a workshop for a total of an hour?' I would (and actually did) feel knackered. I remember the assistant manager saying in the previous meeting that mood definitely drops in November. College demands and training workload increases, the game 'load' is generally higher and the weather is crap.

So even this could affect the effect of the interventions. Players may have a better positive affect score in April because the weather is better than November! Anyway, I made sure that I got there 20 minutes before again, because I still think that rapport building is a process and not something that happens overnight. I never get complacent of the relationships with staff and players, because they could change at any time, and maybe even for reasons that I cannot control.

When I arrived, only a few of the senior [organization] staff seemed to be present in the office. I came face to face with the senior manager again - Bob. I always feel a strange sense when he is around. A big part of me wants to kiss his arse when I see him. The other more common part of me tends to acknowledge him and then ignore him after. According to the [organization]'s academy staff, Bob doesn't value a lot of the academy work. I don't know if that's true, but I think in this climate where things can be pretty intimidating, I have learned that you have to 'fight fire with fire'. This might be very different to how you should approach other sport organizations and their staff. I can't imagine the senior manager of [elite sport amateur organization] being so intimidating and confrontational. I asked Bob if Dave [academy manager] or Ben [academy assistant manager] was about and he directed me into their office. I spoke to Ben for a while; I feel like he is an ally now, but again, I don't take it for granted. I started things off by asking how he was, and asking how the players are today. My first team building session may come at a perfect time.

The [organization] team lost to [rival organization] by 2 points the night before. Ben told me that [rival organization] are always a difficult team to play (physically) against but I think [organization] were still expected to win. I did think that the loss could be a good subject to bring up in the first team building session, but, as soon as I entered the meeting room, and Ben told a few players (diplomatically first, then a bollocking) that they could have done better in the game, I thought the players could still be sensitive the day after a loss. One player in particular after Ben's constructive feedback sulked which led to Ben's giving the player a bollocking. This was shortly followed up 5 minutes later by Dave coming in and giving the same player a louder, firmer, bollocking in front of all the squad. I knew then that talking about it while emotions are still high is a bad idea. Perhaps this further emphasizes the

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importance of team debriefs maybe a couple of days after a game (a loss in particular), which was one of the participatory stress management recommendations from the stress audit conducted (study three) in the summer. Dave was great with me beforehand. He shook my hand, said hello and then said that he wasn't staying. He then looked me up and down and said 'I suppose we should get you some kit now you're [a part of the organization] … What size are you?'. I was really pleased with this response. A sign of approval and a great way of making me feel a part of the group. I must admit, I'm now left pondering whether it is still important to appear external and not assume that I'm incorporated into the [organization] environment, or whether to fully let down 'the guard' and try and fully integrate myself. I still think it's important to sit somewhere in the middle.

The completion of intervention questionnaires took a little longer than I anticipated. About 15 minutes in total. One player is [not fluent in English] and completely struggled, not understanding the words – I haven't checked the questionnaires yet, I've not had time, but I wouldn't be surprised if this player did not complete it. And if he did, how valid is it going to be? Eventually we started with 'Chinese whispers' [communication game], which gave the players the first opportunity to muck around and have fun, but, they completed the task, and were happy with their haribo sweets for the winning team.

By this time it was about 6.30pm, so I only had half an hour left, so I started the team SWOT. I put the players in 7 groups of 5 (approximately) to come up with opportunities / threats to improve. They all had pre-written flipchart paper and pens to use. I went round each group talking to them, getting them to be specific about each point. I then got them to feedback to the squad. The group itself had a habit of talking over one another and sometimes over me. I asked Ben for feedback at the end and he advised to give them the hard line to earn their respect. I also explained to him that I didn't want to come in and swear at them (a commonly accepted emotional display role by staff) as an external person, but it seems I have the 'go-ahead' to do so. Most of the groups did a pretty good job of completing the flipchart paper. I've taken the completed flipchart paper back to the research lab and plan to combine the information on to an A0 poster for the next session. After this time, I got the players to come up with individual SWOT analyses as homework to bring back the following session in one month's time. It's still very early stages of course with the intervention, but I think I may need to be more assertive and not take any shit. Dave says 'hammer them if they speak over you', but I'm not confident that that would be the best approach.

Meeting with the Sport Psychology Consultant - November

[consultant] text messaged me the day before I was going to be delivering the first

CET session and asked to meet up. I had already been given a heads up from the manager a couple of days before that [consultant] was going to be at the [organization] on Thursday, so I was already trying to prepare myself for the manager and consultant to observe my session, which made me a little nervous given the previous issue I've had with [consultant]. The manager had again given me a late time on the Thursday to deliver a session: 6.45pm. I was becoming increasingly aware of the effect that 'timing of delivery' for a session may have on the success and engagement within the sessions. Having spoken to the manager after the CET session about whether there are different times available, the manager said that this is the only time that they can fit in psychology sessions, because players have college and training all day generally. Therefore, it appeared that there's not a lot I can do to change or control this issue. At least the timing could be relatively consistent!

In terms of the meeting with [consultant], we opted for half five; an hour before my CET session, which meant I couldn't prepare prior to the session. There were a couple of things with the session that I would liked to have pre-planned for. For example, preparing for being more assertive with the players, what was I going to say in response to if and when they muck about or speak over one another. Not to mention the issue of swearing. I made some time for preparing mentally, 5 minutes before starting the session (in the toilet of all places, because it was the only quiet place where I could be alone and activate my full focus, I did some positive self-talk and role playing to imagine how best to respond to awkward players). The manager had told me to 'be assertive' following the assistant manager's feedback the previous fortnight, which was a bit embarrassing but if anything it gave me a full lease to come down hard on the players if and when I need to. This was one thing I spoke with the consultant about who was surprisingly very supportive.

Our meeting started off with a nice conversation about life in general. What I had been up to, what he had been up to. It was a brilliant way to break the ice given the previous disagreement we had had over the phone in August, and [consultant]'s lack of proactiveness to meet up in October. [consultant] spoke about rugby in general and how it's a real 'warrior sport', which requires players who have that 'warrior blood' in their system when they're born. He was making the point that if they haven't the coping skills now they might never have them. I had sensed this was the manager's view when I interviewed him back in July, and I think it's important to educate them of the importance of 'nurturing' as well as nature in assessing players' coping skills. I had to defend this with [consultant] somewhat, because one of my interventions is CET and I don't want [consultant] telling the manager it's a waste of time! I told [consultant] that developmentally, I believe that some players will never have had

to cope before, so they might never know how to. I think he / she saw both sides of the coin.

I went through what I have done so far with the players and you could see he / she was interested. In fact, from the SWOT I carried out, he / she was very keen to have some referrals based on this information. While I was keen to strike a partnership with the consultant, my main concern was the effect his / her work could have on my evaluation of the intervention. My interventions could statistically be effective, but how do we know it isn't because of the work [consultant] could do with each player. I am meeting again with [consultant] in a couple of weeks, to discuss the outcome of the individual SWOT analysis. I think [consultant] is keen to work together, but I think he / she struggles to be available though; he / she could be a bit more organized. On the plus side, [consultant] is the last piece of the participative puzzle in my opinion. I now feel like my intervention is more participative. I could possibly still get some more of players' opinion through the intervention, although I think in some cases the players don't have the maturity to know what's right for them. So maybe speaking to two or three players would be best.

[consultant] wants to hand out questionnaires about psychological characteristics, [researchers'] work as a psychological audit. [consultant] is also interested to see if my interventions will affect the psychological characteristic scores mid- to post-season. It's something I could include in my write up analysis, but more than anything, I think players are going to get sick of filling out questionnaire's, so filling out [consultant]'s could essentially compromise filling out mine!

CET Session One - November

For the first CET session I thought it would be beneficial to conduct a SWOT analysis of my own in terms of my delivery of intervention content. I think a strength in this session was that I was far more prepared for players that wanted to muck about. Because there were only 15 of them (instead of 36 in the team building session), it was much easier to steer the players – I think the individual worksheets I developed are a good idea because it encourages the players to think about themselves, although being in a group environment still provides opportunity for players to switch off, look at others' answers, and be influenced by people who don't want to take it seriously. That said, being in a group also helps players to talk to each other to find solutions to individual problems.

Opportunities: When we got to players finally talking about what causes them to feel stressed, the two main stressors currently seem to be 'college – tutors not understanding how busy players are' (get players to show the tutors their time management schedule) and 'injuries-not wanting to be injured for long'. Players also mentioned that they continue worry

about things that they can't control. These points provide a good opportunity to focus on time management (controlling the controllables) and coping with injury (controlling/accepting the uncontrollable).

Threats: Players still try to mess around in psychology sessions. I have got better at shouting for their attention and telling them to wait their turn to speak, but I am hoping things may improve with time (probably not, they are young). I think some individual sessions would really work to get all of them engaging more, but I'm not sure how I can fit this in. Perhaps if you have 12 / 13 1st year players, you do half an hour with each player; 6 hours (3 hours for two nights); you'd need to start at 6pm to be done by half 9pm, or start at 5pm to be finished by half 8pm. That could definitely build greater rapport and potentially engagement at a group level. The session lasted about 50-55 minutes; I could have given the players more exercises because many of them had completed them pretty quickly.

CET Session Two - November

For this session I tried to conduct brief individual coping sessions with each player. Subsequently, I made some notes on the outcome of each interview. Participant 1 – "My life's alright – No Problems" – So far, individual sessions are not going well (because participant 1 was resistant to disclosing personal information; Participant 2 – Clever lad, wasn't bothered either way about psychology support but quite receptive – he lost a lot of weight in recent months, gone from 118kg to 102kg which was a real achievement goal for him; Participant 3 – switched on lad – took the information about controllability of stressors and matching to particular coping strategies on board; Participant 4 – we spent 20 minutes chatting to build rapport which led to him engaging more after this. Participant 5 – Came in stressed and we got on well. He seemed a little unsure about disclosing information to begin with but felt comfortable enough to ask when he wasn't sure about coping techniques. This was mainly because I asked him to ask me if he didn't understand anything. I think this helped to build trust. He got a little tired at the end as I was repeating myself a little about the coping session workbook that I wanted him to complete as homework. He seemed a bit concerned about sharing his stress experience with other in the next CET session, which I assured him he didn't need to and that the information covered in the individual session would remain confidential; Participant 6 – a confident young lad who seemed pretty interested in how to use coping strategies effectively and we built good rapport during the session.

Most of the lads were brilliant. The first session with Participant 1 was very difficult, but I got better with the lads, learning to be patient and not rushing into explaining how to

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complete the homework worksheet. Generally, to begin with, I chatted for 10 minutes then tried to dive into session 1. After Participant 1, I learnt to divulge my stresses, hear theirs, spend 15-25 minutes chatting about them and their lives in general before channelling this towards the coping worksheet. The general feedback from participants was that they find it difficult doing sessions at 6pm onwards. They like team reviews (which they have had one so far and one cancelled today), and they found the individual session more beneficial than the first group session.

Second Set of CET Session 2 - December

The second set of CET session two individual meetings – I was supposed to start at 5.30pm, but an earlier meeting at the [organization] has been organized from 3 / 3.30pm, so I'm just having to wait now for each player to show up. This inadvertently means I'll be having another [reorganised] date at the [organization]; as will the players waiting to meet up with me. It is bound to have an effect on their morale and engagement. It looks like all of the staff have gone home – apart from Ben and the cleaners. Another great sign of being integrated in the [organization] – Ben tells me to make myself a cup of tea - 'you know where the kitchen is don't you?' It's actually approximately a year today that I completed study two data collection with [organization], which means that I've been involved here for over a year now. Perhaps this is how long it can take to build rapport with the [organization]'s staff and 'fit in'. I'm still not complacent. Anything can change at any time. But it's a great opportunity to learn about professional sport environments.

It's now 6pm and I'm beginning to wonder where the players are. Could it be that the players haven't been told where to meet me? I'm sat in an office in the staff offices – surely the players would work that out? Probably another example of the players not being told where to go for meetings. Communication in this respect could be better.

Spoke to five more first year players, Participant 12 still to meet with; he was 'off with the runs'. Another pretty productive session with each player. At times I spoke to them for too long perhaps (i.e. 25 minutes) before taking them through the coping session.

Team Building Session - February

I arrived at the [organization] to deliver a team session in the evening (again). Only to find that the players were leaving, the manager and strength and conditioning coach had gone home. Only the assistant manager was there. Ben said he thought there was supposed to be a session. Later than evening I received a fairly brief email from the strength and conditioning coach (Luke). '[researcher], Listen, my sincere apologies for not putting the session on the board. I got the dates wrong, and thought that it was next week. Again all I can say is sorry.

Luke.'

Second (Rearranged) Team Building Session - February

It was a tough and challenging night on a number of accounts. When I got to [organization], I spoke to Luke who said that eight players were away as they had a college game that night. I tried to give Luke some mid-point intervention questionnaires to pass on to Dave & Ben. He took 10 questionnaires to give to the non-participating players – so now I have to chase after those players to get the questionnaires filled out. When I got into the club room, there were MSc [university] sport science students taking skin samples of each player and the nutritionist was hanging around as well. They didn't bother to leave in a hurry which meant I couldn't get started at 6.30pm. The nutritionist seemed to want to know everything I was doing; like he was doing an audit on Luke's behalf. I had to juggle my time between talking to the players and trying to appease the nutritionist by providing him knowledge about the session. He asked for a copy of the questionnaire to take away. My time was also compromised by having to continually ask some players to turn off music that they were playing in the room so that I could start the session; as well as forcing each player to complete the process evaluation at the end of the questionnaire whilst answering a series of 'sequential' questions from the nutritionist.

The SWOT analysis discussion in the session went reasonably well. A few players really contributed well to discussing about how some of their previous weaknesses have become strengths. Most other players didn't contribute a huge deal. But it was a good visual to get them thinking and talking to each other for five minutes about how things have changed. They all pretty much agreed that they are far more integrated than a few months back. Ben was impressed and is going to ask Bob if they can stick it up on the club room wall (which is shared with the senior professional team). Ben also said it would have been great to have the same at the start of the season and asked if I'd be around to deliver some sessions next year. I think Ben is very supportive of the psychological support, but I feel a strong sense that the other staff do not value it. The scheduling of late evening sessions are a strong indication of that. How can I change that? Can I change that? The sheets I handed out about 'the strengths of each player' went down very well with Ben – A technique he has used with the [national] u19 team in the past. 'this is **really** good', said Ben. The responsibility sheets were handed out at very short notice with no explanation, so I doubt players will have engaged with this activity. Players wanted to leave at this stage. It's the sort of thing some people will read and others will throw away.

Some of the processes evaluations for mid-point were useful: A few notes on the main

points:

1.   Players don't feel like their feedback matters with staff.

2.   Players don't think the staff (and some players) take the sessions seriously.

3.   Some players would like more one-to-one sessions.

4.   Quite a few squad players would like sessions more often.

5.   Some players don't feel they are being told anything they don't already know (only one person said this; they might know it but do they apply it?)

6.   Almost all players don't like the late night sessions.

7.   Some players think the sessions are short.

CET Session Three - February

An earlier session was arranged by the staff for 3.30pm. I think it helped in terms of engagement. Reflecting on the session I delivered 2 weeks ago (14th Feb), I really prepared well for this session; I provided each player with a relatively large workbook on time management strategies. Getting them into group work always seems useful. Particularly in this case where each player talked to one another about current time management issues. Players could therefore support each other with ideas on how to be better time managed. I recall that four of the players were missing, so I only had eight players there. I appreciate that some players were playing a competitive game that night but if that was the case, then why wasn't the session scheduled by staff for another night? I don't think the manager realizes why it's so important for all of the players to attend. Clearly, it's a confounding variable for my intervention research, but also, not every player is getting the same benefits.

A great example of this was Participant 9, who couldn't attend the time management session for whatever reason – It wasn't because he was playing that evening. I spoke with him before the next subsequent CET session and he told me how he is stressed about his many exams and that he's struggling with work at college, and now they [the organization] are scheduled to play more competitive games. My immediate thought was 'this guy could have really benefitted from the session on time management'. I gave him the workbook for the time management session, but he hadn't looked at it. It's also a lot easier and makes more sense to go through it when you have someone else going through it with you. In general, I think the time management session went quite well. This was a session that I was going to deliver later on in the season, but I think it was timely to do it now before they have revision pressures again a few months later. In this way, I guess my approach was attempting to be more preventative rather than reactive. A secondary approach to stress management rather than tertiary perhaps.

At the end of this CET session, I bumped in to Dave and asked him about his evaluation of the previous Team SWOT session that was delivered – I think he liked it but emphasized that as coaches they are more concerned about individual rather than team development, even though their preparation for each competitive game could suggest otherwise. He also showed me knowledge of sport psychology by mentioning 'process goals' – I said I would focus on process goals next time. Not sure how I'm going to do that with 35-40 players yet, but where there's a will there's a way.

CET Session Four - February

The session was delivered at 5.30pm, a bit earlier than most sessions which I think helped. What also helped to some degree was that they had a 7pm session with Ben afterwards. Therefore, for once, the psychology session wasn't the last scheduled organizational activity in their day and I think this helped with their engagement. As usual, the lads were busy watching and playing on the computers, watching funny YouTube clips as always. It was quite tricky to get them off the damn computers to start, but it's normally helpful for 5 minutes for me to unpack my bag and prepare my materials for the session. One lad, Participant 10, who is a bit of a jokester, but was actually quite helpful in getting the group ready for the beginning of the session. 'Come on guys, it's 5.30pm, it's [researcher] time now.' It's these usual comments that have me thinking "do I take that as a compliment or a mickey-take?" In this organizational culture, I think you have to be able to take the banter, disagreements, opinions and the odd bit of prating about. "They're still kids", I have to remind myself. 16 / 17 year old lads that are physically 10 years older in some cases.

When we got started with the CET session, I made the decision, for once, to pull up a chair and sit at the same level as the players. As always, they are sat or lying about on the couches provided. I started the session recapping on what we did a fortnight ago while a couple of late arrivals showed up. This was also, surprisingly, the first session for a while where every player was in attendance. Great!

I recapped again and felt quite relaxed there as well. At this point, one of the lads raised his hand. After I finished my sentence, he asked if we could turn the couches and chairs around into a circle. I was actually really pleased with this; Not only the suggestion (because it was a good idea), but also because the dynamic between me and the players had changed slightly. In a good way I think. Was this just because I sat down at the start? Maybe! Where is the applied consultancy literature telling you to do this? Is it just common sense or intuitive? Generally when I am delivering a psychology workshop, it doesn't feel particularly intuitive to sit down.

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Maybe if I'd done this months ago, it may not have worked, because I've probably built more rapport since.

From this point, the session was quite strange to begin with. The players started moaning about how they've been stressed out, and, it seemed pretty genuine. I nearly scrapped what I had planned to turn it into a stress breakout. I actually offered this to the lads, because I saw the challenge and went for it. This is applied research, if they want to vent their emotions, then let them. Put your programme agenda to one side (on the other hand, this demonstrates effective social sharing of emotions, which may bring them closer together). As it turned out, a couple of players moaned in the group for a few minutes and then they seemed quite happy to try and muck about, so I brought the programme agenda back in. We worked through the workbooks and some lads found it quite easy while others struggled a little. The group task was quite challenging for them. They struggled to come up with changeable and unchangeable factors of stressful situations. What I did observe through the session was that players do tend to use more emotion focused skills than problem focused skills which will make the next session interesting because it will be on problem-solving. I am yet to decide whether role playing as a form of problem solving is a good idea. I know they'd enjoy it but will they take it seriously – will it just provide an opportunity for them to give each other banter.

I think because it was quite a relaxed session, where I let them chat to one another as they were going along, it meant the session flew by and we didn't get through all the workbook activities. I told them to continue on with them before next session, but I don't think they will. The best option for next time is probably to give them a recap to see if they've remembered much about problem / emotion- focused coping and changeable / unchangeable stressors. I made sure that I made time for some progressive muscular relaxation. I have mixed feelings about the benefit of doing this in a group setting, although, mainly, I think the outcome was positive. Most of the players took it seriously and could feel the obvious difference between tension and relaxation. One player even said, 'I bet this would be good to do to help get to sleep.' I think this demonstrated that they could see the benefits for different solutions. For example, I mentioned that it could be good after an evening session to try and loosen off a bit; it could also be done lightly when rehabbing with injury – which they seemed to appreciate.

There was the very obvious downside of using progressive muscular relaxation – two players saw it as an opportunity to pass wind publicly during when I was reading; one player kept laughing uncomfortably and one player chose to let his bollock hang out of his rugby

shorts for all of us to see. It was difficult not to laugh in response to this, it was the result of players having to clench their buttock muscles, but, I'm pretty sure he'd orchestrated it. Subsequently, I quickly changed my softly spoken voice to a normal tone and made it more instructional to get their attention, which seemed to work. I also make them tighten and hold their muscles for longer because it made it more difficult for them to laugh or muck around. I concluded by making the point that they can use this technique in a very short-term way to respond to stressful situations and controlling their emotions and physical tension. I used the gripping of a stress ball as an example. The bollock incident almost made me reassess the success of the session. But I think the real success was the 'circle of trust', which made me feel that they accept me and want to engage in the sessions.

Team Building Session Three - March

A 5.30pm Start! It is firstly disappointing that it has taken a week or more to reflect on the 3rd team session. One main reason for not reflecting in the first couple of days was that I was very angry after the seminar, to the point that I couldn't wait to finish my intervention and never return to the [organization]. That's probably a bit extreme (but this was how I felt at the time), and I felt that longer retrospective reflection may be better for rationalizing this stressful situation.

In terms of reflective diaries, why is it that don't you read many reflective pieces of sport psychology work? One, because the process is difficult to maintain. Such a long term log during intervention delivery can involve writing at the end of the day, or in non-ideal environments. Most of my diary accounts have come just before bed or in coffee shops prior to and after intervention session. Secondly, one of the roles of an applied psychology researcher is to keep emotions locked away in the face of a client / organization. You'd have to wonder how readers would perceive a practicing psychologist who writes a frank reflective practice paper detailing their anger, frustration, and anxieties relating to the organizational environment in which they are delivering sessions.

When I arrived at the [organization], I popped in to see Dave to collect some coach performance evaluation sheets for players (that Dave and company were supposed to complete and give back to me two weeks ago) and then walked into the meeting room. When I got to the meeting room door, the lights were turned off and when I entered all the squad were sitting there, waiting for me. I asked why the lights were off and got no response from the players. Just as I was about to turn the lights on, the senior manager came in looking ferocious (a look like he wanted to kill someone). All the players were silent, I was silent. The manager very quickly looking confronting at several players, looking for something in

the room (in a hurry), then looked at me, smiled abruptly, then left quickly. It was a strange scene. I can't quite explain what he was doing or if he was just looking for something (in the dark), but I'll admit that I was intimidated and tried to stay strong and professional. After he left, I turned the light on. So because the players tried to play a silly prank by turning the light off, it backfired because the senior manager was ready to bollock any of them (for no reason); it was indeed, a very tense start to the session.

I started by handing out the player worksheets and pens, and as I did this, I noticed the same work placement student nutritionist as before (accompanied with a friend) sat at the back of the room again. So once again for the team session I had an observer (in fact, today, I had two!). I was trying to keep my cool because I had now offered research and (free) workshop sessions for 18 months, not just for the players, but I had also delivered parental workshops on request of the [organization] staff to help manage the manager's perceptions of 'pushy and impatient sport parents'. In this session, I did feel like I am still being assessed (I perceived that they were waiting for me to slip up or for players to misbehave) – by a bloody MSc [university] placement student, who, as great as he thought he is, is less qualified in his field than me! I kept my cool and simply asked him 'everything alright?'. His response was, 'yeah alright…just interested to see how the players respond'. I quickly worked out that he's either been asked to assess me, or is just trying to stir the pot if I slip up at all. It perhaps gives him an opportunity to increase his place in the organization if he can step on me to do so. I kept my cool and said 'if you want to stay for a while that's fine.' I hadn't technically started the session and I already felt under pressure. I remember using self-talk in my head to give me confidence and reduce my anxiety. 'I'm better than all of you'; 'I know my session content is good, regardless of what work placement students think'; 'so what!'

The session was on personal goal setting and things started off pretty well I think. I asked the players to consider a ten year planner. What is it that they would have liked to have achieved each year for the next ten years. Both the players and the placement student had to really engage and think about it, which was good. There were a couple of jokes about wanting to have a helicopter in 10 years. But you could see the players were really giving it some thought, so this started off the session well. I was pleased because delivering a group session on individual goal setting to 30+ players / placement students is challenging. The squad sessions are the perfect opportunity for them to play pranks on one another and muck about. They are only 17-19 years old but given my experiences of the organizational culture here I'm sure similar would happen at the senior professional level. Less mucking about but pranks would still occur. Some of the players struggled with the idea of process, performance

and outcome goals, but I was able to identify the players that hadn't written anything or were struggling, so eventually each player was able to identify goals. Getting players to feedback was good because they always want to have a say. This shows that they are engaged, and it also shows the placement student that most players are engaged. Other players are likely to have benefited from each other's opinions as well.

The work placement student (and his mate), decided to leave after about three quarters of the session, which I perceived as 'they have seen enough, I have done my job appropriately and professionally'. The players were mostly engaging and so there wasn't much else to watch for my spies. I was really pleased when they left, because it empowers me to give players the hard line if they are misbehaving. It's a bit harder to do that when you've got someone observing you, who can stir the pot by going back to the staff and saying '[researcher] told the lads off because they were misbehaving; he said F and S words!' Of course, what I have learnt is that it's ok to swear in front of the players. I have observed staff saying all sorts of things: 'you're shit', 'you're fucking fat.' 'you're supposed to be a decent fucking flanker…' No wonder players in study three commented that it is an intimidating environment for players.

The players are used to this organizational culture and use it themselves between players, so I know I can use it too. What I cannot afford to do though is behave like this in front of the work placement student, which after a few attendances now, suggests to me that he is not on my side. I have a good social intelligence to know when I may be acting neurotic and irrationally perceiving when something isn't the way it seems, and when it is absolutely clear when you're perceptions are 'on the money'. In this scenario, I know that if I swear and shout at 35 players who are talking, it will get the message across. However, I know that if I do that in the presence of the placement student who is already biased against psychology, then they will likely perceive that I do not have control or the attention of the group. Interestingly enough, having the placement student there is enough to divert attention away from the session slightly anyway.

One other issue, I really have no idea about, but could be a factor since the New Year, is that Dave, Ben and Luke all know that my father passed away in December. It's only been three months since his passing and while there are still moments of grieving away from it all, delivery of sessions is one opportunity to focus away from that and perform to the best of my ability. So there isn't a second that I think his passing has affected my competency to deliver sessions. If anything, it had made me stronger, more assertive, and less likely to take too much shit within the [organization]. There is, at times, a fire in the belly to make these

sessions as effective as they can be (given the variety of constraints and challenges). However, given the possibility that [organization] staff talk amongst themselves, it's possible that they've asked the placement student to observe my competencies and emotional stability. If that's the case, then I understand that. They are after all a professional sport organization and they have a duty of care to their players. I'm not entirely convinced that this has happened because I do sense a strong scepticism from the work placement nutritionist and the [organization]'s strength and conditioning coach (Luke), but it's my way of rationalizing the placement student's presence in group sessions.

When the work placement student left, this was my opportunity to approach the players more assertively. I had players writing down their own personal process goals, and because some players were struggling, I spent a few brief minutes with almost each player (at least the players that were struggling or hadn't written anything). During this point, players started chatting amongst themselves a little, which gave a couple of players opportunity to muck about. While chatting to a player (and a player who wanted help), four players sat around the computers. Most of them were using the desk space to write on. However, one of them (who hadn't seemed interested the whole session) decided to play a video of the team playing and started watching it. I was furious, because I was trying to help players that needed (and wanted) help and one lad was trying to spoil it for the others.

The fire in my belly struck with little hesitation. 'oi!' I shouted. The squad went slightly quiet. I then paced over to the player and said without hesitation 'I didn't come here to watch a fucking video… TURN IT OFF!' The player was slightly full of himself, but turned it off. The player is limited in conversing in English, and I noticed he tries to get away with being a delinquent because he claims that he can't understand what I'm saying and vice-versa. I had lost my temper, but with good reason. It was disrespectful and could have ruined the rest of the session. The squad went quiet at this point and I returned to the player I was helping for a minute. I helped a couple of the other lads, and then, to show that I had no bad feelings about the disruptive player, I returned to him and tried to help him with his process goals. Maybe I shouldn't have done that. But I thought I would be professional, continue to respectfully help him; to show that I do not have any bad feeling, but the previous behaviour of the player was not acceptable (and in my opinion, myself at the time as well).

After a while, some of the more uninterested players in the past, were actually trying quite hard, but just struggling a little. Perhaps the writing exercises are difficult for some of them. Perhaps I need to find other ways to engage their thinking. My gut feeling is by getting them to do something physically-related. A team session on the pitch perhaps. A pre-

performance routine? Kicks? Throw-ins? That said being on the pitch could be last place they want to be after completing two to three physically demanding training sessions per day. The content for this team building session was more individual than team based, and I think it benefitted certain individuals. It was easily one of the most challenging sessions I have had to deliver. I remember waiting for the train at [city] and still being angry, but by the time I got home I was beginning to feel good about the fact that I stood up to the player and overcome the start (senior manager) and the presence of the work placement student.

CET Session Five, Problem Focused Coping - March

The circle of trust had naturally continued from the previous CET session which I was very happy about. Unfortunately, due to a hectic month of full time work, PhD in the evenings and some personal circumstances, it is only now (20th April) that I am able to reflect on this session. This is a shame on my part because I am sure that I would have been more reflective nearer the time. Reflection a week on wouldn't be so bad, but over a month might be too long unless there are 'irrational or critical incidents' which help you to clearly remember.

On the 15th March, I wanted to focus on problem-solving. I was a little concerned that the players may not fully engage in just completing another worksheet, so I tried a group activity – role play. I got the group of participants in pairs of two's to come up with stories of recent confrontational situations at the [organization], where one person had been confrontational or argumentative and another person has responded, appropriately or inappropriately. This was actually a good activity because it gave players an opportunity to talk about issues that have occurred, and in some circumstances, where players could have dealt with the confrontation better. In this way, the outcome achieved its purpose. However, I wanted the players to try and re-enact the scenarios, with one person playing the role of the 'difficult person' and the other person acting as the 'respondent'. A couple of the lads did this quite well, but ultimately, I was dealing with some immature 17 year old boys who saw it as an opportunity to mock the people at the [organization] who have been 'confrontational' in the past. Undoubtedly, the players really enjoyed it – I guess that's a positive. What seemed to transpire was that by doing the role play activity it actually gave the players an opportunity to laugh about (re-appraise) previous stressful situations and share commonly experienced emotions. It wasn't the coping aim I had planned for this session (to actively seek problem solving) but being able to laugh at difficult situations is still enhancing their ability to cope with [organization] demands.

A couple of pairs of participants really wanted to act out their prepared 'scene' in

front of the other players, but it came to a point where players were just mocking staff, and so I chose to end the role play and move on to another task. I used the role plays as examples of stressful events that have recently occurred at the [organization] and asked players to come up with some more examples. From this, I got them to feedback the stressors to me and I wrote them on the whiteboard / flipchart paper. After I listened to these stories for 5-10 minutes, I got them to each practice the 3 O's (coping options, outcomes, order) with a particular issue that they had identified and then feedback their thoughts on this. I think the players liked this less because they were having to think a bit more rather than talk or act. After this, I created the scenarios of game / training situations and how players can plan ahead for 'what if scenarios' before they occur. I then got each player to develop their own scenario and apply the 'who, where, when' principle, followed by the degree to which anything can be done to change the situation, and the 3 O's of coping to deal with this issue.

6.3 Qualitative Process Evaluation at Midpoint and Post-intervention

The qualitative information that was obtained from the process evaluation surveys at mid-point and post-intervention revealed that the main macro factors were related to the design and delivery of interventions. Specifically, a number of participants from both the team building and CET with team building groups felt that they did not have a say in the types of sessions that they received. In addition, in terms of delivery both intervention groups (i.e., Team building and CET with team building) were generally happy with the content of the sessions delivered, but would have liked more sessions made available to them. Also, some participants in the team building sessions felt that there were too many participants in each session and some members would have liked more one to one sessions.

The micro process evaluations from participants related to an appraisal of impact, engagement and motivation to participate in sessions and readiness to change. In terms of appraising the impact of intervention effects, a number of participants in the team building group felt that the intervention had improved social bonds amongst the playing squad and improved knowledge of one another's playing roles. Similarly, members of the CET with team building group felt that the sessions were well individualized for problem solving individual issues whilst also improving close relationships within this intervention group. Conversely, a small number of members of the team building group felt that they struggle to retain information after each team building session. In terms of engagement, some members of the CET with team building group felt that working through example stressors and writing down solutions was good for engaging in sessions as well encouraging them to learn more about their personal coping methods. In terms of readiness to change, some members of the

team building group demonstrated a lack of readiness to change, by: (a) feeling that the organization may not respond to any player recommendations, (b) feeling that the intervention sessions will not change them, as the material goes over information they already know, and (c) a feeling that sessions should be optional, so only the people that want to attend will attend.

Motivation to participate was also influenced by contextual factors such as time and organizational engagement. Specifically, the main contextual factor was timing in so far that most of the intervention sessions were delivered late in the evening after intense physical training sessions for players. Many players from both intervention groups stated that sessions were arranged too late in the evenings when players wanted to go home and recover from a full day's training. Subsequently, according to the players concentration and motivation levels are low during sessions because they are fatigued from training. Moreover, after the mid-point process evaluation, it was fed back to the staff that players would like the sessions to be integrated in to the day rather than evening so that players would be less tired. Although a couple of sessions were arranged by the staff for earlier times, this pattern of late evening sessions largely did not change from mid-point to post-intervention. Subsequently, players spoke of organizational engagement as a contextual process issue that hindered their motivation in sessions. Specifically, players felt that from the feedback that was provided to staff, it was not listened to or acted upon. There was also a distinct feeling from some players that staff were agreeing to provide psychological sessions to publicize that the organization is helping the players 'mentally', rather than investing the appropriate amount of time and resources to support any real improvement in well-being and performance.

Finally, a process evaluation survey was also administered to three members of coaching staff (e.g., academy manager, assistant manager and the strength and conditioning coach) at post-intervention. From a macro process perspective, all staff agreed that they were satisfied with how the psychology sessions had been delivered. However, the assistant manager felt that the sessions could be scheduled more regularly and integrated into the annual academy schedule, so that all members are aware of when the sessions are going to take place. From a micro process perspective, all staff strongly agreed that they had encouraged the academy players to participate in the sessions. However, there were mixed views when appraising the impact of team building and coping effectiveness. Specifically, the strength and conditioning coach felt that it was difficult to say whether the psychology sessions were having a positive influence on well-being on performance, or whether this effect was purely down to maturation and developing through all areas of academy life. In

comparison, the manager felt that the psychology support offered had had a positive influence on the majority of players for well-being, while the first year group had also developed well mentally, tactically and physically throughout the year. When considering how academy factors could have affected when psychology sessions were implemented, all staff agreed that there were contextual factors relating to the timing of sessions. For example, the strength and conditioning coach suggested that the timing of sessions were largely impeded due to players' college education commitments. In addition, the manager acknowledged that the academy training and game schedule may have occasionally compromised when psychology sessions could be delivered. Nonetheless, there was a keenness from the manager and assistant manager to integrate psychology support into their annual academy plan in the future.

7

General Discussion

"In popular government results worth having can only be achieved by men who combine worthy ideals with practical good sense."

~ Theodore Roosevelt.

7

General Discussion

In applying the theoretical tenets of cognitive-motivational-relational theory (Lazarus, 1991a, 1999; Lazarus & Folkman, 1984), the central aim of the thesis was to examine the management of stress as it was experienced in a professional sport organization. Specifically, this thesis has: (a) reviewed the effectiveness of stress management interventions in sport performers, (b) investigated patterns of within- and between-person differences in early career professional rugby players' experiences of organizational stress, (c) conducted an organizational-level stress audit in a professional rugby academy, and (d) evaluated the impact of organizational stress management interventions in a professional rugby academy. Collectively, this research furthers scientific understanding of the organizational stress process as it applies in a professional sport organization. In line with cognitive-motivational-relational theory, the overall findings indicate that for early career professional rugby teams, a range of personal and social resources are required to adapt to the wide and ranging demands of their organizational environment. Moreover, the development of these individual and organizational resources is important, as they are associated with greater perceptions of positive well being, coping ability, team functioning and performance.

This chapter summarises the key findings of the four distinct but interlinked studies reported and their contribution to theory and research. The contribution of each study is then followed by an overall consideration of implications for research and practice. Finally, strengths and limitations of the thesis are offered, along with future research directions and a general conclusion.

7.1 The Contribution to Theory and Research

7.1.1 Stress Management Interventions in Sport Performers

To the author's knowledge, there is a small selection of scientific reviews in sport psychology that have evaluated the effectiveness of psychosocial interventions conducted with competitive sport performers. Of the limited reviews that have been conducted these have only evaluated the effectiveness of interventions targeted at enhancing competitive performance (e.g., Greenspan & Feltz, 1989; Martin et al., 2005). These reviews have

neglected to consider that performance enhancement in competition may also depend on an athlete's ability to perform under the pressure of interacting with their competition environment. In addition, despite the long held view in sport psychology that a relationship exists between stress responses and performance (Jones & Hardy, 1990), surprisingly no systematic reviews have been conducted to evaluate the effectiveness of stress management interventions aimed to combat athletes' stress and improve their performance. Reviewing the literature on stress management in sport performers is important for a number of reasons. Firstly, the prominence of stress that athletes consistently experience in the lead up to and during performance in competition (e.g., Kristiansen et al., 2008; Neil et al., 2011; Thomas et al., 2007a) supports the notion that psychosocial interventions are fundamental for optimizing well-being (Miller & Kerr, 2002). Secondly, from a transactional stress perspective (Lazarus & Folkman, 1984), narrative reviews only appear to suggest that cognitive restructuring and reduction approaches may be effective for reducing athlete's competitive state and trait anxiety (Hanton et al., 2009; Thomas et al., 2008). However, anxiety is only a response to competitive stressors and neglects to consider other influential emotions and components that are inherent in transactional conceptualisations of competitive stress.

There is also a limited evidence base pertaining to the circumstances in which stress management interventions may be effective for particular sport performers. This information is important for making a strong contribution to the sport psychology evidence-base for stress management research. Furthermore, systematic reviews can consolidate and disseminate the overall evidence base which is of great benefit to assisting applied researchers and consultants in delivering the highest level of empirically supported treatments for combating athletes' stress and improving their performance. To overcome some of the aforementioned limitations in the existing literature, the central aim of the systematic review was to evaluate the effectiveness of stress management interventions that aim to optimize athletes' competitive stress experience and performance. Table 7.1 presents an overview of the key findings, strengths and limitations from the systematic review conducted.

A key finding from Chapter 2 was that stress management interventions are for the most part associated with the optimisation of stress processes. However, the evidence in favour of optimising stress and performance concurrently was weaker than the evidence for interventions which targeted the optimisation of stress solely. This provides support for previous narrative reviews which suggest that a number of sport performers may require high activation states to perform optimally in their given sport (Thomas et al., 2008). Therefore, attempts to reduce stress responses (e.g., anxiety) before competition may not always result in

Table 7.1. Overview of key findings, strengths and limitations from study one.

Chapter	Purpose	Methods	Key Findings	Strengths	Limitations
2	▪ To evaluate the effectiveness of stress management interventions for facilitating stress and performance in sport performers. ▪ To identify gaps in the stress management literature in sport.	▪ Systematic review of the sport psychology literature. ▪ 64 studies (63 published papers) of stress management interventions in sport performers reviewed. ▪ Papers reviewed for study characteristics and effectiveness. ▪ Interventions were coded into cognitive, multimodal and alternative interventions. ▪ Effect sizes calculated for each study using Comprehensive Meta-Analysis (CMA) software.	▪ Stress management is effective for managing stress or improving performance, but only partial support found for optimising both concurrently. ▪ Multimodal stress management interventions are the most effective for managing stress. ▪ Most interventions targeted the reduction of cognitive and somatic state anxiety. ▪ Interventions targeting the removal / reduction of stressors, modification of cognitive appraisals, or development of coping abilities are extremely limited. ▪ Provision of manipulation checks (i.e., social validation) and follow-up assessments are extremely limited. ▪ Interventions conducted with elite and professional athletes are extremely limited. ▪ No previous interventions have been conducted to manage organizational stress in sport performers.	▪ The first systematic review to evaluate the effectiveness of stress management interventions for optimising stress and performance in sport performers. ▪ A large number of stress management interventions reviewed. ▪ The calculation of effect sizes using CMA software allowed for consideration of strength of intervention effects.	▪ The outcome measures and interventions adopted were diverse; therefore a meta-analysis was not appropriate. ▪ Vote counting approach; studies were interpreted in terms of their reported significance, rather than their effect size. ▪ Most interventions were conducted in laboratory or training environments; therefore field experiments were limited. ▪ A number of interventions did not report a theoretical underpinning of stress, although many appeared to adopt an interactional conceptualisation. ▪ Difficult to ascertain from the multimodal interventions which components were most effective. Also, many multimodal components comprised cognitive-behavioural treatments.

improved performance. Therefore, considering athletes' appropriate activation states prior to intervention development is likely to be important for increasing the likelihood of optimising competition stress and performance concurrently (Mellalieu et al., 2006). Such findings may be important for dispelling any traditional research view that there is a direct association between stress responses and performance (e.g., Jones & Hardy, 1990). This also provides a strong impetus for highlighting the likely theoretical importance of considering transactional mediating processes (e.g., appraisal and coping) that could explain an indirect relationship between competitive stress responses and performance. This is also an important consideration for evaluating the conditions by which stress management interventions with sport performers are effective. In so far that the majority of stress management interventions reviewed attempted to reduce competitive state and trait anxiety, interventions targeting the optimisation of competitive stressors, cognitive appraisals and coping functions were limited. It could be the case that stress management interventions are more or less effective at reducing competitive anxiety responses when sport performers display positive or negative appraisals of their environment, and / or demonstrate particular coping attempts.

Another key finding was that multimodal stress management interventions appeared to be the most effective approach to stress management. This was also found when evaluating randomised controlled trial interventions which demonstrated the highest level of empirical support. Although the findings were more favourable for optimising athletes' stress than improving performance, these findings in part concur with previous narrative review findings for effective performance enhancement interventions (Greenspan & Feltz, 1989; Martin et al., 2005). One likely explanation could be that cognitive-behavioural-based multimodal interventions may be effective due to serving many purposes. For example, positively restructuring a performer's appraisals of competitive stressors may provide the basis for better engaging in reduction techniques to reduce negative emotional responses, which may in turn facilitate coping efforts.

Although the central aim of the systematic review was to contribute to sport psychologists' knowledge of effective stress management interventions in sport performers, a secondary aim of the review was to identify the existing gaps for future stress management research in sport psychology. A key limitation of the reviewed interventions was the rigour with which study characteristics (e.g., type of sport, age of participants) were described and manipulation checks conducted. Although it is acknowledged that the requirements of publication could preclude the full dissemination of this information, this is not a sufficient argument to withhold important study characteristics such as the age of participants, the

participating sport, research design adopted, or treatment descriptions. These characteristics, along with the inclusion of manipulation checks and follow-up assessments are critical for sport psychologists to wholly understand the conditions by which stress management interventions are effective. For example, the key findings from the systematic review indicate that multimodal stress management interventions are effective for reducing competitive state anxiety in collegiate sport performers. However, we know less about the effectiveness of interventions that aim to reduce or eliminate stressors, modify cognitive appraisals, or develop effective coping behaviours. In addition, elite and professional sport populations have largely been neglected in the stress management literature. At least, we believe this is the case, but 20% of the interventions reviewed did not provide any information about the competitive standard of the performers sampled (see Chapter 2). Nonetheless, the finding that elite and professional populations have been neglected for intervention is surprising. This is in so far that a wide range of traditional and contemporary qualitative research has investigated elite and professional athletes' experiences of competitive and organizational stress (Fletcher et al., 2012a; Gould et al., 1993; Hanton et al., 2012; Nicholls et al., 2006; Scanlan et al., 1991), but not intervened. These populations are an important consideration for future research in so far that different stress management interventions may be required for these performers and their respective sports. For example, given the potential for these performers to be more exposed to intense performance environments than collegiate performers, it may be the case that elite and professional performers are able to adapt quicker to stress management programmes. Such a finding could inform the recommended length or number of stress management sessions that are most appropriate for this population. These gaps, along with the key findings of the systematic review were instrumental in shaping and informing the direction of the remaining studies reported in Chapters 3-5.

7.1.2 Within- and Between-Person Relationships of Organizational Stress

Previous qualitative research on organizational stress in sport psychology has so far failed to capture the ongoing dynamism of how sport performers may appraise, respond and cope with daily organizational events that are encountered in their organization. In addition, according to the cognitive-motivational-relational theory of stress (Lazarus, 1991a, 1999; Lazarus & Folkman, 1984), the way in which individuals may appraise, respond and adapt to demands may be influenced in part by dispositional and situational factors. Although qualitative research has attempted to identify some within-person relationships of organizational stress (e.g., Hanton et al., 2012; Didymus & Fletcher, 2014), to our knowledge, no studies have examined the influence of between-person factors. Such factors

are important for considering the conditions by which sport performers are able to make greater positive appraisals of organizational events, experience positive affective responses and utilise adaptive coping behaviours. Table 7.2 presents an overview of the key findings, strengths and limitations from study two (see Chapter 3).

Chapter 3 makes a significant contribution to the sport psychology literature as it represents the first longitudinal prevalence and examination of organizational stress processes as they are experienced by sport performers who operate in a professional sport organization. A key finding was that daily cognitive appraisals of organizational events and daily affective responses were significantly related. Specifically, professional sport performers who demonstrated higher levels of threat and harm appraisals were found to respond more negatively to their organizational environment. In addition, those performers who displayed higher challenge and harm (inversely) appraisals of the daily organizational events were found to display higher positive affective responses. Thus, patterns of cognitive appraisal styles have a direct influence on professional sport performers' responses to their organizational environment. These findings provide support for stress appraisal theories (Lazarus, 1991a, 1999; Lazarus & Folkman, 1984; LePine et al., 2005; Podsakoff et al., 2007) which suggest that strain may be experienced when events are appraised as a threat or harm to the attainment of a person's goals. Conversely, positive affect may be experienced when events are evaluated as challenging or facilitating progress towards attaining one's goals. These findings add to the limited body of qualitative research in sport psychology which has identified appraisal-emotion relationships in relation to competitive and organizational stress in elite athletes (Hanton et al., 2012; Neil et al., 2011). These findings also make a contribution to the organizational psychology literature on work stress by readdressing the instrumental role of cognitive appraisals in shaping a person's interaction with their work environment. From a practical perspective, these findings also demonstrate that individual-level stress management interventions (e.g., cognitive restructuring) in this organization may be important for modifying and optimising appropriate cognitive appraisals of generally occurring organizational issues, to reduce the likelihood of strain.

To fully understand how different sport performers interact with their organizational environment, we need to understand personal and situational contexts. A key finding showed that those professional sport performers who displayed higher dispositional core self-evaluations (i.e., positive beliefs about one's general worthiness, competence and capabilities) were more likely to respond positively to events which had been appraised as challenging. Similarly, in the case where sport professionals experienced lower levels of

Table 7.2. Overview of key findings, strengths and limitations from study two.

Chapter	Purpose	Methods	Key Findings	Strengths	Limitations
3	▪ To investigate organizational stress processes in early career professional sportsmen. ▪ To examine the relationship between daily appraisals of organizational events and affective responses. ▪ To examine the relationship between daily affect and coping. ▪ To examine the personal and situational moderators of the above relationships.	▪ Longitudinal experience sampling method (ESM) using personal digital assistants (PDAs). ▪ $n = 39$ early career professional rugby union players (Mean age = 17.23, $SD = 0.87$). ▪ Background survey completed which measured core self-evaluations and facet neuroticism. ▪ Information obtained for each player position and whether they represented key decision makers in the team. ▪ Participants completed the PDAs twice daily, five days per week, for six weeks in total. ▪ Participants rated the degree to which they appraised, responded to and coped with events that occurred in the past hour in the organization.	▪ Daily threat and harm appraisals were strongly associated with greater daily negative affect. ▪ Daily challenge and harm (inversely) appraisals were associated with greater daily positive affect. ▪ Core self-evaluations moderated the relationships between threat appraisals and positive affect (inversely) and challenge appraisals and positive affect. ▪ Positive affect was predicted by key decision makers and inversely predicted by facet depression and playing position. ▪ Negative affect was strongly associated with all coping functions enacted by coping behaviours. ▪ Positive affect was associated with emotion-approach coping enacted by both changing aspects of work and talking to others. ▪ Key decision makers predicted talking to others to express affect.	▪ Innovative method and sample of early career sport professionals. ▪ Longitudinal 6-week design. ▪ ESM provides greater accuracy of recall than other retrospective designs. ▪ Readdressed the importance of appraisals, which are largely neglected in work stress research. ▪ The first study in sport psychology to consider personal and situational moderators of organizational stress in a sport organization. ▪ One of a limited number of studies in both sport and organizational psychology that demonstrates how affective responses activate coping, rather than vice-versa. ▪ Combines key tenets of both transactional stress and the demand-control-support-model.	▪ Cross-sectional analysis of data. ▪ Small sample size. ▪ Generalisability of results. ▪ Completion rate was poor. ▪ Did not control for time of day or stressor encountered. ▪ Did not investigate these relationships with performance.

positive affect from high threat appraisals, this pattern was found to be greatly diluted for performers who displayed stronger core self-evaluations. In so far that core self-evaluations represent a trait composite measure of self-esteem, locus of control, generalised self-efficacy, and emotional stability, the findings provide support for cognitive-motivational-relational theory (Lazarus, 1991a; 1999; Lazarus & Folkman, 1984) by demonstrating how key antecedents such as a person's learned beliefs about themselves and their world, and personal resources such as locus of control play an influential role in demonstrating how different individuals interact and respond to their environment. These findings for core self-evaluations as a moderator of appraisal-affect relationships in organizations also add to the organizational psychology literature in the area, which has identified that core-self-evaluations play an important role in organizational stress and coping processes (Kammeyer-Mueller et al., 2009). From an intervention perspective, given that core self-evaluations are dispositional beliefs of one's ability to function in the world (Judge et al., 1998), the ability for stress management interventions to effectively optimise this trait may be unlikely. However, these findings suggest that interventions that enhance individuals' beliefs in their capabilities to manage particular organizational events may be beneficial for increasing the likelihood of positive adaptations to the daily organizational issues that they encounter.

In the specific situational context of the professional rugby academy sampled, a unique contribution to theory and research was the finding that 'backs' (i.e., playing position) and key decision makers in the playing squad were found to directly influence positive affective responses to daily organizational events. This supports transactional conceptualisations from the social and organizational psychology literature, which suggest that situational contexts are important in shaping emotions and coping (Cooper et al., 2001; Cox & Ferguson, 1991; Folkman, 1984; Lazarus, 1991a). However, in attempting to explain the possible reasoning for such influences on affective responses to events, the tenets of the demand-control-support-model (Johnson & Hall, 1988; Johnson et al., 1989; Karasek, 1979) appear to make a strong contribution. In so far that greater control beliefs are likely to influence perceptions of positive affect (Cox & Ferguson, 1991; Folkman, 1984), the demand-control-support-model delineates control as consisting of both skill discretion perceptions (i.e., the extent to which the individuals are allowed to use their skills) and decision latitude (i.e., the level of control that an individual has over situations). For professional sport teams, it may typically be the case in training environments, for example, that backs and key decision makers perceive themselves to have greater autonomy in utilising their technical skills and also have greater physical and verbal control in making team

decisions to initiate change in the team's performance. In considering the development of organizational stress management interventions in sport organizations, these findings are important for highlighting how providing professional sport performers with stronger perceptions of autonomy / control over their environment could be associated with higher levels of positive affective well-being (Karasek & Theorell, 1990).

Although research on organizational stress in sport and organizational psychology has generally accepted the potential within-person relationships between cognitive appraisals and affective responses, less research has considered how affective responses to organizational events may activate particular coping efforts. Indeed, the majority of organizational stress research has considered how coping efforts through secondary appraisals are associated with greater affective well-being (Daniels et al., 2008, 2013). This is an important research direction as a number of theories consider emotions to serve an adaptational function (Hanin, 2000; Lazarus, 1991a; Vallerand & Blanchard, 2000). This is because 'action tendencies' are believed to motivate individuals to generate resources towards achieving particular tasks or purposes.

Chapter 3 makes an important contribution in this regard, by demonstrating that professional academy rugby players who experienced higher levels of daily negative affect were more likely to draw on coping resources (i.e., control or support) to achieve particular coping functions (i.e., problem or emotion-approach). In addition, those performers who displayed higher daily positive affective responses were more likely to adopt emotion-approach coping functions by both changing aspects of their work *and* talking to others. Such findings contribute a new understanding of the roles of emotions in sport. In particular, by indicating that negative affective responses are not necessarily dysfunctional as previous theories in sport would suggest (e.g., see Hanin, 2000). Rather, negative affective responses to events may still motivate the elicitation of coping responses to enable performers to repair how they interact with their organizational environment. In the context of developing interventions aimed to optimise the organizational environment, the findings also suggest that there are a number of social consequences of displaying emotional states, which may be an important coping resource for combating stressors encountered in sport organizations. This was particularly apparent for key decision makers in the playing squad, who were directly associated with eliciting greater social support (i.e., talking to others) for emotion-approach purposes. From a transactional perspective, this supports the notion that situation-dependent control abilities (i.e., key decision makers) may influence the secondary appraisals of available coping resources (Cox & Ferguson, 1991; Folkman, 1984). Taking these points

together, it seems that developing interventions to optimise the appropriate social sharing of affect responses in similar sport organizations is likely to be important for facilitating well-being and social functioning.

7.1.3 An Organizational-level Stress Audit

In assessing the organizational stress processes that may be prevalent in a professional sport organization, it was important to explore the organizational context behind some of the aforementioned within-person relationships. Indeed, identifying the most common organizational stressors that different individuals encounter and the degree to which negative outcomes are caused by such events are typically a basic prerequisite for considering the development of stress management interventions in organizations (Briner & Reynolds, 1999). To provide support for the findings reported in Chapter 3, and, to support the rationale for developing organizational stress management interventions in professional sport, Chapter 4 reported the findings of a participative organizational stress audit. In advancing the organizational stress management research in sport psychology, this organizational-level stress audit makes a contribution by holistically exploring the organizational stress process across a variety of sport personnel (e.g., sport performers, coaches, managers, support staff, administrative staff) who operate in a professional organization. In addition, by adopting a participative action research approach it was possible to achieve a contextual understanding of different members' stress experience and gain their input on recommendations for stress management in their organization. The research also makes a contribution to the organizational psychology literature by following calls to "give more attention to developing techniques used to diagnose the need for stress interventions" (Bowling et al., 2012, p. 79). Table 7.3 presents an overview of the key findings, strengths and limitations from study three (see Chapter 4).

A key finding was the identification of a number of common organizational stressors that were encountered by both professional academy rugby players and staff who operate in this professional sport organization. In particular, the main organizational stressors included: managing external expectations, player hierarchies, poor communication, a lack of tailored development training, a bullying culture, and academy transitions. Although these stressors provide some support for the identification of similar stressors that are prevalent in elite athletes (Arnold & Fletcher, 2012; Fletcher et al., 2012) and sport coaches (Rhind et al., 2013; Thelwell et al., 2010), this is the first study on organizational stress processes in sport psychology to identify these stressors in a single sport organization, rather than the identification of stressors from individuals who operate in a range of organizations.

Table 7.3. Overview of key findings, strengths and limitations from study three.

Chapter	Purpose	Methods	Key Findings	Strengths	Limitations
4	▪ To conduct an organizational-level stress audit with members of the professional rugby academy organization. ▪ To identify recommendations for stress management interventions for this organization.	▪ Mixed method Participatory action research design. ▪ $N = 47$ professional rugby academy staff ($n = 7$) and players ($n = 40$). ▪ 13 individual interviews conducted with staff ($n = 7$) and key decision makers ($n = 6$). ▪ 3 focus groups conducted with remaining players ($n = 34$). ▪ Stress management survey completed by all participants ($n = 47$) at the end of each interview. ▪ Content analysis conducted for interpreting interviews and stress management recommendations. ▪ Frequency analysis conducted for interviews and stress management survey.	▪ Players and staff encounter a range of organizational stressors, including: managing external expectations, a bullying culture, player hierarchies, poor communication, lack of tailored development training, and academy transitions. ▪ Players and staff feel threatened by stressors, including: receiving negative feedback, bullying culture and hierarchies, transition to a higher training intensity, and being injured. ▪ Players and staff mainly experience anger and anxiety due to stressors. ▪ Receiving social support is the main coping resource obtained for players. ▪ The main organizational-level recommendations were: improving team cohesion, modifying the training structure, improving communication, increasing the number of post-match game reviews. ▪ The main individual-level suggestions were: modifying appraisals for first year and second year players, coping education for first year players, and building confidence for the squad.	▪ A strong sample size for a mixed method study. ▪ Participatory recommendations from all members of the sport organization. ▪ The corroboration of findings from study 2, interview and survey data from study three. ▪ Holistically identified organizational stress processes and how they were interlinked. ▪ Highlighted how different coping behaviours elicited are linked to different coping functions. ▪ Identified how organizational stress could be combated at an individual- and organizational-level.	▪ The large focus of recommendations for players only; Coaches refrained from suggesting initiatives for staff. ▪ Time factors led to focus groups being conducted with large sample sizes ($n \leq 15$), which comprised the richness of data that could have been obtained from each participant. ▪ Participatory approach could have comprised a variety of members as part of a 'steering group'. Although not possible in practice. ▪ Generalisability of findings.

This is important for tailoring appropriate stress management interventions to modify the stressors that individuals operating in a particular organization may typically encounter. This latter point is emphasised by the identification of a bullying culture that is encountered in the professional organization investigated, which is not likely to be a typical issue for other sport organizations. The identification of a bullying culture also supports the tenets of cognitive-motivational-relational theory by illustrating that environmental antecedents of transactional stress may not only include demands (i.e., stressors), but may also include constraints, opportunities, or the culture in which individuals operate (Lazarus, 1999).

The identification of these common organizational stressors was important for understanding how individuals in this organization appraise, respond and cope with specific environmental demands. The findings provided further support for previously found associations between appraisals of (Hanton et al., 2012; Didymus & Fletcher, 2014) and emotional responses to organizational stressors (Fletcher et al., 2012b). However, in the context of this professional organization, players and staff were found to feel threatened by negative feedback, the bullying culture and player hierarchies, player transitions to a higher training intensity, and players being injured. Furthermore, the findings demonstrated that players and staff's most common response to organizational stressors was anger and anxiety, which has been found to be a common response to stressors in professional rugby union players (Nicholls et al., 2006; Nicholls et al., 2009a). The threat appraisals and emotional responses identified provided a rationale to suggest that individual-level interventions may be appropriate for combating some stressors which may be unavoidable, such as transitions to a higher training intensity and being injured. This was supported by the finding that for players in particular, receiving social support was their main coping resource for dealing with a range of organizational demands. This provided an interesting comparison to Chapter 3, whereby predominantly the same individuals provided longitudinal data using personal digital assistants to suggest that they elicit talking to others to express affect or solve problems. The corroboration of the studies reported in Chapters 3 and 4 is important for developing stress management interventions with this organization. Specifically, the findings from Chapter 4 suggested that professional rugby academy players rely on receiving, rather than actively seeking social support from others. Chapter 4 therefore suggests that social support is still potentially the most available coping resource within this organization. However, the ability of academy players to elicit particular coping resources appeared to be somewhat limited.

Although exploring the prevalence of organizational stress in this organization was evidently important, Chapter 4 advanced the organizational stress management research in

sport psychology by gaining the views of organizational members on (a) what could be done to optimise their organizational environment and (b) what could be done to better equip personnel with the resources to combat potentially harmful stressors. This was also important for identifying particular target groups who may be most at 'risk' (Rick et al., 2001). Using a mixed method approach for gaining participative recommendations, the findings provided support for developing a range of organizational-level initiatives to modify characteristics of the organizational environment. These included: improving team cohesion, modifying the training structure, improving communication, and the integration of more post-match game analysis. In comparing these recommendations to the categorisation of organizational-level interventions typically applied in organizational psychology (e.g., Newman & Beehr, 1979), it can be said that such recommendations are mainly focused on modifying *organizational* characteristics, rather than *role* (e.g., increasing participation in decision making) or *task* (e.g., job redesign) characteristics. However, it may be possible that by improving organizational characteristics, such as cohesion and communication in sport teams, that interventions in this manner may also indirectly modify tasks characteristics (e.g., training to increase capabilities to complete tasks). A noteworthy finding from this thesis was that although the stress audit reported indicated that the majority of the organization would participate in such initiatives, after separate consultation during academy staff meetings, particular programmes became more specifically targeted and developed for the academy playing squad (e.g., improving cohesion and communication).

The findings also provided support for the management of organizational stress processes at an individual-level. These included: modifying appraisals for first year and second year players, coping education for first year players, and building confidence for the squad. These findings have supported systematic reviews which have identified cognitive-behavioural-related treatments as the most common approach to competitive (see Chapter 2) and organizational stress management interventions (Richardson & Rothstein, 2008). However, although these recommendations played a key role in the development of future organizational stress management interventions in professional sport (i.e., Chapter 5), they were also considered in relation to the findings reported in Chapters 3. Specifically, if we consider the role of personal resources (e.g., core self-evaluations) in influencing patterns of appraisals and responses to organizational events (see Chapter 3), alongside the need for first year players to cope with demands (e.g., early career transitions, bullying culture), then this points to the need for rugby union players in this professional organization to develop a greater range of coping abilities to confidently manage organizational stressors and overcome

negative responses. What appears to be important here is the ability to develop a greater understanding of the coping behaviours and functions which are most effective in tackling specific organizational stressors encountered in this professional sport context. This is because behaviours enacted to achieve coping functions such as problem solving or expressing affect may be adaptive for functioning in specific organizational conditions, but maladaptive in others (Daniels et al., 2013).

Collectively, these findings and recommendations add considerably to the literature on organizational stress as it applies to professional sport, by identifying how organizational stress could be combated at an individual- and organizational-level, and, for specific target groups of a sport organization. These findings also provided support for the notion that multilevel approaches (i.e., individual-level and organizational-level) may be needed to comprehensively modify the organizational environment and individuals' ability to adapt positively to it (Dewe et al., 2010; Kohler & Munz, 2006). However, to date there are limited multilevel stress management interventions that have been developed and evaluated in the organizational psychology literature.

7.1.4 Organizational Stress Management Interventions

The findings from Chapters 3 - 4 indicate that the organizational environment and the way in which professional sport performers continually interact with this environment are important for understanding these individuals' experiences of operating within a sport organization. These experiences of organizational stress may be associated with a range of important individual outcomes, such as affective well-being, coping ability, social functioning in the organization, and performance (see Chapter 4). Such findings suggest that it may be prudent to develop interventions aimed at modifying both the organizational environment (e.g., improve cohesion and communication) and individuals' capabilities of coping with a range of demands that are specific to the organization within which individuals function.

One of the strongest contributions of this thesis to both sport and organizational psychology literatures was the development and evaluation of organizational stress management interventions that were delivered in a professional sport organization. To our knowledge, this is the first intervention in sport psychology that has targeted the management of organizational stress. The findings from the organizational stress management interventions reported strongly contribute to sport psychologists' knowledge of the effectiveness of specific programmes targeted at combating organizational stress in professional sport. Chapter 5 also makes a contribution to the organizational psychology

literature by evaluating the effectiveness of multilevel interventions, which, despite the logical rationale provided and recommendations offered (Biron & Karanika-Murray, 2014; Bowling et al., 2012; Giga et al., 2003b; Flaxman & Bond, 2010; LaMontagne et al., 2007; Kohler & Munz, 2006; Mattila et al., 2006; Nielsen et al., 2010b) have received limited investigation. Table 7.4 presents an overview of the key findings, strengths and limitations from study four (see Chapter 5).

A key contribution was that the delivery of a season-long organizational-level intervention aimed at modifying organizational characteristics (i.e., team building) in a professional sport organization was successful for improving a range of self-report measures for positive affect, coping self-efficacy, team cohesion and performance over time. These findings provide some support for the cognitive-motivational-relational theory (Lazarus, 1999), by suggesting that team building approaches comprised of goal setting may be important for working towards goals which are key to affective well-being (Daniels, 2011). The benefits of goal setting may also provide some support for the tenets of the demand-control-support-model (Karasek & Theorell, 1990) by demonstrating the role of perceived controllability for facilitating efficacy perceptions of initiating problem focused coping (e.g., see Chesney et al., 1996). In addition, the social support that can be gained from working collectively as a sports team can play an instrumental role in the sharing of emotions and strengthening social bonds (Rimé, 2009). The effectiveness of team building in enhancing professional academy rugby players' perceptions of social cohesion and performance also supports previous meta-analysis reviews in sport psychology which have identified that team building in sport teams is generally associated with greater social cohesion and sport performance (Martin et al., 2009). These findings add to the relatively mixed evidence base for effective organizational interventions in organizational psychology (e.g., see LaMontagne et al., 2007; Richardson & Rothstein, 2008).

An important finding for the organizational stress management literature relates to the evaluation of a multilevel stress management intervention (i.e., organizational- / individual-level intervention). Although coping effectiveness training with team building was effective for increasing positive affect, social cohesion and player evaluations of team performance, the overall findings suggested that coping effectiveness training was largely ineffective in providing any additional positive effects to that achieved by team building. Furthermore, it seems that organizational interventions such as team building alone are sufficient for improving professional sport performers' affect, coping self-efficacy, team cohesion and performance. Although there are very limited multilevel interventions that have been

Table 7.4. Overview of key findings, strengths and limitations from study four.

Chapter	Purpose	Methods	Key Findings	Strengths	Limitations
5	▪ To evaluate the effectiveness of organizational-level stress management in the professional rugby academy. ▪ To evaluate the effectiveness of multilevel stress management for improving sport professionals' affect, coping self-efficacy, team cohesion and subjective performance over time.	▪ Quasi-experiment with non-equivalent control design. ▪ $N = 57$ academy rugby players. ▪ Professional academy players participated in either a team building programme ($n = 28$) or coping effectiveness training (CET) with team building programme ($n = 12$). ▪ $n = 17$ participants from a non-equivalent academy team acted as a control group. ▪ Measures completed at baseline, mid-point, and post-intervention for the following variables: affect, coping self-efficacy, team cohesion, subjective individual and team performance. ▪ Professional academy players completed a process evaluation survey at midpoint and	▪ Both intervention groups displayed a positive linear change over time in positive affect and group integration to social activities. These changes from pre- to post-intervention were greater for the team building group and more delayed for the CET with team building group. ▪ Both intervention groups displayed a positive linear change in attraction to group socials and subjective evaluations of team performance. These changes from pre- to post-intervention were greater for the CET with team building group. ▪ The team building group also displayed a positive change from pre- to post-intervention for group integration to tasks, subjective evaluations of individual performance, problem-focused coping and stopping unpleasant emotions and thoughts. ▪ Problem-focused coping and stopping unpleasant emotions and thoughts were predicted by	▪ Supports the effectiveness of organizational stress management in a professional sport organization. ▪ Contributes to the evidence base for multilevel stress management in organizations. ▪ Multilevel growth curve modeling provides evidence of nonlinear behaviour change in organizational interventions. ▪ Controlling for selection diluted the likelihood of a Hawthorne effect being found. ▪ Conducting a 3-month follow-up to assess if behaviour change was maintained. ▪ The detail by which organizational	▪ Small sample size for an organizational intervention. ▪ Non-participation of academy staff. ▪ The time structure of intervention sessions did not follow a consistent pattern until after midpoint measurement. ▪ High baseline scores for coping self-efficacy for the CET with team building group meant the intervention was not effective over time. ▪ Unable to control for process evaluations as the control group did not complete this data. ▪ Unable to evaluate organizational outcomes (e.g., retention).

post-intervention.	selection.	interventions were evaluated (e.g., by growth curve modeling, process evaluations and researcher reflections).
▪ A randomized sample of professional academy players ($n = 18$) completed a 3-month follow-up of outcome variables.	▪ Process evaluations found that participants in the CET with team building group had higher macro process evaluations (e.g., satisfaction with frequency of sessions and intervention delivery) on average than the team building group.	
▪ Multi-level growth curve modeling was conducted to analyse nonlinear change in the outcome variables over time and between experimental groups.	▪ Micro process evaluations (e.g., believing the sessions had an impact and motivation to participate) increased from midpoint to post-intervention for the CET with team building group, in comparison to a reduction for the team building group (ns, $p > .05$).	
▪ Linear and quadratic growth models were considered.		
▪ Selection (i.e., the number of competitive games played during the season) acted as a control to explain between-person variance.	▪ Both intervention groups had increased their perceptions of contextual processes from midpoint to post-intervention.	
	▪ Overall researcher reflections suggest that a range of organizational staff factors could have undermined and facilitated the effectiveness of the stress management interventions.	

evaluated in the literature, this discussion provides an intriguing comparison of the extant sport and organizational psychology literature in regards to the effectiveness of multimodal-cognitive-behavioural-based programmes.

In so far that Chapter 2 found that multimodal stress management interventions were generally effective for optimising competitive stress processes in sport performers, the reviews conducted on occupational stress management interventions suggest that the evidence in favour of effective multimodal programmes is generally weak for optimising psychological responses and resources (Richardson & Rothstein, 2008; van der Klink et al., 2001). One explanation for why this multilevel intervention was generally not effective for this professional sport team may be that the planning of delivering several intervention components is likely to require significant time and resources in comparison to the development of a unimodal programme (Maynard et al., 1998). Furthermore, this could compromise the ability to implement additional stress management components appropriately (Bowling et al., 2012). This explanation would support the meta-analysis findings for occupational stress management interventions by Richardson and Rothstein (2008). Their findings revealed moderate to large effect sizes ($d = > 0.61$, p $< .001$) for single and two component intervention programmes, but non-significant and negative effect sizes for three component intervention programmes ($d = -0.10$, ns).

Another possible explanation for why the multilevel intervention was largely not effective could be that both intervention components were perhaps addressing similar key underlying organizational issues (e.g., communication, cohesion), therefore incremental effects for the most part were unlikely to be observed. Indeed, these findings would support the notion that the implementation of an organizational-level intervention could work to the detriment of more complex individual-level components (Briner & Reynolds, 1999). Nonetheless, it should be noted that participants in the coping effectiveness training with team building programme did display improved perceptions of positive affect, social cohesion and team performance over time. Therefore, multilevel stress management interventions do appear to hold some promise for optimising organizational characteristics, affective well-being and performance evaluations in sport teams. It could be suggested, however, that the multilevel intervention conducted in Chapter 5 may not have been an appropriate *person-intervention fit* (Randall & Nielsen, 2012) for addressing the nature of the sport sampled. For example, in team sports like rugby union, performance is dependent on successful cooperation, communication and coordination of team mates. Therefore, team focused interventions such as team building may be suitable but individually-focused

initiatives may not be. In comparison, where other team sports are dependent on individual performances (e.g., cricket), it may be the case that teams may benefit from multilevel interventions.

A unique finding in the context of professional sport was that regardless of intervention group, academy rugby players who were selected the most often to compete in competitive matches displayed higher self-efficacy evaluations for problem-focused coping and stopping unpleasant emotions and thoughts. Although there may be limited empirical evidence to support this finding, this may suggest that selection is an important organizational resource which directly supports the development of coping self-efficacy. In so far that selection provides greater opportunities to expose individuals to a performance environment, this may enable more attempts to apply and learn from eliciting different coping behaviours, which could in turn develop greater perceptions of coping effectiveness.

In attempting to rigorously interpret the effectiveness of these interventions, it was important to validate the findings by conducting a manipulation check and a follow-up assessment. Although such checks are important for demonstrating stronger intervention efficacy (American Psychological Association, 2002), the stress management interventions conducted in sport to date have largely neglected the integration of such checks (see Chapter 2). The findings reported from the brief process evaluation (Chapter 5) and participant / researcher perceptions (Chapter 6) make a strong contribution to the sport psychology literature. This is because the evaluation of the interventions goes beyond traditional methods of validating the statistical significance of intervention effects. Moreover, by elaborating on the conditions that may explain the link between intervention processes and outcomes, this may advance psychologists' understanding of the key processes which should be tackled or optimised in sport organizations, to facilitate the future likelihood of effective stress management interventions.

A key finding in this regard was the observed changes and between-intervention group differences in macro, micro, and contextual processes. Since a number of intervention modifications were made midway through the season-long intervention programmes (e.g., more regular coping sessions) after consultation with academy players and staff, the steeper increased quadratic changes over time that were observed for the coping effectiveness and team building group could perhaps be explained by this group displaying generally higher and improved ratings for macro (e.g., satisfaction with frequency of sessions and intervention delivery) and micro processes (e.g., believing the sessions had an impact and motivation to participate). Indeed, such findings could not be explained by the sole statistical evaluation of

behaviour change and previously adopted social validation methods. Similarly, the observation that intervention groups had increased their perceptions of contextual processes was further explained in Chapter 6 whereby participants felt that managerial staff did not value the importance of integrating the organizational-level programmes enough. Furthermore, other organization priorities led to the scheduling of interventions to be delivered late in the evenings after a typical day of intense physical training sessions for players, which affected participants' motivation to engage in sessions.

These findings make a contribution by supporting previous organizational psychology research which has identified similar process-related issues when delivering organizational stress interventions (DeJoy et al., 2010; Landsbergis & Vivona-Vaughan, 1995; Murta, Sanderson, & Oldenburg, 2007; Nielsen & Randall, 2012; Nielsen et al., 2007, 2009; Randall et al., 2007, 2009). Specifically, the identification of varying and dynamic macro, micro and contextual processes provides support for a recently proposed evidence-based model for evaluating organizational-level interventions (Nielsen & Randall, 2013). This model identifies three levels (e.g., mental models, intervention and context) by which applied researchers can identify the extent to which process issues are having an impact on intervention outcomes. Although some of these process issues may be unique to the context of professional sport organizations, the findings suggest that the process conditions by which our organizational interventions were effective may be able to transfer to other organizational contexts. Furthermore, although the integration of evaluating process issues in organizational interventions is still in its infancy (cf. Nielsen & Randall, 2013), this is the very first sport psychology study to consider the identification of intervention process-related factors. Therefore, there is still a great deal of lessons to be learned when intervening in professional sport organizations. Furthermore, in taking these points together with the earlier findings reported in this thesis, there are a number of important practical implications for applied researchers and sport individuals operating in sport organizations to consider.

7.2 Implications for Research and Practice

The findings reported from Chapters 4 and 5 suggest that the design, delivery and evaluation of organizational-level interventions can be maximised by the input and unwavering participation of as many members of the sport organization as possible. In particular, coaches, managers and other influential decision makers in sport organizations have an extremely influential role to play in activating participant engagement and behaviour change. Coaches and managers should be encouraged to actively participate in all phases of an organizational intervention, including the preparation, auditing, action planning,

implementing and evaluating stages (Nielsen et al., 2010b). Therefore, applied psychologists and researchers need to educate these individuals of their vital influence in organizational change. In addition, coaches and managers need to be informed of the importance of keeping sport performers involved in the participatory discussions relating to each stage of the intervention. However, one of the common issues that psychologists may have to approach with coaches, managers and key decision makers of sport organizations is that stress management is not simply an individual's responsibility; it is also the responsibility of the organization within which individuals operate (Dewe et al., 2010; Fletcher et al., 2006). To combat these applied challenges, an important starting point could be exposing coaches and managers to individual-level programmes to support their own management of organizational stress. As was demonstrated in the stress audit reported in Chapter 4, coaches and managers do encounter a range of organizational stressors and experience negative affective responses pertaining to their job in professional sport. However, these individuals who are judged on their ability to develop sport performers are more likely to prioritise actions for the management of sport performers' stress experience. Therefore, individual-level interventions aimed at supporting coaches and managers at the outset may be important for improving both a positive readiness for organizational change and active support for future organizational-level interventions (Nielsen & Randall, 2009; Nielsen et al., 2010c). Our findings at an organizational-level suggest that sport organizations who provide a forum space for individuals to share their joys and frustrations with colleagues may be an important supportive coping mechanism that may in turn be productive for organizational functioning and productivity.

From an applied research perspective, multilevel approaches to organizational stress management in sport organizations still hold some promise for affective well-being, social functioning and performance evaluations. A key implication from our research suggests that delivering different interventions concurrently to the same participants may not be beneficial for the most part (see Chapter 5). Rather, any positive effects observed from one programme may dilute the effects of another (Briner & Reynolds, 1999; Bowling et al., 2012). This is because where complex programmes require individuals to practice and learn a range of taught strategies the outcome could be that individuals feel overtaxed and only learn some useful techniques, but, perhaps not particularly well. Therefore, multilevel interventions may be more effective when practitioners consider the separate delivery of individual- and organization-level programmes. Alternatively, interventions could be delivered in succession, such that the evaluation of one intervention leads to the tailoring, delivery and modification

of another. Provided that interventions receive the trust and backing of organizational management (cf. Fletcher et al., 2006), this sequential approach may facilitate the likelihood of sport organizations integrating and maintaining stress management programmes as part of their structured schedules. Furthermore, where the potential maintenance of interventions can lead to greater well-being and performance development in professional sport academies, this could motivate a national agenda for governing bodies of sport academies to consider the integration of organizational stress management in to policy.

To tailor appropriate interventions for specific sport organizations, sport performers, coaches, managers and psychologists need to work collaboratively. This is vital for periodically identifying the main periods of a season where members at different levels are likely to experience considerable strain as a result of increased or more intense organizational demands. Identifying these key periods would support organizations to encourage their members to develop planned responses to potentially threatening events that may occur in the future. This is important for promoting greater proactive methods of coping under increased pressure (see Chapter 3). For sport performers, the development of adaptive coping methods could be particularly important towards the end of a professional sport contract, when players are informed whether or not they are going to be retained, which may create greater career uncertainty. The findings reported in Chapter 3 also suggest that coaches and managers should be aware of different sportsmens' personalities, as this may assist organizations in providing greater support to those who will most likely appraise events as threatening and respond negatively during busy training schedules.

In sport cultures where a push for high productivity results in being deliberately exposed to unreasonable physical pressures (e.g., prolonged high intensity training), a periodic single assessment of psychosocial stress may not always be entirely straightforward. In line with the findings reported in Chapter 4, this suggests that a range of longitudinal assessments, interviews and observation methods are likely to provide a greater overall perspective. Obtaining this information from a range of sources will be important for providing performers, coaches, managers, and researchers with the most accurate illustration of the specific demands which individuals find most demanding. Furthermore, this information will also be important for understanding whether the coping behaviours that these individuals adopt for tackling particular demands are beneficial for well-being and performance. From a practical perspective, a comprehensive examination of stress experienced by organizational members at different levels is beneficial in developing tailored stress management programmes for the individuals and groups that may be most at risk of

negative outcomes to stress.

A comprehensive examination of stress is also important for reasons relating to intervention design and processes. Firstly, research suggests that shorter intervention programmes may be more effective than longer duration interventions (Richardson & Rothstein, 2008). Therefore, similar to competitive stress management interventions, organizational stress management programmes could be relatively short in duration, and could be more effective when delivered in the lead up to or during these particular stressful periods of the year. In this way, if organizational members have previously received a stress management intervention, they could later receive 'refresher' sessions around these previously identified periods (Bowling et al., 2012). This will likely be important for reinforcing previously acquired knowledge and applying these skills in pressurised environments. Provision of refresher sessions is also likely to be particularly important in the context of professional sport teams, where the optimisation of cohesion and goals are required in the midst of performance environments where annual team socialisation occurs.

Secondly, to reliably evaluate the effects of interventions on desired outcomes, the research evidence-base for organizational stress management is likely to benefit from measuring participants' baseline stress at a time during the year when levels of stress responses are particularly high, in comparison to measuring baseline stress at a time in the year when levels of responses to stressors are comparatively lower. This was observed in Chapter 5 whereby participants in the coping effectiveness training with team building intervention displayed early ceiling effects for coping self-efficacy; thereby preventing further improvements in the outcomes. Therefore, the timing of baseline and intervention evaluation is important for decision makers (i.e., coaches, managers) in sport organizations and applied researchers to be cognisant of. This is because the timing of measurement is crucial in determining the true validity of intervention effects (Biron & Karanika-Murray, 2014; Probst, 2013; Randall & Nielsen, 2012). Indeed, when the time of measurement is not optimally in line with positive changes that have occured in the organization, then this could represent a poor *environment-intervention fit* (Randall & Nielsen, 2012). Similarly, applied researchers need to be aware that individuals participating in stress management interventions may adapt to the intervention over time (Bowling et al., 2012). In other words, although organizational members' needs may have warranted intervention at the outset, the suitability of an intervention may no longer be required prior to post-intervention evaluation. Where this occurs, it is likely that no positive behaviour change will be found at post-intervention. According to the intervention fit model proposed by Randall and Nielsen (2012), the latter

may represent a poor *person-intervention fit*.

The overarching message from the above subsections is that applied researchers and decision makers in sport organizations need to be better educated in the knowledge that intervention effectiveness is often achieved at the outset, before stress management interventions have been designed or delivered. Therefore, the rigour with which applied researchers are able to monitor organizational members' stress prior to delivery will play an important contributory role in the effectiveness of future organizational interventions. However, practitioners also need to be aware that pre-made intervention 'packages' are unlikely to fit with the ongoing transactional nature of the organizational environment and the individuals interacting within it. Therefore, as applied researchers and practitioners we need to be more open and receptive in adapting our programmes during the course of our scheduled interventions to parallel the dynamism of personal and environmental changes. In relation to the rigour of reporting, designing, and evaluating effective (and ineffective) stress management interventions, there are number of research recommendations which should be prioritised.

Firstly, the systematic reviews of stress management interventions that have been conducted in sport (see Chapter 2) and organizational environments (LaMontagne et al., 2007; Richardson & Rothstein, 2008) highlight that applied researchers publishing intervention research need to provide greater detailed explanations relating to intervention efficacy. Specifically, it is often the case that journal article space precludes a thorough step-by-step description of the full content and breakdown of intervention initiates. This should be a key priority for advancing the field of evidence-based stress management interventions for various organizational contexts. Furthermore, it is an important responsibility of applied researchers in facilitating the translation of findings to advance greater evidence-based practice (Probst, 2013). However, this responsibility is perhaps not only a duty of the authors submitting papers to journals for review, but it is also the responsibility of journal editors to strongly encourage this information prior to publication; if necessary, as supplementary online materials. A straightforward solution is for authors to either offer such information as supplementary online materials or on request from readers. A related issue on descriptive information is the need for stress management researchers to be explicit in their publications regarding key participant information (e.g., age, gender, competitive standard, type of sport, sport occupation) (see Chapter 2). Dissemination of this information can be readily addressed by intervention researchers. This dissemination will strongly contribute to the current evidence base for understanding the main factors that moderate intervention effects for

particular sport populations. Such moderators are already credible, as Chapter 3 demonstrated the importance of personal (e.g., core self-evaluations) and situational factors (e.g., key decision makers) that directly influenced the way in which professional rugby academy players appraised, responded and adapted to their organizational environment. A related implication for best practice is the lack of follow-up assessments that are conducted by researchers to evaluate sustained behaviour change. In the case where organizational interventions are found to be statistically effective, then follow-up assessments are crucial for understanding how enduring behaviour change may be and at what point positive changes to outcomes subside. To repeat an earlier point that was made, from a practitioner perspective this information is necessary for planning when to offer refresher sessions to sustain positive affective well-being and adaptive responses to organizational stress.

One of the main priorities for improving organizational intervention efficacy should be the provision of thorough manipulation checks to assess whether participants felt that the interventions were effective and to provide greater confidence in the validity of the findings. Too often is the case it seems whereby interventions are found to be statistically significant but participants perceive the programmes to have little impact on their desired effects (and vice-versa). Therefore, in light of the limited number of stress management interventions in sport that have previously provided manipulation checks, this needs to be a future priority for intervention designs in this area. Furthermore, the findings from our organizational interventions in professional sport illustrate that there are a wide range of process issues that psychologists must consider throughout the intervention phases of participatory design, planning, delivery and evaluation. These process issues are important for not only contributing to our knowledge of what aspects of interventions are effective but also under what contextual circumstances. For example, organizations interested in implementing individually-targeted interventions should first assess individuals' readiness for change, as this is largely associated with effective intervention outcomes (Bowling et al., 2012). However, our findings also suggest that the management team implementing individual-level programmes also need to demonstrate a readiness for change, as participants receiving the interventions can feel less motivated to participate when they perceive that management does not value the importance of such interventions in their organization.

When attempting to modify the organizational environment in which sport personnel operate, applied researchers and consultants need to be aware of the potentially toxic effect of emotional contagion which could be an inherent daily occurrence and somewhat unavoidable in sport organizations (e.g., see Chapter 4 and Chapter 6). For example, in the case where

coaches and managers display maladaptive coping behaviours and dysfunctional emotional expression in response to organizational stressors, this could impair their own as well and other members' well-being (Bowling et al., 2012). Undoubtedly, the opposite could also be said for coaches and managers who frequently display adaptive coping behaviours and express positive emotions with other individuals. Therefore, when evaluating the processes which might explain intervention successes or failure, psychologists might wish to monitor the degree of emotional contagion that is experienced by individuals in an organization at any point in time, as this may help to explain participants' affective and motivational states during the course of interventions (Biron & Karanika-Murray, 2014).

Taking these points together, by regularly monitoring, interacting and adapting to the organizational sport environment in which individuals operate, it is possible to achieve effective organizational stress management. However, such success may be due to a wide range of process issues that need to be considered and optimised. Therefore, applied sport psychologists need to begin to unravel the main process issues that may facilitate or hinder effective organizational interventions. This should be the next priority in advancing our knowledge of effective organizational stress management interventions in sport organizations.

7.3 Strengths and Limitations

Although the strengths and limitations of each study reported have been highlighted in their respective chapters, the following presents a consideration of some of the general strengths and limitations of this thesis. One of the main strengths for advancing the field of organizational stress and its management was the strong contribution offered from the extant organizational psychology literature. This contribution enabled the consideration of differing work stress models (Johnson & Hall, 1988; Johnson et al., 1989; Karasek, 1979) and frameworks (Cooper et al., 2001) to advance our understanding of how professional sport performers manage their organizational stress experience and under what circumstances (Daniels, 2011; Nielsen & Randall, 2013). In addition, this thesis has also demonstrated how sport psychology research in this area makes a contribution to the evidence-base in organizational psychology. Firstly, sport is a context in which multilevel testing can be facilitated (Wolfe et al., 2005). In this way, the thesis demonstrates how professional sport performers and teams face pressures for selection, career development and cooperation within an organizational environment characterised by frequent change (e.g., team socialisation). These examples are likely to be analogous to pressures faced by individuals who function in other high performance organizational environments (e.g., surgeons, combat units). In

addition, although emotions are an inherent part of sport, the thesis makes a contribution to organizational psychology by providing insight into how emotions provide an adaptive role which may be important for social functioning, coping and performance in organizations.

Another strength which relates to the contribution of sport to organizational psychology is the reemphasis of the role of cognitive appraisals in shaping individuals' transactions with the organizational environment (see Chapter 3). Furthermore, the investigation of a professional sport organization has provided further insight into the ways in which individuals' interactions and responses to organizational stress may vary according to important personal (core self-evaluations) and situational characteristics (job role / position, key decision makers, selection). These are characteristics which are readily transferable to other occupations. The methods by which sport psychologists have attempted to understand organizational stress also makes a contribution to organizational psychology. The vast qualitative research conducted in this thesis and previous studies in sport provides organizational psychologists with a richer, more animated and emotive insight of the unique nature of organizational cultures (e.g., bullying) and contexts (occupational transitions) that are encountered in varying organizational levels and roles. Such antecedents to stress may be less likely to be recognised in the predominantly quantitative job research community (Mazzola et al., 2011; Saam, 2010). In the context of organizational research conducted in smaller institutions (e.g., professional sport organizations), our findings contribute to organizational psychology calls for greater utilisation of mixed method frameworks (Biron et al., 2006; Elo et al., 2008; Kompier et al., 2000; Nielsen et al., 2010a, 2010b) to gain a more complete appreciation of the nature of organizational stress in ways not possible from the sole use of either quantitative or qualitative methods alone. One of the main contributions of researching in sport organizations was in relation to the limited evidence base for effective organizational stress interventions. Our findings showed that in the context of a professional sport organization, a season-long intervention targeted at modifying organizational characteristics (e.g., cohesion and communication) was effective for improving positive affect, coping self-efficacy, social cohesion and performance. In addition, the consideration of process issues highlights that there are many similar threats to internal and external validity of interventions in sport as there are in other organizational settings.

A key strength of this thesis was that the design of organizational stress management interventions, and the preceding studies which helped to shape them, were heavily informed by the cognitive-motivational-relational theory of stress (Lazarus, 1991a, 1999; Lazarus & Folkman, 1984), which has been previously applied in both fields of sport (e.g., Fletcher et

al., 2006) and organizational psychology (e.g., Cooper et al., 2001). Although intervention research is typically criticised for lacking a theoretical foundation (Michie & Prestwich, 2010; Scharf et al., 2008), our examination of organizational stress processes and the characteristics associated with it were strongly grounded in a transactional stress framework. In addition, the research decisions which were made throughout the studies conducted were also a result of careful consideration of an amalgamation of important theoretical and practical information. This information included: additional models of stress in the workplace (Johnson & Hall, 1988; Johnson et al., 1989; Karasek, 1979); empirical research from both sport and organizational psychology; and, the contextual understanding of how this evidence base can be applied to the specific organizational setting.

The integration of innovative and varied research methods was believed to be a continuing strength throughout the reporting of this thesis. In particular, the inclusion of longitudinal research designs (see Chapters 3 and 5) to assess within- and between-person changes is an important contribution to the organizational stress literature. This is because no previous quantitative research in sport has examined these associations in such a manner, or within a professional sport organization. However, it is acknowledged that the experience sampling study (Chapter 3) analysed the data in cross-sectional fashion. Therefore, only the averaged patterns of associations were measured. This cross-sectional analysis neglected to consider how organizational stress associations may vary according to particular stressors or time of day.

Another strength in this regard relates to the rigour adopted to evaluate whether given interventions were effective for improving the outcome variables measured (see Chapter 5). Firstly, growth curve modelling to assess curvilinear relationships between the intervention groups was believed to be a strength. This is because when statistical relationships are observed to show delayed accelerated improvements over time, then the plotting of linear improvements or decrements to the outcome variables provides an inaccurate estimate of the discontinuity of interventions at post-intervention or follow-up (Cook & Shadish, 1994). Furthermore, in so far that the non-equivalent control group did not necessarily require an intervention, dummy coding the intervention groups (e.g., 1 = team building, 0 = coping effectiveness training with team building + non-equivalent control group) allowed for a greater comparison of whether each treatment group was more effective over time than the average of the remaining two groups combined. In addition, the ability to control for competitive game appearances for all intervention and control groups enabled us to guard against possible Type III error. In this intervention context, Type III error refers to

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hypothesising that experimental and control groups will be statistically different, but being wrong about the direction of the difference (Cook & Campbell, 1979). This was important in so far that the intervention findings reported showed that the number of competitive games that individuals were selected for was directly related to coping self-efficacy variables. A similar strength was the integration of process evaluation surveys which have previously not been integrated to evaluate sport psychology interventions. Although the main purpose of these evaluations was to validate the intervention effects, it was not possible to control for process evaluations to consider their potentially direct effect on outcome variables. This is because the process evaluation data was only completed at two time points by the intervention groups and not the control group. Nonetheless, these process issues supported the rigorous interpretation of curvilinear relationships that were observed from the organizational stress management interventions.

An initial challenge at the outset of this thesis which became a key strength was the gaining of access to a professional sport organization and the investigation of their members over the course of approximately 22 months. Using a range of electronic diaries, interviews, focus groups, questionnaires and diary notes, this enabled a comprehensive assessment of organizational stress as it was experienced by professional sport performers operating in this organization. A challenge rather than a limitation was perhaps the regular frequency with which these assessments were conducted. Put simply, those applied researchers who are better able to embed in to organizations on a more full-time basis (of short or longer duration) are likely to gain a more holistic understanding of the organizational environment and processes. Moreover, the influence that researchers may gain from being a more regular 'fixture' is undoubtedly likely to be important for optimising members' readiness for organizational change. In this regard, it should be acknowledged that the inability to maintain organizational staff involvement and participation in the interventions was a key limitation. This was unfortunate due to the key influencing role these individuals had in planning and scheduling the interventions, as well as the degree to which their well-being and motivations at different times in the year may have had a knock on effect on performers' motivation to participate in the interventions.

In considering some other potential limitations of the thesis, the ability to estimate sufficient power for cross-level interaction effects in studies two and four was influenced by the small sample sizes of the professional sport organization sampled (Mathieu et al., 2012). This meant that the power to detect reliable associations in Chapter 3 and intervention group effects in Chapter 5 was poor. Therefore, our reports reported for within- / between-group

differences in these studies could appear somewhat inconclusive, due to an insufficient level of power to detect an existing effect. Another limitation of the studies reported in this thesis was the ability to *objectively* measure stress and related outcomes (e.g., burnout, absenteeism, injury, performance). Indeed, the objective measurement of these variables has proved to be a challenge for organizational psychology research more generally. However, sport environments could provide an ample opportunity to measure physical strain in organizational settings. For example, sport performers could be measured for their blood pressure, heart rate, or hormone levels during pressurised training and competition settings. On the other hand, it may be difficult to ascertain whether such measures of physical strain are due to psychosocial organizational stressors, or the physical exertion being applied (cf. Bowling et al., 2012). Nonetheless, all of the data collected in this thesis are based on statistical associations of self-report data and qualitative perceptions. In defending this limitation, however, there is some evidence to suggest that it is more appropriate to measure organizational conditions as perceived rather than objectively. This is because perceptions of organizational conditions may be a better indicator of behaviour and well-being than more objective measures (Leka et al., 2005). On this point, it can be observed that our interventions focused on assessing short-term individual-level outcomes (e.g., affect, coping, cohesion). However, we were unable to evaluate long-term organizational-level outcomes such as productivity and retention. This is a common limitation in organizational-level intervention research (Richardson & Rothstein, 2008). Although we collected data on the professional sport performers who were released from the professional academy at the end of the intervention programme, this was not a reliable organizational-level outcome due the nature of cohort year groups and cyclical turnover (Cook & Campbell, 1979) that typically occurs at the end of a 3-year professional academy contract.

From the perspective of generalising our findings to other organizational settings, an external validity issue concerns the nature of the organizational population that was sampled. As our findings suggest that organizational-level interventions could be effective for individual-level outcomes in sport organizations, this finding is largely atypical of the organizational intervention studies that have been reviewed to date (LaMontagne et al., 2007; Richardson & Rothstein, 2008; van der Klink et al., 2001). Although this finding makes a contribution to the evidence base, we may need to embrace a degree of caution in the extent to which the positive changes observed in this sport sample could also be exhibited by employees in other organizational contexts. Although there are clearly synergies as well as unique differences between different organizational contexts, replication of organizational-

level interventions with sport performers and other personnel are clearly needed before we can exuberate more confidence in the effectiveness of organizational stress management interventions in professional sport.

7.4 Future Research Directions

In taking all of the earlier study findings and discussion points together, a selection of future research directions have been suggested to consolidate and advance some of the findings reported in this thesis. Firstly, the findings from Chapters 3 and 5 highlight the importance of considering how other models of workplace stress may compliment or extend transactional approaches to understanding stress in the organizations. It was found that by applying the main tenets of the demand-control-support-model to the transactional stress research conducted, it was possible to develop a greater insight into how eliciting control and support may be particularly important for coping with organizational events. Indeed, researchers who are interested in investigating how sport performers and personnel cope with organizational stressors should continue to measure coping behaviours and functions as interconnected thoughts and actions rather than in isolation from one another (cf. Lazarus, 1999). As control and support behaviours have been found to be enacted to solve problems and express affect in organizational settings (Daniels et al., 2008, 2009, 2011, 2013), future researchers could examine to what degree control and support behaviours might also be elicited to reappraise demands or disengage / avoid them. This research would provide a greater understanding of the associations between coping behaviours and functions and to what extent particular combinations are more adaptive for combating organizational stressors. Furthermore, researchers conducting longitudinal examinations of how athletes cope with environmental demands over time could measure the abovementioned variables alongside the utilization of the recently validated organizational stressor indicator for sport performers (OSI-SP; Arnold et al., 2013). In this way, it may be possible to measure baseline perceptions of various organizational stressors, and then track over time the intensity, frequency and duration of previously identified subscales which relate to the main stressors that they encounter in their organizational environment.

On this point, stress is an ongoing dynamic process which regularly changes over time (Folkman & Lazarus, 1985). Despite this point, longitudinal designs in this area are very much lacking. Organizational stress in sport needs to be measured with longitudinal designs in the future. This is because there appears to be variation within the patterns of appraisals, affective responses and coping methods. Furthermore, there is also significant variation between individuals. A priority for future research may be to replicate such a design, with

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consideration for between-person variance according to the specific organizational stressor encountered and the period in a competitive season when this occurred. Given the limited research that has been conducted with other 'performers' (e.g., coaches, managers, support staff) who operate in sport organizations, a research priority should be the longitudinal examination of organizational stress processes in these individuals. This is likely to be important for identifying how their patterns of experiencing stress may parallel the patterns that are experienced by their sport performers. Such research findings may be able to indicate the degree to which sport performers experience strain as a result of observing the strain experienced and maladaptive coping efforts elicited by their coaches and managers (Totterdell, Hershcovis, Niven, Reich, & Stride, 2012).

In relation to this population of individuals, research evaluating the effectiveness of stress management interventions with coaches and managers seems fruitful. Furthermore, perhaps the training of such individuals to deliver interventions in their organization (e.g., team building, goal setting), may provide us with greater insight into whether exposing these key decision makers to psychosocial interventions may promote a readiness to change, which in turn may be instrumental in future planning of organizational-level interventions (Nielsen & Randall, 2009; Nielsen et al., 2010c).

Future researchers interested in evaluating the effectiveness of organizational stress management interventions in sport could compare the effectiveness of longer duration programmes to that of shorter duration programmes. This is an interesting future direction from a practical and research design perspective. Longer duration programmes could be perceived by participants, organizations and researchers to require more rigorous planning, greater time resources and regular assessments of outcome variables being measured. In comparison, shorter programmes may be perceived by participants and organizations to be more cost effective and practical to implement when needed. Although meta-analyses findings in organizational psychology suggest that shorter term programmes are so far the most effective from a limited evidence base (Richardson & Rothstein, 2008), it would seem more probable that longer sustained programmes which are integrated into organizational sport structures and schedules could be more effective in the long-term. This would support the general belief that it could take up to one year before validly confirming that any sustainable behaviour change has occurred from the delivery of interventions (Martin et al., 2005).

Finally, the evaluation of the organizational stress management interventions reported in this thesis suggests that future research needs to pay greater attention and consideration to

measuring contextual and process issues. These process evaluations may be able to provide greater understanding of the circumstances by which the effectiveness of interventions may be facilitative or impeded. Reporting such information will be important for understanding whether the interventions delivered appropriately matched the dynamic needs of organizations and the individuals operating within it (Randall & Nielsen, 2012). This information is also crucial for bridging the gaps between previously devised stress management intervention frameworks, intervention methods and practice (Biron & Karanika-Murray, 2014).

7.5 Concluding Remarks

In the 1950s, Hans Seyle had the foresight to suggest that stress is an unavoidable consequence of operating in organizations. The likely implication of this statement was that we as individuals need to learn how to adapt to this stress. Since this time, organizational psychology research has employed different theoretical explanations for understanding the experience and outcomes of stress in different organizational settings. This research has suggested that the management of stress in organizations is not only the active responsibility of the individuals who operate in this environment, but it is also the responsibility of organizations to provide the optimal conditions and resources necessary to facilitate individuals' well-being and productivity (Daniels, 2011; Dewe et al., 2010; Richardson & Rothstein, 2008). One organizational setting in which the management of stress has not been considered is the professional sport arena. This is despite over a decade of sport psychology research which has identified that the organizational environment is a breeding ground for stress at the highest competitive levels of elite and professional sport (Arnold & Fletcher, 2012; Fletcher & Hanton, 2003; Fletcher et al., 2012a; Hanton et al., 2012; Kristiansen et al., 2012; Woodman & Hardy, 2001).

The Design and Delivery of Stress Management in Professional Sport has presented the first set of studies in sport psychology to examine the management of organizational stress processes as it pertains to sport performers who operate in a professional sport organization. In undertaking this programme of research, the cognitive-motivational-relational theory of stress (Lazarus, 1991a, 1999; Lazarus & Folkman, 1984) provided the lens through which sport performers' interactions with their professional environment, and, the conditions by which these interactions may vary could be understood. In addition, the comprehensive examination of organizational stress in this professional sport organization allowed for the shaping, participative design and delivery of organizational stress management interventions to be evaluated. The findings of these interventions suggest that

initiatives which are aimed at modifying specific organizational characteristics of the environment may be associated with greater perceptions of affective well-being, team functioning and performance evaluations for those sport performers who operate in a professional organization. It is hoped that the methods adopted and findings generated in this thesis provide a foundation from which future stress management interventions in sport organizations can be evaluated and advanced. Such future efforts will be fundamental in changing individuals' lives for the better, both in terms of their performance aspirations and positive well-being.

Afterthought: My Experiences of Stress Management

In reflecting on my early life experiences of stress management in sport and business (see preface, pp. xii - xv), the programme of research outlined in this thesis has certainly advanced my understanding and interest in the topic. Although I am no longer a competitive sport performer, I now possess a greater appreciation for the stress management techniques which are likely to be beneficial for well-being and performance in this environment. Specifically, multimodal cognitive-behavioural techniques seem to be most favourable for individual perfomers and team building may be most favourable for sport teams. However, in line with my personal experiences in sport and from interpreting several of the findings in this thesis, perhaps what is more important is the 'inoculation process' through which performers practice and learn how to respond to different competitive scenarios. Although stress inoculation interventions were reviewed in the systematic review, I have learnt that we still lack a strong evidence base for the evaluation of such interventions applied in ecological settings. So despite reviewing 64 stress management intervention studies with competitive sport performers (see Chapter 2), I believe that there is still a lot more for us to learn in this area.

During the completion of my part-time Ph.D., I have been strongly exposed to the workplace environment as it pertains to operating in different Higher Education institutions. Similar to a number of workplace environments, I have observed a range of stressors relating to personality clashes, poor communication channels, fierce competition between teaching and research staff, staff hierarchies, high workload and bullying, to name a few. Furthermore, I have watched colleagues of varying personalities attempt to manage their stress experience in successful and unsuccessful manners. As a result of these observations and from the research conducted in a professional rugby union academy, the key learning point for me has been the importance of identifying and accepting the dispositional conditions by which people are unique in how they appraise, respond and cope with stressors. By acknowledging our dispositions and how we respond to particular stressors, I believe that this is an important step in the process of activating readiness for change. So how have I changed in relation to my experiences of stress management in recent years? On reflection, I have not resigned from a stressful job since my experiences of working in investment banking, which is a good start! Although the workplace can provide a range of intense and accumulating demands, I have begun to acknowledge that my personal experiences of organizational stress have been

influenced in part by my previous lack of self-esteem and assertiveness. This was evident in my time working for a large investment banking organization and it is still evident on occasion. However, receiving support and reassurance from colleagues and supervisors has been an important resource for helping me to reappraise previously threatening situations and to regulate my emotions.

In recent years, I have also learnt how managing my personal stress can also have an important impact on managing stress in other areas of my life. When my father passed away almost 3 years ago, my main coping mechanism for several weeks was that of problem solving and assertiveness to arrange his funeral, manage family disputes and be strong for other family members. Over several months following this, I can distinctly recall feeling a sense of strength and growth in becoming more decisive and assertive in my full-time job role. However, although I believed that I had become a more independent decision maker, I had in turn lost the confidence to ask for support and advice from others, when I probably needed it the most. What I have learnt from the research outlined in this thesis is that in many cases, the ability to seek social support from others is perhaps more beneficial for longer-term psychosocial development in comparison to receiving social support.

In addition, as I have matured from a young enthusiast of stress management in to becoming a researcher on the topic, I realise that my personal experiences have perhaps shifted from acute to more chronic experiences. For managing the latter, I have learnt that longer-term approaches to stress management are necessary for positive well-being. For example, effectively managing one's experiences of chronic stress may require a healthy fit between one's current lifestyle, exposure to challenging environments and being surrounded by the right people. I have certainly not fully mastered the effective management of my own stress experiences yet. However, I am continuing to learn about myself and how to 'thrive' under different conditions. Nonetheless, this thesis has provided me with a greater appreciation for how stress management interventions can help to change peoples' lives, and, my own.

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Appendices

Appendix 1

The following appendix contains a template example of the letter that was sent to professional sport organizations to request participation in the research studies conducted.
In addition, the original project proposal for study 2 (Chapter 3) was attached to each letter that was sent to each sport organization.

Date

Dear ,

I am contacting you with regards to a research project that I believe will be of benefit to the performance of your players and staff in preparation for forthcoming season in the [league].

To summarise briefly, the purpose of my study is to assess the psychological demands that players and personnel experience within [sport], their individual interpretations and emotional responses to these demands. The literature from sport and occupational psychology suggests that an inability to regulate one's emotional reactions to pressures may result in a performance impairment for those concerned. Therefore, my study seeks to provide valuable information that will support the performance excellence of both your players and staff at [sport organization].

We are looking to sample 40-50 sport performers and personnel from your organisation. At Loughborough, we have all of the necessary equipment at hand for this research and would be able to visit your organisation whenever is most convenient for you. The research should only require a small number of day visits over a period of 2 months, and any research findings from our collaboration would remain entirely confidential. Furthermore, provided you are satisfied with the level of service delivery and dissemination of findings, I would like to offer a number of psychological skills training programs for the players and staff, all at no expense to your organisation.

I would very much like the opportunity to discuss this project in further detail with your organisation, and would be extremely grateful for the opportunity of an interview / face-to-face meeting with your performance directors. I believe this proactive approach would allow us to discuss how such a scheme could contribute to the performance excellence of your organisation in the least intrusive way possible. I look forward to hearing from you.

Yours Sincerely,

James Rumbold BSc MSc

PhD Supervisors
Dr David Fletcher – School of Sport, Exercise & Health Sciences, Loughborough University
Professor Kevin Daniels – Business School, Loughborough University

Project Proposal

Background

During the season, the ability to manage a variety of competitive and occupational demands may be critical in facilitating the performance outcomes and psychological well-being of the performers (e.g., players, coaches and support staff) that operate within a professional sport organisation. Furthermore, the sport and occupational psychology research has shown that an inability to effectively manage such demands can lead to a number of detrimental effects on well-being (e.g., burnout, illness, depression), not to mention the likelihood of performance dysfunction.

Aims and Objectives

Under the supervision of Dr David Fletcher and Professor Kevin Daniels of Loughborough University, we would like to provide a needs analysis of the competitive and occupational demands that are encountered by your squad (e.g., players, coaches, and support staff). More specifically, we wish to assess the psychological demands that players (aged 16 upwards) and staff experience within [sport], as well as their individual interpretations and responses to these demands.

Methods

Using an event sampling method, we would supply a personal digital assistant (like a blackberry phone) to each participant. These devices would ask individuals to rate the intensity of the demands that they are currently experiencing on a daily basis, the extent to which their demands are positively / negatively evaluated, and in turn how they respond to these demands. The time taken to complete these questions is between 1-2 minutes. Participants would be required to carry the personal digital assistants with them on a daily basis (Monday – Friday) for 2 weeks in October, and 4 weeks in November. Any findings would be kept strictly confidential and disseminated back to the individuals that took part.

Practical Implications

In terms of the benefits to your working practices, the squad will be better placed to (a) identify the pressures within their job roles and (b) implement more effective strategies to cope with the demands that they experience within rugby. Previous research from occupational psychology has also provided evidence of the following outcomes of reducing workplace pressures: reduced conflict within the team, improved team effectiveness, improved job performance and satisfaction. As a result of the data that is produced from the personal digital assistants, it may be possible to deliver psychological interventions at an individual (e.g., player, coach, support staff) and organisational level (e.g., the squad) in order to help combat the pressures that are experienced. These sessions would be based on cognitive-behavioural techniques that aim to restructure the way that an individual evaluates and responds to competitive and job pressures.

Appendix 2

The following appendix includes an example participant information sheet along with a content form which was completed by participants before undertaking study two (Chapter 3).

Loughborough University

Participant Information Sheet

Research Team
James Rumbold
Professor Kevin Daniels
Dr David Fletcher

What is the purpose of the study?

This research is being conducted by Loughborough University. The study is part of a wider research project investigating performance management in professional sport organizations. We are interested in assessing the demands that you experience in your role at the academy. The research team aim to offer psychological support in the form of workshops based on the information provided.

Who is doing this research and why?

This study is being conducted by James Rumbold as part of a doctoral research project funded by Loughborough University. This research is being supervised by Professor Kevin Daniels and Dr David Fletcher.

What will I get out of taking part?

1. You will gain a greater understanding of the pressures that you experience within the Academy.
2. You will learn how to deal with pressure in the most effective way to improve your performance.
3. You will receive sport psychology support that is tailored to your needs as a member of the academy squad.

Once I take part, can I change my mind?

Yes. After you have read this information and asked any questions you may have we will ask you to complete an Informed Consent Form, however if at any time, before, during or after the sessions you wish to withdraw from the study please just contact the main investigator. You can withdraw at any time, for any reason and you will not be asked to explain your reasons for withdrawing.

Will I be required to attend any sessions and where will these be?

The main investigator will be present at the academy ground at least once a week to collect the personal digital assistants from each participant and hand them back the following week. If any additional sessions are arranged then these will take place at the academy ground.

How long will it take?

The questionnaire at the beginning of the study should take no longer than 5 minutes to complete. It is expected that the study will take 30 days to complete (approximately 6 weeks).

Each day the participants will complete questions on the personal digital assistants 2 times a day, and the questions will take 2 minutes to complete on each occasion.

Is there anything I need to do during the study?

It is very important that once you agree to participate in the research, you remember to complete the questions on the palmtops as often as you can when you are prompted by the personal digital assistant. However, if completing the questions becomes too stressful, you are under no obligation to complete it. It is very important that you keep the personal digital assistants safe in a locker when you are not completing the questions. The palmtop computers are the property of Loughborough University. If you lose it, then please notify the research team (see contacts at the top of page 1) and the Police as soon as possible.

Who should I give the questionnaire and personal digital assistants back to?

Please pass the questionnaire back to the main investigator once it is complete. The main investigator will collect the personal digital assistants every five days, recharge the batteries and return them to the participants within 3 days.

What will I be asked to do?

The research requires that you complete a questionnaire first, and complete a small number of questions on a palmtop computer, twice a day for five working days each week. The study will be carried out in the first two weeks of October, and then again for four weeks in November. We do not ask you to identify yourselves on either the questionnaire or the palmtop, so you are assured complete confidentiality. The answers will remain confidential to the research team, and only similarities across participants will be reported.

Will my taking part in this study be kept confidential?

Yes. Each participant will be given an identification code (a number) so as not to be identifiable by name. Information on age and will be used to match participant data at measurement occasions. All data will be held on computer within a statistics software package. Only the investigators in the research project will have access to the data file, which will be password protected. In keeping with the data protection act of 1998, all of the findings will be stored for 10 years and kept safe in a lockable filing cabinet.

What will happen to the results of the study?

The findings will be used in a presentation on these issues for the academy players and staff. You will be invited to the presentation, which is a chance to discuss the findings and what they mean.

I have some more questions who should I contact?

Please contact the main investigator (James Rumbold, j.l.rumbold@lboro.ac.uk).

What if I am not happy with how the research was conducted?

The University has a policy relating to Research Misconduct and Whistle Blowing which is available online at http://www.lboro.ac.uk/admin/committees/ethical/Whistleblowing(2).htm.

Loughborough University

Academy Rugby as it is Experienced

INFORMED CONSENT FORM

(to be completed after Participant Information Sheet has been read)

The purpose and details of this study have been explained to me. I understand that this study is designed to further scientific knowledge and that all procedures have been approved by the Loughborough University Ethical Advisory Committee.

I have read and understood the information sheet and this consent form.

I have had an opportunity to ask questions about my participation.

I understand that I am under no obligation to take part in the study.

I understand that I have the right to withdraw from this study at any stage for any reason, and that I will not be required to explain my reasons for withdrawing.

I understand that all the information I provide will be treated in strict confidence and will be kept anonymous and confidential to the researchers unless (under the statutory obligations of the agencies which the researchers are working with), it is judged that confidentiality will have to be breached for the safety of the participant or others.

I agree to participate in this study.

Your name _____

Your signature _____

Signature of investigator _____

Date _____

Appendix 3

The following appendix includes the personal digital assistant items which were programmed for participants in study two to complete twice a day, five days a week, for a total of six weeks (see Chapter 3).

Palmtop (PDAs) Item Inclusion

1. *Where have you spent most of your time in the past hour*?
   In office, In gym, training pitch, at college, at home, other

2. *In the past hour, what kind of event has had the biggest impact on how you think or feel about your role?* Argument with another person, pleasant social interaction, barriers to performing your role, receiving social support, doing difficult work, other

3. *What was your main feeling about this event?* Nervous, sad, frustrated, happy, Up for it, other?

4. *In the past hour, to what extent did events prevent you from performing well?*
   Not at all=1, 2, 3, 4, Very much so = 5.

5. *In the past hour, to what extent did you view these events as an opportunity to work on your goals?* Not at all=1, 2, 3, 4, Very much so = 5.

6. *In the past hour, to what extent did you view these events as being damaging to you in some way?* Not at all=1, 2, 3, 4, Very much so = 5.

7. *In the past hour, how worried did you feel about being able to deal with these events?* Not at all=1, 2, 3, 4, Very much so = 5.

8. *In the past hour, how frustrated did you feel about having to deal with these events?*
   Not at all=1, 2, 3, 4, Very much so = 5.

9. *In the past hour, how happy did you feel about being able to deal with these events?*
   Not at all=1, 2, 3, 4, Very much so = 5.

10. *In the past hour, how down did you feel about having to deal with these events?* Not at all=1, 2, 3, 4, Very much so = 5.

11. *In the past hour, did you change your behaviour to help solve problems?* Not at all=1, 2, 3, 4, Very much so = 5.

12. *In the past hour, to what extent did you change your behaviour to help you get emotions off your chest?* Not at all=1, 2, 3, 4, Very much so = 5.

13. *In the past hour, to what extent did you confide in others to help solve problems?* Not at all=1, 2, 3, 4, Very much so = 5.

14. *In the past hour, to what extent did you confide in others to help you get emotions off your chest?* Not at all=1, 2, 3, 4, Very much so = 5.

15. *In the past hour, did you change the tasks you do to help you solve problems?* Not at all=1, 2, 3, 4, Very much so = 5.

16. *In the past hour, did you change the tasks you do to help you get emotions off your chest?* Not at all=1, 2, 3, 4, Very much so = 5.

17. *In the past hour, to what extent did you talk to people to help solve problems?* Not at all=1, 2, 3, 4, Very much so = 5.

18. *In the past hour, have you spoken to others to help you get emotions off your chest?* Not at all=1, 2, 3, 4, Very much so = 5.

Appendix 4

The following appendix is the interview guide that was developed for the stress audit study conducted in study three (see Chapter 4).

Loughborough University

Interview Guide

Firstly, please complete the information below:

Participant number:

Name:

Age:

Gender:

Email(s):

What is your role at the academy? (Please circle):   Player   Coach   Manager

Other (please state)………………………………….

How long have you been involved in your role at the academy?

………Years……………..Month

Player position (if applicable):

Interview date:

Time begun:

Time ended:

Duration of interview:

Section One

Hello, I'm [name] from [affiliation]. Thank you for choosing to participate in this interview study. In this project I am talking to the academy players, coaches, support staff and your manager to discuss issues that they feel are important for improving performance and well-being for everyone involved in the academy.

The purpose of this study is to gain an insight into your experiences of the academy within training, education and games. During the following discussions I am interested in hearing about your experiences of academy rugby and how you perceived various issues that have occurred in the lead up to games. I want to learn in greater depth about your experiences so that I will be able to better help the academy with a season long programme starting from October and running through until May next year. The information from this study will be used in a number of ways:

1. To deliver and evaluate a season-long psychology programme, based upon the information you provide during the interviews.
2. To write up a research paper to be published in an international peer-reviewed journal.
3. To contribute in the confirmation of my academic degree (i.e., Doctorate).

I would like to emphasise that all of the information that you provide me is completely confidential and will remain anonymous. For the purposes of this study, I would appreciate it if you do not repeat any of today's conversation with other participants, because I want to get an unbiased view from each and every one of you who are involved in the academy.

Your participation is entirely voluntary and you are free to decline from answering any questions that I will be asking or stop the discussions at any point. There are no right or wrong answers to the questions I will be asking. I want to learn and benefit from your experiences and expertise so that I can be in a better position to help you and the academy with a season-long programme. I hope, therefore, that you will answer the questions in a straightforward way. If there any questions that you do not understand then please do not hesitate to ask me.

There are a couple of things I need you to keep in mind throughout our discussions:

1. I will be asking you about your experiences as a player involved in the academy. This will involve you thinking back to events and incidents that occurred during your experiences of the training environment, the experiences you have of any study whilst being part of the academy, and your preparation for and performance in games. Since you will have to think back in time, you might not be able to immediately remember some things. Take your time as you try to recall the past; pauses are fine. If you cannot remember after trying to think back, then just let me know, but please do not guess.

2. When you are doing this recall, keep in mind that I am interested in your overall experience as a player, both in and out of the competitive arena. So in your answers you can draw on any and all aspects of your experiences. This could include things such as lessons, examinations, jobs, relationships or anything else that was relevant to your athletic experience as they pertain to the issues that we will be discussing.

Please be as honest as possible, don't feel like you need to tell me what you think I want to hear. I can assure you that I will not divulge this information to any of your coaches/players/other staff.

The interview contains several sections covering various issues that may have been important in your preparation for and performance in competitions. I will sometimes use the term "team" during our discussions; the team refers to all the athletes, coaches, personnel, and any other people that were involved in the academy. I will be using a rough interview guide of questions, but I would also like you to contribute with anything that you feel is important and was not already covered in the questions asked.

Do you have any questions about what I have talked about so far? If you have any questions as we go along please ask them if at any time you do not understand what I am asking and need some clarification. Okay, I just need you to sign this written informed consent and then we can begin.

Section Two

To better understand your experiences as a manager/coach/member of staff player, I would like to ask you a few questions about different aspects of your academy environment, and I would appreciate *your own* personal experiences. So, if you don't think that some of the questions are relevant, then please do say so. Also, if you think there are issues not covered by the questions I am asking, then again please do say so. The questions are only there as a rough guide – it is your own personal experiences of your organizational environment that I am interested in.

	Interview Questions
1.1	Could you tell me about something that has happened within the academy recently which has gone really well? *Probes:* Can you tell me a bit more about what happened? Who was involved? Why do you think things went well? What do you think contributes to this? What could be done to help these things happen more often? What could you have done to help these things happen more often?
1.2	Tell me a little bit about things that are important to the team's success.... What are the main factors for a healthy functioning academy environment?
1.3	Could you tell me about something that has happened within the academy recently which hasn't gone so well? *Probes:* Can you tell me a bit more about what happened? Who was involved? Why do you think things went well? What do you think contributes to this? What do you think could have done to prevent the problem or manage the problem better? What could you have done better?
1.4	Can you tell me about any factors that prevent you from performing well as an individual and as a team? *Probes:* How important do you think these factors are? How do you find the training/competition load? What do you think causes these issues? Are there any other factors that prevent you from doing your job well? Stressors specific probes: Can you tell me about any factors within training/games/ that prevent you from performing well as an individual and as a team? What do you think you could have done better to stop this from happening? What do you think the academy could do to stop this from happening?

1.5	To what extent do you think that these demands can be removed from the academy?
1.6	I'd like you to now think about your experiences of studying while being part of the academy set up. How easy do you find it to balance your studies with training and playing games?
2.1	What do you tend to think about when these issues occur? *Probes*: In what way do you think these demands affect your performance? Can you think of a way in which you could think about these issues differently? i.e., more positively for performance?
3.1	What symptoms or feelings did you experience when this was happening? *Probes*: How did you feel about these demands at the time? Why do you think that was? Can you think of a time when something or someone within the academy environment made you worry/frustrated about performing to your best of your role?
3.2	How would you normally try to deal with these demands? *Probes*: Can you describe any techniques that you rely on and find helpful for dealing with pressures? What do you think you the organization could do better to help you manage your role and any associated experiences of stress?
3.3	How do you think these demands affected your performance? Are there any factors that cause you to feel less satisfied with your role at the academy?
4.1	Do you have any recommendations for workshops, group or individual that would help the academy or yourself to perform better? *Probes*: What can the organization do to enhance the support it offers you? Would ..... help? Is there anything else the organization could do to help you with ....?

	If you could prioritize what you would like to change to improve the team functioning and performance, what would the order be?
4.2	Before we proceed to the next section, is there anything else you can add concerning what has just been discussed in this section?
	This almost completes the interview. However, before we finish, I would like you to complete a quick survey to help summarise some of the recommendations that you have suggested today. Would that be ok? It should take no longer than 5 minutes to complete.
5.1	This just about completes the interview. However, before we finish, let me ask you some final questions. How do you think the interview went? Did you feel you could tell your story fully? Did I lead you or influence your responses in any way? Is there anything that we haven't talked about that you are able to tell me about your experience of the sport organization? Have you any comments or suggestions about the interview itself?
5.2	Thank you for helping out with this interview study.

Appendix 5

The following appendix is an example interview transcript. This interview represents one of the single interviews that were conducted as part of the stress audit in study three (Chapter 4). The participant being interviewed was a coach who worked at the professional rugby union academy.

JR: So it's week 6. Starting about 20 past 12, something like that, so thanks again for agreeing to take part in this. I do appreciate it. Erm, I was wondering if we could start off by me asking you could you tell me about something that's happened in the academy recently that's gone well?

PP: I think the skill level of work that we do with the players is improving all the time and there's um a better balance now between the physical and the cerebral as I'd like to put. So I think that's going in the right direction.

JR: And in what way do you think it's improved from previous years?

PP: Erm well I've only been here for thirteen months now, so I just do know that the [rugby academy name] culture is very physically demanding its fairly aggressive and I think the skill content maybe wasn't as high as it could have been and in my perspective should have been erm... and we've been able to sort of shift it towards that and the general acceptance of it has been good as well.

JR: And is that acceptance from the coaches or the players or sort of everyone as a whole?

PP: Everyone as a whole yep.

JR: That's great and is there anything currently that you've observed where you think "well this could still be or this could be maximised or this could still be improved", in terms of improving the skill set perhaps?

PP: I would like to think that players could do more for themselves. Erm, based on what we've actually covered with them they still too much wait to be told that they have to do extras. They know their weaknesses and yet you don't see too many of them out there actually working between themselves and trying to develop, it has to be pushed by us, which, that's an area we've got to look at that.

JR: Do you think there's anything that might contribute to that, so that's preventing them from doing that at all or?

PP: Um I think it's just probably that history dictates here that, you know, you wait and do what you're told and when you're told to do it you're told how much to do, there isn't a great deal of individual initiative that takes place and I think, er, there's er, a definite fear factor of stepping outside what is the norm here. Um and you know too many of the players for me view it as a weakness to say "can I go and practice this, can I do that, will you help me?" The more mature lads will come and say to me will you just come and do some passing with me, erm but certainly the younger lads I think they see it as a weakness and they feel they shouldn't have any weaknesses cause if

they've got weaknesses then people pick up on it and you know that's the culture [bullying] in this place.

JR: Mmm, do you think it's a perception as well that if they say, "[current participant's name] I think I need to work on this." That it's almost a threat to admit that because you might make a note of it in terms of "right if they don't improve on this then we'll boot them out in February".

PP: I've never ever given any player an indication that that's how I would react, so I would hope not James no, but the environment that they've been here prior to here or whatever that may have been the case and yeah they could well feel that way so. But I encourage them all the time that that is what they should be doing and there is too much of a er, we say here it's a 'hand up instead of a hand out' attitude but they still don't put their hand up often enough, they're still not actually having their hands out but they're waiting all the time to be told to do x y and z.

JR: In terms of the sessions, the extra sessions they could do, do you think they're well aware that they could just go out on the pitch themselves and practice it?

PP: They are. They are told that yeah.

JR: But is there almost just a fear of doing it themselves and doing something wrong or, or just general weakness?

PP: I think it's just a, I think one of the things is again with lads of this age is its credibility, it's like no one else is going out and doing extra stuff, the hookers will do it because that's deemed what hookers do and scrum halves might do it but then nobody else does it and I think it is a little bit of what we said before, it is a weakness. Sometimes it's seen as a you're a, you know "you're a creep, you're trying to do too much" or whatever. There's all that psychology that comes into play with lads of this age.

JR: Do you think there's anything erm that can be done to kind of change that view at all? I mean I know I appreciate you sort of tell them again and again and again. You know is there anything that can help, can help the penny drop almost that actually "it's okay for me to do this and I should be doing this to help my development?"

PP: I think the general openness of the culture needs to, to improve. There is too much of a fear culture and "don't put your head up and speak out of turn, in fact don't speak at all" is a lot of them's mantra you know and that's completely wrong. You know, I think that's one of the biggest issues that we have to address here is that it's not the third years are top dogs and you know your place as a first year and you know your place as a second year and err you stay there. If you've got something to say because

you're in a better position, you're more perceptive or whatever as a first year you should be able to say it but they won't, they don't. Erm, there's certain people in the academy that players are scared of, you know there's a bit of a bullying culture erm and again those are all issues that we would do well to address and we would be a better set up for it.

JR: In terms of the bullying you just mentioned, is it generally from the more experienced players or players in similar positions, that are also perhaps similar positions?

PP: Yeah there is definitely a positional thing that if he's going to be my threat, I'm going to make sure I knock him down and keep him down as long as possible. Erm, there's a negative motivation culture if you like as well that by knocking somebody down all the time you're going to make them better and it doesn't work for all, only works for some people and doesn't work for others and to ridicule people, to get them to do things isn't the way I see things should be done. Again that's the culture of what this place has been "if you aren't tough enough to hack it then off you go", well everybody's different, everybody responds in different ways, everyone needs different motivational methods so and I don't think we cater for that here. It's pretty one dimensional.

JR: I meant it's interesting you're saying about motivation, is there anything in terms of me delivering some sessions, is there anything I could do in terms of delivering different types of motivational climate or?

PP: I think having, people having the confidence to speak up if they feel that there is, if they feel they have something worth saying and they know it they've gotta have confidence that they can say it and that they won't be ... "shut up you're a first year, what do you know?" and you know and as I say ridiculed at times . So I think I want a culture where it's equal for everybody and then when we get on the pitch or even when we're training you know, that third year might not have spotted what's going on, the first year might well have done but that first year won't speak up and say, you know, which I think is wrong. So just a general openness for everyone in the squad that I feel we need to work towards.

JR: Have you had any experience in the last thirteen months where there have been some first years that have done that, where they have spoken up and said, you know, we need to do this?

PP: No, pretty much they won't, but I know from talking to them individually that they recognised it but they won't say it. When we take out, when we play an U18 team and

take out the senior players it's very, it's almost just like a rudderless ship because they're [first year academy players] not used to actually saying things and directing things because there's always U19s there's always those third years around who are top dogs and they do it all.

JR: And that's really interesting in itself because you'd think that if I'm an U18 and I know the U19s are now gone I might think "oh I feel more confident to talk now" and I'll actually be more vocal and you might have a more vocal U18 side than, from those particular players if you like, than an U19 but it's almost as though they've been trained not to speak up.

PP: Well we put out an U17s team against [nation] U16 and we were totally and utterly lacking in direction and in decision making and [academy manager / head coach] was going mad on the touchline and I just thought, these guys don't know how to do this because they never do it week in week out in practice or in anything. They just do as they're told and when it comes into a situation where "I've gotta lead this and direct this", they can't do it.

JR: That's interesting. I'm just thinking about previous conversations we had in the sort of last meeting I had with yourself and the other coaches, about key decision makers and whether you know there's a way in which you could put some onus on some of them. Erm it's kind of related but I'm just thinking whether in training whether it's almost.. whether it's possible to encourage certain players that are first years [for coaches] to say, "Right you're gonna be coming up with the decisions in this training session" for example or, "Your task today is, you're telling us how to run it, go" kind of thing.

PP: Yeah, yeah too right.

JR: I mean would that be effective or is that something...

PP: I've tried doing it.

JR: You've already tried doing it?

PP: I've tried doing it, you know with warm-ups. I mean there's classics, three or four lads, very good players but just won't say anything. So I say, "[second year player] you're doing the warm-up today so have something ready." He's like, "Oh, what do I have to warm up?" I say, "Well it's up to you to decide" you know and um it's just really quite heads down they won't sort of eyeball somebody if someone's not doing it right, pick them out you know it's just like I'll just give these instructions and get through this. So...well you know it's being done, try to do it erm. You see [academy manager / head coach] encourages this rivalry, a classic is there's [third year player] who's a

third year, very good player but has been out injured nearly all year, had a big knee op and he's got a lad called [third year player] who's coming through and [academy manager / head coach] just tears into [previously injured third year player] all the time saying, "ahhh he's getting your place, just look at him run, he's fitter than you, bigger than you, stronger than you" like this and [previously injured third year player] is just like, you know I can tell he's like, "Oh fuck off" rather than saying, "Yeah he is good isn't he, I can see him running". You know just having some banter with and I know for a fact that [academy manager / head coach] would shut up then because he has to be the one that's leading it and if you get back at him a little bit, mm err alright. We've got two small guys and the motivation [from the academy manager / head coach] is constantly saying, "You're too small for this game, don't know why you're here, might as well go home now" you know bang, bang, bang and it is his form of psychology, you know he feels it works and the lads just like cower like this and don't say anything back to him. So that's why it's perpetrated cause again you get a laugh off everybody else and um but it's for me it's not the way that those lads at that age, that stage of their development should be coached, motivated, inspired whatever. So that's something and that's why when it comes to situations which need somebody to speak up or say something they won't do it because they feel they'll just get ridiculed. Erm you know when things have been shouted at them on the touchline you can see it just like, "oh shit", heads down it really affects them, they won't turn round and say, "I'm doing this just leave me, I'll do it right. Okay right I made a cock up then I'll put it right" rather than, "You're fucking coming off if you do that again, ra ra ra!" Wow...

JR: Do you think it's a bit of a respect thing with players? In terms of "I wouldn't dare speak up because I have this respect for my peers or my manager so I wouldn't dare speak up?"

PP: I don't think it is respect no, I think it's fear. I'd put a million pounds on the fact that it's fear. [laughs]

JR: [laughs] Any thoughts you have on how you kind of conquer some of those fears really?

PP: Erm..you start it on the park, on the training park, by having that interaction and the coach saying you know, criticising you and say, "Right you tell me now how you're going to correct that and what you're gonna do so it doesn't happen again and we get the end result we both want" And he would stand there and if they need some drip feed or whatever and then, "oh yeah right..there you go then". I think you've got to be

very much ummm the same in a training game on the training field as you will be at game time, you know so that they don't feel threatened that, "It's a game now I freeze, jeez I can't do that, I can't turn round and say that to him, I can't say that to him", you know.

JR: What's interesting is I'm just thinking about sort of some of the sessions I could try and help with from October to May and just thinking about almost if you had a session in a room somewhere with players where you almost practice decision making

PP: Yeah, yeah.

JR: And you create scenarios that maybe have already happened in training or as a coach you think are likely to see in training anyway and you get them to, pre-empt them to think about in groups, how would you make these, or as individuals, "How would you solve this decision? How are you going to correct this?" you know to improve the situation, so perhaps when they get into the training environment they're actually able to then implement it a little bit more

PP: Mmm yeah.

JR: Because then it's a little bit less in your face in terms of, "Oh I didn't know he was going to ask me that."

PP: Yeah, yeah.

JR: "Don't know how to answer it" because it's almost been pre-empted. I don't know whether you think that would be, could be useful?

PP: Yeah well I do. I mean when I was at [university] um with the [university] side, when I was in charge of the [university] side, on the way into the team room I would, or before that, I would grab two players or three players and say, "I'm going to ask you this question, what's your answer gonna be? Just think about it a bit more." You know I would never give them the answer but I'd pull it out of them and then we get in and I say, "Right [player name] what's going to happen at those first three line-outs? What's our aim?" and so on, just bang bang bang you know, and everyone's just like, "Yeah, great!" I think, you know, pre-empting and probing and directing is really important for young people like that because again it's that, is it a threat or is it a challenge scenario you know because that can happen in team meetings just as much as it can happen on the field.

JR: I'm just wondering as well about the typical kind of biological theory of kind of fight or flight.

PP: Yeah, yeah.

JR: You know if something gets thrown at you do you do you fight or do you leg it basically? Sometimes if you're provided with that kind of information a bit earlier on it enables you to fight.

PP: To fight yeah.

JR: It enables you to fight because you've got a bit more time [resources] to do it almost. [laughs]

PP: Yeah you do. You don't put a boxer in a ring without bloody training them for several months do you? It's just the same.

JR: Yeah. Excellent, that's brilliant thanks [participant]. I'll move onto another question umm...what do you think are the main factors for a healthy functioning academy?

PP: Erm...honesty. Erm.. a level playing field for everybody, so equality. Ermm...respect, massive hard work culture and never thinking that you've cracked it. Always, always striving to get better and get better in every way.

JR: Exactly. I mean my personal experience in the last year or so you know since I've come down here has been that the staff really embrace that in terms of always keen to learn always keen to improve um, you know work ethic is right up there in terms of one of the main factors. Um would you say, I mean do you think that most of the players buy into that, the work ethic?

PP: They do yeah. I think they know that if they don't they won't survive, so...and the desire to be part of this academy is just huge and so yeah they do buy into it. Erm you get one or two who think that they're a little bit above, erm that rail you know cold faced work ethic you know because of where they've come from but again that pretty soon gets knocked out of them. So yeah they all do.

JR: I'm just thinking about those main factors and I'm guessing that's an expectation you have of each other as a member or staff but also of players. A) do you think players are aware of those expectations and b) do you think they sort of see those expectations as a challenge or some of them as a threat at all?

PP: Erm..I think they will all see it as a challenge and erm they're here for the challenge, they wouldn't have been picked out unless they felt they were up for that challenge. So you would hope it's not a threat to them. Erm..you know we had a classic where there was a number nine, which number nine were we gonna take out of the EPDG to come into the academy this time. Playing wise it was yeah pretty equal and then they worked up in the gym. One of them just worked so much harder and the other one was a little bit arrogant and like watching other people and the first one was just working and

working. [academy manager / head coach] he actually said to me, "Just look at how he's working" and so we said, "yeah we'll go with him".

JR: I see, excellent. Okay I'm just going to ask you a quick question about your, your job role. If that's okay?

PP: Yep.

JR: Can you tell me any factors which might prevent you from doing your job well?

PP: Um the biggest one is when it comes to match time erm [manager/head coach] he just changes his mindset erm he erm takes over a lot of things that I would do during the week and you know other times er when it comes to match preparation and everything he has to be hands on and I'd like to have that and more of that and more in terms of the psychological preparation of the side as well.

JR: Can you elaborate at all on the psychological preparation?

PP: Erm, I don't get to lead. Every time it's he leads and then he'll say to me, "What do you think or whatever?" So that's the main thing you know so erm... and in terms of when it's half time we're going to have a half time discussion or at the end of the game and erm we never, like you were just saying before about preparation, so I know what he's gonna say cause I don't wanna be saying something that contradicts what he says. Even though I might be thinking that I would never do it in front of the players and so on. Erm and I think we have to work, he's gotta let me into his world basically, before half time talks and the end of the game and before the games you know. I mean I think he prepares pretty well you know but it is just his way.

JR: So just to clarify almost having him say, "Right [participant], I'm gonna say this to the players."

PP: Yeah.

JR: "This is what I think we're going to do."

PP: Mhmm yeah.

JR: "And this is what I'm going to say." So it's almost before half time saying, "This is what I think we need to talk about "Yeah?

PP: Yeah.

JR: Yeah, okay, thats brilliant. Erm is there anything that you think you could do better to improve that communication?

PP: Probably be stronger with him and tell him you know. I suppose, you know because I'm the new boy I've pretty much kept my head down, had one incident where I did stand

up to him and told him but er other than that I've, yeah, I could be stronger and erm yeah.

JR: Just thinking about that incident where you mentioned sort of about the one point, the one time that you did say something, was that responded to quite well or did it cause conflict?

PP: Yeah it caused conflict, you know I sat here and he told me to "fuck off!" you know and he just, that's the way he is and so on and er he came back to me two hours later and apologised and said that what I'd said was right erm but it'll happen again because of the nature of the beast you know so erm I've got to manage that you know. Sometimes it's pointless thinking you can change it, you've just got to manage it in a different way I think that's what I'm doing. I'm a lot calmer now than I mean 5 years ago I'd be on a touchline shouting and bawling but er I've learnt a lot and I'm going to help him learn basically. It's one of my goals to make him a better team player on the touchline and also the reputation of [rugby academy name]. Because I know a lot of people on the rugby circuit you know and they say when I'm out, "Oh fucking hell, how can you work with that guy and you know all this on the touchline." And I say, "Yeah I know, I know but he's a very good coach and he's just got issues there you know." Because he is a very very good coach, he's, he really is top on the field, knowledgeable, game sense, understanding everything coach it's just some other issues there are a nightmare [laughs] so you know.

JR: So with your role there I suppose in terms of sort of coping with some of those issues, patience, I think you sort of said it, patience is a big thing.

PP: Yeah it is indeed yeah.

JR: Absolutely.

PP: And um I suppose really..not erm..I found it at the start a bit difficult that I was, I was cut out I suppose. You know there are certain points where you know right well okay, you're the assistant coach, you're in charge of the backs or whatever but you mean he'll shout at the backs and bark at the backs and you know do all this and erm I just yeah okay I'll just step back and let him do it. I found that you know I didn't like doing it you know I'd come from [university] where you work with [coach name] at his absolute bloody level and then you come to here where its....up and down like this and I just thought to myself okay I don't need to have this I'll just sit back and try and change it slowly, so that's what I've been doing.

JR: And just to kind of well elaborate, how do you think you'll change it?

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PP: By my manner, by my management of players and you know just little bits of conversation where you sort of say, "Well he actually is very very capable of leading people around him if we give him the chance to do it and you know." And he'll go "yeah, yeah yeah." Then it'll come to a practice and he just takes over completely and does it himself you know so eventually it'll come round so you know. You know I know this is about me one of the things that I've found about [academy manager / head coach] is that he's massively insecure. He has to be told all the time that what he's doing is good and whenever he does something, "Was that alright [participant]? Was that alright?" so I'm spending a lot of my time bloody telling. And I'll tell him if it was poor, I'll tell him if it was bad. Now I think it's something that you know it's just like a, an aside as we're coming off the pitch. I think what we need to do is sit down, you know almost like this and say well, "That session you know bang bang bang" and then he'd do the same for me when I'm doing a session.

JR: Almost like a reflective practice?

PP: Absolutely James yeah, you know. Just if it's one thing like you know something simple like you know, "You didn't engage those 4 guys there you know and they're an important part of it" because again he does that a lot but if it's the team it's the team, the other guys can go and stand on the side which I just I'd never ever do that you know so. We need to do more of that.

JR: And do you think that's something that sort of [academy manager / head coach] and perhaps some of the others would engage in if you were to say, "Let's have a few more sessions after training where we just have a five minute chat, almost a SWOT of what was good in that session, what could have been a bit better" or..?

PP: It will depend very much on his mood erm but I think it's something that we should do and that's one thing I've got in my head that we need to do with 2 or 3 senior players, that it's not just me and [academy manager / head coach] and [strength and conditioning coach] or whatever, it's me and [academy manager / head coach] and 3 senior lads. You know they say, this is gonna be where it's really really tough because they won't say anything against [academy manager / head coach], not a cat in hell's chance. Um but we've got to get to that point where they can say, "Well actually that session we feel needed to have a litte bit more of this". And you know he's been known and I saw it several times last year where he kicks the forwards out for you know, I finish the backs because I've done 45 minutes it's been quality intense stuff but he does another 45 minutes on line outs and scrums and the lads are just... you

know they've gotta be able to say, "The last 20 minutes of that we were just going through the motions, it's counterproductive." Not one of them will have the balls to say that.

JR: Mmm yeah that's really interesting, I'm just thinking about you sort of said maybe having some meetings with the sort of maybe 3 of the more senior players do you think having someone more impartial to talk to about that sort of thing would be useful or do you think that would be again sort of counterproductive?

PP: You see again when we had a big department review um end of May maybe beginning of May, [academy manager / head coach] at one point directed it to other members of the management team, "I don't want you to be talking to players in corridors behind my back." And the reason those players talk to other members of the management team is because they can, they know that they can't talk to him. And you found that you could tell by the way he said it and when one of team sort of started to question it he said, "That's it I've said it, you know where I'm coming from." And we're like oh..er...okay. So he will see that, that's what I'm saying this insecurity thing, he will see that as a threat, you know I mean I, if it were me you know I'd say, "Yep fantastic because we're gonna get feedback from it which is of benefit to me and to everybody." Um so I think what's going to have to happen is you will need to get some senior players together and say, "Look this is where we have to go to, this is where you as a person, it's part of your development, you're going to be a better team leader, a better person from being able to in the right forum say well actually you know we're a bit knackered and can we actually do something different rather than just being flogged."

JR: And if I were to do that would I provide that information to [academy manager / head coach]? Or would I provide it to coaches or?

PP: I think you provide it to the coaches cause again you don't want it to be a threat to him. You know it's like we're all in this together and so the players think the sessions are great but sometimes they go on a bit too long, that sometimes [academy manager / head coach]'s very very old school in warm ups. It's just you know run up and down get your heart rate up bang bang bang. I'm very much let's do this with a ball in your hand, let's do this more thought processes, etc, etc. Erm and there's always a time and a place for both, but doing it almost every session, you know I mean like when [academy manager / head coach]'s away some of the lads say to me, "Oh fucking great we'll have a proper warm up today" you know and they'll say it to me but they

won't ever say it to him you know. Um things like that they've gotta all come out and because they never come out he doesn't actually think there's anything wrong with it and that it's and you know our success rate indicates that it's all great, that it's all the right stuff well yeah but success rate for this is the players that come out individually not what we as an academy team do to [opposition academy teams] whoever it's what at the end of their 3 years comes out to go into those guys and are they a better person, can they stand up can they say what needs to be said. Cause again if they're going to be playing first team rugby and they're you know 20 or whatever then they've gotta be able to actually say to bloody [senior team player], "Hey I want the ball when I ask for it, not when you've finished with it and you've trundled it on four times and then its fucking slow ball" you know. They'll never ever be in a position to do that, you know. [third year academy player], [third year academy player] he's an absolute and utter freak! He's like an exception that you know you can't believe er and that's you know his Dad and his upbringing and everything you know er but the majority of them that come out through this process to go onto there, they'll have frailties in that and you know you can't have that.

JR: Yeah, I mean it would have been really good to get some of their perspectives actually and some of the lads that have just moved up to the senior side to get their perspectives on you know what could have helped them prepare better in some respects for senior you know playing in the senior side.

PP: You've got your classic now, [fourth year player], last year's academy captain, he's around, he's just walked past the window there you know you get hold of him and you know see what he says. I mean again this is another classics, he was the one you know I said it's a level playing field well [academy manager / head coach] showed him more favours than other people erm and er but then get hold of someone like [third year player name], [fourth year player name], or [third year player name] or you know they're all them lads, they'd be really good to do things with to talk to and see how prepared they feel about being in that environment now.

JR: Mmm. That would be really useful. I'll think I'll have to have a chat with some of them if that's alright?

PP: You should do yeah.

JR: Erm just talking a little bit now about your relationships with staff and players erm what's your relationship like with your line manager?

PP: Erm it's getting better, most definitely getting better. As I said to you before found it difficult to begin with erm but now I feel very comfortable um I don't feel threatened by him at all. Um I know when to step back, I think I make it work more than he makes it work erm but that's fine.

JR: Do you think he feels threatened by you because I know you were saying you were threatened by him but what about the reverse?

PP: Erm I don't honestly know that. I wouldn't, seeing the history of me coming here was two and a half years ago, do you know this?

JR: Not sure.

PP: Well two and a half years ago I was interviewed for the job um here with [academy manager / head coach] and [senior team member of staff], four of us were interviewed, erm, had the interview heard nothing. A week later I got a phonecall, could I come back for another interview? And I said, "Yeah that's fine." So I came back this time there was [senior team manager], [senior team coach], [senior team coach], [senior team member of staff] and [academy manager / head coach]. And um so interviewed, everything again, heard nothing for a couple of weeks and I know [senior team member of staff] pretty well from the past so I phoned him up, he said, "Hasn't [senior team manager] phoned you?" I said, "No." Then he said, "Well I've been telling him to phone ya" he said then I said, "Well [senior team member of staff] you tell me did I get the job or not?" He said, "Four of us voted for you but he [academy manager / head coach] wouldn't have you." And um he wanted his mate who he knew and you know didn't feel threatened by or may whatever you know but he knew he could work with him. And so I didn't get the job obviously and he probably took about three weeks to phone me to tell me and when he phoned me I said, "[academy manager / head coach] that's fine. If you know him and you wanna work with him and you don't know me that's fine," I said, "You know but you could have called me before." "Ah well, well." I said "Anyway, don't worry about it". And um a year later they phoned me back and saying, "It hasn't worked with him." You know so..that was when I knew then am I the one that he wants you know second time around or is it just because it hasn't worked with the other guy? And then I thought well I don't give a toss, I want the job erm I want to be in that environment.

JR: And that was the job as assistant manager yeah?

PP: Yeah yeah.

JR: Fantastic.

PP: So that's how it came around.

JR: And you're enjoying it for the most part?

PP: I love it.

JR: Yeah.

PP: Absolutely love it yeah. It's a great environment to be in.

JR: Is there anything that causes you to feel er less satisfied in your role at all? Whether it be admin tasks or relationships or anything else.

PP: Anything that does cause me now to be less satisfied then?

JR: Yeah.

PP: Erm, I would actually like to have a bit more of an admin feel of things. Again [academy manager / head coach]'s very much you know, I mean he says that he's massively pressured, he's got so much to do but and I say to him, "Just give me it to do then, I'll help you, I can do this." But he doesn't cause again he just yeah think he feels maybe a bit he's gotta keep hands on it all and then he's this er this reassurance, he's always got to be reassured.

JR: That's really interesting actually from because from a, from a sort of occupational psychology perspective, one of the things that some psychologists recommend within business is erm sharing job tasks or sharing workload because if you have a manager that has a high workload one of the ways of combating it is sharing out the tasks with other workers to er to make things more manageable. And certainly that could be something which might be quite useful you know should you, should either of you you know or anyone else in the group ever think how can we better manage our workload and something you could always try if you wanted if you felt that would be useful.

PP: Mm yeah, see [academy manager / head coach]'s also he's he's um doing I don't know if he's doing a masters now or whatever he's doing but you know he's almost got this drive that he has to get some academic qualification and that he's got to be almost respected because he's got this masters and he's gonna do a PhD and he's gonna do you know whatever else. Erm and it it seems like that's something that's like I've gotta do it, I've gotta do it and er that's up to him but sometimes that gets in the way of you know he has a massive workload for that. And you know joking he says, "You'll call me Dr." And I say, " I will never ever, ever call you Dr" And he says oh ahh.

JR: [Laughs]

PP: So you know just a bit of banter but he does actually see it as for his credibility you know. That again am I doing well scenario. And you know from whatever his background is and so on you know that is probably fair you know it's understandable why he's going down that route.

JR: And just out of interest you've talked a couple of times about sort of positive feedback erm you know [academy manager / head coach] likes to have feedback. What about other group members, you know academy staff for example do they have a similar sort of need for feedback, positive or negative?

PP: Erm I don't know whether people need to, I mean my nature is I give it. You know I do give positive feedback and also give it the other way but the majority of times I'm giving positive feedback and I you know Theresa is just absolutely fantastic with the lads you know. You know and I'm always telling her. And she knows things about you know players that she'll tell me but she won't tell [academy manager / head coach] you know and things like that and so because they're relationships that you build you know and [strength and conditioning coach] does a brilliant job and [strength and conditioning coach] is an absolutely fantastic motivator and he leads that work ethic more than anybody else you know and so yeah I'm, you know it is absolutely vital for team members to be given positive encouragement and yeah so yeah. I do that all the time.

JR: What about the players? Do you think the players give each other positive and negative feedback?

PP: Mmm well again no that comes back to what I say about this issue of not stepping out your box, not stepping over the line. Erm when I coach I try to encourage self-evaluation, self coaching, reflection and then doing it in a pair, or in threesomes or whatever and they just, they won't do it. Mmm you know again it's just this, it's the comfort thing, you know if I step over here I might get made to look daft and I don't wanna do that so they don't, that is my biggest, the area that I would like to see improved the most; the interaction, the confidence to speak up, to be a motivator, a leader, for everybody to feel comfortable that I can say this that I can do that.

JR: It probably sounds like a daft question but do you think that would improve functioning in the team and performance potentially? On the pitch?

PP: Undoubtedly. Without a shadow of a doubt and er being able to um then sit down in a dressing room afterwards and reflect properly and I mean something that I want to do this year is to give the players erm an opportunity to self reflect after every game. And

you know we'll do it on paper that I actually drew something up a while ago [flicks through paper]. That, that's something that I want to do because again we don't do that it's just did we win, did we batter them, who did what well.

JR: What could I have done better?

PP: Yeah and you know we don't do enough of individuals give yourself targets it is massively about we win, we win, we win and that has to be part of the mentality but again as I say that isn't the reason for them being here, to make us an all conquering academy it's for them as individuals to get into the bloody first team squad. So..

JR: But clearly them improving upon their skills set in terms of being able to communicate with others is still gonna, or still going to have a knock on effect in terms of team performance

PP: Exactly.

JR: And the academy yeah.

PP: Yeah, yeah.

JR: I think that's fantastic. I think that's really good. I mean one of the things I was also interested in, in terms of from October to May, was also I'd be quite interested in getting coach assessments of players on sort of a weekly or game basis. If that's something that's and a very similar basis to this actually erm but I guess it's just yeah it's just educating players, the importance of evaluating themselves isn't it? Erm..

PP: You know like that quote on the bottom, I've put that on there because it's deemed like if you're playing for [rugby academy name] you're gonna be successful, you're gonna win. Well that isn't the way it is you know erm and you've got to decide whether you're happy just to be a part of what it is now or you wanna take it up somewhere else and you know you as an individual coming through you know you're not just gonna be a part of this success, you're gonna be a success yourself. That's why a lot of these players, you know when they come to 18 or 19, they don't move on because they've just been in such a good set up and then all of a sudden it's like well actually you're a good player but there's 3 or 4 others that have got the edge on you because of persona um confidence you know whatever. And they, a lot of them just think, "We've won 21 out of 23 games this year so I'm gonna be okay" and you won't.

JR: It's interesting because some of the previous conversations I've had in the last few days there's been a few examples provided to me of you know games last season where rolling over teams by 30 or 40 points but they're not playing as well as they could you know. It's just they're steam rolling them but they could be beating by 70, 80 points

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in a game because they're just cruising you know. So the win is perceived as you know we've won and it's good but you know there's still obviously some work that could be improved upon between players and as a team perhaps. Um so clearly, as you rightly said, self evaluation is very important. Erm, am I able to keep this? Or do you want me to give that back to you?

PP: Yeah sure.

JR: Is that okay? That's really useful. That's brilliant no thanks [participant]. Okay so I've got er I've got a few more questions if that's okay? If you've still got some time? Erm, perhaps if we carry on with the players, um are there any things in particular that you feel might cause them to feel sort of stressed or frustrated in training sessions at all?

PP: Erm I don't know what makes them stressed really. No I think just the expectation sometimes and they need to be able to just enjoy it a bit more and um yeah I think the enjoyment factor for me is something that sometimes isn't there and we ought to make that a bit more part of what we do instead of it just being drudgery, hard work, hard work you know. We've got to have some fun time. I mean a classic last year was I decided to play some football with them and one of the lads said, "Shit." He was injured. He said, "I've been here 2 years and we've never ever once done something different like that and then you bloody do it today when I'm injured" you know like that. [laughs]

JR: [Laughs]

PP: And you know that's, just to do different things. Mentally it keeps you fresh and you know I think sometimes we need to think about doing a bit of that instead of it's all like, "Well there's a big game coming up and we've gotta win that big game" and so everything is geared to that you know. You get stale and you get mentally um not deflated but you aren't up for it, you know and you have to do different things sometimes to get your energy back.

JR: Keep you fresh.

PP: Yeah yeah. You energise players you don't bloody take the energy out of them and sometimes some of the sessions, like I say they're just so long and same same same.

JR: That's really interesting you've said that as well cause a couple of days ago I was speaking to one of the other members of staff and they said they think one of the issues with some of the players is that they go home, maybe they get home at 7 o'clock, 8 o'clock at night sometimes and they just sit there and play on their

computer games or something. And there's almost a level of boredom when they're not training and is there someway of like you said energising them and giving them something to be less bored

PP: Yeah, yeah mmm.

JR: and fresh and I don't know if you have any sort of suggestions for that? Might be based around the point you made about enjoyment factor or?

PP: Yeah, yeah. I mean one of the things you know I've done summer camps before where you've got kids together, 4 or 5 days whatever and you put them into teams at the start of the week. And you know it's a rugby camp but then you'll have erm a rugby rounders tournament which is just you know half an hour or whatever, or a rugby volleyball or a continuous cricket or something like that and you just have a scoreboard and so it's like you know the sporting challenge. And you've got, say we've got 36 lads, we have maybe 3 teams of 12 or six 6's or whatever you can just play little round robins and have that fun, that banter that goes on and you say, "right next week it's erm you know as I say it's a continous cricket game" or it's gonna be something, "Right you've gotta nominate 3 of your players to play in such a game and whatever." And things like that, cause they're still bloody 16, 17, 18 year old lads you know and the challenges of things like that are just like, "Woah yeah that's great!" You know and I think we should do that.

JR: I'm just thinking as well you know when you're a 17, 18 year old lad you know you might have mates that wanna go out and get tankered and all the rest of it...

PP: Yeah, yeah.

JR: And maybe some something of an evening occasionally erm that involves everyone getting involved in it might curb them from actually also going out in on a midweek. I don't know if they do that, I don't know.

PP: I don't think they do too much. You know we had, we had a staff tenpin bowling night and you know the banter and the laugh we had was great and we just need to tell these lads, "Right quid a week for the net 5/6 weeks whatever, that'll pay for 2/3 games of, everybody make your way on the bus to wherever and we'll go and have an academy bowls night" and things like that you know, that's all we need to do.

JR: Mm. What effect do you think that would have on the players in terms of or just their overall sort of camaraderie as a team and performance?

PP: Oh it would be massive. You know cause again the banter it becomes stale and you know the banter is you know centred around their physical appearance around their

girlfriends or their sexual bloody activities or whatever you know and again you just wanna get it out of that and you know say just have a little tournament and say to them, "Right" have a social committee and say, "In 2 weeks time I want you to come up with a social activity that we're gonna do, we can all do" and you know be it from 6 o'clock to 8 o'clock, that's it, done, bmph, gone.

JR: And would that, could you manage that, with training sessions as well?

PP: You bin a training session every now and again, that's what it's about you know it's not about the drudgery of it. You say, "Right we've trained really hard guys, fantastic, we're just gonna miss this session and we're gonna go tenpin bowling or we're gonna have a game of continuous cricket out there". It's er as I say you gotta remember they are not professionals like the guys that have just been walking past this window all the time. They've gotta be doing other things as well and I think that would be good for morale.

JR: Do you think that that's another thing that other staff would engage in?

PP: Yeah.

JR: And they would engage in that in terms of if you said, if someone said, "Right we're gonna miss this training session and we're going to go out bowling" you think people would be receptive to that?

PP: [academy manager / head coach] probably wouldn't. Erm, but again if we could plan it at the right time so that he doesn't see it as interference and I wouldn't want it to interfere with our preparation but there's sometimes when we get further on down the line, come to January, February whatever, because this is a 12 month cycle. You know this isn't like it was in school for them, where in April they've played some sevens and they don't touch a rugby ball till September and they're playing cricket, tennis, doing everything else. It's a very different environment but they are still young lads who are seeing their peers do all that, they've already done it and just to go, "Pffft you're not doing all of that anymore, you're doing full time rugby" again is mentally tough.

JR: Mm. In that respect do you think some players need some kind of lifestyle management?

PP: Oh yeah. Totally.

JR: But I mean is that something you think they'd be receptive to or?

PP: Probably not because they don't think that there's a need for it. They will actually think, "Nah I'm gonna be a professional rugby player this is what I need to do". Well how many young lads at this point break down, don't get through and yet maybe if there

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was just a little bit of something different in that programme, that prevented you from breaking physically or mentally, it's gotta be a positive.

JR: Mm absolutely, fantastic. I'm just thinking we've talked a little about the training environment erm, wanted to ask you about anything in terms of preparation, sort of in the lead up to gameday, whether it might be a home game or an away game. Is there anything that you think might prevent some players from preparing as well as they could?

PP: Erm maybe overwork before like we've said, sometimes a lineout or a scrimmage session will just go on forever erm I think that the preparation of the players would be better if the onus was put on them to prepare more and to say, "Right [first year player] you're gonna do the team talk today, [third year player] you're gonna talk about how we're gonna defend and you're gonna stand up and there's gonna be a flipchart in the room and you know that's how you're gonna do it." So they've all gotta be switched on and you know you tell them the week before or whatever erm we've got video footage of almost every club that we play. They'll be different personnel by the nature of age group rugby but the system and what they, their style, their playing ethos doesn't change too much so we could say to them, "Right have a look at Northampton, what do we have to be wary of? How are we going to deal with what we're being wary of?" So putting the onus on them a lot more.

JR: I'm just thinking about sort of, away games for example if they're on a coach you know what sort of things would they do to prepare if they're on a coach? Would they just be watching a DVD player or listening to music or having a bit of banter or?

PP: Yeah they do all of those things you know. Our choice of DVD sometimes I think is questionable erm you know but thing is that they choose them. No I don't, I don't think in terms of our preparation for away matches things like that it's far off the mark other than I think the players should have more say. I think that we do all our stuff there and that again is why they actually get on the pitch sometimes and they can't do the things that you would hope they would do because it's continued right the way up to going out on the pitch that it's been coach lead. And you know it's gotta be player lead.

JR: Okay. No that's really useful actually. I was simply thinking about well a couple of things really in terms of you know some players, if they are travelling to a game for example, they might need a bit of time away from thinking about the game you know to listen to music to relax. And you might have some others that might wanna watch

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er or might wanna talk to others about the game and what they're gonna plan to do because it might motivate them a little bit and it might help them switch on, so as soon as they get on the pitch they're ready to perform. Erm and I guess what I was just trying to think was if there's ways we can just try and maximise that mental preparation at all um or whether you think it's already pretty good as it is?

PP: Erm I think it's pretty good yeah. Yeah quite well yeah I think it's good.

JR: Okay and in terms of you were saying about giving more player ownership, would you would you try and do that with each and every player or would you do that with some of the sort of more key or more senior players?

PP: I'd do it with players when I felt they were ready for it. Some clearly will be at certain time in their 3 years here and then you know you might say a first year, "Yeah he's ready now he can do it. He can stand up in front of everybody and say right this is what we need to do today." Like there's [third year player] as a first year you know as a 17, 16/17 year old and he'd say, he'd cope with it definitely. Yeah so just when they're ready yeah.

JR: Mm, great. Thanks [participant]. Okay so just a couple more questions then if that's alright? It's more just a kind of conclusion now about any recommendations you have in terms of helping me develop something, some kind of programme for the players and maybe perhaps some of the staff as well if they're interested? Erm do you have any recommendations at all that you think could be useful to help players with their team functioning and performance?

PP: Yeah I just, you know all the stuff I said before about fear that they don't wanna say things and you know that it isn't a, a fear culture. That it has to be open and honest and you can say what you feel and you know there's avenues for it. You know they aren't gonna go to [academy manager / head coach] and say certain things, I like to think they'll do it with me erm and I know they'll definitely do it with 2 or 3 other members of the management team and they should be able to do it to everybody. So that's, I think that is the biggest thing to get to that we're all in this together, we've all gotta play our part and I don't have to wait for my turn to come to the top of the tree before I start having input or motivating or doing whatever else you know.

JR: So how do we do that? How do we get a scenario where we have a group environment where all the players are involved all the coaches are involved? How do we get the players to speak up to everyone in the room and voice their opinions?

PP: We have them talking about the three stages in their career here if you like. So you have a third year who will talk about what it was like as a first year, second year, third year and then you have a second year talking about what it's like as a first year, second year and then you have a first year talking about what it's like just coming in. And just see if that commonality along the bottom will be pretty much the same. So if it is the same, what are the pros, what are the cons? And how do we change the cons? How do we build on the pros? Erm obviously there's only going to be two of them who'll have any input as a second year but again what is the difference there? What can be done to make it better or get rid of the bad elements? And then you know in third year we maybe even bring a [fourth year player] in, who's now a 4th year and gone, so he's got, then you've got 2 people who can reflect on being third years. And um you know how they can be better, how they manage those people down there better as opposed to everybody just looking how do we manage getting up there and you know not managing it, dealing with it. And um so I think that would be an important exercise to do.

JR: And do you think they would, do you think they would speak out, you know in front of [academy manager / head coach] for example? Or do you think that would be..

PP: Probably not in front of him no, I don't think they would.

JR: Right. Okay. So what about if it was perhaps a group session, if I were to speak to the players and perhaps have yourself in there or another member of staff that they might feel more comfortable speaking to um do you think that would perhaps get the desired outcome in terms of getting them to speak up?

PP: Yeah I do. Yeah.

JR: I mean one of the things of course is if I do interview all the players in focus groups, you know hopefully that might, I mean obviously

PP: Yeah might come up.

JR: I can address some of these things in terms of say what is it like for first years, second years, third years.

PP: Yeah, yeah. Mmm.

JR: What are the pros and cons? Hopefully might get something out of that but at the same time perhaps erm at a later date, perhaps in the beginning of October if that's not too late getting players, or perhaps even middle of August perhaps, get the players together with a couple of the coaches and myself and we can have an open honest session er about what could be improved and things.

PP: Yeah. Definitely.

JR: Okay. That's brilliant, thanks [participant]. Is there sort of anything else you think you'd sort of prioritise? I know it's sort of linked, but you talked about decision making and direction so perhaps giving players more onus?

PP: Erm one thing that I would like is that there's more of a link with the head coaches, the senior coaches as to what sort of direction and what sort of player they want to come out of here, erm because I don't think there's enough of that. I think there's a little bit of a, the two guys are very very similar.

JR: So just to clarify you mean from..

PP: [senior team manager]

JR: From [senior team manager], down here to say "What are you looking for, for us to bring players through?"

PP: You know and can some of these lads, again it not be a total shock to be all of a sudden said, "Oh right on Monday you're playing in the A team and [senior team coach]'s coaching it and [senior team manager] and [senior assistant team manager] will be watching and bang bang bang". Just how you can do it and I've suggested and [senior team manager] has said, "Oh yeah yeah we can do that" was have one of the players who you think will make it, to go and be with the team on the Friday in the team room and then go in the changing room on the Saturday and go out for the warm up in the game and see [senior team stadium] you know filling up and so on. And then go back in the changing room and be there at half time in the background and you know.

JR: So more of a spectator but it's preparing them for the big stage isn't it essentially.

PP: It is, definitely.

JR: And that's really interesting because again one of the conversations I've had with coaches over the previous days has been, how do you get players to prepare themselves for 20,000 / 40,000 crowd when you've never done that? You can't replicate it in training, you can't replicate it in academy games, how do you replicate that? I think that's actually a very good way, very good example of how you do that and just say, "Yeah come in."

PP: You sit in on the team talk. You come in on the bus.

JR: Yeah.

PP: You know whatever and you probably wouldn't take them to away games because that's more tough but certainly at home you'd come to the hotel you'd bang bang bang. You know and then they come back on Monday morning, we have a team meeting and

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they say, "Well this is x, y, z we've got to all aspire to do this as players and I learnt this from being with them and.." And it's not just for the individual he would then feedback to the whole group.

JR: So almost like a group session for the players and the person that's gone does the feedback, almost presents this.

PP: Yeah too right.

JR: I learnt this. I did this this and that, this was bloody daunting.

PP: Yep, yeah.

JR: Yeah, I think that would be very useful actually if there's ways you can incorporate that, then that's brilliant. Okedoke, brilliant, like I say thanks very much for that [participant]; that wraps up the interview. Thanks ever so much for your time.

PP: Pleasure.

Appendix 6

The following appendix is the study three report which was delivered to the professional rugby union academy after collating the findings and recommendations from the stress audit conducted in study three (see Chapter 4).

Academy Rugby as it is Experienced:
Study Report from Interviews and Focus Groups

Findings and Recommendations for Performance Development

FINDINGS

Group

- STRONG ACADEMY WORK ETHIC
- SUSTAINED STABILITY OF STAFF GROUP
- TRANSITIONS INTO SENIOR TEAM – Big success over past few years
- TEAM SWOT ANALYSIS & PRE/POST MATCH TEAM DEBRIEFS – Beneficial for goals
- AWAY DAYS & GROUP SOCIALS – Very beneficial for cohesion and communication

Player

- PLAYER FEAR FACTOR – Lacking confidence to speak up and ask questions
- PLAYER DEPENDENCE ON STAFF – Players need to do more for themselves
- POOR TIME MANAGEMENT – Not seeing the importance of managing their training, studying and social time
- LACK OF INVOLVEMENT IN THE TEAM (Injured Players) – Not feeling part of the team
- BALANCING EXAMS AND TRAINING – Doing A-Level exams during busy training week was hard
- PLAYER STALENESS NEAR END OF SEASON

RECOMMENDATIONS

Group

- MAXIMISE TEAM COHESION DURING SEASON WITH TEAM BUILDING ACTIVITIES – Incorporating more regular SWOT analysis
- ENCOURAGE STAFF APPRAISALS WITH MORE SENIOR STAFF – To support academy staff development and goals, and raise awareness.

Player

- COPING/LIFE SKILLS FOR NEWER PLAYERS
  - TIME MANAGEMENT SESSIONS FOR PLAYERS
  - DECISION MAKING AND ASSERTIVENESS SESSIONS FOR PLAYERS – Interactive educational sessions complemented by decision making on the pitch
- ENCOURAGE GREATER INVOLVEMENT FOR INJURED PLAYERS (e.g., progress meetings with coaches, team talks, editing of player's strengths and weaknesses in games to work on)
- ALTER TRAINING SCHEDULES DURING A-LEVEL EXAMS
- ALTERING THE STIMULUS OF TRAINING NEAR THE END OF THE SEASON - Potential for changing the content of some sessions to prevent staleness

Appendix 7

The following appendix is the study four (Chapter 5) intervention questionnaire that was completed by participants in the intervention groups at mid-point and post-intervention (see Chapter 4).

Date:

Instructions for completion:

This survey contains some general questions about your experiences of academy rugby over the past few weeks. Please read carefully the statements and circle the answers that you agree or disagree with. Please respond to the statements as honestly as possible. There are no right or wrong answers to this survey. Your responses will remain anonymous and completely confidential.

Please complete the information below:

1. Your Name: ....

2. Your Age: .... Years

3. What is your home postcode? ....

4. Are you currently injured?   YES   /   NO

5. How long have you been a player at the academy?
   ....Years   ....Months

This scale consists of a number of words that describe different feelings and emotions that you have experienced over the past few weeks. Please read each item and circle the appropriate answer in the space next to that word. **Please could you indicate to what extent you have felt this way during the past few weeks: (use the following scale to circle your answers)**

Over the past few weeks, I have felt ...	Not at all	A little	Moderately	Quite a bit	Extremely
Interested	1	2	3	4	5
Distressed	1	2	3	4	5
Excited	1	2	3	4	5
Upset	1	2	3	4	5
Strong	1	2	3	4	5
Guilty	1	2	3	4	5
Scared	1	2	3	4	5
Hostile	1	2	3	4	5
Enthusiastic	1	2	3	4	5
Proud	1	2	3	4	5
Irritable	1	2	3	4	5
Alert	1	2	3	4	5
Ashamed	1	2	3	4	5
Inspired	1	2	3	4	5
Nervous	1	2	3	4	5
Determined	1	2	3	4	5
Attentive	1	2	3	4	5
Jittery	1	2	3	4	5
Active	1	2	3	4	5
Afraid	1	2	3	4	5

The following questions are designed to assess your feelings about your PERSONAL INVOLVEMENT with the team. Please read each item and then circle the appropriate answer in the space next to that statement. **Please could you circle from 1 to 9 your level of agreement with each of these statements.**

	Strongly Disagree								Strongly Agree
I have been satisfied with my performances in training	1	2	3	4	5	6	7	8	9
I'm happy with the amount of playing time I get.	1	2	3	4	5	6	7	8	9
Members of our team stick together outside of training and games.	1	2	3	4	5	6	7	8	9
I'm unhappy with my team's level of desire to win.	1	2	3	4	5	6	7	8	9
Some of my best friends are on this team.	1	2	3	4	5	6	7	8	9
This team does not give me enough opportunities to improve my personal performance.	1	2	3	4	5	6	7	8	9
I enjoy other socials more than this team's socials.	1	2	3	4	5	6	7	8	9
I like the style of play on this team.	1	2	3	4	5	6	7	8	9
I have been satisfied with the team's performances in training	1	2	3	4	5	6	7	8	9
Our team is united in trying to reach its goals for performance.	1	2	3	4	5	6	7	8	9
Members of our team would rather go out on their own than together as a team.	1	2	3	4	5	6	7	8	9
We all take responsibility for any loss or poor	1	2	3	4	5	6	7	8	9

performance by our team.									
Our team members rarely socialise together.	1	2	3	4	5	6	7	8	9
Our team members have conflicting goals for the team's performance.	1	2	3	4	5	6	7	8	9
I feel like I am making a contribution to the team's performances.	1	2	3	4	5	6	7	8	9
If members of our team have problems in training, everyone wants to help them so we can get back together again.	1	2	3	4	5	6	7	8	9
I am going to miss the members of the team when the season ends.	1	2	3	4	5	6	7	8	9
Our team members communicate freely about each player's responsibilities during games or training.	1	2	3	4	5	6	7	8	9
For me, this team is one of the most important social groups to which I belong.	1	2	3	4	5	6	7	8	9
I have been satisfied with the team's performances in matches	1	2	3	4	5	6	7	8	9
I enjoy being a part of the social activities of this team.	1	2	3	4	5	6	7	8	9
I have been satisfied with my performances in matches	1	2	3	4	5	6	7	8	9
Our team would like to spend time together in the off season.	1	2	3	4	5	6	7	8	9

The following statements are designed to assess your ability to deal with problems that may generally arise. **Please read each item and then circle the appropriate answer in the space next to that statement (use the following scale to circle your answers).**

When things aren't going well for you, or when you're having problems, how confident or certain are you that you can do the following:	Cannot do at all										Certainly can do
Find solutions to your most difficult problems	0	1	2	3	4	5	6	7	8	9	10
Sort out what can be changed, and what cannot be changed	0	1	2	3	4	5	6	7	8	9	10
Make a plan of action and follow it when confronted with a problem	0	1	2	3	4	5	6	7	8	9	10
Leave options open when things gets stressful	0	1	2	3	4	5	6	7	8	9	10
Think about one part of the problem at a time	0	1	2	3	4	5	6	7	8	9	10
Make unpleasant thoughts go away	0	1	2	3	4	5	6	7	8	9	10
Take your mind off unpleasant thoughts	0	1	2	3	4	5	6	7	8	9	10
Stop yourself from being upset by unpleasant thoughts	0	1	2	3	4	5	6	7	8	9	10
Keep from feeling sad	0	1	2	3	4	5	6	7	8	9	10
Break an upsetting problem down into smaller parts	0	1	2	3	4	5	6	7	8	9	10
Get friends to help you with the things you need	0	1	2	3	4	5	6	7	8	9	10
Get emotional support from friends and family	0	1	2	3	4	5	6	7	8	9	10
Make new friends	0	1	2	3	4	5	6	7	8	9	10

This scale consists of a number of statements that describe different feelings that you GENERALLY experience in rugby *and* in life. Please read each item and then circle the appropriate answer in the space next to that statement. **Please could you indicate from 1 to 5 your level of agreement with each of these statements (use the following scale to circle your answers)**

Generally ...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I determine what will happen in my life	1	2	3	4	5
There are times when things look pretty bleak and hopeless to me	1	2	3	4	5
I am satisfied with myself	1	2	3	4	5
When I fail, I feel worthless	1	2	3	4	5
I am capable of coping with most of my problems	1	2	3	4	5
I do not feel in control of my role	1	2	3	4	5
I am confident I get the success I deserve in life	1	2	3	4	5
I feel depressed	1	2	3	4	5
I complete tasks successfully	1	2	3	4	5
When I try, I generally succeed	1	2	3	4	5
I do not feel in control of my success in my career	1	2	3	4	5
I am filled with doubts about my competence	1	2	3	4	5

This section asks you about the psychology sessions that you have been involved in so far this season. Please read each statement and then circle the appropriate answer in the space next to that statement. **There is also space for you to explain some or all of your statement responses. Please could you indicate from 1 to 5 your level of agreement with each of these statements.**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I have had a say in the type of sessions I have received	1	2	3	4	5
I have been satisfied with how the psychology sessions have been delivered	1	2	3	4	5
I have been satisfied with the frequency of sessions delivered	1	2	3	4	5
I have been satisfied with how well the sessions have been maintained	1	2	3	4	5
Please add a reason for your answers:					
I think that the sessions have had an impact	1	2	3	4	5
I think some changes could be made to improve the sessions	1	2	3	4	5
I think the sessions will lead to some lasting changes for myself and my teammates	1	2	3	4	5
I am motivated to participate in each session	1	2	3	4	5
I have tried to apply aspects of the session worksheets provided	1	2	3	4	5
Please add a reason for your answers:					
I think academy factors have affected how and when the sessions are implemented	1	2	3	4	5
I think academy factors have reduced how effective the sessions could be	1	2	3	4	5
Please add a reason for your answers:					

Appendix 8

The following appendix is a brief interview conducted with one of the academy rugby union players who participated in the coping effectiveness training and team building intervention group in study four (see Chapter 5). The interview provides a brief 30 minute discussion of process issues pertaining to the organizational stress management interventions delivered.

30 Minute Interview at 3 month Follow-Up

JR: So thanks again for agreeing to have a chat. I just wanted to talk to you about your thoughts of the psychology sessions you had last year and just to get your honest feedback about them. One of the things I wanted to ask you to kick things off, was had you had any psychology support, psychology sessions prior to having any sessions by me, delivered by me?

PP: Er no I haven't no not at all.

JR: Ah okay, erm, this is probably a bit of a challenging question and again be completely honest, erm, what would you say your opinion was of psychology prior to any sessions you received?

PP: I think I learnt a lot during your little classes but, erm, I think yeah it's just the time that we can learn in really, but yeah I think they were really good for us.

JR: Ok cool, good stuff, erm, do you think the mental side of rugby is important?

PP: Yeah I think its huge, its massive.

JR: In what sort of way?

PP: Like, like, the state you're in and what like kind of thing, you want to do, and your body... how you can rest and stuff.

JR: That's good to know, just out of curiosity but for you personally in training and rugby is there anything that you think is quite important for you personally in terms of mental aspects that you would like to try and improve on?

PP: Yeah maybe getting more like more focused in like training than I am now, but other than that I'm ok.

JR: Cool, thanks for sharing that, was just quite curious really. So would you say that your view about psychology changed as you had more sessions at all?

PP: Yeah first of all I thought mm I didn't really enjoy it but then I got into it and I started to question myself like this is quite good for me.

JR: Cool, good stuff. So what did you think of the psychology sessions in general?

PP: Erm, I thought some were like very beneficial but as a group, as our first year [group] we probably mucked about a bit too much, but I think other than that they were alright.

JR: Do you think, I dunno like, if you can remember some of the content of some of the sessions? But did you feel like some of the sessions benefitted you personally more than others?

PP: Yeah I think the more, the stress-relief one that helped me quite a lot to just get rid of everything and then it's so much easier to sleep and stuff.

JR: Ah ok, so the muscle releasing tension one that sort of thing?

PP: yeah

JR: Ok that's cool. Just out of curiosity have you ever tried to apply that like at home?

PP: Yeah yeah I have quite a lot actually.

JR: Ah right and that's helped you find?

PP: Yeah

JR: Ah great that's good to hear. Any sessions you felt benefitted the squad more than perhaps for you personally?

PP: I think the session with all of us the first, second and third years, where we got to write down about individuals' strengths you know on the sheets of paper?

JR: Yeah yeah

PP: Yeah I thought they were really good and gave everyone a bit of confidence and stuff.

JR: Ah that's good and did they help, did that help in any other sort of way as well as just improving confidence in some people?

PP: Erm, just like reminding people like why they're here and what they're doing.

JR: Good stuff, can you remember which one you got?

PP: Erm yeah I got one from [player name].

JR: How'd you know it was [player name]?

PP: He told me! [laughs] just saying things like I'd do, I'd go anywhere [on the pitch], i'd put myself in anywhere [position] where no one else would and stuff like that.

JR: Ah that's nice, great. Was that probably the feedback you wanted to hear?

PP: Yeah yeah, but sometimes you're going to hear stuff like that aren't you.

JR: Yeah, good stuff. In terms of the sessions that you guys received, how do you think those sessions came about? How do you think they were developed in the first place? Any ideas?

PP: Erm I don't really know really! Erm I thought they were all..like…I can't really explain it to be honest… no I cant.

JR: No that's alright, I'll tell you anyway, it's okay I was just quite curious but erm I don't know if you remember this time last year, it was July time where we all, well the first years and me, we all sat in this room, erm and I did what I called a focus group where I asked you about your experiences of the academy. I know you'd probably only been here about two or three weeks but what I'd done was I'd had some group interviews in here with first years, second years and third years, interviewed coaches, [manager], [assistant manager], [strength and conditioning coach] etc, erm and some of the third years who have either moved into a fourth year or stepped up to the seniors and basically I just asked everybody how they

thought the academy could function a bit better, erm, whether that's psychology related or just in general, whether it's making training sessions more specific that kind of stuff, erm, and also any recommendations for psychology sessions. So from that last July that kind of helped me to put together some psychology sessions for the different groups and so that's how they came about basically, so that's how they were put together. So I just wondered if you could tell me about any barriers that affected when the psych sessions were delivered?

PP: I think erm as our group of first years, I don't think anyone went into real detail about stuff because what of being worried what other people would think really, but other than that really...

JR: Ok so you mean like a sense of like, you think because some of the topics are a bit sensitive?

PP: Yeah yeah like that.

JR: Ah okay, and do you think that was throughout, through all the sessions or do you think that changed through time?

PP: Over time I think it changed like 'cause we got to know each other more because we'd only known each other two or three weeks then, but maybe like half a year on we were really getting to know each other and becoming really good friends and sharing, we share you know, got to know each other.

JR: Ah good stuff, and out of interest are you saying that in reference to the first year groups sessions, so are you saying that's a similar issue when you had big squad sessions as well?

PP: Yeah I think that the first years were a bit intimidated by the older ones and they couldn't really chirp up [in team building sessions] but yeah I thought, by the time we all knew each other it was much better.

JR: Alright, and that was within the squad [team building] sessions as well?

PP: Yeah

JR: Great, good stuff. To what extent did you find the psychology sessions easy or hard to do?

PP: Erm I kind of found them easy it's normally just sitting down and listening and participating in the activities really so yeah.

JR: Ok, good stuff. Was there anything you think that maybe made the sessions work well at all?

PP: I think working in groups and actually doing the work [together] like yeah doing the work to your ability in a group was good but can't think of anything else.

JR: No that's alright. Er, do you think time was a key factor in affecting the sessions?

PP: Yeah definitely was.

JR: It probably sounds like a silly question but in what way was it, did it affect the sessions?

PP: Erm I think it was like brought [scheduled] upon us quite quickly like during the week it would suddenly come up [on the weekly training schedule] then it was quite late [in the evening] and then everyone would be quite tired and it wasn't really long enough to like do stuff.

JR: Ok so a few points there, so that's really good thanks. So first thing I think you mentioned they come up at a short notice you said?

PP: Yeah they'd come up like two days like a day before.

JR: Ok so I suppose if you hadn't seen the [weekly schedule] board you'd find out quite last minute?

PP: Yeah exactly.

JR: Ok, then the other point you made was about it has been a long day of training and that sort of thing so you're quite tired and then..I'm trying to remember the last point you made, I had it a minute ago in my head...

PP: Just the amount of time

JR: Yes thank you! So the amount of time you had in the sessions then, so do you feel they could have been a bit longer then?

PP: Yeah I think they should have been a bit longer really, if it's at the end of the day though we got to get home and eat really but yeah.

JR: So I guess because most of the sessions, you probably had sessions up to about an hour in some cases, I appreciate in some you we refilling out questionnaires which might have taken 10 minutes or 15 minutes so you might have had three quarter of an hour sessions so just to get your perspective really, do you think if sessions were a bit longer do you think players would be switched on provided the time of the sessions?

PP: I think if you gave them the amount of work you should do in an hour and a half they'd work harder to get it done out of the way or something like that.

JR: Ok, were there any sessions that you particularly enjoyed at all?

PP: Well the stress-relieving thing I really liked, yeah that was really good. Yeah that pretty much the really good one yeah.

JR: Were there any you didn't enjoy as much?

PP: Erm no not, erm I mean the first of all, at the start of the year with all the third years was a bit daunting [team building] but apart from that it was all pretty good.

JR: Alright, okay that's good stuff, er what else did I want to ask you.. to what extent did you think maybe other priority [academy] sessions maybe affected where the psych sessions could be put on?

PP: Sorry what?

JR: it's alright I'll start again, so to what extent do you think other sessions, like physiotherapy, strength and conditioning and training, to what extent do you think those sessions affected where the psych sessions were able to be put on?

PP: Well we normally have like, cause like after school, cause like school is a big factor, we have like gym straight after that and that normally ends at like 6pm and then some people have physiotherapy after that and then it just gets later and later then.

JR: Ok and erm if you, if you wanted to have more, well I'll ask the question, would you be interested in having more psychology sessions again this season?

PP: Yeah I would yeah

JR: Yeah? Okay that's cool, so if you were the [practitioner], if you were me and you were going to put some sessions on in a perfect scenario in a perfect world, when would you try and put the sessions on?

PP: Erm

JR: What sort of time of day?

PP: Probably just after lunch maybe 1, 2 o'clock when everybody has eaten and not buzzing.

JR: Hmm and would that work in terms of people's college and things like that?

PP: Erm not really no [laughs]… which is a bit [awkward]… but yeah probably the best time.

JR: Ok, that's really useful. Erm could you tell me about, were you injured at all last season?

PP: No.

JR: Ah good, touch wood you won't be this season either! Could you tell me about a time when you weren't playing much last season?

PP: Erm I was playing quite a lot because of an injury to a third year players [player name], he was injured quite a lot 'cause of his hamstring but towards the end when he was coming back, I was on the bench quite a lot.

JR: I was just going to ask you in terms of when you weren't playing whether that affected you in terms of being in the psychology sessions and getting involved in them at all?

PP: No not really no, I was normally quite, I was in there really.

JR: Did you feel after a while quite comfortable getting involved in the [coping] sessions and things?

PP: yeah I think like as a first year you need to prove yourself and actually chirp up and do

the, do your activity and kind of feel better about it.

JR: Good stuff. Erm do you think the coaches had much of a say in terms of what was in the sessions and what was put on and that type of thing?

PP: What, the psychology sessions?

JR: Yeah.

PP: Erm not really no, I don't think. It's when we could fit it in really, cause it's not really.. I dunno..

JR: No that's fine. Erm did you get a sense at all, just out of interest, did you get a sense at all whether there was any, and you don't have to name names, any particular players who didn't want to attend these sessions or tried to bunk off them or anything like that?

PP: Not really, I think everyone quite enjoyed them and like really, but erm no I don't think there was anyone really, except for the people that just wanted to get home and eat and like go to bed and that!

JR: Yeah no that's understandable, did you feel like there was anything in particular that the sessions may have been good for improving within the academy at all?

PP: Erm I think team cohesion was a big, like everyone coming in, like getting to know each other is a big part. I think that was quite a big part in that psychology session.

JR: Good stuff. And what about first year lads, do you think the sessions helped at all in terms of generally coping with training and college demands and things like that at all?

PP: Yeah it taught me like how to like relieve stress and be more organised really, with myself you know, and it's just small things like packing a bag before going out and then yeah… the, I dunno really.

JR: That's brilliant. I mean you already said that you try to implement some of the stress relieving strategies which is fantastic, just out of curiosity any of the time management or anything like that?

PP: Yeah it's much better to be honest, I use to be an absolute failure at that kind of thing, but yeah it's much better I haven't been late for any sessions sort of last year or I haven't missed any college deadlines so it's been alright.

JR: Ah right great! And do you think you could ever, in terms of some of those first year sessions you had, do you think that erm you might be still be able to apply some of those things? I know you said about the stress relief and time management for you has just generally improved. But do you think you could have applied any of the other stuff at all in the future?

PP: Yeah I think yeah I think I could.

JR: Ok good stuff. Do you remember much about the goal-setting session at all?

PP: Yeah a little bit yeah

JR: Yeah do you still have any?

PP: Yeah I have them on my desk actually.

JR: Oh right.

PP: Yeah and the [performance profile] circle thingy, yeah about the, well mine was about organisation and time management but dunno about.

JR: Alright good, good stuff. Do you know if the academy are doing anything in terms of goal-setting or anything since?

PP: Not that I know of.

JR: Alright, cool just wondered. Erm, what time are we at, we're at half 3, I've got a few other questions I could ask you as well, erm [laughs]. I might have asked you this before so forgive me if I have, but how do you think the sessions benefitted you personally?

PP: Er just by like I dunno as I said probably, just organisation was a big part because I was awful yeah and the sleeping, I've slept much better since the stress relieving because when I couldn't sleep I started doing them and it really helped.

JR: Ah right cool. Good stuff. And just out of interest, did you get a feel for anything in particular that was causing you not to sleep as well?

PP: Just an achey body really, I just woke up with a head-ache or aching muscles really.

JR: Oh right, and some of the stress relieving stuff helped with that?

PP: Yeah.

JR: Great. Erm do you feel like the squad sessions, do you think that helped you communicate better with the other players?

PP: Yeah at first I was really quiet like typical first year doing nothing but as I've gone through the year I've really got to know everyone and I can speak up you know so...

JR: Good stuff. Erm I think have I asked you much about the number of psychology sessions you had last year?

PP: Er dunno.

JR: Ok, so how satisfied were you with the number of psychology sessions you had last year?

PP: Erm I think one a week is fine really but it's just the amount of time that is really an issue.

JR: Yeah, do you think, maybe not once every week, but do you think you'd want more sessions across the season?

PP: Probably yeah.

JR: And you might not be able to answer this but are there any sorts of things that you think "ah yeah I wouldn't mind a session on focus, or a session on"..?

PP: I don't know, erm just in general everything helped quite a lot so...

JR: Ok, that's really useful, I was going to get your perspective about the performance reviews around February time [when players are told they are being released at the end of the season], erm for the third years last season and I wondered whether you got a sense of the third years that were essentially told that they are not going to be kept on, whether they were still quite willing to take part in the remaining squad sessions, psychology sessions that were put on?

PP: Erm, to be honest, some of them like, they didn't partake in much but some were still trying really hard and doing stuff to help the team out and I think that worked yeah.

JR: No that's good to know. In terms of the psychology sessions that you had, did you feel that there was anything that wasn't beneficial or wasn't really helpful?

PP: Erm well at first, I wasn't really getting into it all because I was a first year, but other than that no it's been really good.

JR: Ok good stuff, the discussion that people had in different sessions were they, did you find those useful?

PP: Er yeah, I got to know other peoples perspective on stuff and got to know them so its, I learnt from that as well.

JR: Mm I mean out of interest, obviously its pre-season now, I suppose you've got your experience from last year. Are there any other times in the year where you get that opportunity for the squad to sit down and just sort of have a chat, how's your father sort of general things going on.

PP: I think most days we do, cause were just sitting in the changing rooms when were not at school and we just sit in the changing rooms and chat, I mean all the second years are going down to [town] after [a week's training] camp so yeah we all, our second years are really close compared to most, so yeah I think it's going to be really good.

JR: Are there any things you think that's lead to the 2nd years, your group being really sort of tight, really close?

PP: I dunno really. We seem to be different to the third years I think we push each other and we're friends as well but yeah I dunno really to be honest.

JR: Ah I just wondered if any of the psych sessions could have helped with that at all?

PP: Yeah I think it did, cause there was quite a lot of banter in it but it brought us closer I think.

JR: Mm cool. Good stuff. Erm a few other things, I'm looking at the time as well, to what extent do you think the sessions were well maintain across the season?

PP: What do you mean?

JR: Well did you feel like the sessions were, when I say maintained, I mean do you feel like you had sessions in September, October, November, December, January, February….?

PP: Yeah I kind of feel like they were spaced out normally, like as in we'd had one each month type of thing, but it wasn't too irregular.

JR: Do you feel like some sessions would have been useful at certain times of the season?

PP: Probably all the group sessions, if you like mixed everyone up and got to know everyone, writing down the stuff about the team [goals for the season], and get to know other peoples perspective on the team [goals].

JR: And when would you do that in the season then?

PP: Pre, pre-season.

JR: Good stuff. Oh out of interest, because you went on camp last year, did you find that was quite good for that sort of thing?

PP: Yeah, I mean it would have benefited us quite a lot, but camp was really good to get to know everyone, but that [team building] could have benefited us a little bit more.

JR: If they'd been a bit more? If there had been some psych involved?

PP: Yeah

JR: Ah that's good to know. I mean unfortunately [manager] did actually invite me to the camp but I'm actually down in London for the Olympics next week, got a few tickets, so unfortunately I can't make it to the camp otherwise I would have come along. So sorry about that. I just wondered how do you think yourself and players felt about staff not being involved in the sessions that you had? Was that a good thing, a bad thing?

PP: I think that was a really good thing, 'cause we wouldn't exactly speak our mind when they're there because obviously they are going to think something bad. But yeah I think it's much better than having them there.

JR: Can you think of a scenario or any sessions where you think it would be beneficial to have staff there or do you think it is nice not to ever have them there sort of thing?

PP: Maybe in a big group session, to like you know keep everyone in order and do the work properly but no not really to be honest.

JR: Ok. Erm could you tell me about any team socials you had last season at all?

PP: [laughs] well we went out on my birthday, which was... so..

JR: When was that?

PP: [date] and that was really good, it was so good, there was so many, just events went on and nothing went on really we just got home and yeah was pretty good!

JR: was that your 18th?

PP: 17th

JR: Alright, big one next year then...

PP:Yeah yeah can't wait. Well its everyone's big one isn't it?

JR; Yeah, excellent. So had you had many team socials last year?

PP: Mm not that many to be honest, maybe we went out 5, 6 times, well maybe a bit less, but we could just go out to like a Chinese restaurant or something, just eat and go home I mean that would be much better than just going out on the piss so yeah.

JR: Yeah that's cool. Obviously what we talk about here is completely confidential so it doesn't matter if you tell me every session that you went out on the piss, I'm not going to tell anybody so that's fine!

PP: No no! [laughs]

JR: But I suppose the reason I'm asking is because this time last year, players generally across the board said we'd like to have more team socials and I just wondered if that was something that had naturally happened? Did you have more socials?

PP: I think after the psychology sessions we did.

JR: Oh right.

PP: Yeah I think that urged us on to do more and to get out and you know do things we wanted to do really.

JR: Good stuff. And yeah hopefully you can sustain that you know and with the new first years coming in, second and third years can find a way of go-karting or going for a Chinese or curry or something 'cause obviously some of them [first years] wont quite be 18 so won't be so easy to go out and get drunk drinking lots of booze. I was also wondering and I will go on and explain this a little bit as well, but I wondered if you had any what you call 'fun' training sessions that were maybe not so rugby-related, so having a game of football or something like that?

PP: Yeah I think towards the end of the season when, well when the rugby had nearly finished we had a lot of fun, well we played football out on the rugby pitch and played a lot of well netball with the rugby ball.

JR: And was that good?

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PP: Yeah was really fun! There's a lot of banter involved as well but yeah was really good.

JR: I mean I was just curious because obviously it's nice to do something like that because it's fun and gets everybody together, but I just wondered in terms of whether it was good for any other reason like physically for your body to be doing, switching and changing the stimulus a bit?

PP: Yeah I think it was, relieves a bit of pressure as well, cause to do well in sport, 'cause we can just go and do football and just kick a ball and that's still good for you as well so...

JR: Ok, do you think in terms of those types of sessions, do you think you'd want to have a few more of those in the season at all or do you think it's about right given the sort of training schedule that you have?

PP: Erm, well on camp we had like, we just did like basketball and that was really good but I mean we could do a little bit more when we don't have a match or something like that at the end of the week but it's quite hard to fit it all in and be like professional about it so...

JR: Absolutely, yeah good stuff. Erm to what extent with the psych sessions did you feel it, those sessions placed more demands on you in terms of time and that sort of thing?

PP: Well at the end of a hard day we still had homework and we had to eat and we had to go to sleep and get up... and I mean that's all it really is to be honest, fitting more things in after and then sleep is quite a big thing so.

JR: Yeah. Erm I don't know if you'll be able to answer this so it's absolutely fine if you can't but I was wondering if you, do you think the senior team and the senior management were aware of the types of psych sessions you were receiving in the academy?

PP: Erm I haven't a clue really, erm I mean I don't really know! Maybe the players but I wouldn't know.

JR: That's fine, erm I was going to say what's, like between yourself and the academy staff like players and staff would you say there's a relatively good level of trust?

PP: I think there is yeah, I mean, there's, it's been bad because obviously you know that [first year player] was chucked out [released] because of stealing money?

JR: That was last season?

PP: Yeah.

JR: Yeah.

PP: Well and its, we all came together and it's been really good really to be honest yeah.

JR: Out of curiosity when that happened, you know, what affect did that have then? Did it affect trust?

PP: Well I think first of all the money went and no one really trusted anyone with money so everyone just locked everything away and then well, then people told [the manager] and he started not trusting us then [first year player] got found out and kicked out [released] and everyone just leaves their stuff and they've started trusting us again.

JR: Oh good, good stuff, I'm glad that worked itself out really because that can have a big effect on everybody being a close unit and everything so that's really good. I think that's nearly it to be honest, erm do you think the second and third years last year, 'cause I appreciate you're a second year now, but do you think the second and third years were aware that the first years were having more psychology sessions?

PP: Erm, I think they were yeah. 'Cause obviously we'd tell them an stuff and it was on the board so yeah.

JR: Mm and so what do you think their kind of, what do you think they thought about that?

PP: I think they were just like it's another hour in our day, but we enjoyed it so yeah we told them we enjoyed it and they were like, oh… so.

JR: Ok, that's alright. I just wondered in terms of whether it had an effect in terms of them thinking "oh why are they getting more sessions than us, it's not fair"?

PP: I don't think that thought came around to them to be honest, no.

JR: That's cool, good stuff. And I was just going to ask you I suppose for this season, do you think the sessions, how do I put this, do you think you'd want sort of similar sort of sessions again, so like group sessions, so like first, second, third year group sessions maybe? Or squad sessions? Or maybe some individual sessions, like one on one? What would work for you kind of thing?

PP: Erm I think like group sessions are really good to like know everyone at the start of the season, but like smaller groups of us should like you know be pulled out and maybe worked on I dunno, it probably worked better with just smaller groups or something.

JR: I mean one of the things I was thinking about was whether you get a few first years, second years, third years and have a small group of a mixture of years kind of thing.

PP: And mix it up a bit.

JR: Yeah, but I mean, what do you think about one to one sessions? Do you think it'd be useful at all?

PP: Yeah I think it could be useful but I don't think they'd be like be enjoyed with each other together as much, but I think they'd be pretty beneficial to be honest.

JR: In any particular… for any particular reason?

PP: Erm I think they'd [players] be more concentrated and willing to give everything in the sessions...

JR: Alright, no that's really useful, any questions you've got for me at all about the psychology at all or sessions?

PP: No I think I'm good.

JR: Okay, no that's brilliant [participant name] thanks a lot for telling me a bit about it, and that finishes the interview, cheers.

PP: No problem.