

**Philippa Thomas**

# Influences of strain in elite athletes: A case study of New Zealand Open Boxing.

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## **Abstract**

The main purpose of this study was to provide an institutional understanding of the effects of stress within elite level sport performance, in an effort to identify further resources for sporting organisations in support of their athletes. The primary investigation focuses on the transitional periods within an athlete's campaign, from preparation to post-competition. This research emphasises stress as a transactional process; commencing with an athlete encountering a stressor(s) which generates a response: emotional and cognitive, which the athlete appraises and adapts to. These response tasks will determine the direction and intensity of the strain experienced.

This research adopts an applied case study methodology guided by an existential post-positivist methodology. Existentialism frames this research by arguing that athletes have choice, and that choice is determined by individual meanings within the complex social and organisational environment in which they operate. Despite this, it is possible to find some common patterns in the idiosyncrasies of sporting life.

Participant/observation fieldwork was completed across three event cases involving New Zealand Nationally ranked squad open boxers (N = 11) and coaches/staff (N = 6), in their preparation and qualification leading up to the Rio 2016 Olympics. In addition to these participants; four individual athlete cases were selected for semi-structured interviews on completion of the fieldwork. This research found support within scholarly literature related to stressor identification in elite performance sport, and found Hanin's IZOF model a useful framework for analysing the dimensions of athlete strain. Five major themes were identified as exposing boxers and their coaches to more intense levels of strain. Findings have supported temporal and contextual factors moderating influence on stressors and both found internal and external resources to have mitigating effects on the intensity of strain. As such, sporting organisations can provide athletes with resources to improve situational controllability and improve individual's expectancy of stressors they are likely to encounter; further, enabling facilitative coping measures be taken in high pressure environment of elite sport training and competition.

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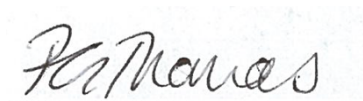
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## Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signed:

A handwritten signature in cursive script, appearing to read 'Pip Thomas', is written on a light blue textured background. The signature is positioned above a thin horizontal line.

Philippa (Pip) Thomas

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# **1 Introduction**

“Sport management research needs to examine athletes’ experiences to better understand athletic phenomena and how the sport manager might develop strategies to cater for these phenomena” (Edwards & Skinner, 2009, p. 383).

This research arose through the researcher’s involvement in the boxing community, both at amateur and professional levels. This involvement, over a five-year period, included management, mentoring and logistical support of both professional and amateur boxers, with respect to training and their competitive needs. This highlighted the physical and mental strain incurred by the athletes in funding, preparing and competing at the elite level. Participation allowed for unique insights into the often unseen challenges faced by boxers.

The potential effects of unmanaged athlete stress leading to strain and undesirable consequences such as sub-optimum performance, premature retirement, and early transition from amateur to professional ranks, was identified as a risk to athlete wellbeing and performance. Observation at the February 2015 organisational review meeting conducted by Sport New Zealand (SNZ) into the governance and management of Boxing New Zealand (BNZ) also suggested that athletes are not well supported and do not have a safe or adequate voice. The perceived lack of athlete security is believed to increase risk of strain and performance and contributes to the imperfect environment surrounding current boxing athletes in preparation for and competition in elite international events within open boxing in New Zealand. Sports research to date in this area, has primarily focused on sports management; namely, the contribution of governance to elite athlete performance, and sports psychology, with psychologists directing their research to individual factors of mental capabilities or coping (Fletcher & Wagstaff, 2009). These narrow foci leave broader questions around the inter-

relationships within stress, as a transactional process, as well as the role of broader socio-environmental factors under-developed.

Athletes do not live in a vacuum; they operate within highly complex social and organisational environments (Fletcher, Hanton, Mellalieu, & Neil, 2012). This is a complex process which involves the individual athlete interpreting multiple and potentially competing factors both internal and external to self. Within elite sport, athletes are constantly striving to regain their equilibrium despite regular experiences of strain through training overload, high-profile, high-stakes competitions and other significant life events (Schinke, Battocchio, et al., 2012).

Furthermore, today's sporting environment has dramatically changed with the advent of the professional athlete, social media and advances in sports science, for instance. Commercial realities also face athletes trying to compete for funding and sponsors. Competing at the elite international level requires an athlete to have the capabilities to navigate these mine-fields alongside the traditional stress of technical and physical challenges, including the ability to work collaboratively with multiple organisational representatives both internal and external to their personal environments. The importance of coping and adapting to these conflicting priorities and situations is highlighted by the following quote from this world class performer:

“You need to be able to handle any situation that's thrown at you. .... you cannot isolate yourself ... it involves team-mates, coaches, doctors, management. You may not get on with all of them but you've got to hold it together, you have to be consistent. You may have to compete in conditions that you didn't wish for ..... you have to be able to cope with that.....” (G. Jones, Hanton, & Connaughton, 2007, p. 258)

Therefore, sporting organisations must strive to understand how to minimise unnecessary and controllable strain and provide support environments applicable to individual needs by investing in athlete centred practices (Gould, Guinan, Dieffenbach, & McCann, 2001) that provide direct understanding of what causes strain in modern athletes.

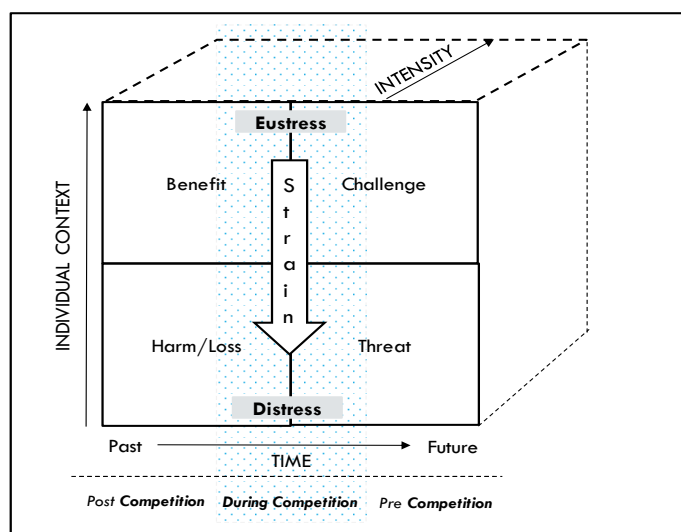
This research provides greater insight into the factors that contribute to athlete strain and provide recommendations for mechanisms on how sports organisations can support athletes to mitigate and/or moderate the effects of strain, inevitable in the high-pressure environment of elite sports activities. It also provides an opportunity to offer greater institutional knowledge, designed to better inform athlete process in identifying stressors and their propensity to instigate strain when performing at an elite level. Furthermore, this research provides individual perspectives through inside insight into the day-to-day experiences of these athletes operating within this high-pressured environment.

### **1.1 Definition of the Concepts of Stress**

Stress is 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, Hanton, & Mellalieu, 2006, p. 329). Situations that arise which initiate the process of stress are contributed to by one or more factors which athletes find themselves facing. These are referred to as ‘stressors’ (Fletcher & Hanton, 2003; Fletcher et al., 2006; Woodman & Hardy, 2010).

The definition of stress as a transactional process suggests that stress is multi-factorial, and as such it has inputs, processes and outputs (Fletcher et al., 2006). Stress is then transacted through the dynamic process of coping. Coping is defined 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” (Lazarus & Folkman, 1984, p. 141). The act of coping determines how an individual experiencing a stressor, assesses the encounter by evaluating the resources available to them and then deciding on whether to take corrective action (cognitive, behavioural and/or physical), with the respective assessment and consequential action referred to and defined as appraisal and adaption (Lazarus & Folkman,

1984). Stress, therefore, results in a subjective output or response dependent on an individual's assessment of the direction (benefit/challenge/threat/harm) and the corresponding depth of response, or intensity (Hanin, 2010; Lazarus & Folkman, 1984). Strain occurs where the directional response to the stressor moves from deviations of positive or 'eustress' to negative or 'distress' (Selye, 1974 cited in Lazarus, 2000). Even where the direction of the output is eustress, the act of processing stress requires processing effort which is denoted as strain (Hardy & Hutchinson, 2007). Strain is the effect of negative psychological, physical and behavioural responses resulting from an ongoing process of unmanaged stress (McKay, Niven, Lavalley, & White, 2008). For the purposes of this research, the spectrum of negative stress output will be referred to as 'strain'. This approach is consistent with the work undertaken by McKay et al. (2008).



*Figure 1-1– Conceptual model of the inter-relationship between time, context and intensity and the outcome of stress appraisal, developed from research from Lazarus and Folkman (1984).*

Figure 1.1 provides a diagrammatic representation of these concepts, with individual context alluding to internal and external resources, motivations and perceptions. Temporal elements in italics, relate specifically to the transitional phases defined during this research and are indicated here as an example only.



The individual's interpretation of the stressors faced will determine the depth (intensity) and the direction of strain as represented by the four quadrants and the directional arrow, with strain intensifying from eustress (comfortable) to distress (uncomfortable). The four quadrants refer to Lazarus' (2000) theory of challenge or threat, which given time, provides for an individual's primary assessment to the current/future event as challenge/threat to self, or to a past event as a harm/loss or a benefit to self.

## **1.2 Research Question**

This research provides a greater understanding of the mechanisms that can be implemented by sporting organisations to minimise the effects of strain on elite athletes. While it was not the intention to analyse the individuals' psychological or physiological responses to stress, it is pertinent to understand the symptoms identified for the purposes of recognising athlete strain during fieldwork. In line with case study method and to best understand the phenomena under examination, research questions were designed to allow for an examination of both positive and negative personal and organisational influencers. Although coaches and other support staff were observed during the participant observation process, the intention of this research is to prioritise the athlete.

The following questions were central to addressing the primary research question. The primary question was:

*What resources (internal and/or external) support an athlete's ability to manage stress for peak performance in the preparation and during significant competitive events?*

The secondary questions were:

- *What factors do athletes encounter in the operation of their sport which requires them to transact stress?*
- *What are athletes' experiences of strain in preparing and competing in major international events?*
- *What factors did they feel had more or less impact on their ability to deal with these stressors and performance in training and competition?*

This research set out to examine how sporting organisations could influence or minimise the degree of strain experienced by elite athletes when preparing and competing in major international competitions. In undertaking this research, the researcher gained a greater understanding of what, when and how stressors interact with an athlete and to identify and analyse the resources that influence their direction and intensity through active participant observation, document analysis and follow-up interviews.

### **1.3 Framework and Case Boundaries**

The objective of this research was to investigate transactional stress from a broad perspective, from the initial transaction or event, the stressor, through the process of appraisal and coping to the outcome or degree of strain. While the final outcome is the effect of strain on performance, this was beyond the scope of this project. As such, this research was bound in case-study methodology (Swanborn, 2010) by the following framework:

#### **1.3.1 Temporal Concepts**

The concept of campaign draws on Schinke, Stambulova, Trepanier, and Oghene (2015) concise framework for outlining the transitional phasing of boxers over a four-year Olympic campaign cycle is referenced; (1) Entering the National programme, (2) Entering major

international tournaments (being preparatory phase for Olympic qualification), (3) Olympic qualification, (4) Focused preparation for the Olympic Games, (5) Participation at the Olympic Games and (6) Post-Games. This research is bound to the transitional phases of (2) entering major tournaments and (3) Olympic qualification, during the 2016 Olympic campaign.

In addition to the temporal conditions of a campaign; the following transitions apply to the periods within that campaign; preparation (training period in the lead up to an event), pre-competition (period immediately preceding competition at venue), competition (competitive event) and post-competition (period following competition) (Devonport, 2006).

### 1.3.2 Contextual Framework

This thesis provides a summary of contextual boundaries as diagrammatically presented in the conceptual model (*model*) presented in Figure 1.2, extended from Polman, Clough, and Levy's (2010) coping model and Lazarus' (1984) definitions of coping. The component parts framing this research look at transactional stress in three parts; (1) the initial event creating stressor; (2) the reaction/effect by the individual to experiencing stress (appraisal, coping, outcome) and (3) the resources utilised to cope with stress (internal/external).

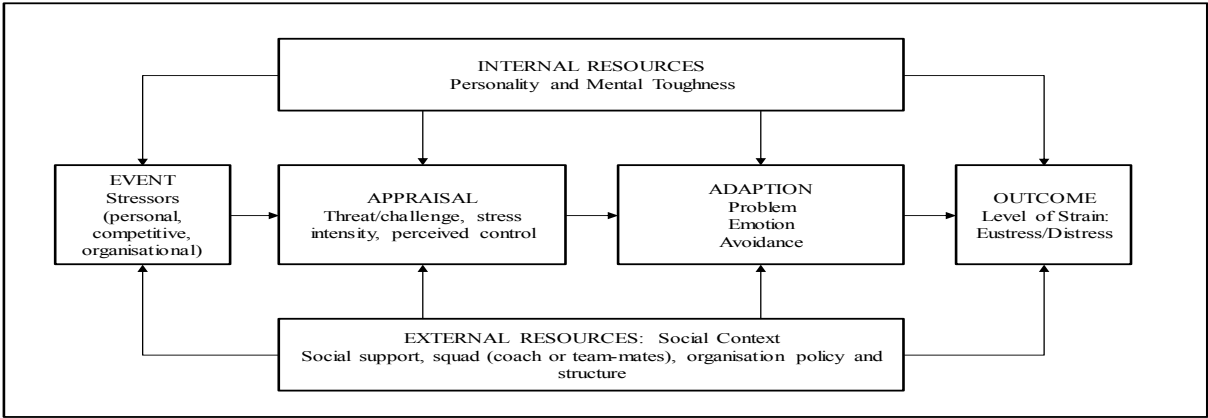


Figure 1-2- Initial Conceptual Model adapted from Polman, Clough & Levy (2010).

Table 1.1 outlines the primary scholarly knowledge framing the analysis of each of these four parts, providing a link to the literature and findings sections for each of these constructs.

*Table 1-1 – Summary of guiding research and internal document references.*

<b>Part</b>		<b>Guiding research</b>	<b>Section References</b>
1	Stressor	Analysis of Arnold and Fletcher (2012b), Fletcher et al. (2012), McKay et al. (2008) and Woodman and Hardy (2010); refer section 3.5.1 for detail on method, provided three higher-order classifications; organisational, competitive and personal which informed the initial conceptual model (figure 1.2).	Literature: section 2.2 Synthesis: Appendix 1
2	Dimensions	The dimensionality of strain is guided by Hanin (1995), individual zones of optimal functioning (IZOF). These dimensions include; form, direction, intensity, time and context.	Literature, dimensions: section 2.3, Discussion: chapter 5
3	Coping	Lazarus (1984, 2010) provides the framework for the further definition of form, the transactions of coping; appraisal and adaption and outcome (strain). These transactions are summarised in the conceptual model in figure 1.1.	Literature, coping: section 2.4 Discussion: chapter 5
4	Resources	This research hypothesises that resources perceived and received, internally or externally derived; provide athletes with greater ability to cope with athletic stressors (Freeman & Rees, 2009; T. Rees & Freeman, 2006).	Literature: section 2.5 Discussion: chapter 6

## **1.4 Rationale**

While there is significant research into the component parts of the stress process, the researcher identified only limited research that explored the inter-relationships of stress as an end-to-end transactional process. Gould, Greenleaf, Chung, and Guinan's (2002) work provides research,

which is broad in scope, including both inputs (stressors) and outputs (performance) and involving two cases studies; summer and winter Olympics. However, while broad in scope, it was not designed to examine the interactions between variables.

Woodman and Hardy (2003) suggest that elite performers may be exposed to various kinds of relational and organisational stressors which differ in form or intensity than lower standard athletes. There is an expectation that elite athletes will have a greater capability for adapting to stress, but correspondingly it is also more likely that the elite athlete will be operating in an environment governed by more professionally operated structures and processes, thus reducing the stressors that they may be exposed to (Woodman & Hardy, 2003). Given this divergence of expectations between participation-based and elite athletes, it is therefore argued inappropriate to generalize findings across these populations (Woodman & Hardy, 2003).

There is some expectation that the management of stress is common across all sports. For instance, environmental factors across elite major competition events, such as venues and accommodation are likely to be the same or very similar. However, stressors which are intrinsic to the sport or organisational group environments and dynamics may vary by sport and within sports organisations. Differences are likely to occur between sports, such as, in high personal risk sports and others (e.g. racing car driver versus a swimmer), and in individual sports athlete versus team sports (Fletcher et al., 2006; Gould et al., 2001).

This research explores the management of stress in '*AIBA open boxing*'. Association Internationale de Boxe Amateur (AIBA) opening boxing is defined as boxing competitions regulated by the international governing body (AIBA) rules and regulations which also govern Olympic competition boxing (AIBA, 2016). Boxing is described as a 'prole' sport; a sport that is associated with the working class (Kantomaa, Tammelin, Näyhä, & Taanila, 2007; Wilson, 2002). Research in boxing is primarily focused on two key areas; sociology (DeGaris, 1997;

Wacquant, 1995, 1998, 2011, 2015; Woodward, 2004, 2006, 2008, 2013) and psychology (Devonport, 2006; Schinke, 2009, 2010; Schinke & Ramsay, 2009; Simpson & Wrisberg, 2013). The range and complexity of stressors and the individual nature of boxing vis-à-vis team sports offer a rich environment to study this complex phenomenon.

Boxing involves both technical and physical prowess. It is a sport that is “won and lost in the head” (Schinke and Ramsay (2009, p. 1) and mental edge is critical to the ability of a pugilist to perform at elite levels (Devonport, 2006; Lane, 2002; Schinke, 2007, 2010; Simpson & Wrisberg, 2013). As a combat sport, boxing involves a high risk of injury, with a potential to be physically knocked-out. For athletes that proceed through the competitions, cuts, bruises, fatigue, and experience of physical, mental and emotional strain is inevitable. As one athlete during this research emphasised, stress has an ability to generate more stress and it is a real hostile environment with boxing. In this way, strain can materially impact performance; lack of adequate preparation, distraction or a loss of focus can result in a blow which can quickly impact a result and/or lead to injury. Progression in boxing requires careful management of oneself during preparation and training to minimise exposure to unnecessary impact and/or injury, particularly during sparring (practice competition). It is these factors that emphasise the need for boxers to have an ability to manage stress efficiently, and for the organisations supporting them to minimise unnecessary if not eliminate stressors and/or their escalation to strain and distress.

Given that these inter-relationships are so under-examined, particularly with respect to elite boxing athletes, there is “a need to examine the stress experiences of athletes from sports and contexts not yet investigated” (McKay et al., 2008, p. 144). Schinke, Bonhomme, McGannon, and Cummings (2012) explored adaption processes of professional boxers, but this was limited to media analysis. To date, no other research has explored stress in boxing, with transitional periods being particularly under-examined from an insider’s perspective (Schinke et al., 2015).

In recent years, Schinke has however conducted practitioner-based research in the psychological aspects of boxing, including recently commencing longitudinal studies working alongside the Canadian Olympic boxing team on adaption across multiple transitional campaign phases (Schinke, 2007, 2010; Schinke et al., 2012; Schinke et al., 2015). This research supports and extends Schinke's research by exploring the end-to-end process, with a particular emphasis on determining the effect of resource on adaption to specific stressors in an AIBA open boxing environment.

This research applied a case-study approach which adopts a stratified method of cases and methods. This is consistent with Arnold and Fletcher (2012a) who urged future researchers of organisational stress to adopt a less unidimensional approach to data collection and analysis techniques and to examine the different properties of stressors such as “intensity, duration, prevalence, quantity, timing, specificity and closeness and the underlying properties of situations appraised as stressful, such as novelty, predictability, event uncertainty, imminence, duration, temporal uncertainty, ambiguity, and timing”. This study does not purport to address all these issues but was designed to deliver a further understanding of the interaction between stressors, coping and mitigating resources. Finally, while the author touches on the impact on performance and recommends inclusion of this in future research, these are highly complex relationships which lie beyond the scope of this study.

## **1.5 Structure of Thesis**

Applied case study research provides a methodology to explore the research question in a structured way, commencing with an initial conceptual model and concluding with an alteration or extension of that model (Swanborn, 2010). The intent in adopting this methodology was to enable the study to investigate a broad scope to the understanding of the end-to-end process of

transactional stress. The research method applied in this project, includes analysis of documents, fieldwork, and interviews (outlined in detail in Chapter 3). Analysis and review of documents include a review of scholarly literature in the domain of research; including; stressors, stress, strain and coping, with emphasis where applicable to research identified in sport and boxing. Chapter 2, combined with Appendix 1, presents the results of a synthesised literature published to date on related topics on stress in elite sport. Chapter 4 reports findings from fieldwork conducted as an active-participant, presented in narrative form for each of the three temporal cases included in the scope of this research. These are; preparation and personal training, AIBA Asia Oceania qualification tournament, and AIBA Olympic world qualification tournament. The narrative is written in the first person, as this was deemed appropriate given the researchers overt and active role in the day-to-day operations of the participants. Chapter 4 also includes a sub-section on the researcher's personal perspectives, providing context to the researcher's participant/observer role. Chapter 5 provides an analysis of the findings, drawing together all parts of the data collection including; the analysis of fieldwork narratives, interview transcripts, document analysis, as consistent with the framework. Chapter 5 synthesises the results into the five dominant themes. These are; coaching capabilities and style, coach conflict and behaviour, the pressure to perform, nutrition and making weight, and coping with loss. Chapter 5 investigates the five key themes against the framework outlined in table 1.1, providing analysis of the relationships between the contributing stressor(s), the coping transactions and the direction and intensity of the stress. Each theme is summarised in a diagrammatic form, representing the interactions (or relationships) between the transactional elements of stress; context, time and resources, and briefly discussing each theme in line with literature outlined in chapter 2. The individual interaction diagrams contribute to the development of the concluding conceptual model presented in Chapter 7. Chapter 6, expands discussion specific to addressing the research questions (refer to Section 1.2) by considering the



key interactions identified in each theme from Chapter 5. The final chapter offers a conclusion, supporting arguments for the proffered conceptual model, recommendations for Boxing NZ and suggestions for future research.

It is important to note; that this research is primarily focused on the effects of strain on the athletes themselves. However, in doing so, strain was also identified in and amongst the coaches during this study. Instances of coach strain have been documented in narratives in Chapter 4, but analysis of resources in Chapter 6 and the conclusions identified in Chapter 7 focus on the athlete's ability to manage stress for peak performance in the preparation and during significant competitive events, as consistent with the research question.

## **2 Literature Review**

This literature review is structured in alignment with the framework for transactional stress (refer to Section 1.3). The section is broken down into the following components:

1. Stressors
2. Dimensions
3. Coping
4. Resources (internal and external)

In addition to this, it provides context to organisational policy, process, and structures which can underpin athlete resources and the implications of stress on sports performances.

### **2.1 Introduction**

Stress is a transactional process with inputs (stressors) managed through the mechanisms of coping. Coping is considered to be moderated by time and context and mitigated by internal and external resources (refer to Section 1.1). Identifying stressors without understanding intensity of experience was recognised as a shortcoming by Fletcher et al (2012). Athletes experience, interpret and respond to stressors differently, and the intensity and experience of stress are dependent on the existential meaning an athlete attributes to the outcome of the event. The same stressor may impact one athlete more severely than another or even affect the same athlete more severely on different occasions (Lazarus, 2000; Fletcher et al, 2012). According to Lazarus (2000), the output of stress is a complex mix of physiological and psychological responses in an individual. These outputs, which take the form of psychophysiological responses, will be experienced at varying levels of intensity, depending upon the relational perspective and meaning attributed/attached at the time of the individual (Lazarus, 2000).

Lazarus & Folkman (1984) identified that the intensity of stress is often higher when the stakes are higher, for example, a loss at a critical event early on in an athlete's career may be more or less stressful than if experience nearing retirement. However, while there are differences in the way an individual transacts with stress, it is not unreasonable to expect some common themes within a specific social group and situational contexts (Fletcher et al, 2012).

## **2.2 Stressors in Elite Sport**

The taxonomy of stressors and subsequent categorization has been the source of numerous studies (Fletcher & Hanton, 2003; Gould, Jackson, & Finch, 1993; McKay et al., 2008; Noblet & Gifford, 2002; Scanlan, Stein, & Ravizza, 1991; Wilding, 2014; Woodman & Hardy, 2003). This research is well synthesized in Arnold and Fletcher (2012b), which critically reviews the results of 34 studies of organisational stressors encountered by sports performers. This analysis identified 640 distinct stress factors that were then abstracted down to 31 themes, including leadership and personnel, cultural and team, logistical and environmental, and performance and personal (Arnold & Fletcher, 2012a). Three key papers were identified in the elite athlete sports domain. Fletcher et al. (2012), categorise stressors as factors intrinsic to the sport, role in the organisation, relationships and interpersonal demands, athlete career, performance development issues, and organisational structure and climate. Woodman and Hardy (2010) focus on the environmental, personal, leadership and team factors associated with stress. Finally, McKay et al. (2008), defined 'strain' as the negative psychological, physical and behavioural responses experienced from the competition environment, social evaluation, social support, underperforming in competition, the pressure to perform, training issues, negative aspects of interpersonal relationships and life events (McKay et al, 2008).

These stressors can be summarised into three higher order themes;

- Organizational stressors - the “environmental demands (i.e., stimuli) associated primarily and directly with the organization within which an individual is operating” (Fletcher et al., 2006, p. 329).
- Competitive stressors – the “ongoing transaction between an individual and environmental demands associated primarily and directly with competitive performance” (Hanton, Fletcher, & Coughlan, 2005, p. 1130).
- Personal stressors – the “ongoing transaction between an individual and environmental demands associated primarily and directly with personal life events” (McKay et al., 2008, p. 144).

Key stressors identified in boxing-related literature is centred around the environmental and mental challenges for preparing and competing in a weight restricted, multi-round, combative sport. Boxing at the lowest possible weight classification to maximise size and strength is perceived as beneficial (Schinke, 2010; Simpson & Wrisberg, 2013; Wacquant, 1995). The intake restrictions and strict lifestyle management, required to meet these weight classifications, was one of the most commonly quoted stressors identified by boxers (Schinke, 2010; Simpson & Wrisberg, 2013; Wacquant, 1995). Environmental factors in the training and competition environment were also cited as factors affecting boxer stress. For instance, in preparation for competition, boxers are required face each other in the ring during practice or sparring sessions. This requires a controlled social environment where discipline and mutual respect protocols need to be assured to minimise friction (Pellett, 2005; Simpson & Wrisberg, 2013). Frictions can occur when there is a lack of cohesiveness about sparring rules, when the rivalry between competing boxers particularly in the same weight category occur or where there is a mismatch of age, experience, and weight (Pellett, 2005; Wacquant, 1995, 2011).

During competition phases, boxing literature further identified expectations of oneself and from

others as stressors experienced by boxers, with Simpson and Wrisberg (2013) referencing fear of letting oneself or others down or the fear of losing as often greater than the fear of getting injured or knocked-down. Schinke et al. (2012) identified stepping up in opponent level, the high calibre of competition, travel, bouncing back after a loss, scheduling and opponent changes, and injuries as stressors in their case-study. Knockout structured based events, as is the case in Olympic open boxing competitions, require boxers to move from one bout to another, potentially on subsequent days. Schinke et al. (2012) also highlighted, multiple weigh-in requirements and dealing with significant or minor injuries sustained in the previous bout as instances which required an ability for an athlete to adapt. Finally, according to Davis, Benson, Pitty, Connorton, and Waldock (2015), the ambiguity of refereeing and judging makes strategizing for fights difficult, and is a notable competition stressor experienced by elite boxers. Davis et al. (2015) video analysed 29 Olympic final and semi-final bouts at the 2012 London Olympics and found that “technical [physiological] discrimination between winners and losers is difficult, bout outcome may be more dependent on which punch is “lucky” enough to be scored by the judges or who appears to be dominant on the day” (p.53). The boxing literature identified in this paragraph was not specific to the identification or discussion of stressors, but does suggest a trigger or event can initiate a process of stress.

This combined research provides a robust and extensive catalogue of stressors, along with concise definitions, for sources of stress (stressors) identified in a sporting context. Stressor identification research, however, fails to provide any constructive support as to the why and how athletes interact with these stressors and how this can be utilised to support these athletes deal with stress and strain. This was a shortcoming noted by Arnold and Fletcher (2012a), who challenge future research to examine the dimensions of stress to understand intensity, predictability and timing implications. The following section provides a framework for exploring dimensionality of stress.

## 2.3 Dimensions of Strain

Arnold and Fletcher (2012a) consider Hanin's (1995) individual zones of optimal function (IZOF) as being an appropriate framework to support understanding and analysis of the dimensions of athlete stress and strain. The model offers five dimensions for interpreting the effects of strain; form, content, intensity, time and context (Hanin, 1995).

*Table 2-1-IZOF Model, adapted from Hanin (2010) and (Lazarus, 2000); Lazarus and Folkman (1984)*

Dimension	Factor	Examples/Explanation
<b>Form</b> The subjectively perceived or observed response(s) identified in the individual.	Cognitive (Thought)	Alert, focused, confused, distracted.
	Affective (Mood)	Worried, nervous, happy, angry, joyful, fearful, ashamed, anxious.
	Motivation	Willing, desirous, interested.
	Volitional	Determined, brave, daring, persistent.
	Bodily	Tired, jittery, restless, sweaty, breathless.
	Motor-Behavioural	Sluggish, relaxed, sharp.
	Operational	Smooth, effortless, easy, clumsy.
	Communicative	Connected, related, in touch.
<b>Direction or Content *</b> The interpretation of the outcome of stress by the individual. <small>* For the purposes of this thesis, the term direction is adopted.</small>	Function	Success or Failure.
	Feeling	Pleasant or Unpleasant.
	Appraisal	Challenge, Threat, Harm or Benefit.
<b>Intensity</b> The force of the response inflicted by the contributing stressor and/or the concentration of the resultant emotion.	Strain	Distress or Eustress.
<b>Time</b> Phases, cycles, sequencing, length, and frequency of an event or situation.	Career Transition	Rooky, experienced, imminent retirement.
	Campaign Transition	Preparation, training, pre-competition, competition, post-competition.
	Competition Structure	Calendar, frequency, and duration of the event(s).
<b>Context</b>	Cultural	Beliefs, expectations of behaviour.
	Environment	Weather, Location.

Dimension	Factor	Examples/Explanation
The nature and circumstances of the task, event or competition at that given point in time.	Expectations	Own, significant others, community, institutional.
	Prior Experience / Knowledge	Of the sport, event, circumstance, stressor, strain.
	Criticality	Importance of the event to the individual and/or in terms of the campaign.

### 2.3.1 Form, Direction and Intensity

Hanin (2010) explores form, by defining stress as perceived or observable responses, which provide form beyond emotion; including psychological factors (cognitive, affective/mood, personality, behaviour), physiological (biochemical/neurological, motor-behavioural, operational), and social factors (communication). In determining sports performance, Cheng, Hardy and Markland (2009) argue that emotion (in particular anxiety) overlaps with other psychological domains, such as cognition, attention, and motivation. This infers that emotion, thought, focus, or attitude; which might include irrelevant thoughts, fear of failure or disinterest, are difficult to isolate from one another. Lazarus (2000) partially addresses this contention, referring to emotions as involving positive or negative psychophysiological reactions to an individual's interaction with the environment. More importantly, he argues that these responses are never one-dimensional and that each emotion can be "aroused and transformed into other emotions based on the changing relational meaning a person constructs from the person-environment relationship" (Lazarus, 2000, p. 234). For example, in the heat of competition, the athlete's emotional responses may translate from anxiety to excitement to relief or pride or even shame, as the event progresses.

Researchers in the domain of athlete stress and strain, most commonly cite anxiety as the output of stress (Cheng, Hardy, & Woodman, 2011; Hardy, 1996a; G. Jones, 1995; Woodman &

Hardy, 2003). It is therefore relevant to explore anxiety as a form of stress. Lazarus (2000) defines anxiety as the emotional response of facing an uncertain, existential threat, given the significant body of literature in this area to date, as well as its evolutionary and naturalistic trigger to humans cognitive and physiological (somatic) systems. These cognitive and somatic systems are designed to put the individual at both physically and mentally alert for a fight or flight response (Cheng & Hardy, 2016; Cheng et al., 2009). Anxiety has traditionally been divided it into two constructs. The first is cognitive anxiety, which relates to negative expectations and concerns about oneself, the situation at hand and the potential consequences. The second is somatic anxiety, which refers to the physiological symptoms resulting from being aroused (Woodman & Hardy, 2003). More recent attention, focussed specifically in the sports domain, refers to performance anxiety as “an unpleasant psychological state in reaction to a perceived threat concerning the performance of a task under pressure” (Cheng & Hardy, 2016, p. 271). Cheng et al. (2009) argued that, to allow for more focused and effective intervention programmes, a more differentiated model for interpreting athlete stress would be meaningful. Furthermore, the dimension of direction is consistent with the principles which initially underpinned arousal based performance models that refer to facilitative anxiety as supporting performance and debilitating anxiety as having a negative effect on performance (Hardy & Fazey, 1987).

The principles of facilitative versus debilitating anxiety led researchers to arousal based models and theories such as the catastrophe models, which introduced the concept of peak individual thresholds between physiological anxiety and performance (Hardy, 1996b; Hardy & Fazey, 1987; Jones & Hanton, 2001). However, research to support peak physiological anxiety as a predictor of performance is unequivocal, with little empirical evidence to date to support a direct correlation between anxiety in isolation and sports performance (Nicholls, Polman, & Levy, 2010a; Woodman & Hardy, 2003). Researchers have determined that negatively-toned



emotions are not always detrimental to athlete performance, whilst positively toned emotions are not always beneficial (Hanin, 1995, 2010; Lazarus, 2000; Levy, Nicholls, & Polman, 2011; Robazza, 2006). While the literature appears to agree that negative forms of stress are not always detrimental to performance, it fails to provide a clear and consistent distinction as to why this may be the case, and more importantly, how athletes can be supported to cope with the stressors they experience. This research supports the validation that athletes experience strain differently, through form, direction and intensity. To understand why, however, individual athlete meaning needs to be explored through the dimensions of time and context.

### 2.3.2 Time and Context

According to Hanin (2000), form and intensity of strain can be further explained by exploring temporal and contextual factors relational to the athlete. Existentialists argue that “anxiety is a great teacher” (Nesti, 2004, p. 57), which suggests that anxiety (as a dimensional form of stress) is not only influenced by the individual’s interpretation of the stressor but through prior experience or exposure (Nesti, 2004). Individual experience and/or previous exposure to an event, the duration of which the stressor is incurred, and the transitional point the event occurs in an athlete’s campaign or career are all examples of how temporal elements can determine the intensity of the stress experience (Hanin, 2000). Context takes into account both external and internal factors that are specific to a point in time. For instance, as touched upon earlier (refer to Section 2.3.1), the nature of the event in which a boxer is competing will dictate the criticality and or inherent meaning the boxer places on that competition. In a major qualifying event where success or failure can result in proceeding to the Olympics (or not), the stakes are high and the intensity of pressure and potential for strain is equally high. Similarly however, minor events, which may infer funding or investment opportunities, may also hold similar exposures to strain. Internal or personal context involves an individual’s goals, priorities, beliefs about

the self and world, whilst external context relate to features that exist in the individual's physical environment at the time (Hanin, 2010; Lazarus, 2000).

Context not only accounts for the intensity of a stressor but also impacts on an individual's desire and/or ability to cope and consequentially operate effectively when facing stressors (Hanin, 1995; Jones, 1995; Lazarus & Folkman, 1984; Schinke, Battocchio, et al., 2012).

Schinke et al. (2015) further identified the importance and profile of competition, career stage of the athlete, level of experience, the degree of risk, the potential of success and the environmental and life-event factors within or around the athlete affects the ability for elite boxers to prepare for and compete in major campaigns. Preparation periods for boxing competitions are generally significant in length of time between bouts/competitions, particularly when compared to sports such as rugby or football. Athlete strain during this period is contributed to by stressors involving the necessity for peak physical conditioning, strong mental preparation as well as injury, strict nutrition and weight control (Schinke, 2010; Simpson & Wrisberg, 2013). One criticism of the literature on athlete stress is that it does not clarify the complex transactions that occur between the occurrence of the stressor and adaption.

An athlete's desire or ability to transact stress will be dependent upon their individual interpretation of whether or not they have access to the appropriate resources (tangible or intangible, internal or external) required to cope with the situation presented to them (Lazarus & Folkman, 1984). For example, if a boxer was hit unexpectedly by a significant punch, his/her initial response may be anger, excitement or bravery. Faced with the same situation, however, another boxer may respond with fear (of getting hurt or of losing), shame or disinterest. Having experienced the initial response, the athlete will process their response according to context. For example, assessing their ability to respond to the situation, based on their personal beliefs, level of fitness and skill, boxing experience and prior experience of having received a significant hit. Based on these contextual factors, the athlete with the ability

to cope will not divert focus to the emotional response but will direct their focus (Hardy & Hutchinson, 2007) on instigating the appropriate situational reaction, for example; raise their guard, or counter the opponent, thus minimising strain. To understand how stress is managed effectively to facilitate performance in elite sport, it is important to explore research into athlete coping.

## **2.4 Coping**

Given what is at stake, an elite athlete's ability to efficiently and effectively cope during significant sports events and moments increases the likelihood that the performer will attend to relevant concerns in a constructive manner (Schinke et al., 2012). Having encountered the stressor, and experienced initial psychophysiological responses to the event, individuals continue dealing with the effects stress through the process of coping (refer to Section 1.1). This involves interpreting, evaluating, then determining and taking appropriate action to a given situation. Researchers argue that it is an individual's cognitive, affective, motivational and emotional responses, as well as their personality traits, that will determine their approach to coping (Cheng & Hardy, 2016; Hardy, 1996a; Lazarus, 2000; Lazarus & Folkman, 1984; Polman et al., 2010).

Through the assertion that an individuals' cognitive appraisal of potentially stressful situations will be influenced by an interaction between the personal and situational factors, Lazarus and Folkman's (1984) transactional constructs of stress and coping provide a useful theoretical framework for understanding the stress appraisal and coping relationship. The personal factors are consistent with the Hanin (2010) dimensions (refer to Section 2.3), whilst examples of situational factors include social interactions and the environment. Examples of individuals' cognitive appraisals include questions around whether they have experienced the

situation before, its achievability, the level of criticality and consistency to the individual's career, self-evaluation of appropriate and adequate levels of preparedness, and consideration of the need for re-evaluation of goals in the specific situation.

The appraisal process is split into primary and secondary activities that work interdependently. Primary appraisal involves individuals identifying whether the situation is important to them and whether it is likely to jeopardize their well-being, that is; create strain. There are two possible interpretations. The first is that no action is required (i.e. neutral or positive benefit to personal well-being). The second is that action is required (i.e. the situation will result in harm/loss, threat, or a challenge to personal well-being). It is the individual's appraisal of stress that determines what an athlete thinks and feels that shapes the way they react, and consequentially cope (Lazarus, 2000). Secondary appraisal occurs only if the primary appraisal results in the individual deciding to take action. Secondary appraisal involves assessing options, in context of available resources (internal and external, tangible and intangible) (Lazarus, 2000).

Robert Schinke's recent research has focussed on adaptive qualities of boxing athletes. Schinke (2010) suggested that many boxers who had the opportunity to fight in high profile tournaments, had little understanding of how to adapt when they encounter a significant event. Schinke, Bonhomme, et al. (2012) found that boxers who approached the tournament motivated and with a good understanding of their personal attributes, a strong sense of identity inside and outside of boxing and a realistic expectation of performance and what could be gained from success (i.e. positive anticipation), were better able to adapt than boxers who entered the competition with doubts and uncertainty or felt like they didn't belong. For instance, the tournament winner in their research stated: "I don't think people realise what's inside of me, and what kind of focus I have" (Schinke, Bonhomme, et al., 2012, p. 836). The ability to overcome inexperience, to adjust on the fly, to be self-confident, self-focused and have control

over oneself, the opponent and the sporting context were all identified as adaptive qualities in the context of the Schinke, Bonhomme, et al. (2012) research.

The relationship between stress response, appraisal and adaption is not one directional or linear but will inter-relate and transform as the situation develops. The response may transform (positively or negatively) as a situation develops or the individual adapts, and this will require a further appraisal and adaption processing (Lazarus, 2000). According to Lazarus (2000), an individual will then adapt to a situation by implementing strategies based on these identified and accessible resources (internal or external). While there are many different classifications of adaptations strategies in scholarly literature, the author has chosen to adopt the following definitions set out by Nicholls, Polman, Levy, Taylor, and Cobley (2007):

- **Problem or task focused** - implementing strategies designed to meet the issue head-on and manage oneself or the environment, plan, information gathering, communicate, technique, concentration.
- **Emotion or distraction focused** - managing the emotional response to the stress; self-blame, humour, relaxation technique, positive self-talk, blowing-off steam, discussing/sharing with others.
- **Avoidance or disengagement** - disengaging from the situation; distraction, removing oneself from the situation.
- **Approach-focused** - increasing one's effort to reduce the effects of the stressor.
- **Appraisal-focused** - re-evaluating the situation and de-sensitizing oneself to its importance.

The adaption strategy selected is linked to the appraisal of strain and the degree to which the athlete perceives they can control the situation (Hanin, 2010; Lazarus & Folkman, 1984). The athlete's response will therefore depend upon the type and intensity of the stressor and/or

corresponding strain and their previous exposure to the situation, as well as the availability and/or accessibility to resources. Additionally, Polman et al. (2010) found that an individual's personality traits also correlated to the type of adaption strategy an athlete would implement. For instance, neurotic personalities would adopt strategies to eliminate or minimise stressful feeling, such as avoidance or emotional adaptations. In contrast, conscientious personalities adapt through the utilisation of planning and decision-making approaches (Polman et al., 2010).

Researchers found that elite athletes will adapt to in-context (typical/anticipated) demands using problem-focused strategies but, when new challenges or unforeseen stressors occur, they are more likely to adopt emotion-focused strategies (Cheng & Hardy, 2016; Nicholls, Levy, Carson, Thompson, & Perry, 2016; Schinke, Bonhomme, et al., 2012). Cheng and Hardy (2016) also found a strong correlation between perceived control and approach based adaptations in higher performing individuals. Nicholls et al. (2016) noted the importance of resetting goals was critical to an individual's well-being (minimisation of strain) rather than goal dis-engagement, especially when faced with an unattainable outcome. This is particularly important in a sports context where uncontrollable variables (e.g. an unexpected draw, a high calibre of opponents, poor preparation, illness or injury etc.) can impact on goal achievement (Nicholls et al., 2016; Schinke, Battocchio, et al., 2012).

Nicholls, Levy, Grice, and Polman (2009) found a direct relationship between the severity or intensity of the stressor (refer to Section 2.3) and the ability of the individual to cope. That is, the intensity of the stress will be diminished (and vis-a-versa) when the athlete perceives that they have the capability and resources to manage the stress. As such, the first step in adaption happens when the athlete has appraised the stress as being within their control. Furthermore, according to McKay et al., 2008, interpersonal conflicts can create varying degrees of strain in athletes. This suggests that some athletes are more or less able to isolate themselves from the conflict and perform despite experiencing this stressor.

Coping self-efficacy and perceived control are two identified constructs that may provide some explanation for why some athletes cope differently to others. Coping self-efficacy extends the belief that an individual has in their ability to execute a task leads to them obtaining the desired outcome, making additional allowance for the available resources that they will be able to mobilize to help them attain their goals (Bandura, 1997; Nicholls et al., 2010a). Perceived control refers to an athlete's belief, confidence and readiness to meet the requirements of performance. It is a person's belief that they have the resources available to adapt and succeed in the pursuit of their goal despite any pressure/stress that has or may occur (Cheng et al., 2009). Cheng et al. (2011) developed the 'three-dimensional model of performance anxiety', which adds the regulatory dimension, perceived control to cognitive and somatic symptoms for assessing the effects of performance anxiety on athletes and its consequential impact on performance. Having explained how performance anxiety is considered to be a dimensional form of stress (Lazarus, 2000), it is reasonable to transfer Cheng et al. (2011) empirical findings that athletes who have high levels of perceived control with better performance.

The differences between self-efficacy and perceived control is one of timing, event or situation. Perceived control refers to the pre-competition period, where an athlete calls on confidence and self-belief that they have prepared well, are ready to compete, and as such can control their performance anxiety (Cheng et al., 2009). However, this construct fails to differentiate between stressors. It also suggests that all stressors incurred by athletes are both anticipated and controllable. The research does not address the application of control in the process of coping when the athlete faces stressors in a competition environment. Coping self-efficacy provides a broader view and can apply to any stressors or responses an athlete encounters. It is based on the premise that the athlete can draw on a range of resources to adapt to the situation and prosper (Nicholls et al., 2010a). These closely connected constructs provide a valuable bridge between the mental toughness literature and the research on stress.

While athletes can prepare for common distractions (crowd interruption, weather) other more arbitrary or intense occurrences such as unexpected injuries, unavailable resources, bad decisions, or tough opposition may be outside of their control. Perceived control would be more appropriately classified as a component of appraisal, whereby the athlete determines how much control they can exert over the situation. This is consistent with the broader view adopted by Lazarus and Folkman (1984), which states that belief in control is significant to whether an individual's primary appraisal is that of challenge or threat. This suggests that the most problematic stressors are those which are arbitrary, unanticipated or uncontrollable. For example, an athlete cannot control the draw or referee/judging bias and as such these stressors require higher levels of resources to combat strain. For an athlete to successfully cope with significant stressors, they need to evaluate a complexity of relational (temporal/contextual) and situational variables and use effective adaptive strategies to reach optimal performance.

In sum, the consensus within the literature is that athletes who present higher levels of coping capability will out-perform their competitors where an athlete both believes they have the resources and perceives that the situation is within their domain of control (Cheng & Hardy, 2016; Cheng et al., 2009; Cheng et al., 2011; Fletcher & Sarkar, 2012; Jones et al., 2007; Nicholls et al., 2009; Nicholls et al., 2010a; Nicholls, Polman, & Levy, 2010b). These resources can be either internal to themselves - for example, confidence in abilities, ability to focus or block a distraction - or externally accessible. The following sections provide further background into the implication of resources to coping.

## **2.5 Resources and Coping**

Having appraised a stressor as requiring action, the athlete will evaluate resources available to them to support their perceptions of coping self-efficacy and situational control. The athlete



will then utilise these resources as required to adapt to their situation and minimise the effects of strain. According to Freeman and Rees (2009), these resources will be either tangible or intangible, internal or external. Intangible resources may take the form of emotions, esteem, information, appraise or something more tangible (Freeman & Rees, 2009). Tangible resources are, however, specifically designed to meet the exact need of the athlete in that circumstance (Freeman & Rees, 2009). These include medical assistance, funding, or equipment and informational input. Internal resources refer to attributes an draws upon from within themselves, for example, confidence in abilities, ability to focus or block a distraction. External resources are those that are accessible from another individual, group or organisation. Organisational structure and support, defined as the administrative bodies that sets policies and processes to govern and manage sports activity (Freeman & Rees, 2009), and Social support, provided by friends, family, coaches/staff and team mates, have been identified as two forms of external support available to athletes in the process of coping (Freeman & Rees, 2009). Having determined that coping self-efficacy, self-confidence and perceived control all contribute to an athlete's ability to deal with the pressures of performing in elite sport, consideration of the concepts of mental strength as a mitigating resource of coping is warranted. The relationship between resources and the stress are outlined in more detail in the following section.

#### 2.5.1 Mental Strength as an Internal Resource to Coping

Fletcher and Sarkar (2012) argue that psychological resilience provides an individual with the capability to respond positively when faced with significant adversity, whilst their definition of resiliency represents a significant overlap with research that explores the concepts of mental toughness in higher performing athletes. Mental toughness has been defined as:

“Having the natural or developed psychological edge that enables you to: cope better than your opponents with the many demands (competition, training, lifestyle) that sport places on a performer; specifically, be more consistent and better than your opponents

in remaining determined, focused, confident and control *under pressure*” (Jones, Connaughton & Hanton, 2002, p. 209, italics added).

Both psychological resilience and the definition of mental toughness suggest that an athlete's ability to cope under pressure requires internal mental resources to appraise and adapt to the effects of strain, particularly in elite sports performance (Connaughton & Hanton, 2009; Hardy, Jones, & Gould, 1996). This is further supported by Gucciardi, Gordon, and Dimmock (2009) who refer to mental toughness as an ability to respond and appraise pressure, challenge, and adversity to consistently achieve determined goals (Gucciardi et al., 2009).

While confidence, positive personality, focus and motivation are identified as constructs within the psychological resilience domain (Fletcher & Sarkar, 2012), the mental toughness domain provides Clough's (2002) 4C framework. Clough (2002) added confidence as the fourth dimension to Kobasa (1979) model of hardiness, which included challenge, commitment and control. To date, researchers still debate the empirical accuracy of mental toughness as a concept over hardiness or resiliency (Clough, 2002; Middleton, Marsh, Martin, Richards, & Perry, 2004b). This seems to be a debate over subjectivity, measurability and context rather than one around the general principle that mentally strong athletes perform at high levels. As such, it is worthwhile exploring the component parts of mental strength, in both the mental toughness and the resiliency domains, in conjunction with the transactional process of stress.

Control, confidence and commitment are mental resources that athletes draw on to adapt to stressors and minimise strain (Clough, 2002; G. Jones et al., 2002; Vealey, Hayashi, Garner-Holman, & Giacobbi, 1998; Woodman & Hardy, 2003). Control is defined as the sense of control over the situation and environment, confidence describes individuals who have the complete self-belief that they possess unique qualities that will enable them to succeed, and commitment (specifically, focus and motivation) refers to sticking to the task despite problems and obstacles. The application of situational and temporal dimensions provide the distinction

between self-belief and self-confidence. This becomes especially relevant when an athlete is faced with the pressure of performance. An athlete develops confidence in their skills and abilities over the course of their campaign and career through experience with multi-faceted training, competition and prior exposure to stressors (Fletcher & Sarkar, 2012). Self-belief narrows in situational focus. For instance, as the athlete enters the field of play they draw on this confidence to support the unwavering belief that they can achieve their desired objectives (Bandura, 1997). Self-efficacy broadens this belief by adding resiliency to the equation (Bandura, 1997; Fletcher & Sarkar, 2012). Self-efficacy introduces a belief that one can overcome obstacles and demands (pressure/stress) and still achieve those same desired outcomes. The fourth dimension of the mental toughness 4C model includes challenge, which argues that mentally tough athletes will interpret obstacles as challenges (Clough, 2002; Jones et al., 2007). This is consistent with research that identified that higher performing individuals assess strain as a challenge to overcome, rather than a threat to avoid (Jones, Meijen, McCarthy, & Sheffield, 2009). As such, this research argues that challenge represents an output of primary appraisal rather than an internal resource consistent with Lazarus (1984).

Mental strength has been the focus of most psychological research in boxing (Devonport, 2006; Schinke, 2007). Devonport (2006) found that high self-efficacy, motivation and mental toughness characteristics was identified by participants as contributing to success. This was associated with abilities to relax, concentrate and self-regulate arousal and cope with being hit (Devonport, 2006). According to Schinke (2007), Boxing is a sport founded on control, control of oneself, control of the other, control over the judges and consequently control over the outcome. A boxer who loses concentration, or control in the ring, is likely to be punished by the judge or by the opponent. Simpson and Wrisberg (2013) quote one boxer interviewed in their study as saying that “Boxing is a lot about mental – you know. You’ve got to prepare yourself well mentally, cause you’re out there on your own” (p.113).

Marino (2004, p. 5) also touch upon the issue of control to an athlete's ability to manage their emotions, citing that "Boxing helped me learn how to control my emotions. You get in there and you are very afraid, and then all of your training takes over". Given the nature and context of the sport, the risk of injury to both physical and emotional well-being is high. The need to have oneself mentally prepared, have emotions under control and focused is therefore fundamental to not only performing well, but also to ensuring that the risk of injury is minimised (Wacquant, 1995). Of particular concern in boxing is where strain affects the perceptual process. If the athlete is too anxious or too relaxed this will affect their range of attention or focus, which may result in a failure to pick up important internal and external cues, putting the athlete in a vulnerable situation for risk or injury (Otty, 1997).

Self-confidence, created through carefully designed training, proper equipment, carefully chosen competition and most importantly adequate preparation is often cited as important to an athlete's ability to cope with the pressures of competing (Devonport, 2006; Schinke, 2010; Simpson & Wrisberg, 2013). One athlete interviewed in Simpson and Wrisberg's (2013) research stated: "For me I personally train as hard as I do through fear because I don't want to get into the ring thinking I have not done enough" (p.115). As highlighted above, the importance of mental preparation is as important as the physical preparation. As another of Simpson and Wrisberg (2013) participants states "I think the mental and physical go hand in hand and if you don't do the physical preparation then mentally you will be all over the place" (p113). These findings are consistent with Vealey et al. (1998) who found that mastery, social support and physical/mental preparation are the three leading factors in developing confidence in an athlete.

In sum, it is posited that exploring mental strength capabilities as resources during coping appraisal and adaption is relevant to better understanding the transactional process of stress. This is consistent with Crust (2007) who concluded that more research is required to determine

whether mental toughness increases the ability to think clearly under stress, make decisions under pressure, and initiate coping strategies.

### 2.5.2 Social Support as an External Resource to Coping

Social support is said to be beneficial to the effects of strain by decreasing the potential impact of the stressor, by improving an individual's perception towards coping, or by providing a distraction from, or solution to the situation (Cohen & Hoberman, 1983; Cohen & Wills, 2000; Rees & Freeman, 2006). How social support moderates this effect is still being debated, but research suggests that it influences the individual's self-confidence and/or self-efficacy (Rees & Freeman, 2009) and ultimately provides mechanisms for facilitative coping, which can lead to better performances (Gould, Greenleaf, Chung, & Guinan, 2002; Gould & Maynard, 2009; Rees & Freeman, 2009; Rees, Hardy, & Freeman, 2007). The assertion by Freeman and Rees (2009) is that perceived support (i.e. the belief an athlete has that they will have access to support from others, if and when they need it) is said to increase the athletes confidence in their ability to cope with a given situation. That is, that they will cognitively assess the situation as being less straining or more controllable have perceived that support is available, consequently it is the perception itself that supports the appraisal phase and moderates strain (Freeman & Rees, 2009; Rees & Freeman, 2009). However, having appraised the stressor in relation to social support, and determined that action is required, resources will, if necessary, be recruited in the adaption phase (Freeman & Rees, 2009; Rees & Freeman, 2009).

Social support can be derived from many sources important to the individual and their context, including significant personal relationships (family, friends, partners), sporting relationships (coaches, managers, sports scientists, team-mates, competitors), or communities (organisations, fans, sponsors) (Rees & Freeman, 2006, 2009; Rees et al., 2007). Social support from family and friends was identified as important due to the sacrifices and life-style restrictions associated

with being involved in high discipline sport, which demanded equal sacrifices from family and friends in terms of social availability (Simpson & Wrisberg, 2013; Wacquant, 2011). The utilisation of social support can take the form of emotional, esteem, informational and tangible support and provides the athlete with facilitative adaptations, such as a sounding board for concerns, input regarding a competitor's strengths or simply a boost of confidence through positive affirmation (Freeman & Rees, 2009). Emotional support provides comfort and security, while esteem relates to providing positivity and encouragement which lifts the athlete's self-confidence (Freeman & Rees, 2009).

Wacquant's sociological research also highlights the importance of personal identity derived by the athletes, through enhanced perceptions of themselves received from their social network or community, who may revere them for their toughness, hard work, discipline and perseverance through their performance of boxing (Wacquant, 1995). Furthermore, in today's modern sporting environments, social support is no longer reliant on physical interactions, but expands and is often present through social media conversations and interactions, and further research into this social support dynamic is warranted.

While team support is crucial in many sporting environments (Carron & Eys, 2012; Carron, Shapcott, & Burke, 2007), in boxing this construct is challenged. Elite level Boxers compete as individuals, frequently competing against each other at local competitions, but also train and travel together as a squad for international competitions. To date, there is limited literature exploring cohesion as a source of support in individual-based competitive sport. But whether the athlete is a member of a national club or team, athletes are almost always part of a social group (Wolf, Eys, Sadler, & Kleinhert, 2015). Evans, Eys, and Wolf (2013) found that while it is important to take individual requirements into account, it is equally as beneficial to develop group dynamics in an individual sport based context. Benefits of interpersonal relationships such as shared understandings of the challenges of elite sport, common language and purpose,

mutual respect along-with meeting tangible requirements through shared knowledge, training partnerships and support are, as relevant to individuals as they are to teams in sport (Carron & Eys, 2012; Carron et al., 2007; Wolf et al., 2015). Additionally, informational and appraisal support through social interactions in like-minded cohorts can also offer help to the individual in evaluating situations and to develop potential solutions (Cohen & Hoberman, 1983).

According to Carron and Eys (2012), group cohesion has the capability to provide athletes with a source of social support beneficial to the management of strain and athlete performance through “decreased role ambiguity, decreased cognitive anxiety, increased positive affect, decreased social-loafing and increased effort” (p.). This was also found to be this case where the boxer’s gym environment operated on principles and protocols of discipline, respect, and due-care, and where athletes felt safe and supported (Pellett, 2005; Simpson & Wrisberg, 2013; Wacquant, 1995). The suggestion that group cohesion is a factor was highlighted by a number of quotations included within Simpson and Wrisberg (2013) research. One of their participants noted: “we see each other every day .... the lads in the gym you are practically living with them. It’s just talking and it’s not always about boxing .... You’ll sit down have a talk about it, have a laugh it’s good”. Simpson and Wrisberg (2013) also found that younger athletes looked to more experienced boxers for advice, and that boxers regarded themselves as a “band of brothers” (p. 114). This provided social support both inside and outside the ring, and that boxers not happy in their gym environment found that this affected their performance (Simpson & Wrisberg, 2013).

Boxing, like other individual based sports, requires a strong dyadic relationship between the coach (and assistants) and the boxer (Schinke, 2010). A differentiating factor in boxing is the presence of trainers/coachers within the field-of-play, during warm-up and between rounds of competition. Simpson and Wrisberg (2013) highlighted respect, trust, knowledge and motivation as critical themes identified by boxers in their study pertaining to the coach/trainer

relationship. Jowett (2007) argues that despite significant pressure and stress, highly committed coach-athlete relationships are more likely to support performance by providing collective efficacy between the parties (Cohen & Wills, 2000; Jowett, 2007; Zaccaro, Blair, Peterson, & Zazanis, 1995). Jowett (2007) specifies that this commitment must be mutual, and requires a respect of each other's time, matching each other's effort, and authenticity (open, honest and consistent).

Jowett (2007) proposes that to “avoid relationship disruptions” (p.71), the coach and athlete(s) need to understand and review their specific roles and rules (codes of conduct) through regular meetings. Task conflict occurs when there is a disagreement among group members about the content of the tasks being performed, including differences in viewpoints, ideas and opinions (Leo, Gozalez-Ponce, Sanchez-Miguel, Ivarsson, & Garcia-Calvo, 2015). However, a truly supportive environment takes time to develop. Expectations and judgments can contradict support, and this in itself can add to athlete strain.

Distraction, the pressure to perform, the pressure to consult and communicate, can all affect whether the athlete gets the support they need (Gould & Maynard, 2009). For example, an athlete may have decided to focus on their skill development rather than winning at a particular competition, given their personal goals and campaign plan. However, their funding body may expect of them to win at all costs, therefore contradicting the kind of support the athlete may be seeking. Developing a supportive environment as a meaningful resource takes a strong understanding of priorities of both the athlete and their partners, and time to develop (Rees & Freeman, 2009). As with other forms of social support, a lack of cohesion between the individual and the group can result in strain where a lack of clear roles, responsibilities, and ways of working together exist. In its most extreme form, this can lead to conflicts (Carron et al., 2007; Gould & Maynard, 2009). When operating effectively, however, social support provides positive aspects as a moderating factor in facilitative coping.



Finally, organisational and social support is critical to not only the success of the athlete but also to their ongoing health and wellbeing (Simpson & Wrisberg, 2013; Wacquant, 1995). This highlights the importance for organisations to support athletes to develop internal resource capabilities and provide appropriate supporting environments and resources to meet athlete needs. Further research is required to gain greater understanding into the relationships between relational concepts, resources and athlete appraisal processes with regards to coping self-efficacy and perceived control, and to enable a more consistent approach to further supporting athletes in this area.

## **2.6 Organisational Structure and Process as an External Resource to Coping**

It is anticipated that athletes should be able to draw on organisational resources and support to navigate stress and to maximise performance opportunities. Fletcher and Wagstaff (2009) found the way individuals are led and managed by their NSO's to be an important factor in determining that codes sporting success in Olympic competition. While funding is only one of the factors for success identified in organisational practice research (De Bosscher, De Knop, Van Blottenburg, & Shibli, 2006; De Bosscher, De Knopa, Van Bottenburgh, Shibli, & Bingham, 2009; Gilmore & Gilson, 2007; Oakley & Green, 2001; Sotiriadou & De Bosscher, 2013), it has a direct impact on an NSO's ability to identify and develop talent, provide training facilities and services, sports science services, international competition and/or allow an athlete to concentrate full-time on their sport.

The framework for measuring performance levels in elite sport management programmes is based on an initial research project in the UK, which resulted in critical success factors for Sport Policy Leading to International Success (Sotiriadou & De Bosscher, 2013; SPLISS, 2011, p. Appendix A). This identifies a National Sporting Organisation's (NSO) ability to identify

and develop talent, provide training facilities and services and invest in sports science services and research as contributing factors in developing high performance athletes (De Bosscher et al., 2006; De Bosscher et al., 2009; Sotiriadou & De Bosscher, 2013). Other contributing factors included, participation in international competitions, the procurement of funding to support an athlete's ability to concentrate full-time on their sport, and coach provision and development (De Bosscher et al., 2006; De Bosscher et al., 2009; Sotiriadou & De Bosscher, 2013). While the research conducted to test this hypothesis was partially inconclusive, arguably due to limitations of scope (six countries), and data measurement variations and consolidation (60 sports), the research did support these factors the SPLISS critical success factors of elite sports performance, with financial resources being found to be the most significant (De Bosscher et al., 2009). It is not surprising that funding is a predominant finding here, as the other factors, such as the provision of national training facilities, coaches and sports scientists, are heavily dependent on financial resources availability.

This lack of funding is particularly difficult in boxing, with participants typically coming from lower socio-economic backgrounds (Wilson, 2002). As such, higher intensity training and higher competition costs (travel, equipment, diet) of elite sports involvement place considerable financial stress on the athlete and their families (Baxter-Jones, Maffulli, & Group, 2003). This is amplified by the stringent performance-based funding principles of HPSNZ (Sam, 2011) and the geographical distance from significant competitions. As such, access to both training and competition opportunities are limited. Furthermore, a failure to perform places further financial strain on both the NSO and the athletes.

Whether funding exists or not, the degree of capability of organisational factors was also found to be of significance in elite athlete performance (De Bosscher et al., 2009; Gould et al., 2001). Sports body capability requires a strong organisational structure as well as a robust administration system to support elite performance (De Bosscher et al., 2006). Despite

limitations in funding, volunteer and self-funded athlete based organisations can deliver resources such as national camps, self-funded international travel, education, training, and support. In summary, a strong organisational environment should not only provide the tangible requirements or assets, equipment, and capital, but also, a social support network to assist the athlete in preparing for and competing at an elite level (De Bosscher et al., 2006; Schinke et al., 2015; Sotiriadou & De Bosscher, 2013).

From an NSO perspective, at the time of writing, Boxing New Zealand (BNZ) employs one full-time staff member responsible for general administration duties. Portfolios are assigned to individual Board members, including high performance, finance, funding and coach development. Rather than providing high-level governance, BNZ board members are primarily operationally focused, performing detailed tasks and working within their own guidelines rather than directing formalised strategic policies or plans. As an organization that is reliant on volunteers, BNZ aligns with the concept of ‘kitchen table’ management style (Kikulis, Slack, & Hinings, 1992). They operate with low formalization of administration, athlete services, and support systems, and few decisions are made without the volunteers’ involvement (Amis, Slack, & Hinings, 2004). Amis et al. (2004) also found that roles [are] awarded more as a consequence of loyalty and commitment rather than expertise. At BNZ, little emphasis is placed on formal planning or having set procedures; the organisation is run informally with the primary objective being the satisfaction of its members. These organisational structures survive primarily because of the passion of the volunteers involved, and they rely heavily on relationships and community knowledge. This structure requires minimal funding, yet what is currently provided is not sufficient to meet the needs of Olympic competition. This forces the rapid evolution and adaptation of organisations in order to be successful (Amis et al., 2004).

## **2.7 Implications to Performance**

In his research from his work with the US Olympic Committee, Harberl (2009) argues that stressors are encountered by all athletes, and it is the athletes who are unable to effectively manage those stressors that are falling short in their performances. This indicates that athletes better capable of dealing with stressors have more opportunities to optimise their performance. Most significantly, it has been found that athletes who appraise stressors as challenges (for example; non-selection, injury, competition loss) demonstrate better optimal performances (Fletcher & Sarkar, 2012; Jones et al., 2009; Lazarus & Folkman, 1984).

Early researchers in performance anxiety, proffered arousal based models (Hardy, 1996b; Hardy & Fazey, 1987; Jones & Hanton, 2001), which argued that certain levels of performance anxiety triggered optimal levels of performance. With researchers challenging the ambiguity of these arousal based models, Woodman and Hardy (2003) meta-analysis set out to prove the relationship between cognitive anxiety and competitive sport performance and the relationship between self-confidence and competitive sport performance. Like Levy et al. (2011), they found that self-confidence was a significantly greater moderator of performance than of cognitive anxiety. Since then there has been a burgeoning body of research that has sought to find the link between individual traits and superior athlete performances. This includes: mental toughness (Holland, Woodcock, Cumming, & Duda, 2010; Jones et al., 2002; Jones et al., 2007; Middleton, Marsh, Martin, Richards, & Perry, 2004a); perceived control (Cheng & Hardy, 2016; Cheng et al., 2011); coping self-efficacy (Moritz, Feltz, Fahrbach, & Mack, 2000; Nicholls et al., 2010a, 2010b); and perceived support (Freeman & Rees, 2009; T. Rees & Freeman, 2009; T. Rees et al., 2007).

To the best of the researcher's knowledge, to date there is no empirically tested model to evaluate the relationships between stressors, coping and performance. The most significant

research in this area, has been conducted by Daniel Gould (see, for example, Gould et al., 2002; Gould & Maynard, 2009; Greenleaf, Gould, and Dieffenbach, 2001). The primary purpose of the Gould et al. (2002) study was to determine the extent to which specific variables were perceived to influence or impact on performance. The self-assessment of performance affects was retrospectively reported, and future research would benefit from development of a model to track transactional stress from stressor to outcome. The understanding that a utilisation of personal resource in dealing with stressors, rather than focussing on performance, is likely to have an effect on processing efficiency and consequentially performance appear logical despite a lack of empirical evidence to date (Hardy & Hutchinson, 2007). Hardy and Hutchinson (2007, p. 147) themselves state that despite much research to date, it is “somewhat surprising that the nature of this relationship remains relatively poorly understood”. It could be argued that this is a result of studies to this point concentrating on the relationship between performance anxiety and performance, which fail to explore the multi-factorial and complex nature of the management of strain (with one form being performance anxiety) through the process of stress.

## **2.8 Summary**

Studies over the past two decades have provided important information on specific components of stress. This sits alongside a considerable amount of literature published on mental strength constructs. These studies suggest a significant overlap in the mental attributes required to be a high performing athlete. Both domains recognise that high levels of pressure are inherent to elite sport and it is the athlete’s ability to cope with this that will often determine levels of success. Recently, researchers have shown an increased interest in trying to determine how athletes appraise stress, centering on coping self-efficacy and perceived control. Additionally,

other bodies of research have investigated the types of strategies or adaptations that athletes adopt having encountered and appraised stressors, including the implications of social support (both perceived and tangible) as a useful resource in these transactions. However, research to date has not addressed the end-to-end transactional process of stress from inputs, coping and resultant strain and effect on performance, and/or explored the multi-factorial and complex variables associated with these transactions. Additionally, research into stress and its effect on performance would be more constructive if it adopted a consistent and systematic approach to identifying the commonalities across these bodies of research and developing a framework within which more robust causal analysis can be examined.

While this study does not or cannot purport to do this, it provides further insight into the transactional process of athlete stress through case-study methodology across New Zealand (NZ) Open Boxer's Olympic qualification campaign. In doing so it provides a starting point for further development of a more comprehensive model for future research. The following chapter identifies the case study research design method under which a conceptual model summarising the process of stress will be developed.

### **3 Method and Methodology**

Use of multiple methods and procedures is both consistent with case study methodology and a post-positivist framework and is considered applicable to this research question which seeks to understand the complex interactions from inputs to outcomes involved in the process of stress. This chapter describes the procedures and methods used in this investigation under an applied case study methodology. This methodology sits in context of a post-positivist ontological framework, with an existentialist axiological researcher lens.

#### **3.1 A Post-Positivist Applied Case Study Approach**

This study is theoretically positioned in the post-positivist paradigm, which recognises that “some reasonably stable relationships can be found among the idiosyncratic messiness of life” (Miles, Huberman, & Saldane, 2014, p. 7). Furthermore, while athlete experiences can be described and tested, there is still a level of unpredictability in social phenomenon. Adopting a post-positivist stance fits with sports psychology research, allowing a broader range of methods to produce independent explanations while recognizing the involvement of the researcher in providing an explanation of the phenomena (Krane & Baird, 2005). Fletcher et al. (2012, p. 545) argue sports organisations involve an “intricate system of socially constructed hierarchies, often with constantly changing frontiers”. According to Yin (1994), Case study research (CSR) processes offer an appropriate methodology to explore individuals and their relationship to the organisations they interact with and is well suited to investigations of sports settings and the requirements of this research.

Selecting a methodology which is designed to best address the research question is consistent with positioning the research in the post-positivist paradigm (Giddings & Grant, 2007). CSR

provides the structure for an in-depth investigation of complex functioning social systems. Active-participant field-work methods allow for close and personal collaboration between researchers and participants, including research/practitioner scenarios. CSR provides a means of breaking down the phenomena into constituent elements that can then be identified and used to understand the demographics, attitudes and motives within a given context of a closely defined group (Baxter & Jack, 2008; Becker et al., 2012; Edwards & Skinner, 2009; Newman, 2014; Stake, 1995) and provide in-depth research with minimal disruptions to and in the participant's natural surroundings (Krane & Baird, 2005).

### **3.2 Embracing Existentialism**

Existentialism provides the axiological framework for this research project. Existentialism refers to the existential 'Big Five': death, meaning, identity, isolation and freedom (Hanrahan & Andersen, 2010). As an athlete prepares for and competes in elite level sport, they are constantly formulating decisions about their own preparation and abilities, their oppositions, the environment in which they are operating; and the context of the organisations they interact with (Dale, 1996). As this research develops knowledge about the relationship and responsibility of athlete strain vis-à-vis the sports organisations they interact with, existentialism challenges the researcher to "to attend to questions around meaning, freedom, choices, and responsibilities" (Dale, 1996, p. 309).

Existentialism, as founded by Danish philosopher Soren Kierkegaard (1813-1855), purports that a person does not have complete free will but has 'situated freedom'. As such, they make choices based on the situation that the world presents (Dale, 1996; Nesti, 2004). Furthermore, rarely if ever does one experience a singular or discrete instance of positive or negative feelings (Nesti, 2004). Therefore, in order to identify and understand the relationship between factors



affecting an athlete, you must not only understand how they interact with their ‘world’ but also the network of meaning(s) an event has on that athlete (Nesti, 2004). Additionally, existentialism provides the link between the individual’s identity as an athlete and their role and affiliation they have with others (Hanrahan & Andersen, 2010; Nesti, 2004). Disruptions in identity through disruptions in everyday goals such as losing (failure), injury or imminent retirement can illicit anxiety responses. Existential psychologists recommend approaches that make athletes and coaches confront their concerns, build awareness, formulate constructive means of coping and to take personal responsibility for the choices they make (Aggerholm, 2015; Hanrahan & Andersen, 2010). Case studies based on an existential approach are interested in the freedom and choices of individuals within the social environment of sport. Existentialism does not deny that an individual is shaped by their circumstances, but argues that an individual can make something out of the situation they face through choices (Aggerholm, 2015; Nesti, 2004).

### **3.3 Applied Case Study design**

Given the researcher’s familiarity with boxing in NZ, it was determined that an applied interpretation of CSR was the appropriate design method to provide a “comprehensive descriptively detailed, conceptually framed, understanding of [this] social group” (Krane & Baird, 2005, p. 88). Applied Case Study Research (ACSR) is designed to offer practical solutions to concrete problems and to inform the immediate needs of practitioners (Newman, 2014), so a “more desirable state of the system can be obtained” (Swanborn, 2010, p. 33). It allows for existing theoretical concepts to inform the study and for the deduction and analysis of multiple variables to model complex relationships and processes (Baxter & Jack, 2008; Swanborn, 2010).

Data was collected and interpreted under Swanborn's (2010) principles of ACSR, through document analysis, active participant observation based fieldwork and structured participant interviews. Figure 3.1 outlines the procedural steps involved in producing this ACSR. The iterative process of comparing the theoretical model to the data helped to ensure 'causal validity' within the scope of this case study, allowing the author to explore the relationships within this defined phenomenon. Limitations of causal analysis in case studies and small sample sizes were addressed by diversifying the method of data collection, by stratifying the sample across campaigns and by addressing the sample selection at the lowest sub-unit, with all participants remaining within one campaign (Swanborn, 2010). Validity is improved when no other factors can provide a more accurate explanation of that relationship (Swanborn, 2010).

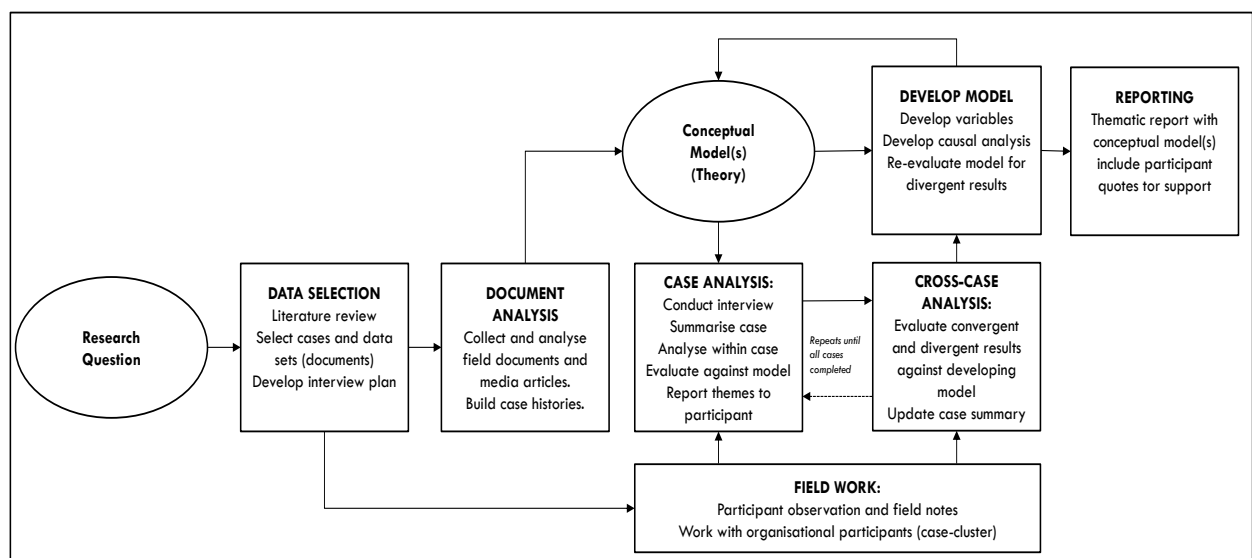


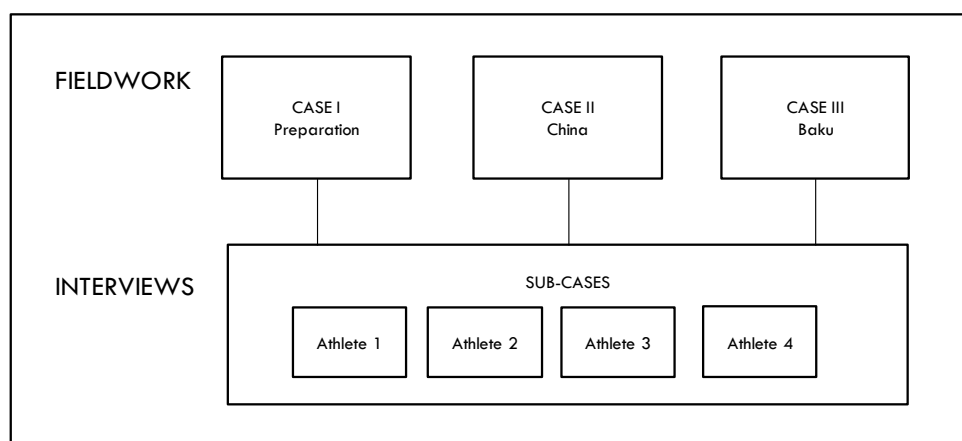
Figure 3-1- Overview of method developed from Swanborn (2010)

### 3.3.1 Case/Data Selection

Three temporal event cases were selected, and combined with four individual athlete cases (lowest sub-unit), which were purposefully selected, as summarised in Figure 3.2. The temporal event cases or data sets for this research are:

- Case I (Preparation) – Preparatory period from February to March 2016 including National Squad camp.
- Case II (China) – Asia/Oceania Olympic Qualifiers’ in Qui’nan city, China in March 2016
- Case III (Baku) – World Olympic Qualifiers’ in Baku, Azerbaijan in June 2016

In addition to the selection of transitional cases in the campaign to 2016 Olympic qualification, four individual athlete’s cases were selected for follow-up interviews at the completion of the campaign. These were purposefully sampled due to availability and to incorporate a range of experience levels. Two athletes attended both China and Baku, while the other two only participated in China only. No female athlete was interviewed due to time constraints.



*Figure 3-2 Overview of Case Structure*

Table 3.1 summarises the number of participants actively involved in each case, excluding the researcher. During these tournaments, the researcher undertook efforts where required in support of athletes and staff. A more detailed contextual information for each case is covered in Chapter 4.

*Table 3-1 – Summary of participants for each case*

Role	Case I	Case II	Case III
Athletes	11	11	5
Coaches	4	3	3
Manager/Support Staff	1	2	1

### 3.3.2 Document Review

Case histories for each participant were produced from media and publicly available documents for insight into subsequent interviews, observations and analysis (Swanburn, 2010). The documents analysed and contributed to the development of the initial conceptual model and case histories. A review of scholarly literature published since 2000 was also completed, focused on searches within the following topic areas; sport and organisational and athlete stressors, stress and strain; organisational policy, Olympics, mental toughness and performance; and then specifically in boxing and elite sport. The searches were made across the AUT database library. In addition to scholarly literature, the researcher reviewed materials obtained from sources and through the internet: organisational documentation (e.g. strategies, campaign reviews and surveys), biographies and media articles about athletes.

### 3.3.2. Overt Active Participant Observation

Observation of participant's actual behavior in their natural environment is especially important when dealing with behavior that might be subject to social pressures or conditioned responses (Edwards & Skinner, 2009). Case studies are known to include ethnographic methods, but this case study research was aligned to applied case study methodology not ethnographic methodological principles. This research adopted fieldwork research methods which included: talking to people (including conversational and informal interviews), observations (with varying degrees of participation), combined with action (working, joking, hanging out) and observing, listening, reading (including interactions of individuals with social media, for example Instagram and Facebook). It was made explicit what would be recorded during the fieldwork (and for what purpose) in the participant information and consent process, which was completed as regarded by ethical research and overseen by AUT Ethics Committee.

The researcher conducted the fieldwork as an active participant/observer, while also conducting logistical and administrative support tasks for the team, during the preparation and lead up to 2016 Rio Olympics. This included attendance at the National training camp in March 2016 and at both qualification tournaments in China and Baku. Providing a helping-hand and working as appropriate on day-to-day operations is consistent with (Wagstaff, Fletcher, & Hanton, 2012) as beneficial to developing bonds between participants and researchers. The reality of the research process was such that observation became greyed, where peripheral members who interacted with the group were nevertheless valuable informants, however, participants who were not party to ethical approvals have not been included in the results.

The researcher did not make any effort to carry out the field research covertly, due to the nature of the research settings and the boxers and coaches were aware that they were under surveillance from the researcher. The researcher openly discussed her research with

participants if they asked about it and did not attempt to mislead them in any way. Personal relationships developed through fieldwork (Newman, 2014) and allowed for informal questioning of athlete thoughts and feelings at appropriate moments such as “are you ready?” or “how were your nerves pre-fight?”. For all observable purposes, the researcher’s role in the team did not change compared to her role prior to conducting the research. The nature of the researcher’s role and the familiarity of the team did not appear to unduly influence the activities and behaviors of the participants nor impact on their training or competition.

This approach was consistent with the practitioner-researcher model which provides for cultural situations (Jarvis, 1999; Krane & Baird, 2005; Schinke et al., 2015), practitioner’s active involvement which seeks to break down barriers and create bonds (Wagstaff et al., 2012) and provides an intense familiarity with the environment and setting of a specific social group (Krane & Baird, 2005; Wagstaff et al., 2012). Krane and Baird (2005) argue that this is particularly relevant to sports based research, where each type of sport, each team, and each individual has its own unique culture. The concept of ‘insider’ versus ‘outsider’, particularly in the context of boxing research, was identified firstly by Wacquant (1995) and more recently by Woodward (2008). Woodward also raised the implications of gender (specifically a female in a predominately male environment). The implications of gender were relevant and evidenced in this research, particularly in case study III, a men’s tournament where less than one percent of the participants were female, and all females present were significantly younger than the researcher. However, this contextual factor was considered to have been both advantageous and disadvantageous to research.

The development of trust and familiarity provided insider status (Rees, Gibbons, & Dixon, 2014; Woodward, 2004) regardless of gender, and where some spaces were out of bounds as a female, the researchers unique position also provided opportunities for discussions with members outside of the squad due to ‘standing out in the crowd’. Additionally, athletes

appeared to be less threatened and protective of their ‘tough-face’ and more prepared to open-up to vulnerabilities in some instances. This was consistent with the concept of entry and acceptance through positioning as a maternal figure in Woodward’s ethnographical research inside boxing gyms (Woodward, 2004, 2008). In other instances, gender neutrality was also consistent with Woodward’s observations, with several athletes explicitly expressing amusement when they were inadvertently reminded of the researcher’s gender/age.

The risk of ‘going native’ is a threat to rigour and objectivity in participant observation research (Krane & Baird, 2005; Rees et al., 2014; Woodward, 2004). To protect from bias, reflexivity was recorded separately from the observation, and this assured for a consciousness around the researcher’s own behaviors and attitudes on the events and narratives being described (Krane & Baird, 2005; Wagstaff et al., 2012). In some cases, events were reconsidered in the light of new information, which was provided by subsequent observations. These new perspectives were also included in the reflective notes. The researcher drew on the definitions outlined in Cheng et al. (2009) three dimensional model of anxiety (for indicators of cognitive and physiological stress or regulatory factors of perceived control) and on Hanin (2010) IZOF model for dimensions of form, direction and intensity when reflecting on observations, conversations from both fieldwork and individual case interviews.

### 3.3.3 Individual Case Interviews

Individual case interviews were conducted with four athletes between November and December 2016. Participants were asked to complete a structured interview, which was based on factors identified as potential stressors. The list of structured items, reviewed with each interviewee for each of the temporal cases they were involved in, was adapted from Gould et al. (2002) after the completion of fieldwork analysis, made appropriate for boxing, an individual athlete sport and the nature of the events and transitional features of this research. This resulted

in a 61-factor inventory (refer to Appendix B). The boxers were asked to identify whether the factor was true or false in their experience of the tournaments they attended and what level of stress this represented to them. They were then asked whether the stress experienced for that factor had a neutral, negative or positive effect (-3 to +3) on their performance. This method, adapted from Gould et al. (2002) research approach, was not intended to be quantitative in format but designed to give some focus to the athletes interviewed in terms of their experience of strain and the potential effect on the own personal outcomes. Future research would benefit from a more scientific method, however, this process did allow for conversations to be informed by the scoring process and the request for example or further explanation where ever these case histories appeared to support or contradict these scores. This allowed the participants to add detail to their interpretations and lend nuance to any models derived. Furthermore, Providing this method allowed for the structured framework to lead into a more semi-structured interview, which is more aligned to exploring the participant's personal experiences as directed by the research questions defined above (Amis, 2005). Each interview took approximately one hour. Interviews were audio-taped and transcribed by the researcher and transcripts remain confidential to the researcher and her supervisors.

#### 3.3.4 Case documentation

Extensive field notes, including reflexive diaries, were completed each night by the researcher. Each case was then transcribed into type-written form and relevant social media content (through personal acceptances and on athlete public profiles) and public media articles were collected and incorporated where relevant. Individual case interviews were audio-recorded and relevant sections were transcribed, along with the detailed factorial analysis. Each individual case was then analysed for themes (refer 3.3.5) and consolidated into the three individual temporal case findings.



### 3.3.5 Data Analysis

Documents and case transcripts were examined for emergent themes (Braun & Clark, 2006). Five key research papers were selected from the literature review, including a meta-analysis. These papers were selected because of they were specific to elite level sport and considered generalizable to this research (refer to Appendix A). This initial analysis categorised the stressors as organisational, competitive and personal (refer to Section 2.2). Thematic analysis provided a method for identifying, analysing and reporting patterns within the data, but combining and refining frequently referred to observations of, or conversations by the participants within the cases (Braun & Clark, 2006). This research adopted a deductive approach consistent with ACSR (Swanborn, 2010), starting from the themes identified from the stressor analysis above. Factorial instances of each stressor from the combined list developed from the document analysis were recorded (refer to Appendix B) and higher order themes identified as each of the three temporal event cases emerged and were reviewed and refined with each parse.

Sub-case (four athlete interview) data was then analysed for consistency to support or challenge the themes, directed by the dimensions of form, direction and intensity outlined in Hanin (2010) framework (refer to Section 2.3.1). Five higher order themes were consequently identified as significant to the athlete participants in this research; coaching capabilities and styles, coach conflict and behavior, the pressure to perform, nutrition and making weight, coping with loss. Each higher order theme was then analysed for interactions based on time and context factors as defined in Hanin (2010) dimensions of stress (refer to Section 2.3.2) and for resources determined to have mitigated the effects of strain and its potential impact in the boxers ability to cope with stress. Any effect that had on their performance was noted (where evident). These interactions were documented in a relational diagram for each theme and used as input in the further development of the conceptual model.

### 3.3.6 Development of the Conceptual Model

Developing an initial model (Figure 1.2) was considered important to focus the research, which was emergent in nature, helping frame the initial observations, identify key data and direct interviews (Krane & Baird, 2005). This model was adapted and extended as the research progressed, consistent with causal case study analysis which attempts to identify the connected factors, through patterns and themes (Swanborn, 2010). The term ‘interactions’ is used to reference these connections and these interactions were diagrammatically represented under each theme identified in the analysis phase. Including multiple cases gives us more confidence that these interactions are generalizable (Swanborn, 2010; Weatherbee, 2010). As each case was completed, these interactions were compared with previous completed cases and the model. This was interpreted for a literal replication (compatible result), a theoretical replication (expected negative result); or a challenge to the model (Swanborn, 2010; Yin, 2003). Given a result that challenged the model, a decision was made as to whether to revise/extend the model, collect additional data, and/or reanalyse previously collected data (Swanborn, 2010 citing Bergman, 2008). The process was repeated until all cases had been concluded and theory and data provided a “good understanding of the dynamics underlying the relationship” (Eisenhardt, 1989, p. 542).

### 3.3.7 Reporting

Woodman and Hardy (2010, p. 210) argue that “if interview transcriptions are simply reduced into textual summaries and subsequently inserted into a hierarchical tree, the very essence of qualitative research would largely be lost”. It is not the intention of this thesis to aggregate individuals various experiences but to pay attention to the norms, differences and outlying examples of the various stakeholders within this study, and to offer potential solutions where applicable (Swanborn, 2010). This report is designed to blend the personal experiences of the

athletes with the theories and data supporting the proposed conceptual model. Therefore, the narratives from the fieldwork research are reported in their entirety in Chapter 4, and then analysed and discussed in composite parts according first to theme (Chapter 5) and then to primary research objective, resources (Chapter 6). The selection of athlete experience descriptions was carefully considered to ensure confirmability and the overall authenticity of the report, along with balancing the necessity for anonymity in a small sample size (Becker et al. 2012). Case-studies appeal to readers because they provide evidence or illustrations that people can identify with, and provide for a variety of presentational modes (descriptions, charts, diagrams, overviews) which provide a clear representation of the complexity and relationships between the topics (Swanborn, 2010).

#### 3.3.8 Data Triangulation

Triangulation of the findings between document, active-participant fieldwork and interview findings, along with the stratification of cases (three temporal cases and four individual cases) improves validity and rigour and provides support for the limitation of studies with small samples (Swanborn, 2010). As such the research purports to provide knowledge, within the confined boundaries of this ACSR, that can be used to solve practical problems (Newman, 2014). According to Swanborn (2010, p. 33), this knowledge can be used to “deduce the specific conditions under which another, more desirable state of the system can be obtained”. In addition meetings were held with the research supervisors to validate the themes identified as significant stressors experienced by the participants.

### 3.4 Limitation of Method

Case study methodology is designed to deliver ‘causal validity’ within the scope of this case study by exploring the relationships within this defined phenomenon. This research identifies

possible causal interactions between transactions within the stress process which suggest direction and intensity (specifically, mitigating relationships of time and contextual factors, and moderating factors of internal and external resources). However, this research is unable to provide validity. A more stringent collection of measures, in line with the instrument outlined in Section 3.3.3 and offered in Appendix C, is required in order to achieve validity. For example, an instrument which measures stress intensity levels and implications to performance. In addition to this, qualitative data would also be required to ascertain the appraisal and adaption processes that intervened between the stressor, its direction/intensity and the consequential effect on performance. Additionally, in order to use a subjective performance measure multiple temporal measures would be recommended (Levy et al., 2011). These should include benchmarks at various points in the transitional period to determine an athlete (and their coaches) expectation of what a good performance looks like, along with recording performance assessments immediately after the bout, and again during the post-competition period. Measuring post-competition periods allows us to see adaption win or lose, giving further insight into post-competition strain and coping.

Stratified case study research, across multiple transitions, both within and across campaigns and across different individuals (athletes and staff), is still considered an appropriate method, and in this instance further explained variability across environments and resources. Case study design incorporating multiple methods and overt active-participant based fieldwork allows for insight into the culture, emotions, behaviors and mental states experienced by the athletes, which is combined with quasi-experimental data from interviews and measures. This will provide for the assessment and impact of strain on elite athletes consistent with the recommendations of Fletcher and Wagstaff (2009).

### **3.5 Summary**

This chapter has outlined the case study method and design adopted by this case study, in context of the post-positivist existential framework. ACSR provides an appropriate methodology to examine the complex psychological and sociological relationships from within the specific sports environment case of boxing.

In the next section, the principal findings of the current investigation are presented for each of the three cases in line with the recommendations of this method. Each case includes findings from the fieldwork and individual interview phases as outlined within this design.

## **4 Case Study Findings**

This chapter provides narrative descriptions for each of the three temporal cases which took place between February 2016 and July 2016:

- Case I: National Camp and Preparation for International Competition (preparation)
- Case II: AIBA Asia Oceanian Qualification Tournament (China)
- Case III: AIBA Olympic World Qualification Tournament (Baku).

### **4.1 Introduction**

At the commencement of this research, no New Zealander boxer had qualified for the 2016 Olympic Games, even though four male athletes had attended the 2015 World Championships. The remaining opportunities for an NZ boxer to qualify for the 2016 Olympics included the Asia Oceania qualifier (for both males and females), the AIBA Open Boxing (AOB) World Qualifier (male only) and the AOB Women's World Championships 2016 (female only). At the completion of this study, no NZ National boxers had qualified for the Rio 2016 Olympics.

Each case study is presented as narrative description, bound by the case study methodology which bounds these cases in time and context (refer to Section 1.4). The final section provides the researcher's personal perspective in her role as a participant observer. The case narratives are compiled from a combination of documented findings, recorded whilst acting as a participant observer in different case periods, additional quotes and references taken from subsequent interviews with four individual athletes, and corresponding media analysis (both social and published media). Descriptions - taken from the detailed field notes - included reflections both during and after fieldwork, which enforced an ongoing process of self-regulation (Krane & Baird, 2005). Given the participant-observational nature of this research,

these observations are described from the researcher's individual perspective and, as such, have been documented in the first-person. For both the field work and the interviews conducted subsequent to the participant observation, all quotes are given ad verbatim. In order to protect individual athletes, there is no specificity to which athlete said what within the narrative other than in publicly available information such as results (and even then, only the gender and number is given). In the case of the coaching staff, no names have been used but specific reference (number) is made to which coach was involved.

## **4.2 Case Background**

The qualification process for the 2016 Olympics is provided through a series of international competitions including the World Championships, Continental Championships, World Qualifiers, AIBA Professional Boxing (APB), World Series Boxing (WSB) qualifier. The total number of boxing athletes competing from all nations at the 2016 Olympics was 272 (240 male, 32 female) with a maximum of one athlete per event per country. 2016 was the first Olympics which opened entry to professional boxers initially restricting this to WSB and APB boxers only. WSB boxers were eligible to qualify through continental, world or WSB routes, and as such had more opportunities for success. No NZ boxer was eligible under APB/WSB quotas.

The structure of Olympic qualification competitions involves five to six bouts of boxing over approximately 10 days, in a knock-out format, moving from a maximum round of 64 through to the finals. There are three bouts of three-minute rounds for males, and four bouts of two-minute rounds for females. The objective of the sport is to not get hit while landing as many clean and effective punches to the opponent above waist height. They compete in a stance: southpaw (left foot/hand forward) or orthodox (right foot/hand forward). The referee

adjudicates the bout, and where a boxer is injured, issues an 8-count. If the athlete fails to recover within eight seconds or is knocked-down or out (KO), or fails to return blows or protect himself, the referee can stop the bout.

AIBA licence their coaches by 'stars' based on educational qualifications and experience, from 1\* through to 3\*. Under AIBA rules (AIBA, 2016), boxers are supported in the corner during competition bouts by a maximum of three coaches, one of whom must be a 3\* coach. Only one coach or second can enter the ring during the round breaks, with the other two remaining on the edge (skirt) of the ring.

### **4.3 Case Study I: Preparation and Personal Training**

This research covers the six-week period from February to March 2016 which directly preceded the team departing for the Olympic qualification competition held in China.

Preparation and personal training for the campaign was conducted in boxer's own gyms and environments, in conjunction with their personal coaches and supported by club team managers.

Being heavily involved in events preceding this time, including a Trans-Tasman competition held in February of 2016, offered an opportunity to engage with the athletes and to build rapport prior to the commencement of the research, as well as providing insight into some of the context surrounding the selection process. In addition, my active involvement with one of the teams provided further insight into two of the athletes involved in this campaign. However, for the purposes of this research, the observations represented under Case 1 relate to the National Camp and to organisational events in preparation for the Asian Oceania Qualifier.



#### 4.3.1 Time and Context

Prior to the commencement of this research, the athletes were required to compete in a ‘box-off’ competition held in January 2016 in Auckland to determine the number one ranked boxer in each weight class and it was from this process that the athletes were selected for international representation. The box-off was arranged at short notice. Even though one athlete had difficulty making weight and another was still recovering from a broken hand, both were required to perform against challenging opponents for their places in the National squad. This was in spite of previous international performance creditability. In subsequent interviews, a number of athletes commented that they found this process unfair and stressful. It also left them little preparation time for the Olympic qualifying event, given the proximity of time between the box-off and departure for China. This lack of preparation time was particularly stressful for those that were selected to the squad for the elite team for the first time.

#### 4.3.2 National Training Camp

A single National squad training camp was organised for the athletes selected for representation in China in March of 2016. It was held three weeks prior to departure and was held over three days. I was responsible for some of the management and organisational tasks for this camp, alongside the Head coach and an assistant coach. The camp had six main participants. A sparring session held during the camp included three other athletes and one additional athlete coach, along with various other boxers (including some professional) and their coaches who attended the camp for the open sparring segment.

All nine selected athletes were invited but only six athletes attended, supported by the NZ National Men’s Coach and two additional coaches. Given the political climate and tensions between coaches 1 and 3, some members of the squad did not to attend the full camp or dinner, other than one sparring session. The non-attending ‘team’, felt that a lack of clarity around the

content and the timing of the camp would be detrimental to their preparation. This impacted the ability to build squad cohesion, particularly for the younger and less experienced athletes. It also created a sense of division, elitism, and “awkwardness” (athlete interview) within the squad for those that only came for the sparring.

During a debriefing session towards the end of the camp, the coach asked the athletes how many of the athletes thought that they would make the Olympics, all hands went up but most were tentative and included sideways glances. During the camp, I had observed several instances where inexperienced or newer squad members were hesitant, nervous and unsure. One of the older recent entrants to the National squad also remained on the out-skirts throughout. In his sparring sessions, his uncertainty and frustration were apparent – taking an opportunity to reassure him, stressing he deserved to be part of the squad, he responded; “Thanks – that means a lot” (athlete). The same athlete expressed his feelings about late selection (in terms of his career stage) after competing both in China and Baku, commenting “I feel it’s been a li’l overdue” (athlete Facebook).

The open sparring session, which included boxers from outside of the National squad and the boxers who had declined the camp invitation, had no formal plan or structure. When the other national squad team members arrived, there was distinct tension, and only a few of us who knew them better greeted them. The tension between the National or Head coach and the arriving coach was evident. One of the youngest athletes seemed uncertain of himself and his surroundings, and he spent a bit of time beside me, looking for support and encouragement. He said “I thought [three of the athletes] seemed a bit above themselves at camp, [but after we went to China I was comfortable with them and we talked and stuff and they are all good]” (athlete interview).

There were several mishaps related to the sparring session. A more experience boxer (generally regarded as having an unusual, ungainly style) and one of the first-timers were paired, but tensions quickly flared, and the sparring became heated. Afterwards, the rookie boxer commented, “I was there to learn, and he was just using spoiling tactics – it was frustrating but I should have stayed in control”. Another issue was the camp format. One of the most experienced boxers, complained heavily about the training format of the camp, saying that “it was frustrating because my legs were cooked from the heavy sprint session in the morning and the other boys just came in fresh – was really annoying”. I also observed that there were a lot of spectators and the boxers later commented to me that it was very distracting.

A squad dinner was arranged, to provide a relaxed and informal atmosphere to talk about the campaign, for the travelled athletes to share their experiences with the new recruits, and to provide appropriate nutrition at a reasonable cost. The athletes who had attended sparring and not the full camp were also invited but declined the offer. When questioned in an interview later, one said that it was very difficult because of the coach (athlete interview). Over the dinner table, the conversation turned to the nuances of travelling in China. The athletes and coaches were very positive about the evening indicating that it had developed some squad connection (athlete interviews; coach interviews).

All athletes interviewed expressed concern about the lack of National camps and their constructiveness. The rookie athlete summarised this in an interview, stating “I wish that the camp had been for 3 weeks, before we left, cos I wanted to get to know the boys better so that we could talk to each other better. It is better once you get to know people a bit. And also they gave us stuff to work on but it was hard to focus on it when you went home and you were on your own” (athlete interview). He also commented about the need for more sparring “I had never fought or sparred a southpaw before and I had to fight one in China – it was crazy. I should have been more prepared” (athlete interview).

#### 4.3.3 Logistics and Planning

Over the period of the camp, we also started the process of sorting visas. One athlete required support in addressing some issues regarding his visa (he had criminal charges). Processing of the visas was extremely time-consuming with numerous trips to the visa office. Because the squad manager was based in Hamilton and I completed this task for the men's squad, along-with arranging the uniforms and travel insurance for the all athletes. Athletes were initially expected to pay for their own tracksuits. Given this, one of the athlete's coaches wanted personal sponsorship branded on it. This was concerning as it would result in differences in squad uniform. It was also deemed inappropriate (the sponsor was a funeral home). On discussing with the squad manager, it was agreed that Boxing NZ would fund the tracksuits. It was also agreed that no personal branding could be justified.

Most concerning during the preparation period was the extent of friction between two of the travelling coaches. There had been no formal policy or process over the selection of the staff. It was common knowledge (and both confirmed to me individually) that the two had almost come to blows on the previous World Championships campaign. One of the coaches was the high-performance convenor and one of the higher profile athlete's personal coach, and as such had a conflict of interest. The BNZ high-performance convenor had self-appointed the staff for the trip to China, including the squad manager. He had also appointed the head coach on a 12-month contract. The head coach was required to pay his own travel costs whilst HP convenor and the squad manager were funded under the Funded Athletes HPSNZ agreement. At this point the issues between the head coach and the HP convenor were resulting in serious friction and creating high levels of strain in each.

#### 4.3.4 Funding

All but one athlete was self-funded. Costs included training, competition and travel costs, and the external funding allowed that sole athlete to focus on his campaign full-time. By comparison, other athletes had to find sufficient time for training alongside work commitments, as well as fundraising for international travel costs. This tension was further aggravated by the late selection and consequent short lead up time. Whilst the athletes interviewed stated that they did not find this issue particularly stressful, I observed that responsibility for fundraising was generally delegated to a combination of the athletes' support teams (coaches and managers) and their families. In one instance, a total avoidance of the issue was observed. When it was noted that he had no money to pay for his travel costs, the athlete said "I don't think about this anymore, I don't want to stress about this [money] as I want to focus on my performance" (athlete interview).

For two athletes and a coach, the international travel costs left them in debt. Another athlete, who had already accumulated significant credit card debt from a previous international tournament, was also unable to travel due to funding and other personal issues. This athlete expressed frustration, stating that "this trip is a bloody disaster, I've spent so much time trying to come up with the money [that] I've barely had a chance to train" (athlete).

For the funded athlete, his funding did not come without its stressors. Receiving funding translated into additional pressure from raised community and institutional expectations. It also increased his number of required media commitments. He and his team had to contend with the interpersonal tensions this created at the organisational level, both in terms of the shifted perceptions of his support team during selection, and the dissatisfaction it created between squad members. One coach stating, "that funding that [boxer] got – it should have been shared around" (coach, as noted during fieldwork). Although there was no observed evidence that

this funding caused friction between the athletes on a personal level, several athletes questioned the position and expressed a lack of fairness around the HPSNZ funding process.

#### **4.4 Case II: Asian Oceania Olympic Qualifiers 2016**

Section 4.2 presents the findings for case II (referred to as China), which covered the period from March 23<sup>rd</sup> to April 4<sup>th</sup>, 2016.



*Figure 4-1 – Tournament logo and Competition Venue, (AIBA, 2016)*

##### **4.4.1 Time and Context**

The following sections set out the relevant dimensional features for Case II, relating to time and context as consistent with the framework set out in section 1.3.1.

###### ***4.4.1.1 Squad Transitional Factors***

The squad travelling to China included eleven athletes (nine males, two females) and four support staff plus myself. The support staff include three male coaches - a 3\* head coach, a 3\* women's coach, and a 1\* coach and one male manager. The weight classes represented included Male (M) 52kg, M60kg, M64kg, M69kg, M75kg, M81kg, M91kg and M91+kg, Women (W) 60kg, and W75kg. This squad included a number of experienced athletes, with




five athletes who had competed at the 2014 Commonwealth Games or at a World Championship level competition. Furthermore, two athletes - who had recently matured from youth to elite - had also competed on the international stage previously, having entered the Youth Commonwealth Games. The remaining other four were inexperienced at the international level.

#### 4.4.1.2 Competition/Event Criticality

The competition involved 226 athletes, who represented 35 countries across two continents (27 countries in Asia and 8 in Oceania). They were competing for 36 qualification places over 13 weight classes (AIBA, 2016). There was still one further opportunity for NZ athletes to qualify if they failed to qualify at this event.

The final 36 qualifications places were filled by 33 countries in Asia and 3 countries in Oceania. All three Oceanian boxers were Australian. Three countries - China, Kazakhstan and Uzbekistan - dominated the places with seven qualifications each. The final qualification results for the tournament are presented in Table 4.1.

Table 4-1- Qualification Summary: Asia Oceania Boxing Olympic Qualification Tournament (Source: Wikipedia)

NOC	Men										Women			Total
	49	52	56	60	64	69	75	81	91	+91	51	60	75	
 Australia							X		X			X		3
 China		X			X		X		X		X	X	X	7
 India			X											1
 Japan				X										1
 Jordan										X				1
 Kazakhstan		X	X		X		X	X		X			X	7
 Kyrgyzstan								X						1
 Mongolia	X			X	X	X								4
 Philippines	X			X										2
 Thailand			X			X								2
 Uzbekistan	X	X				X		X	X	X	X			7
<b>Total: 11 NOCs</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>36</b>

#### *4.4.1.3 Location and environment*

This tournament was held in Qian'an City, in the North-Eastern industrial province of Hebei in North China, three hours north of Beijing. The manager provided travel research which he had sourced and emailed through to each of the squad members. Based on this information, it was expected that we would experience high levels of smog and cold temperatures. In addition, we expected to experience some language and food difficulties. The group therefore left a week in advance to acclimatise and prepare for the tournament, and one team took pre-packaged food with them.

Environmental issues proved to be less of a concern to the squad than originally suggested by the research, with warmer temperatures than expected and only moderate levels of smog.

Athletes did comment that having the additional time to acclimatise and prepare was a positive factor. The facilities were generally adequate too. The distance between the village and the stadium was walkable. Excellent training facilities were available but did not include a strength and conditioning gym. Laundry facilities were available but limited.

#### *4.4.2 Observations and Reflections*

The following provides a narrative description of the findings for Case II, broken down into two transitional phases; (1) travel and pre-competition training and (2) competition.

##### *4.4.2.1 Travel and Pre-Competition Training*

The athletes were left to their own devices from the commencement of check-in at the airport to the checking in at the competition venue accommodation. This occasionally left some members confused and flustered. The flight stopped over in Singapore. During this stop-over, the Head Coach suggested a joint stretching session, but the athletes primarily ignored this and wandered off in their own directions. The younger and less experienced athletes remained with



me, not by any specific request, whilst others stayed plugged in to their music. One athlete was missing as we boarded the plane causing momentary concern, arriving at the gate as the last person entered. There had been no clear instruction as to what time to return to the gate ready for departure.

We were the first team to arrive at the sports centre in Qian'an City, and the organising committee officials were scrambling. As is standard process for AIBA tournaments, participants are asked to pay and carry cash in US dollars. At point of check-in the Team Manager asked who would like to room-share together. Three of the athletes were quick to state they would like to be together [these were three of the four athletes that had previously travelled to Worlds together]. The fourth of these athletes later told me that it had made him feel "pretty sad" and not wanted (athlete interview). Another athlete later said it was very awkward and he didn't want to say anything, but two of the other athletes told him to join their room, so he went along with them (athlete interview). When asked why one boxer had been so quick to opt to room with one from another club, the athlete replied that the boxer in question was "good for morale" (athlete interview). My fieldwork reflections noted that this combination provided some positives and also served to help break down some of the cliques. I had not met my room-mate prior to this trip and, whilst initially uncomfortable, this proved to work reasonably well. The athlete was receiving phone calls and text (primarily from her boyfriend) at all hours of the night. Had another athlete been rooming with her, this may have had created strain (particularly in the height of competition).

Some minor logistical matters arose, especially around the need for equipment. For example, one athlete fabricated a foam roller, whilst another wanted daily massages (which the facility found). Another boxer was keen to access a weights gym (he was denied access). The most aggravating logistical issue was the limitations on social media. This was due to national censorship and limited WIFI access and resulted in increased costs around contacting New

Zealand. Some of the team had previous experience in downloading illegal applications to get around this, but it only seemed to work on iPhones. The application also needed to be downloaded prior to arrival in China. One athlete stressed that this affected his line of support, saying “it stressed me cause I was homesick” (sic), whilst another stated “I just thought, use it to your advantage - let it chill you out .... if you kept trying and kept failing that would be pretty annoying” (athlete interviews).

The group met the next morning over breakfast and initial concerns and logistical requirements were discussed. During the first pre-competition training, each of the boxers had different warm-up routines. Some athletes did dynamic stretches, others wrapped their hands first, and a remaining few were slow to start. The training facility was well equipped and spacious, and initially only the NZ and Chinese teams were training in it. One athlete got into the ring to warm-up and get a feel of the place. Another soon joined him. A coach then took them through some light sparring. One athlete who fights orthodox was training in a southpaw stance. When asked why, he indicated that he was conscious of the number of athletes who fought southpaw at this level of competition. After training, an athlete came to me distressed, concerned over a sore hand. He asked for ice and pain medication, and then spent some time relaxing in my room. In line with my impression, my roommate voiced concern that his nerves were playing a part in the injury concern.

The following day’s training was co-ordinated by one of the female athletes. This created a more cohesive group atmosphere, with athletes encouraging each other during the session and commenting positively about the atmosphere afterwards. The session was sprint shuttles and body weight circuit followed by stretching. One athlete stated, “I haven’t done a lot of this type of training and stretches before” (athlete, as noted during fieldwork). One of the experienced athletes was particularly annoyed the following day. The training had left him

feeling stiff and sore. He had been working on a specific periodised training plan set by his personal coach and had consequently tapered in preparation for the event.

The following training session returned to the previous format, with training divided into groups. This highlighted rifts within the squad that aligned to each of the three coaches. The evening sparring session saw the females sparring against some Chinese athletes (arranged by the women's coach), whilst the male squad had a less planned session with the athletes sparring against each other. One round resulted in a minor ankle injury, causing the athlete to panic. The coach encouraged him to walk it off and got him back in the ring. I noted that another boxer was not sparring effectively, which he confided was in response to the gap in ability between himself and his sparring partner. Another athlete remained on the outskirts as a coach was instructing him on technique and style. One athlete commented, "If you haven't done the work before you go, no point in busting your arse cos you won't become an Olympic athlete in a week" (athlete interview). It was clear that the technical coaching was agitating the athlete and causing him to lose confidence, so I offered him some encouragement and advice at this point. The athlete sparred better in the later rounds.

After the session, another boxer confided that his nose has been broken prior to arrival and was still very sore. I urged him to discuss this with the coach, but he was reluctant. He thought that his injury could result in him being pulled out of the competition. When informed (by me), the coach handled it diplomatically, enabling me to maintain the trust of both athlete and coach, whilst simultaneously ensuring the athlete's wellbeing. This incident, alongside the technical coaching issue and other aforementioned training incidents, raised concerns in my mind around the lack of rapport, trust and understanding between the coaches and some of the athletes. It prompted reflection on the potential advantages of personal coach attendance at significant tournaments, and/or the capacity for this to be developed through increased interactions during the preparation period.

By the third day, the group divisions were becoming even more apparent and the athletes were training in three separate groups aligned with the three coaches. As one coach came in and set up his own session. When asked whether he was leading the day's session, he replied that "others can join in if they want...we didn't ask yesterday we just joined in" (coach, as noted during fieldwork). By the evening sparring session, the rift between squad members had become dysfunctional, with Coach A in the blue corner and Coach B in the red. This appeared to be the turning point from civil behaviour to conflict between the two coaches. Only athletes that were 'club members' of Coach A went to his corner, while all the other athletes returned to Coach B for corner instructions, regardless of whether there were in the same corner at the same time. Coach A was visibly disgruntled, but remained quiet and eventually left the ring. The Head Coach and the Team Manager made no effort to resolve this, despite my suggestion that they should step in. The behaviour was not the result of any significant technical difference between the coaches. Coach A had experienced significant previous successes with athletes at major international competitions, despite not having equivalent qualifications to the other. It is important to note that, at this point, no discussion or decisions had yet been made on who was cornering the athletes in the competition bouts.

The hierarchy between the coaches and the manager were beginning to be challenged. Coaches were complaining to me about each other, the poor communication, and the lack of training plans and structures. It was evident that there was a lack of any pre-agreed training programme and approach, or even clear roles and responsibilities. However, given the varying degrees of experience, fitness and technical capability within the squad, any pre-determined plans would have been required to consider individual requirements and preferences. This was highlighted by a number of issues, including complaints of stiffness and minor injuries.

As the start of the competition loomed, both the two conflicting coaches were demonstrating the greatest symptoms of strain. While one coach was more vocal, demonstrating more anger

and aggression, the other was becoming more reclusive and jittery. By the evening of the third day, the conflict had escalated. The following day, the manager stated that this had resulted in a serious verbal altercation. Questions over the order of the chain of command, and who would - or should - be in the corner with the different boxers, were the predominant issues. This altercation resulted in the coaches refusing to work together, despite both the manager and myself reminding them that they should be acting in the best interests of the athletes. One coach stated “I don’t want him [other coach] in my corner – he is distracting” (coach, as noted during fieldwork).

As the manager was unsure of how to control the situation, I awkwardly attempted to initiate some mediation between the two coaches, suggesting that both took a step back, removed their emotions, shielded the tension between themselves from the athletes, and found a suitable compromise. After this, they appeared to agree to work together. However, when one of them requested a staff meeting, this quickly became heated. The Head Coach felt entitled to make all the decisions. The meeting concluded when both coaches agreed not to corner together. This required the one coach to corner his athletes only, whilst the Head Coach would corner the rest. As AIBA require a three-star coach in a corner, a qualification which one of the coaches did not possess, the women’s coach was required to act as an assistant coach for all the male athletes, as well as his two female athletes. One athlete later stated that he felt that [coach] was not supportive of him doing well in his bout because of this conflict with his coach (athlete interview). Based on comments made by the coach in question, and observations that I recorded at the time, the athlete’s opinion was possibly warranted.

As athletes from other countries flooded into the village, both NZ and other athletes surveyed the physicality of potential opponents and tried to identify those likely to be in their weight class. Athletes processed this in different ways. Some were evidently excited. Others were quiet and reserved. Some were openly fearful. Only the females and three athletes turned up to

morning training and there did not appear to be any communication or coordination between the other male boxers during this period. The female boxing team continued to function effectively as a separate unit under the guidance of their coach.

The fifth day included the weigh-in and the draw. Evidence of increased stress was apparent within the group as the athlete's started to focus on 'making weight'. One commented "I need to keep my nerves under control", whilst another became more animated, stating that he was "excited to be getting this show on the road" (athletes, as noted during fieldwork). I observed that some of the athletes appeared to eat more food than I would have expected, and some of it was thought to be inappropriate for the occasion. The food was buffet style and the athletes commented that it was salty (i.e. not particularly suitable). One such athlete confirmed this, noting that "the food was kaka – well, I liked it, but I didn't think it was appropriate: chicken noodles, pizzas. I wasn't really stressed about, but I was conscious of it and reckon it had some effect on my performance" (athlete interview). This athlete had experienced issues with over-eating and was prone to home-sickness. In his opinion, both had been detrimental to his performance at the 2014 Commonwealth Games. I had discussed this issue with him during the preparation period, and we worked together to stay on task and to "remember why he was here" (researcher). The athlete was communicating with another mentor back in New Zealand, who had also emphasised this focus.

As well as actively reducing their intake, most athletes were dehydrating to 'make weight'. Two needed to reduce approximately 5% of their body weight. Given the potential safety issues involved in dehydrating to make weight, I was concerned at the lack of supervision from the support team, particularly of the young athletes. I therefore asked athletes to report back to me when they returned from the sauna late that night. The youngest athlete returned after 11pm from the sauna. He was severely dehydrated, and his speech was incoherent. His stress at the impending competition was apparent. He emphasised his age, lack of experience, and recent

move to a lower weight class (athlete, as noted during fieldwork). However, not all athletes had to reduce weight. One female athlete needed to drink fluid to increase her weight above the minimum level, whilst another expressed that he consistently had trouble maintaining his weight as he became more nervous about the progressing tournament.

#### *4.4.2.2 Competition*

The athlete's behaviour varied as their fights drew closer. Some clearly isolated themselves and turned inwards or listened to music. Others became more animated and energetic. One boxer commented of another, "he paces and rearranges things randomly" (athlete, noted during fieldwork). When travelling to the weigh-in and medical examination, one athlete returned agitated. He did not have a copy of his medical form. The coach commented that the boxer had a tendency to get more particular as the fight drew close, and that little things tended to upset him more easily. But this appeared to be an excuse; he had not made sure that his athletes had the right paperwork. All the other boxers had theirs. This oversight was especially problematic given that the weigh-in and medical examination processes had time limits.

Rehydration is critical to performance and athlete safety (Schinke, 2010) and, on the day of weigh-in, it was critical that the dehydrated athletes rehydrate appropriately. This process typically included fluids containing electrolytes, which had to be consumed slowly in spite of immense thirst. In previous tournaments, I would ensure that athletes had electrolytes and water available immediately after weigh-in, as they were generally under considerable physical and emotional stress. They were also primarily focused on the fight. However, during this tournament, there were several cases of inexperienced boxers who were not appropriately prepared and did not have these ready for consumption after the general weigh in. I therefore sourced and provided electrolytes for all athletes for their fight day weigh ins. My inability to read or communicate in Chinese made this more challenging than normal.

When the draw was announced, five boxers were paired against Australians. A number of squad members commented that this was less than ideal, particularly given that two boxers had consecutively lost against them. One athlete had recently lost against an Australian for the third time, just one month before this trip, at the Trans-Tasman Championships. Two athletes were also on the ‘wrong side of the draw’, facing the number one seeds if they won their first bouts.

One athlete repeatedly told me that he was homesick, and he made frequent phone calls home. At the end of one of these calls, he had a fight with his girlfriend and they ended the relationship. He coped through both emotional methods, looking for comfort and reassurance and by talking with me about topics like his fight strategy, and through distraction, by helping me with the washing.

On day six, the first boxer in the draw presented himself to the officials for the pre-bout check. The boxer’s uniform was rejected, having failed the strict requirements. Thankfully, it was allowed for that one bout only. Everyone went looking for someone to blame. One coach said, “I told [manager] to go and check them last night” (coach, as noted during fieldwork). I took charge and drove the failed shorts to a seamstress, who sewed the offensive white out of the back and sides.

As the athletes progressed through their opening fights, I took responsibility for videoing the bouts. After each of the fights the boxers were keen to get copies of their video footage, with the majority wanting to sit with me and watch/talk through it together. Watching the videos appeared to provide an opportunity for the boxers to process both wins and losses. No plan had been made to get footage for prospective opponents for when boxers proceeded through the tournament. This video is helpful for athletes to understand opponents stance and style (Schinke, 2010). Given the potential advantages, I also noted that this should be identified as a requirement for future tournaments. As the tournament was not available by live-stream, two



coaches in NZ asked to be on phone conference while the bout occurred. I found this incredibly difficult, but attempted to talk them through their boxers' fights.

On reflection, the volume of fieldwork and voluntary work - and the subsequent stress – meant that my fieldwork notes did not include much detail for the bouts. As such table 4.2 provides an outline of the competition results and a commentary based on my observation and any specific relevant responses from the athletes or coaches.

*Table 4-2 – Case II Summary of Results by athlete (m=men's competition, w=women's competition)*

<b>Athlete</b>	<b>Result</b>	<b>Commentary</b>
M1	Loss	Commendable performance winning one round (29:28, 30:27, 29:28), disappointed but not disappointed in himself.
M2	Win	Good performance, unexpected win (30:27, 30:37, 30:27) for rookie athlete. He gained confidence from this, stating "I'm excited for the next fight – I have got nothing to lose" (athlete, during fieldwork). Had not fully understood the turnaround time of one-day between bout 1 and 2, and had eaten significantly and then been required to make weight again the next morning.
	Loss	Opponent was number 2 seeded southpaw. M2 had no experience either competing or training against this style. He struggled to perform and adapt after breaking his nose in round 1, causing him to bleed heavily. Score: (30:27, 30:27,30:27)
M3	Win	This was a good and close performance (29:28, 29:28, 29:28)
	Loss	He significantly underperformed and struggled to adapt to referee decisions. He was also penalised one point, (29:26, 30:25, 29:26).
M4	Win	He won through a TKO in round 3, to an athlete which he had lost to three times previously. He maintained the pre-agreed strategy throughout the fight, and was excited but empathetic towards his opponent who was devastated by the loss.
	Retired	Going into a fight against a seven-foot top seeded opponent, the boxer was confident that he would "just going to land one of my big bombs and lay him out flat" (athlete, during fieldwork). However, he snapped his Achilles tendon in the first round.
M5	Win	He lost first round, but came back strong (28:29, 28:29, 28:29).
	Loss	If he won this fight his chances of qualifying were high, so he went into the bout appearing confident. He told me that they had been working on the fight strategy for this opponent, having previously lost to him at the World Championships. It was a tough performance and there were mixed thoughts within the team as to whether result was true and fair, regardless of the close result (29:28, 29:28, 29:28). Devastated, his coach said that he collapsed after the bout. However, he was very professional in his response afterwards and purely expressed how much the loss hurt. He damaged his hand during the bout.

Athlete	Result	Commentary
M6	Loss	This was a significant loss to an opponent that he had previously beaten. He thought he had done enough in the fight to win, especially as he won the first round (30:27, 29:28, 29:28). However, he struggled to hold the centre of the ring and dominate the opponent. He was devastated by loss.
M7	Loss	He had a good performance against a strong and experienced opponent. It was good experience for the rookie youngster, who won one round on one judges scorecard (30:27, 30:27, 29:28).
M8	Won	This was a good performance, resulting in a TKO in the second round against a relatively inexperienced opponent.
	Loss	This was a tough battle, and he was exposed defensively. He took too many hits but came back strong in round 3 and nearly achieved a TKO (30:27, 29:28, 29:28). He had a problem with his eye afterwards. In retrospect, more monitoring of this injury should have been undertaken. He took the loss hard as he thought he had almost won.
M9	Loss	This was a reasonable performance but a tough battle (29:28, 30:27, 30:27).
W1	Loss	This was a reasonable performance (40:36, 40:36, 40:36) but she later stated that she was very nervous and felt that she had lost that fight in her head. She was very emotional and disappointed at the loss.
W2	Loss	This was a reasonable performance, competing against a highly-ranked opponent (a bronze medallist). She won one round (37:39, 36:40, 37:39)

The pressure of losses was not only observed in the athletes but also reflected in coach behaviours and comments. Prior to a critical bout, one coach expressed “everyone wants to see him [the boxer] fail – and it will be all my coaching at fault”, whilst after the elimination of his high-profile athlete, he stated that “I am doing my best, but it is never good enough” (coach, during fieldwork). He had significant concerns over the prospective institutional response to the defeat, stating that he was “just going to have to face up to HPSNZ, have to do that three days after we get back, I am really not looking forward to it” (coach, during fieldwork).

Due to the lack of coach cohesion, the support and care of the athletes between and after fights was inadequate. Athletes were left unattended by coaches during warm-down, despite three cases of injured athletes. Whilst one coach was carrying a significant workload and another coach was busy attending to pre-fight routines, the other coach - when not busy with his

athletes – returned to his bedroom. After one athlete's second bout, his subsequent injury was not appropriately assessed. Discovering that he had limped back to his room unassisted, I requested a physiotherapist who determined that he had likely torn his Achilles tendon and required a moon-boot to minimise damage. Additionally, the other injured athlete's damaged hand also looked significantly worse. We suspected that it was broken. Both athletes were sent to the hospital, where an x-ray was needed for the suspected broken hand and a splint required for both injuries. With a lack of support offered by the rest of the staff, responsibility fell to me once again. I requested a meeting with the other coaches and manager, but the coaches refused to come. One stated that it was the "athlete's problem, that he called the shots and he wouldn't listen to him anyway" (coach, during fieldwork).

The lack of medical support made the diagnosis, treatment and management of these injuries very difficult. This was further exacerbated by issues of language, insurance implications and a general lack of support by both the local organising committee and our own support staff. I convinced the athlete to send the x-ray back to his contacts in NZ and get some advice, which he did. The injury had the potential to destroy any chance of qualifying and indicated another lengthy rehabilitation period. The athlete was distressed by the potential severity of the injury and the conceivable consequences for his Olympic campaign. It also led to significant stress for me, as I attempted to provide care that would "ensure his best chances of recovery for the next qualification tournament in Azerbaijan [AIBA Open Boxing Championships,]" (researcher notes). I was satisfied we had made the right decision, having determined that we had done all we could and that he had an appointment the day he got back.

Funding was going to be an issue for one of the injured athletes, as he was going to require surgery. We decided that this would be addressed when we arrived back in NZ, as attempting to obtain relevant information regarding insurance, ACC and treatment was proving too difficult at the event. He was advised to keep the leg up and the bracing on, especially given that the

only crutches available were too short for him. He did not take the advice, and continued to walk on it. When combined with significant delays in the NZ public health system, this resulted in damage to the calf muscle and required a significant operation when he returned home.

After elimination from competition, the women's squad continued to train and take advantage of the quality sparring against international competitors. Meanwhile, the men's team were left to their own devices. When it was suggested to one athlete that he utilise the limited opportunity to spar against others in his weight class, a rarity for him in NZ, he stated; "[our] coach doesn't care if we train" (athlete, during fieldwork). When questioned about the lack of structure and training in post-competition phase, the coach responded that he "was too busy" (coach, during fieldwork). After all athletes had exited the competition, morning training sessions - including sparring - were arranged. On day 12, four male athletes turned up, although all were late. One boxer, who had been struggling with his loss, was excited to spar. There was a distinct lack of direction and control over training, and on day 13 only two male athletes turned up. The coach responded that "the boys just do what they want" and then blamed the manager for not informing the athletes when and where they should be. Neither the coach or the manager took responsibility, and both blamed the other for the lack of leadership. As more athletes dropped out of contention and dealt with their losses, many of the team engaged in heavy drinking, binge eating and partying. I saw this as a wasted opportunity for much needed competitive sparring, particularly given that no athletes had qualified and this was essentially still the middle of the campaign. When one of the senior athletes was challenged, his response was that they "always do it – the coaches in the past have always allowed it – they [the coaches] were worse than us" (athlete interview). On two occasions the resultant behaviour and mess was considerably destructive. On the morning of our departure, for example, the mess in one of the rooms was disgraceful.

## 4.5 Case Study III: AIBA Open Boxing Qualifiers 2016

Section 4.3 presents the findings for case III (later referred to as Baku), which covered the period from June 12<sup>th</sup> to June 27<sup>th</sup>, 2016.



*Figure 4-2 -Tournament Logo and Competition Venue (AIBA, 2016)*

### 4.5.1 Time and Context

The following sections set out the relevant dimensional features for Case III, relating to time and context as consistent with the framework set out in Section 5.2.

#### 4.5.1.1 *Squad Transitional Factors*

Five athletes (all male) competed at this event, all of which had attended the previous qualifying event (refer to Section 4.4). The squad included three athletes who had competed at a combination of the 2014 Commonwealth Games and the World Championships, and two mature athletes who had only competed at a major international competition level in China. The athletes that were selected for this tournament excluded the younger rookie and one of the older/more experienced athletes. This was based on the cost and appropriateness of this tournament in relation to their experience levels. The weight classes represented included M60kg, M64kg, M69kg, M81kg, and M91kg.

The support staff included: a 1\* coach, a 2\* coach, a non-AIBA qualified coach who was also a parent, and two support staff (including myself). The 2\* coach was to act as both coach and manager, supported by myself as assistant manager. The lack of a 3\* coach necessitated the recruitment of one from another country during the tournament.

#### 4.5.2 Competition/Event Criticality

For all amateur male athletes (not APB/WSB), this was the last opportunity for Olympic qualification. 469 athletes from 115 countries competed in the event, with 39 qualifying positions over 10 weight classes available to the winners (AIBA, 2016). This competition represented a higher calibre of participants and was significantly more challenging than Asia Oceania qualifier. It was the last Olympic qualification possibility for NZ athletes and the pressure for athletes to win was intense.

Table 4-3 - Qualification Summary: AIBA World Olympic Qualification Tournament (Source: Wikipedia)

NOC	49	52	56	60	64	69	75	81	91	+91	Total
Algeria			X								1
Azerbaijan	X						X	X			3
Belarus						X		X			2
Bulgaria		X				X					2
China				X							1
Chinese Taipei				X							1
Cuba			X								1
France		X			X	X					3
Germany								X			1
Great Britain					X	X					2
Haiti					X						1
Hungary						X					1
India					X		X				2
Iraq							X				1
Ireland							X				1
Italy										X	1
Japan			X								1
Mongolia		X	X								2
Morocco								X			1
Netherlands				X							1
Poland									X		1
Qatar				X							1
Russia								X			1
Spain	X										1
Tajikistan				X							1
Turkey		X									1
Turkmenistan							X				1
Ukraine			X								1
United States		X			X						2
<b>Total: 29 NOCs</b>	<b>2</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>39</b>

#### *4.5.2.1 Location/Environment*

This tournament was held in Baku, Azerbaijan. A previous Soviet Union country, which became independent in 1991, it borders Russia, Georgia, Armenia, Iran and Turkey. For these reasons, minor concerns for safety were identified. However, Azerbaijan is well developed and no significant issues were anticipated or arose during our stay. The climate was expected to be in excess of 30 degrees celsius. We were required to stay in a hotel for the first three days in Baku central and were then transferred to the athlete village further out in town. The distance between the village and the stadium required a 30-minute bus ride. The village did not have training facilities, health or laundry facilities in close proximity. Access to a boxing gym was available after a few days, but this required scheduling and transportation. On the one occasion we utilised this, the gym was extremely crowded.

#### *4.5.3 Observations and Reflections*

The following provides narratives for the findings for Case III, broken down into two transitional phases; (1) travel and re-competition training and (2) competition.

##### *4.5.3.1 Travel and Pre-Competition Training*

Due to the coaching conflicts experienced in China, significant political and logistical issues preceded the appointment of staff to this tournament. The head coach was stood down. Once again, however, the processes and communication over selection lacked clarity and too many decisions were left until late in the piece. Consequentially, there was some general opinion that two athletes were included that had a particularly large performance gap. Three of the other athletes from China had de-selected themselves, in discussion with their personal coaches and teams.

Booking of airfares and arrangements were done separately, with Team A departing one day earlier than the rest of the squad (Team B). One athlete travelled to Baku via the Philippines, where he had attended a two week training camp with the Philippino team. This was arranged by myself as his club manager. I was also responsible for managing the travel arrangements for Team B. NZ branded t-shirts were provided for both teams as Baku was expected to be hot and the squad only had track-suits.

After resolving a problem with one of the coach's tickets, Team B departed on a long-haul flight to Dubai before connecting on to Baku. During the flight, one athlete expressed concern over his preparation. He had been sick and had subsequently struggled stay within his weight range. When asked what his coach thought of his bout in China, the athlete said that he hadn't been impressed. I sensed a lack of confidence that I hadn't recalled at the previous event.

On arrival, we met with Team A. This was initially awkward and confirmed the sense of a divided squad, particularly when Coach 5 was unsure of the programme. With one of the athletes rooming with his coach (also his father) another athlete was forced to room with a Coach, voicing his dissatisfaction with being separated from the other athlete, "I was keen to room with [athlete] ay, cause we got on and it worked really in China" (athlete interview). As the teams arrived it was exciting to see the broader diversity of athletes, but the same athlete was getting more restless, over-excited and hyperactive. He was trying to engage with the athletes from the other countries. The team from the Bahamas was visibly irritated by these overtures, and I suggested that he try to relax, to which one of the other athletes responded "have you seen him in the ring" (athlete, during fieldwork).

As there was only a small gym, the unqualified coach took the squad out for a run. He was very fit and proud that he could keep up and train alongside the athletes, something he criticised the other coaches for not being able to do. He argued that he was as good a coach as



the other two on several occasions. By this point, the initial awkwardness had eased and the entire squad went for a tour around the old town of Baku, creating a more cohesive atmosphere.

The following day, the team had a technical pads session in the driveway behind the hotel, which was constantly interrupted by cars passing through. There were three different styles of padding. Four of the five athletes had their personal coach travelling with the squad, and the fifth was visibly struggling by comparison. A skype interview with Maori TV was arranged for one of the athletes, and this involved me providing some video footage from sparring the previous day. This was his first live television interview. He was visible nervous. He and his coach were also excited about the coverage and the expected opportunities for further support from home. I provided him with some support to prepare. The interviewer asked who he thought would be his toughest opponents, to which he replied with “the ‘stan countries – they are really good, they have a different style of boxing, but I think I will be fine .... been dieting and training hard and staying focussed and I am just going to fight and leave everything in the ring and it should be enough to come away with the win” (athlete media interview).

On the third day, we transferred to the athlete village. The transfer caused some friction between Team A and Team B, which resulted in the team arriving late to the village and having to wait in a queue for 2.5 hours (to check in and pay). I had tried to predicate the rooming issues by asking a few questions of key individuals, but the same athlete from earlier again caused issues with the father by demanding to stay with a particular athlete. Eventually, the situation was resolved when I advised the father that the son could move back in with him if there were concerns (he was rooming alone and had a spare bed).

The final athlete arrived, elated about the experience of training with the Philippino team. He was at the lightest weight he had been for some time. This was reflected in his confidence levels, and he said that he was “very happy with that weight” (athlete, during fieldwork). He

was also more confident about his boxing. He said, when sparring with a top seeded WSB/APB fighter in his weight class, that he “had to use my jab – my jabs actually really good” (athlete, during fieldwork). Aware that he did not want to stay with the demanding athlete, he was assigned to room with his coach. Later in his interview he reflected that this was marginally stressful, saying “if I get told what to do more and things like that I get stressed - I like my freedom” (athlete interview). This was the first time he and his coach had travelled together. However, when asked whether having his personal coach at the tournament had helped his performance, he said this was quite important.

Training was held in the courtyard outside the village alongside the other teams. The atmosphere was tense but exciting. One coach commented that the teams “were all doing the same thing but different” (coach, during fieldwork). The stress levels of one coach were already rising, and he easily became angry and jittery. One coach commented that two athletes seemed to be struggling, and both commented that they were having difficulties adapting to the coaches’ padding and training sessions. One athlete raised this and asked to be paired with a specific coach. He had previous experience with him in NZ and “he didn’t want to learn anything new at this point” (athlete).

Day four was the day before the weigh in day and, as in China, there was increasing tension. One athlete was unusually withdrawn. Coach 4 thought that “his nerves were getting to him” (coach interview). I agreed. He did not usually have to deal with weight cuts. There was no sauna in close proximity to the village so I organised the logistics, allowing the athletes to attend one with sufficient time to spare. One Coach tried to organise a team trip to the offsite training facility, but training schedules were unavailable. This increased his stress, and he lamented that “we can’t agree a time for the sauna because we don’t know what time we will be training tonight” (coach, during fieldwork). A more pragmatic approach to training would have settled the nerves, but the coach was becoming increasingly agitated and aggressive. One of

his athletes confided to me that “I don’t want him to know how much I have to cut – he’ll panic, he doesn’t understand how it works .... It will take about 2 hours to sauna off” (athlete, during fieldwork). Given that the sauna closed at 9:30pm it was important to get there no later than 6pm. Myself and one of the coaches went to support and assist the athletes. We remained available without intruding.

The athletes were initially calm, and were not drying themselves between sauna sessions, a common practice to maximise the effects of the sauna. Two of the athletes left early, showing signs of increasing stress and stating, “I don’t like to be rushed” (athlete). As the closing time got closer, the athletes became more tense, worried, tired and restless. The athlete who normally did not need to sauna became distressed and required encouragement to return to the sauna. “I’m hating this – don’t want to do it”, he said (athlete, during fieldwork). The athletes eventually became more serious and started to dry themselves between sessions. One athlete was uncharacteristically 1.8kg too high when the sauna closed. “I am finding this much harder than usual – my lead-in was not good – too much salt in the food and probably not enough liquid” he admitted (athlete, during fieldwork). While he sweated some off in his sleep, he had to run off the rest in a sweat suit the next morning before the weigh-in. I noted that there was a highly specific, personal process that each athlete followed to achieve their necessary weight. Where this routine was disrupted, it was reflected as a higher level of stress in the athlete.

The following day – the day of the general weigh-in and draw - the rising stress levels were evident. This was particularly obvious in one of the coaches. Contention over the appointment of a 3\* coach to the squad (recruited from Poland) and the expectation that the unqualified coach would corner his son lead to an aggressive outburst; “you don’t understand the culture” (coach, during fieldwork). The decision to allow an unregistered coach in the corner later lead to disciplinary repercussions from Boxing NZ, and the coaches consequential resignation from the board.

As the draw approached, the athletes and coaches all had very different responses to their rising stress. While one athlete said that he “can’t wait to see the draw” (athlete interview), three other athletes withdrew, becoming quiet and intensely focussed. One of the more adaptive athletes became more animated. His response to the draw was positive, excited and motivated, saying that it “takes the uncertainty out of it” (athlete, during fieldwork). Yet another athlete became anxious and more hyper-active. He said, “I can’t wait for competition to start because I’ve only boxed Australians” (athlete, during fieldwork). Nonetheless, upon drawing an Australian again, he stormed up to his opposition’s room to “wish him good luck” (athlete, during fieldwork). His method of coping appeared overly familiar to other competitors, and whilst evident to other squad members, he appeared oblivious to the competitors’ body language. Later in the tournament, one of the Costa Rican staff commented that she found his behaviour uncomfortable and that her team had considered addressing it. Given that there were 105 countries represented at the tournament, a greater need for cultural awareness was required.

#### *4.5.3.2 Competition*

I was designated to attend the manager’s meeting, the organisation of which was chaotic. It was also combined with the draw. Several coaches, who had intended on attending the draw, did not arrive. The meeting did not finish until 4pm (we had arrived at 11:30am) and it was decided not to inform the athletes of the draw until we returned to village. With the first session starting at 7pm, this left very little lead time for athletes competing in the first round. One athlete - who is known to prefer having a long period of time to prepare – was placed to compete in the first round. In an interview, he later explained his sentiment, saying “here is a big beastly German dude. Fight him. He beat the number one seed and I fought him knowing barely anything about it – only finding out a few hours before. That was a bit shocking ... I need time to calculate” (athlete interview).

The opening ceremony was held between the managers' meeting, draw, and the opening fights. The organising committee requested that each team provide a flag-bearer that needed to be present by 5:30pm. Not wanting the designated NZ athlete to go by himself, I asked the unqualified coach if he would go and was promptly told "no, that's the manager's job". I attended with the athlete and, when we eventually found someone to ask for help, we were told that we were no longer needed. A number of other teams were similarly confused.

Access to the changing rooms and warm-up area were also confusing (there was no signage). I notified the coach so that he would be prepared when he arrived with the athlete. Stress factors were compounded by a bad experience with a late taxi driver, which he described as "a nightmare" (coach, during fieldwork). By the time they arrived, tensions were high. The athlete was knocked out in the second round, despite a convincing first round. The assistant corner coach (Coach 4) said that both the coach and the athlete were very nervous prior to the bout. Table 4.4. provides a summary of the NZ team results for this event.

*Table 4-4 – Summary of Results for Case III (M=Male)*

<b>Athlete</b>	<b>Result</b>	<b>Commentary</b>
M3	Loss	He suffered a serious loss, being knocked down in round 2.
M5	Win Loss	This ended with a TKO in the first round, and was held against a relatively easy opponent.  This was a close bout and many thought that he had done enough to win. He fought competitively (29:28, 30:27, 30:27).
M6	Loss	His results showed a win in one round by one judge (29:26, 30:25, 30:25). He felt that he had performed well, despite the two penalties. He was paired against a tough opponent, who was ranked eighth in world.
M8	Loss	He had a convincing loss against the opposition (30:26, 30:26, 30:26) but he was comfortable with his own performance.
M9	Loss	He was less convincing than he had been in China, (30:27, 30:27, 30:27).

After the knock-out, the athlete who arrived late came up to the seated area. He seemed relaxed and composed. In his subsequent interview, he said he was always calm after a fight as he knew that he had done all he could and it was over. I sensed this relief was an indicator that he did not relish competing, and this was partly reflected in his statement “it is a hostile environment with boxing, they are trying to hurt you” (athlete interview). The next day, the assistant coach told me that he was concerned by the way the athlete’s coach had quickly walked out after the severe knockdown, leaving the athlete alone in the changing room. The fighter later posted on Facebook:

“Fighters talk about the sacrifices they've made in their Olympic pursuits and sometimes feel resentful that the effort didn't pay off, as if they were entitled to the result they trained for. I don't see things that way though, because although we may have trained so hard, you have to understand that everyone else at that tournament did that also! So, I won't sulk forever after reaching so high but coming up short” (athlete Facebook).

When talking about the fight, one of the other athletes said “this sport is brutal, I don’t like seeing this shit. Why am I doing this? What happened to [athlete], it’s brutal ay” (athlete, during fieldwork). When asked whether this fear was physical or reputational, he replied “definitely the physical, been on the delivery end but never been knocked down” (athlete, during fieldwork). It seemed that the conversation was primarily the athlete’s effort to convince himself. His symptoms of stress, including bodily tension and an inability to be still, were evident.

The next athlete to fight had drawn a Finnish athlete. This Finnish athlete had lost 10kg in weight, thereby allowing him to move down a weight class and increase his qualification chances from one to three. It was only the NZ athlete’s fourth international fight. His father was in his corner, despite knowing that this breached the rules and could have caused

significant ramifications for other squad members. By comparison to how he had fought in China, the athlete did not perform as confidently or as well and was slow to start. The coach's inexperience and stress had him questioning the impact on the athlete afterwards. He wondered "did I say the wrong thing – I told him I trust in your power. He was just going for the knock out, didn't really box or fight his way in .... I wasn't happy with his warm-up – should have taken him somewhere quieter and cooler. I was just too uncomfortable cos I didn't know until the last minute whether I was cornering or not" (coach interview).

As I had done in China, I relayed the results to the athlete's manager in NZ. I had taken some video footage of the bout, and I posted approximately ten seconds of it onto Facebook the following day. His coach was irate about this, saying that the athlete and his father were very angry. I was confused, but accepted that I had not specifically asked for their permission. I apologised to both, even though they seemed equally confused. It was not until later that I realised that the coach had thought a video of the full bout had been posted to Facebook. I suspected the real issue was that it was evidence of the illegal cornering. It did, however, highlight the importance of having a policy and process about media, including social media posting.

The anxiety of the coaching staff once again translated into issues over cornering. One coach had approached the unregistered coach to assist him in the corner with his athlete and also suggested that he assist the third coach in place of himself. There seemed to be a rift developing within the staff, which left the unqualified coach feeling awkward and uncomfortably caught in the middle. Reflecting afterwards, I realised that the breach of rules had left both coaches feeling defensive. The third coach, known for being firm about rules and regulations, expressed frustration. After some encouragement, he decided to resolve the issue by taking responsibility and personally cornering all athletes. As the only coach capable of

adequately dealing with cuts, along-with the risks involved in breaching the rules, the other coaches' suggestion to change pre-agreed cornering arrangements seemed irresponsible and confrontational.

Day seven involved two NZ boxers. Prior to his bout that afternoon, one of the team's most experienced boxers watched one of his training partners (and friend) from the Philippines, the number one seed in his division. Boxing in his first-round bout the Philippino fought well below himself and lost. The NZ boxer was visibly upset, but then went off to prepare for his own bout. When asked later whether this affected his own performance preparation he stated:

“You can't compare, every bout is different, depends on your opposition, you can't focus on someone else's fight, yeah I am gutted for other fighters I am close with, but it might sound selfish but honestly I don't care that much – I just shut everything out and concentrate on my own fight”. I am more concerned about “being the man – achieving success for myself than the results of others” (athlete interview).

The athlete fought a top seed (#8 in the world). For the first time in his extensive experience he had his personal coach in the corner (“It was awesome to finally have ya in my corner for a big tournament” Facebook post), and the three of us went for coffee that morning. He was relaxed and focused. He appeared ready for the challenge. The boxer followed his normal pre-fight ring routine, but it seemed a bit rushed and slightly more tense than usual. He received several warnings, including penalties in round one and two for ‘heads up issues’ (leading with the head). This was contestable as the opponent was holding his head down and not getting penalised. His coach said on returning to the corner after round one that he was swearing, but the coach had encouraged him to leave that round behind and focus on the next.

From the spectator's viewpoint at the time, he seemed to be coping with the penalty distractions. One coach, also a champion boxer in the same weight class, expressed his views to me later “he will never make a top [weight] he has his head in front of his feet and the



opposition can easily take advantage”. His own coach later said that losing that early warning in round one had thrown him off the fight, and felt that the judging was inconsistent and an issue. Over the previous two campaigns (Worlds/China), he had developed a strong bond with one of the other NZ squad athletes, who gave him a big hug and teased him about his big head afterwards, which seemed to lighten the mood. Compared to the loss in China the athlete seemed to adapt more quickly and effectively. He was not as emotional, withdrawn or reactionary (and didn’t binge).

“Been a few days since it happened but the fight didn’t go my way. After these kind of loses I shut myself away from social media for a while but I’ve swallowed the loss and will front up to it now. Sadly, the Rio Olympic dream is over and I’m gonna have to decide on what the next big goal is gonna be (sic)” (athlete – facebook)

That evening the second NZ boxer competed, winning easily in round by TKO. He posted online that it was “definitely an ideal way to kick off a tournament” (athlete Facebook). He was already focused on the next fight against the number three seeded boxer.

The same evening the athlete who had been knocked down asked me if I would go and do some sightseeing with him the next day. We had an extensive discussion on the bus back from the competition venue. He was missing his girlfriend. He asked me what I thought he should do from here. The athlete has a tertiary degree, but had put his career on hold to focus on his Olympic campaign. The next morning, the two athletes who had competed the previous day also decided to join us and we went into Baku to explore.

The next to fight (on day eight), was the anxious athlete. He had headed to the sauna alone the night before and had got lost in the taxi on the way back. I had offered to go with him. He shut himself away in his room on the morning of his fight. He fought the Australian that he had competed against in China. His response immediately after was “Brutal – it just gets taken from

you – I want a rematch in Australia – it’s personal now”. Later on Facebook, he claimed; “I put my best foot forward and I’m content with my performance .... In boxing losing is a low, low feeling (athlete Facebook).

Day nine saw the second-round bout and the last NZ Olympic qualification chance. The athlete was uncharacteristically quiet before the fight. The two athletes had very different styles. The NZ athlete had a lot more activity and is a counter-puncher, the opponent had more precise power punches. The assistant coach stated, in his opinion, the “teams” tactics seemed flawed, focussing too much on what the referees were looking for rather than fighting his own fight. Afterwards the corner coach (and personal coach) said “you just don’t know what those judges are looking for – you think one thing you give it to them and you still don’t get the result”. I was sitting next to another athlete (his brother), who was embarrassed by the fact that tears were rolling down his face. He shared that; “It feels worse than it did when I lost” (athlete). In a previous media interview, his brother was quoted as saying; “There would be a little bit of jealousy .... I’d rather him go than none of us go” (Pearson, 2016). Seeing the athlete afterwards I gave him a hug and said “you did everything you could do”. He was very quiet, and you could sense the immense grief. The athlete was on the wrong side of the draw and the Australian that he had convincingly beaten on the other side of the draw went on to qualify for the Games. He posted the following reflection onto Facebook.

“Very close bout but can’t say I deserve it any more than the Dutchman, we both fought our hearts out. This means my Rio Olympics 2016 dream is dead. Very disappointed as you could imagine. 6 years ago I set a goal and 6 years later I didn’t achieve it” (athlete Facebook)

As the tournament progressed, the sense of urgency for the athletes intensified. The results were being publicly challenged, with the results appearing out of sync with the general community expectations. In many participants’ opinions, the application of the ‘heads-up’ rule

was being applied to alter the course of the fights. One of the NZ athletes expressed his frustrations, saying; “The way the referee was telling me off for my head down – cos that really did affect my performance and my stress level” (athlete). In the later rounds, a pattern appeared to emerge with scores reflecting 29:28 on all three cards. Rounds one and two would be awarded to the AIBA desired winner (usually a WSB country), whilst round three went to the loser. This led to significant frustration and stress for both the coaches and the athletes, with a lack of perceived control over the outcomes apparent in the attitudes of the participants.

“It’s demoralizing for the boy – I am not going to tell him he didn’t win - I can’t see that he lost – no matter how many times I watch it” (coach)

“I am done with AIBA – they have no respect for God/Humanity – People who are working so hard to be robbed of their chances” (Nigerian athlete)

By this stage one of the coach’s anxiety levels (as confirmed by the other support staff) were extensive (sweating, pacing and emotional outbursts). His grief at the loss of his high-profile athlete was extensive. He expressed the feeling of being ripped off, panicked about Sport NZ’s response to the loss and anger at AIBA. , He felt helpless, claiming “they are just passive bullies – they know you just have to accept their results”. He was not alone at struggling with his athlete’s loss. The unqualified coach also had a lengthy debrief with me over breakfast one morning, after which he said; “good talk – been struggling with [athlete] loss and it was good to talk it all out” (coach). The split in the coaching staff was once again intensifying:

“It’s all about their boys – actually only [athlete] – [coach] doesn’t care about the others – it’s obvious now. They have just got a bit too carried away with it all” (coach)

By day ten the athletes were totally dispersed. An email had been sent to the athlete’s coaches pre-departure to state that there would be a no drinking policy at this tournament. Given that this was the end of the campaign, some leeway seemed appropriate. The incidents of drinking

were less of an issue than in China, but one athlete (when acting inappropriately) was reminded of the expectations, to which he responded “you’re acting as if I’m 16 years old”.

The team were offered sparring, but only one athlete (having been encouraged by his coach and I) sparred a Guatemalan athlete who had lost on the first day of competition. It was a heavy sparring session and the NZ athlete complained afterwards of a sore back. After the sparring, he threw himself on the canvas in frustration and annoyance at his performance. His coach was embarrassed, but I went over to help him stretch and to help him calm himself down. He had been handling his loss well, but I translated this as simply a release of emotions. We later arranged for him to go see the British physiotherapist who suggested he continue training/sparring. He didn’t do this. This response to some extent emphasised the difference in athletes from other countries, who continued to train, regardless of where they were transitionally.

The night before departure we had a team meeting, where it was agreed that everyone would be back at base by midnight (given that athletes had dispersed and had not been returning back to the village till the early hours of the morning). We agreed to all meet for breakfast at 8am and to also have a squad dinner in Dubai during the stopover (an attempt to bring the squad together and end on a positive note). All, but one athlete, were back in the lobby hanging out with the other teams and chatting well before midnight. The missing athlete texted me at 1:30am, saying he was still in town and would come back when he was ready. I responded that this was “disrespectful”. He didn’t turn up to breakfast and, in Dubai, he caused significant disruption, causing the dinner to be abandoned. Four of the five staff elected to stay and have dinner together at the hotel. The rest of the squad dispersed in Dubai. The staff dinner was positive and provided an opportunity to end on a friendly note.

#### **4.6 Personal Context**

My professional involvement during the participant observation resulted in the development of strong bonds, which allowed detailed insight into the lives of these athletes and coaches.

Familiarity with athletes allowed me to read subtle signs, ask questions and make subtle recommendations. Being on the inside also allowed for a practitioner point of view, and the establishment of trust and rapport (Krane & Baird, 2005; Wagstaff et al., 2012). In the case of my 'club-mates', this required particularly careful management, and a consciousness of ensuring they were given sufficient space and independence when applicable.

On arrival in China, the sense of feeling "what am I doing here – I don't belong" was initially quite strong, and the team were wondering the same with some asking questions on my role. Woodman and Hardy (2010) found that "people will be more readily accepted as part of the team if everyone knows what they are there for" (p.228), with one of the athlete's noting that one support team member behaved like she was on holiday, which "didn't go down very well" (p.227). Taking on tasks and getting involved in mundane activities served not only to combat this, but also provided good opportunities to interact positively with the squad members and open channels of communication (Krane & Baird, 2005; Wagstaff et al., 2012). I felt a distinct difference as a support member from the China campaign to the Baku campaign, having been more actively involved in providing for the needs of the athletes. I provided tangible functions, which on several occasions lead to team members 'opening up' on issues that were concerning them.

There were several distinctive differences between case II and III. The younger and less adaptive athletes did not attend the Baku qualifier, and the support team included three personal coaches for four of the five squad members. All the athletes, including the two less experienced boxers, had experienced at least one international competition of this calibre.

Finally, the bonds that had been built with the athletes in China, carried through to Baku, providing a “buffer” to some of the stressors which occurred in this environment. For example, one athlete, having suffered a particularly hard loss, asked the researcher to spend some downtime together (away from the village). Another openly shared his fear of loss. The degree of comfort was highlighted during a conversation that turned to ‘boy talk’, which the athletes felt no need to filter. When reminded of my presence, one responded; “when you hang with the boys you have to be able to handle it” (athlete).

In Baku, I was one of only a handful of females in approximately 600 participants. My interactions with other teams, notably the Guatemalan team and the Nigerians, who were a team of two boxers on their own, provided additional understanding of the diversities of the environment. It also provided opportunities for me to share experiences and campaign approaches with coaches from other countries, developing opportunities for future international training development at the same time. Overall, the experience was memorable and provided the researcher with extensive personal and professional development, and the in-depth involvement allowed for rich and unfettered data.

## **5 Key Stressors and Coping in Open Boxing**

This chapter presents the findings determined as a result of the research methods outlined in Chapter 3. Five higher order themes were identified after analysis of three temporal event cases and supported by further analysis of the four athlete interviews. This chapter summarises the findings in connection with other taxonomic stressor research, providing detailed analysis of each of the five themes. These five themes include coaching capabilities and styles, coach conflict and behaviour, the pressure to perform, nutrition and making weight, and coping with loss. Each theme opens with a narrative description. This is followed by a summary of the key findings from the fieldwork conducted, with supporting participant scores and quotes from interviews as evidence of the stressor and its importance and impact to the individuals. Findings are outlined for each theme relevant to applicable transitional phases of competition (preparation, pre-competition, competition, and post-competition) (refer to Section 1.3.1). Each theme is analysed for interactions to Hanin (2010) dimensions time and context (refer to Section 2.3.2), and for resources that identified found to moderate or mitigate the effects of strain on the athletes transacting that stressor. Finally, each theme is then discussed in context to other scholarly literature.

### **5.1 Introduction**

As identified in the opening chapter, stress commences with occurrences of individual, group, organisational and environment events or situations called stressors. Findings in this study highlight that stressors are not always unique occurrences but can be compounding, which create a greater intensity to the athlete exposed. As showcased in Chapter 2, there has been a large body of research concentrated on identifying and classifying key stressors affecting elite sports performers. Stressors identified as key themes in this case research included; training and

competition load (Fletcher et al., 2012; McKay et al., 2008), nutrition and managing injury (Fletcher et al., 2012; McKay et al., 2008; Woodman & Hardy, 2010), team issues (Woodman & Hardy, 2010), pressure to perform and under-performing in competition (McKay et al., 2008), role ambiguity (Arnold & Fletcher, 2012b; Fletcher et al., 2012), coaching personalities (Arnold & Fletcher, 2012b), coaching styles (Arnold & Fletcher, 2012b; Fletcher et al., 2012; Woodman & Hardy, 2010), interpersonal conflict (McKay et al., 2008) and team atmosphere, behaviours, interactions (Arnold & Fletcher, 2012b; Woodman & Hardy, 2010).

The evidence collected in this study supports the argument that, despite many commonalities in stressor research, certain stressors are more identifiable in different sporting environments (McKay et al., 2008). Whilst not unique to boxing, several stressors were higher in profile or higher in intensity than in other sports; these included making weight, sequencing of competition, refereeing and judging and managing loss and injury. It could be argued, however, that this may be partially due to the specificity of time and context in one or more of these cases, especially given the criticality of the event under investigation in this research. While the initial phase of analysis is cataloged, all stressors identified (refer to Appendix C), the intent of this study was to identify causal relationships between these stressors and transactional stress. The ultimate aim was to gain a greater understanding of the effects and controllability of strain through resources.

## **5.2 Theme 1: Coaching Capabilities and Styles**

Theme One includes the following stressor sub-categories; coach-athlete tensions, difficulties with specific coaches or coaching styles, coach not understanding the athlete, coaches not fulfilling the role, and a lack of appropriate programming and leadership for training and competition support (refer to Appendix B for more details). Stressors identified in this theme



were consistent with existing research, which included higher order themes of leadership, training environment and team or interpersonal relationships (Arnold & Fletcher, 2012b; Fletcher et al., 2012; Gould et al., 2002; McKay et al., 2008; Woodman & Hardy, 2010). The following description outlines the key findings under this higher-order theme referenced by the temporal concepts (refer to Section 1.3.1).

#### 5.2.1 Preparation

Athletes described the pre-competition training period both during National training camp (case I) and in China (case II) as inappropriate to their needs. One described China as a boot-camp, whilst another thought it was a ridiculous lead-in to a competition. Coaches failed to work together to plan the programme for pre-competition training, or to understand individual athlete requirements. The implications of this were minor injuries and evidence of increased levels of strain. During this period the less experienced athletes, some of which had only recently moved from youth to elite, were clearly struggling with the environment. This was reflected in one such athlete scoring 5 in intensity with -3 on effect on performance during this camp in their interview. This represented a level of strain which had a detrimental effect on the ability of the athlete to perform effectively in training. For the same factor, an experienced athlete scored 3 in intensity but only 0 on effect on performance, suggesting that experience and prior exposure have moderating effects through increased ability to cope with stress both in terms of experience of strain and of the effects of strain on performance. However, in both instances, the stressors that instigated these responses, reflected a lack of constructiveness and lost opportunities for athlete development. This observation was supported by the following comment:

“It was frustrating because my legs were cooked from the heavy sprint session in the morning and the other boys [athletes who came only for sparring session] just came in fresh – was really annoying” (athlete interview).

### 5.2.2 Pre-Competition and Competition

The athletes highlighted the importance of having someone they could rely on in the corner. In line with field observations, one athlete said that he did not feel that one of the squad coaches was personally supportive of him as individual:

“I want someone in my corner who wants me to be successful, and you know if I succeed, then they succeed, but umm I didn’t really feel that with [coach]” (athlete interview).

Others expressed the importance of coaches supporting their tangible needs and offering themselves as a resource for facilitating coping with stressors. One athlete raised concerns during the pre-competition period that the cornering approach and style of one coach might be inconsistent with some mental strategies (emotional adaptations) that he had introduced to his fight plan to address some previous in-bout issues. Another stated:

“At least with [coach] I trusted he knew what he was doing in my corner – had I not or he hadn’t been available for pre-fight warm-up then I would have been really stressed” (athlete interview).

Coaching limitations, and stressors over coaching capabilities, were not only reflected by the athletes. One coach expressed concerns around his own lack of experience and capability to cope with the pressures of the environment after cornering a bout:

“Did I say the wrong thing – I told him I trust in your power. He was just going for the knock out, didn’t really box or fight his way in...I wasn’t happy with his warm-up...I was just too uncomfortable cos I didn’t know until the last minute whether I was cornering or not” (coach fieldwork).

The above quote reflects two key issues. First, a lack of early established roles and responsibilities, which created doubt in this coach's mind, which one would expect to have had some effect on the boxer. Second, a lack of experience in coaching in this environment. This example came from case III of the fieldwork and, while not fully substantiated, the researcher's observations suggest that the athlete in question performed more confidently and controlled in his bouts in case II (i.e. when this coach was absent).

### 5.2.3 Post Competition

The lack of supportive care and attention by the coaching staff was evident in the lack of direction and attention to injured athletes post competition. For example, when the researcher asked about a plan for managing an athlete who had broken his hand during competition:

“It is the athlete's problem, he calls the shots and he won't listen anyway” (coach fieldwork).

While the athlete responded to the incident calmly, he was identifiably distressed. This was not only due to the injury, but also because of the implications for the remainder of his campaign. In the researcher's eyes, this represented both a lack of leadership and a lack of support to the athlete who required informational (options for treatment, recovery plan) and tangible support (hospital x-rays, medical care). This also highlighted the debilitating coping capabilities of the coach (and other staff) on encountering strain.

### 5.2.4 Interactions

A schematic of the relationships observed is presented in Figure 5.1. The focus for this thesis is on the athlete experience, albeit recognising that coaches also experience strain. Given the implications of this theme, however, the model indicates where the interaction applies to the coach versus the athlete.

Within this theme, inter-relationships exist between varying intensity levels of athlete strain and internal resources (notably confidence and commitment); and external resources (coach support and organisational support). Commitment refers to that of the coach to the athlete and the athlete to the coach, for both preparation and performance. The athlete will have greater situational control when they have a combined or active say in the appointment of coaches, and shared responsibility over task and relationship management. Figure 5.1 also reflects the potential effect that athlete self-control has in moderating strain, through their responses to the situation and their interactions with the coach. Both self-control and self-confidence will be moderated by coach and athlete experience. Organisational influences signify the appointment and management of the coaching staff and high performance programmes.

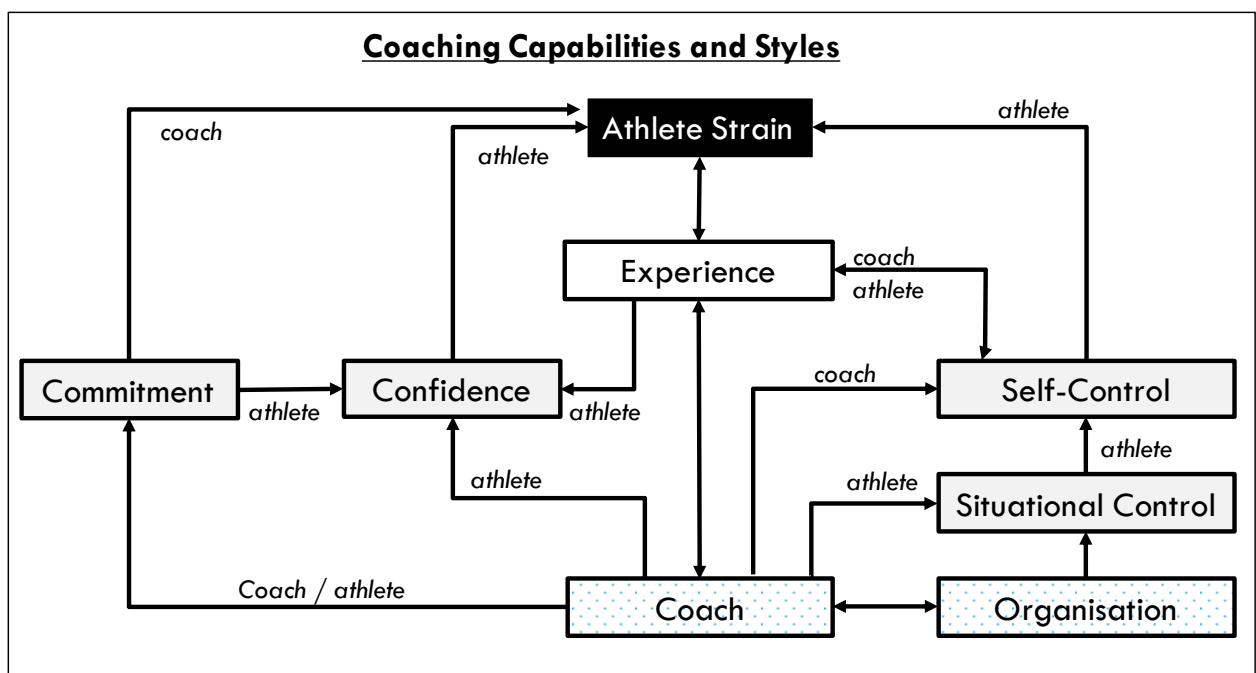


Figure 5-1: Relationships between the components of stress for identified coach capabilities and styles.

External Resources
  Internal Resources
  Dimensions of Time and Context (Hanin, 2010)

What is interesting to highlight here is that stressors do not occur uniquely, but have the power to initiate and potentially escalate other stressors. This would suggest that significant strain was created through undeveloped organisational policy and process, as a contributor to a lack of cohesion between athlete and coach and conflict between coaches. These all triggered additional stressors such as; uncertainty regarding warm-up, inadequate and inappropriate training type and loads, and inadequate management of injuries.

#### 5.2.5 Discussion

The evidence suggests during all transitional phases, athletes were experiencing some intensity of strain (McKay et al., 2008). Athlete strain presented itself in the form of diminished confidence, confusion, worry, unhelpful physical fatigue, distraction and agitation (Hanin, 1995). This could be attributed to a lack of coaching capability, issues of style and ultimately, commitment. The effects of this were found to vary between athletes, with lower levels of strain corresponding to increased prior exposure to coaches. This experience was typically found in athletes who had travelled internationally with those coaches during one or more previous competitions, or in some instances where the squad coach was also the athlete's personal coach. This suggested that strain was still experienced by these athletes, but, as their comments alluded, that experienced athletes were more capable of blocking and/or adapting to these coaching inadequacies through this experience (refer to Section 4). This supported the existing research into the dimensions of prior exposure and experience identified in other boxing related research (Schinke, Bonhomme, et al., 2012; Schinke et al., 2015)

Given the emphasis and criticality of the dyadic relationship between the coach (and assistants), particularly given the coaches presence in the field-of-play during warm-up and in competition, the availability of coaches ringside are a key resource between rounds. It is they who tend to the physical and mental needs of the boxer, provide tactical or, in critical cases of

injury/knockout, medical support (Schinke, 2010; Simpson & Wrisberg, 2013). This requires a high level of trust, understanding, and commitment and a need for collective efficacy (Cohen & Wills, 2000; Jowett, 2007; Zaccaro et al., 1995), a mutual respect and trust and a common understanding of roles and tasks (Jowett, 2007). When this dynamic is working well, the boxer will have accessible resource to support adaption (e.g. step-up in opposition, fatigue, injury, judges warning) during competition, which can lead to an improvement in performance (Rees & Freeman, 2009). However, the observations and opinions recorded in this study found this dynamic to be dysfunctional. A lack of coach experience and understanding of the environment, an inability to stay focussed, internal conflict and egotism, a lack of athlete-coach trust and lack of prior knowledge of each other was evident within all three of the case studies.

As one boxer summarises:

“Yeah, unlike the coaches being a bit overwhelmed themselves. You don’t want the coaches freaking out, which was not always true ....” (athlete interview).

With this in mind, coach capabilities, rather than representing a support resource, became an additional stressor for the athletes to cope with. As Jowett (2007) outlined where task and coach-athlete relationships failed to identified clear roles and rules, conflict and disruptions occur. In addition, evidence also identified coaching capabilities that fell short of the recommendations found in the literature (Gould & Maynard, 2009). Gould and Maynard (2009, p.33) emphasized the provision of clearly defined coaching roles, and provision of coaches who are capable of “read[ing] their athletes physical and psychological readiness states and adjust training accordingly”. Gould and Maynard (2009) also argue that successful coaches know what to expect. They stay focused and do not over-coach. Capable coach support during preparation for up-and-coming competitions is also essential. Boxing research places high importance on developing athlete competition confidence in their bout preparation periods (Schinke, 2010; Simpson & Wrisberg, 2013). This relies on the commitment of coaches to

design and administer appropriate programmes to individuals during training and pre-competition transition periods (Gould & Maynard, 2009; Schinke et al., 2015).

The participants in Case I, did indicate that insufficient programming or preparation was present for this campaign. Although it is difficult to provide concrete evidence that links inadequate performances in Case II and III qualifiers, it is not unreasonable, given findings in Simpson and Wrisberg (2013), Gould and Maynard (2009) and Schinke et al. (2015) that failing to prepare, is consistent with a failure in performance. These findings have important implications for NSO's to take responsibility to provide appropriate structures and processes for the appointment and monitoring of coaching staff to National squads, and to provide campaign-based training programmes that develop and test these relationships.

### **5.3 Theme 2: Coach Conflict and Behaviour**

Theme Two identifies coach conflict and consequential team splits and tension, lack of definition and awareness of staff roles and inappropriate behaviour (refer to Appendix B).

These factors were consistent with the stressors identified in Woodman and Hardy (2010) and McKay et al. (2008). Relationship conflict is defined “interpersonal incompatibility among members, which typically includes tension, animosity and annoyance among members within a group” (Leo et al., 2015, p. 60). Conflict between the coaches was evidenced across all three cases. It was clear, from both observations and quotes, that this was resulting in poor group atmosphere and cohesion as well as dysfunctional training and competition practices.

#### **5.3.1 Preparation**

Conflict between the coaches was present from the commencement of this research. It impacted on the National camp and the preparation processes for international competitions. The conflict

resulting in a disengaged splinter group associated with one of the coaches. This caused “awkwardness” (athlete interview) and disconnection amongst the athletes both at the camp and during the early stages of China trip. It also prevented the creation of an agreed set of squad norms and mutual expectations. This was more evident to the new members to the squad, who initially felt that “those guys think they’re too good for us” (athlete interview). However, regardless of these stressors, the athletes adapted to the situation and developed supportive squad member relationships. As one athlete intimated (and others reiterated) “at the end of the day the boys get on fine” (athlete fieldwork).

### 5.3.2 Pre-competition / Competition

With only the one disjointed National camp, there was a distinct lack of time to resolve conflicts and practice ways of working together in a suitable environment. This was inconsistent with Gould and Maynard (2009) who identified that successful teams spent quality time together either through lead-up competitions, training and competitive camps. Conflict between the coaches was not resolved prior to departure to China;

“BNZ should have sorted this out before we left” (coach fieldwork).

The coach conflict during the competition transition periods continued and was primarily centred around balance of power and who was to corner with which athletes. Coaching strain escalated in both tournaments as the competition bouts loomed and this had knock on effects to other support staff and to the athletes. This issue was particularly critical in China where the expectation was for coaches to corner together and offer a cohesive support team. However, the degree of friction precluded this, resulting in strain on athletes and other coaching staff. This was presented to the athletes as uncertainty, nervousness, worry and perceived lack of control in athletes over training and cornering. In some coaching staff, it was presented as anxiety, anger and inability to function productively. As one athlete succinctly put, “stress



creates stress so I tend to avoid it” (athlete interview), resulting in athletes dis-engaging from the coaching staff. The same athlete stated:

“.... as an athlete you learn to manage your emotions in a positive way, but I don’t think coaches do. Coaches don’t have that same release, coaches have that tension and they kinda act out” (athlete interview).

This comment was consistent with Woodman and Hardy (2010), as demonstrated by a quote from an athlete in their sample:

“Coaches start acting a bit funny when they get into the international environment. I think that they have to prove themselves to other coaches. It is not helping you to become a better performer, it’s all about themselves” (p.224).

The athletes’ main concern in dealing with this conflict was any potential impact that this may have on them. Athlete adaptations included avoidance, as in the above quote, or to compartmentalise it:

“I had no issue with the coach, I knew he was causing trouble but in some ways, I just found it funny, it may have affected the other athletes but after Glasgow [the Commonwealth Games], where the coaches were a lot worse, this wasn’t a big problem” (athlete interview)

The previous comment highlights several key points. First, this dysfunction had been unresolved for a lengthy period. Second, athletes had found adaptive means for dealing with it; in this case, humour was used. Finally, that an athlete’s experience/prior exposure was a moderating factor to strain intensity. The most significant effect of this stressor is its effect on intensifying strain. This was observed to transfer and intensify onto other stressors, such as ineffectual coaching and management support, perceptions of splits in the squad, and poor

communication. The conflict resulted in more maladaptive coping, with staff more concerned with laying blame than resolving problems. For example, the coaches who responded “Not my responsibility – I am too busy ...” (coach, during fieldwork) and “I told the manager to go and check the shorts with officials last night” (coach, during fieldwork). Support and care was also compromised. For instance, concerns with injured athletes were not dealt with and productive analysis of athlete losses were not supported. Furthermore, the conflict that arose between coaching staff resulted in a lack of communication and leadership, which led to the team going in multiple directions, members not turning up to training sessions, and in several cases, undisciplined and dysfunctional behaviour from elite athletes.

### 5.3.3 Interactions

It is reasonable to expect that inter-relationships would exist between intensity of athlete strain, internal resources (notably control or lack of, over the situation through self-management) and external resources (coach commitment and organisational structure and leadership).

Environmental and contextual factors have the potential to escalate the intensity and increase both institutional and personal pressure on coaches’ expectations of their boxers. Examples include; international location, language challenges, external funding expectations and the criticality of event. As such, this can represent a mediating effect on athlete strain. Figure 5.2. presents a schematic of these relationships, including identifiers for influence of coach or athlete. It also highlights duration as an indicator of intensity (Hanin, 2010), demonstrated by the extensive period of unmanaged strain as a result of ongoing conflict. Organisational interactions are also present, as appointments and leadership of coaching staff should be directed by the NSO (Boxing NZ). Finally, as was the case in coach capability, athletes who had experienced the issues between the coaching staff in a previous event, were able to isolate themselves and were more prepared to take care of their own needs than the inexperienced

ones. This also applied to coaches. The coaches who had more experience in the international environment, and in dealing with consequential pressures, were also more capable in coping with the strain and consequentially able to better support their athletes. This was clearly evident within the Women's team.

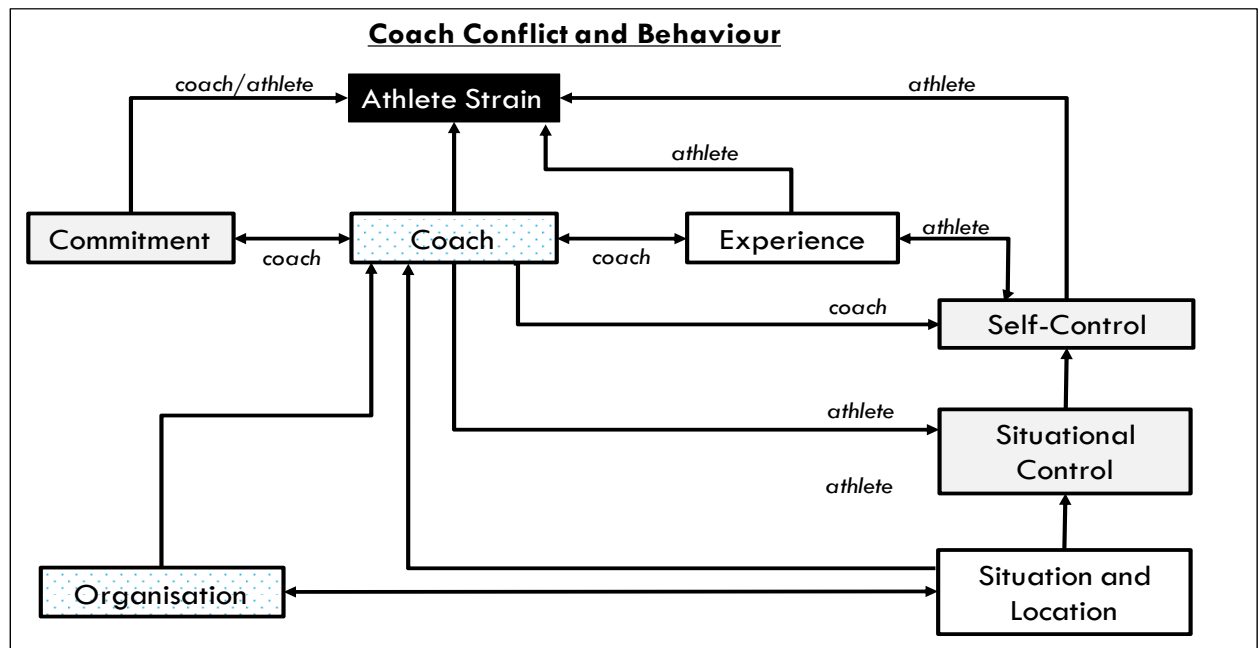


Figure 5-2 - Relationships between the components of stress for identified for coach conflict and behaviour

External Resources
  Internal Resources
  Dimensions of Time and Context (Hanin, 2010)

#### 5.3.4 Discussion

As identified in the case studies, there was a demonstrable gap in commitment and understanding of roles and rules. The lack of defined roles and responsibilities created a dysfunctional environment, resulting in considerable conflict between the manager, head male coach and assistant coach. This impacted on the communication with the team. This included management of athlete expectations in terms of behaviour and training plans, and the requirements for both pre-competition and post-competition. The exclusion of these key elements, as also identified in Theme 1, resulted in conflict and disruption consistent with

Jowett's (2007) findings. As such, this research supports the appointments of staff who have the most appropriate capabilities, alongside an ability to proactively cope with variable situations and pressures.

Staff need to independently support all members of the team equitably, and provide assistance for adapting to strain and increasing performance profiles (Gould, Guinan, Greenleaf, Medbery, & Peterson, 1999). Having the right support team in place is critical to provide athletes with the best chances for successful performances (Gould & Maynard, 2009). Timely and appropriate handling of conflict situations should be managed by NSOs to ensure that conflicts within the squad environment have minimal effects on athletes, particularly during competition period. Contradictory to recommended practices for conflict resolution, which include prompt decision making (Mallet, 2010), non-ideal practices were observed. Due to the personalities and coping capabilities of the coaches involved (both ex-boxers), attempts at resolution became competitive (Mallett, 2010) and increasingly aggressive. This resulted in escalating levels of strain and tension. Finally, athletes cannot always be isolated from these sorts of tensions and therefore must develop the ability and experience to isolate themselves from the conflict and stay focussed on their own game plans. This supports G. Jones et al. (2007) who found that athletes who had higher coping capabilities (levels of control) for dealing with conflict situations were amongst the world's best performers.

#### **5.4 Theme 3: Pressure to Perform**

Pressure to perform includes intimidation of the opposition, competition structures and meeting expectations (refer to Appendix B). While it would be expected that this theme would apply to both preparation and competitive transitional phases, this was not evidenced adequately in case I, and as such is not discussed in these findings. However, this highlights a lack of preparation

of athletes (and their coaches) to provide informational context to competition standards and requirements, and suggests resultant increased intensity in athlete strain during the competition periods. This was particularly the case for athletes who had not previously experienced international competition of this calibre. The following sections outline identified sub-themes of calibre of competition and meeting expectations during the pre-competition and competition period. This section applies to both these temporal transitions but is broken down into two key sub-themes; calibre of opposition and expectation of others as sources of stress in relation to pressure to perform.

#### 5.4.1 Calibre of Opposition

The importance of achieving success to receive a place at the Olympic Games was reflected in the calibre of the opposition attending the event, the pressure to perform, and the expectations of self and others. This was true for both the China and Baku campaigns. This presented considerable strain in most athletes, demonstrated by anxiousness, worry, withdrawal, excitement, over-excitement, nervousness, and restlessness. In some instances, athletes became more concerned than normal over minor injuries or aggravations during training. This strain was more pronounced in Baku due to the scale of the event, the reputation of opposing international boxers, and the pressure of its timing as the last qualification opportunity. The significance of this strain was evidenced by the high number of occurrences of strain identified in Baku (Case III) for competition draw and opposition (refer to Appendix C).

Strain intensified as the draw and first day of competition both approached. The increase in athlete and coach strain was evident, with one athlete stating, “can’t wait to see the draw” (athlete fieldwork) and another expanding “it takes the uncertainty out of it” (athlete fieldwork). With a loss in one bout eliminating an athlete from the multi-bout competition, drawing a highly seeded boxer in early rounds created additional strain in terms of pressure to

perform. Variation in interview profile scores were cautiously interpreted to be a link between the calibre of the opponent drawn, which represented higher strain, and negative performance scores. Several points of significance are outlined in the following quotes.

“I was aware of some people that were around [specified some names] - I know how good those guys are – so probably, it did play on my mind a little bit. So maybe I guess it does, it’s not like I was stressed, but there was a bit of worry there” (athlete interview).

“I’ve dealt with people of that skill level before, dealt with people of that kinda reputation, so I know that they’re good but ummm I am not that stressed out about it, like say when I boxed [athlete], he was ranked 4<sup>th</sup> in the world, I was like holy shit, he is going to fuck me up, he is a two time Olympian, this guy is going to beat the shit out of me, I’m not good enough. Then I boxed those guys like [athlete] and all them and I realise they are not *that* amazing and it is like it’s going to be alright” (athlete interview).

The above comments emphasize the reputation of the opposition and the confidence and experience level of the boxer. Whilst these quotes represent the cognitions of an experienced athlete, Case II included several squad members who attended the China tournament as their first major international competition.

The research finding also identified instances where environmental factors overlap with opposition and consequential performance pressures. For example, in the quote below, an athlete who had a short lead-time between announcement of the draw schedule and his bout, reflected in a debilitation of his sense of situational control. Pre-competition preparation would ordinarily allow the athlete to draw on their confidence prior to entering the ring and allow time for analysis and the opportunity to develop an appropriate fight plan. These preparations allow more time to adapt to both performance pressure and opposition intimidation stressors; as highlighted in the following quote:

“here is a big beastly German dude. Fight him. He beat the number one seed and I fought him knowing barely anything about him – only finding out a few hours before – that was a bit shocking ... I need time to calculate” (athlete interview).

In this athlete’s case, adapting to competition stress typically required him sufficient time to appraise the risks, and to process his fight strategy in context of his opponent. He needs time to adopt problem-based adaption approaches. Not having this time created escalating intensity of strain (the boxer lost in a first round KO). The relationship between distress in this instance and performance cannot be confirmed given insufficient quantifiable evidence to prove this causality, it is not unreasonable to suggest that the link between high intensity strain and performance is warranted, especially as it is supported by significant variances in his interview profiles; his scores were 0/0 (strain/performance) in China versus 4/-1 in Baku.

#### 5.4.2 Expectations of Self and Others

Based on previous scholarly research (Gould et al., 2002; McKay et al., 2008), this study hypothesised that expectations of significant others and institutions would also contribute to additional strain commensurate with this external pressure. Unexpectedly, this research did not identify ‘disappointing others’ as a key finding. Instead, the interviewed athletes expressed the greatest importance as fulfilling their own expectations.

“I don’t care about other people, at the end of the day I don’t get paid for this shit, I do it for myself” (athlete interview)

“I am more concerned with being the man – achieving success for myself” (athlete interview)

This is also contradictory to other boxing research (Schinke, Bonhomme, et al., 2012; Simpson & Wrisberg, 2013), which found expectations from team, fan-base, sponsors, media, family and

friends as both a source of motivation and a pressure to perform. The lack of a definite relationship between expectation and increased strain was also contrary to findings by McKay et al. (2008). However, the evidence becomes less clear when funding implications are introduced, generating institutional pressure to perform because of or to achieve future funding. This suggests that athletes may have taken a short-term perspective and/or are ‘blocking’ this concern from their focus. With only one HPSNZ funded athlete, others had raised funds from friends, family and fans. One could argue that these ‘informal’ funders represent ‘sponsors’ who could expect some return on their investment. Additionally, as the findings alluded, financial responsibility is most often delegated to others. These features may provide some explanation as to why this pressure was less impactful.

These findings raise intriguing questions regarding the nature and extent to which self-presentation may have masked these results, or whether the athletes interviewed had adapted to the pressure of expectation. One athlete suggested that competition out of his home country alleviated some of the strain of performance, but this statement raises further concerns about preparation and focus for and optimal levels of strain as appropriate stimuli for arousal states to achieve peak performances in overseas competitions.

“If it was here in NZ it is a different story. If I am like boxing at the National champs my stress levels is like 5 [on 1-5 scale]...because there is expectation of me to destroy people. But overseas there no one knows me besides my own team. Other [international] boxers don’t have any expectations of me, they don’t know what’s going on” (athlete interview).

Additionally, it raises questions as to whether athlete expectations were set at participation rather than medal contention. While this is appropriate in some competition environments, consideration should be given to directing specific performance expectations for and to inclusion of athletes in qualification campaigns, particularly given funding implications.



### 5.4.3 Interactions

The duration of time scheduled between arrival, the draw and the bout can also intensify the strain on both the athletes and coaches. Once the unknowns are removed, however, the boxers were better able to cope by utilising internal resources of confidence and self-control. The athlete will always have a degree of self-control over the way they respond to this period of uncertainty (regardless of a lack of situational control). As the bout gets closer, the adaptive confident boxer will utilise these resources, to establish a level self-belief that they can perform and achieve their goals. The evidence also suggests that performance pressures and strain are modified by athlete experience and by the athlete's perceived criticality of the event. Whilst expectation was not fully supported by this research, there is still some suggestion that expectation, not least one's own, will have a link to both confidence and self-belief in terms of what the individual perceives as optimal performance. If debilitating, this would result in athlete strain. Figure 5.3 presents a schematic of these relationships. This theme also highlights how environmental stressors (for example, delays in draw, step-up in opposition) can compound performance pressures.

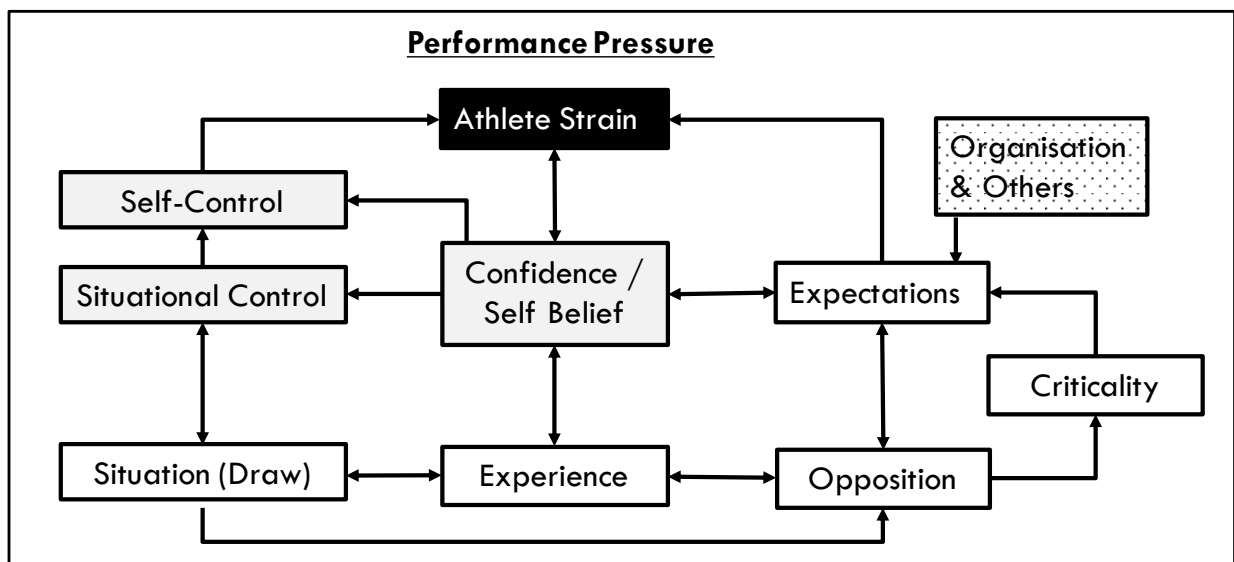


Figure 5-3 - Relationships between the components of stress for identified for performance pressure.

External Resources
  Internal Resources
  Dimensions of Time and Context (Hanin, 2010)

#### 5.4.4 Discussion

For open boxing, the Olympics is seen as a career changing event, and potentially a spring-board into a lucrative professional career (Schinke et al., 2015). This creates additional internal and external pressure to perform and succeed (Hanton et al., 2005; Schinke et al., 2015). Given this, the criticality of the event was recognised in this research as not only impacting the athlete's (and their coach's) level of strain (Schinke, Bonhomme, et al., 2012), but also the potential for the event to be life changing in terms of personal meaning and identity (Hanrahan & Andersen, 2010). For example, it could result in more lucrative professional offerings. These relationships are supported by evidence from this research, which found both criticality of event and the high calibre of competition to be a source of strain to athletes.

In the case of expectations of self and others, it is possible that self-identity factors and self-presentation factors are an explanation to these unanticipated results, particularly when referring to managing loss (Bandura, 1997). This shows consistency with existential theory in relation to athletes (Aggerholm, 2015; Nesti, 2004). Further research is required to decipher

these relationships more accurately. It is notable that Hanton et al. (2005) did not specify expectations, but both Hanton et al. (2005) and Woodman and Hardy (2010) identify opposition as stressor.

Finally, there was an assumption that an inexperienced athlete would have a higher level of strain at the prospect of competing at an event of this standard (Kristiansen & Roberts, 2010). Yet this was inconsistent with findings during preparation and pre-competition phases. Athletes who had not experienced this level of competition appeared to have unrealistic expectations of their potential to compete and win, having no gauge at which to measure their standards against that of the competition. However, as the tournament progressed, these athletes were confronted with the realities of having to re-evaluate their own performance levels against international performance standards. Recommendations for support by staff to support athletes in the setting of realistic performance goals and expectations, during all temporal phases, aligns with Nicholls et al. (2016) who argue that development of facilitative coping requires the ability to realign goals when faced with unattainable personal goals for performance. As such athletes and their personal coaches need to be educated and supported to prepare appropriately for the international sporting landscape; the level of competition, the expectations of referees and judges, and the structure and process of AIBA competition (Davis et al., 2015). As this discussion highlights, this research resulted in more questions and further research is required here to dissect the causality between expectations, funding and self-presentation.

## **5.5 Theme 4: Nutrition and Making Weight**

This theme includes the pressure of maintaining weight and meeting nutritional needs, both of which were consistent with Hanton et al. (2005) who identified poor provision of food and

importance placed on diet as stressors in elite sports performers. What is specific to these findings, and not found in other identified literature in the stressor domain, was the process of ‘making weight’. In this context, making weight specifically refers to the requirement to reduce weight immediately preceding a bout by nil food intake and dehydration. Boxing is a weight restricted sport, with perceived benefits of fighting at the lowest possible weight classification. As such, many of the boxers are also on strict intake restrictions to ensure they fall within the weight limits. However, it is not uncommon for boxers to need to reduced body weight through dehydration (Schinke, 2010). For example, despite sitting at a very low fat percentage, one boxer in this study found that his weight exceeded his weight class limit by 5% in Case II and 3% in Case III. Normally, a boxer in these circumstances would move up in weight class, but here his size made this option uncompetitive. As such, making weight can result in both physical and mental strain (Schinke, 2010).

#### 5.5.1 Preparation/Pre-Competition

During the preparation and pre-competition periods, environmental factors contribute to the stress of the processes of managing weight. This is a common topic of conversation amongst boxers, as observed in this study and consistent with other boxing research (Simpson & Wrisberg, 2013; Wacquant, 1995). The boxer is therefore required to apply strict self-control and commitment to their sport to be competitive at the elite level. During pre-competition, the pressure intensifies. This is particularly true given that they are outside of their normal environments, meaning the availability of suitable nutrition or foods that the athletes are accustomed to can be scarce. The researcher observed that the intake during the pre-competition period in Case II was in some boxers inappropriate for the first five days of pre-competition period, with one inexperienced athlete not monitoring his intake carefully enough and putting on weight. This was confirmed in all interviews conducted, with athletes stating they had had some difficulty in the food selection.

“The food was kaka – well, I liked it, but I didn’t think it was appropriate, chicken noodles, pizzas. I wasn’t really stressed about it, but I was conscious of it and reckon it had some effect on my performance” (athlete interview).

“I couldn’t eat the food, it was salty, it would have made me retain fluid. I ate other things, I was eating other stuff, [athlete’s] stuff because they had packaged stuff, bars and things” (athlete interview).

All athletes interviewed described issues with food responding to ‘my requirements for pre-competition/competition were met’ as false and scoring 2-3 for strain. When interviewed, two further athletes confirmed that they had relaxed their eating too much during the pre-competition period. While this was more of an issue for one athlete than the other, both reflected that it had affected their performance to some degree. Finally, as the second quote alludes, athletes who were more prepared (i.e. taking their own food provisions fully or partially) mitigated strain from poor nutritional provision.

#### 5.5.2 Competition

Some athletes had to reduce up to 5% of their body weight. This is significantly demanding, physically, mentally and emotionally. As one athlete expressed, making weight to this degree was like:

“winning the first fight before I’m ready to go to war” (athlete interview).

‘Making weight’ was the most significant stress factor identified in the fieldwork, which was subsequently endorsed by the interviews. Scores of 3-5 were recorded for the stress factors related to ‘I had my weight under control for this competition’. All athletes are required to weigh-in on day one of the competition (general weigh-in) and then on the morning of every bout they compete in. An experienced boxer who was well conditioned to having to sauna to

achieve his required weight, still rated making weight as highly stressful (3-5). He embraced the process, describing the sauna process as a “social cut” (athlete interview), and enjoyed being alongside other athletes doing the same thing. This was the case even though they were competitors. He preferred to take considerable time with the process and stated “this is how I do it – I know what I am doing” (athlete fieldwork). As such, he demonstrated both self and situational control over the stressor. This athlete scored this as neutral to performance.

However, in Case II, this was somewhat contradictory to the researcher’s observation. The physical effects, which suggested high degrees of somatic anxiety, of such a drastic weight loss were evident. It is reasonable to question whether this stressor could have been minimised by the individual. For example, it could have been done through better weight management during preparation. In line with this, there was an improvement in pre-competition weight between Case II and Case III in this individual. Additionally, this athlete lost in the first round in both China and Baku, and as such, was only required to make weight twice (general and fight day). Furthermore, the cost to performance of weight reduction was difficult to ascertain, but it was conjectured that the lack of energy observed in his bouts was linked to the weight loss. This represents another area that requires further research.

Another athlete, who had been selected on short notice and was unaccustomed to having to sauna, scored the same criteria a 5 on the stress scale, reporting a negative (-1) effect on performance. This boxer had recently dropped down a weight class and was still “getting a handle on the weight” (athlete fieldwork). The intense degree of distress observed in this athlete on his return from making weight for the second consecutive day was visible: physically, mentally and emotionally. In his interview, this athlete was highly critical of the staff informational support during this period. Having progressed through his first-round fight, he was unaware of his next scheduled fight and had failed to eat and drink appropriately between the bouts, resulting in another difficult weight cut. This example demonstrates the

effects of inexperience on an athlete's ability to adapt to stressors, along with the importance of organisational structure and support during this period.

### 5.5.3 Interactions

Within this theme, it is reasonable to expect that inter-relationships exist between varying intensity levels of athlete strain. The construct of control relates to both internal resource, control of intake, control over making weight, but also situational control. Situation control refers to the boxer's ability to control environmental setting factors such as availability of gyms, sauna, type of food. While the provision of nutrition was an environmental factor, the athletes had the ability to not eat the food, find other food, or take their own. For this reason, organisation is represented as a mitigating factor, as preparation and knowledge of the environment prior to competition would mitigate these setting issues. Managing and making weight requires a significant commitment by the athletes, and as such, commitment is considered to modify athlete strain in this context. Both experience and confidence are inter-related and modify strain. This is through a combination of self-confidence in their ability to make weight, and having prior experience which evidences that they can withstand the physical discomforts associated with this process. These relationships are schematically presented in

Figure 5.4. This theme further confirms the construct of embedded stressors, with provision of nutrition intensifying making weight.

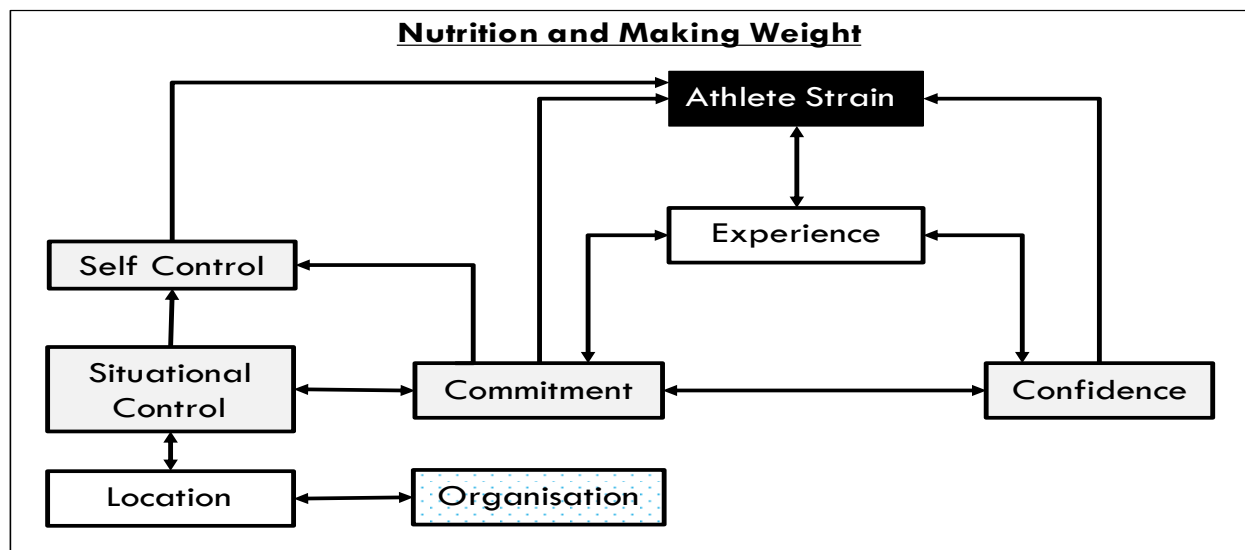


Figure 5-4 – Relationships between the components of stress for identified for performance pressure.

External Resources
  Internal Resources
  Dimensions of Time and Context (Hanin, 2010)

#### 5.5.4 Discussion

Managing weight features as a common theme in boxing literature (refer to Section 2), but is not unique to this sport. Other sports such as rowing, gymnastics, motor-racing, and horse-racing all have the same requirement. Woodman and Hardy (2010) identified diet and weight control as a significant stressor, suggesting some generalisability between different sports codes. However, this research referred to expectations, implications, and criticisms of weight control rather than specific requirements of weight restrictions for competition. Therefore, this research identifies making weight, as a distinct stressor from nutrition, and as such argues that ‘making weight’ be included as a stressor intrinsic to relevant sports, in particular combat sports.



The findings in this study also report that nutritional restrictions and weight control during preparation resulting in athlete distress, identified as; bodily (fatigue, jittery) and psychological strain (panic, sadness, dismay, fear) (Hanin, 1995). More significantly, this research evidenced that the process of making weight intensified as competition loomed. The intensified levels of strain, in some instances resulting in distress identified in this study, were consistent with Wacquant (1995) who revealed that a boxer's diet did produce intense psychological suffering in some instances. The support to manage these weight requirements (both tangible and intangible) would allow for more effective adaption. This organisational and staff support would include; provision of organisational planning and logistics, risk assessment of competition environments and health and ongoing monitoring of athlete weight management programmes which were realistic to body compositions and life-styles (Rees & Freeman, 2006, 2009; Schinke, 2010; Schinke et al., 2015).

## **5.6 Theme 5: Coping with Loss**

Losing in any sport is difficult, particularly when you take into consideration the amount of time and investment an athlete commits to competing at an elite international level. In combat sports, a loss can also mean physical injury. Boxing research further highlights the importance of ego to success or failure in the ring (Wacquant, 1995; Woodward, 2004, 2006). The boxers who agreed to be interviewed were all asked to score whether they were 'satisfied with the outcome of their competition performance', whether 'they lost composure during the performance', and whether they thought the 'judging was a fair reflection of my performance'.

Three athletes reported they felt they had lost composure during their bouts. They recorded this as having a negative effect on their performance. In one instance this was the result of a broken

nose. In the other two, it was because of referee warnings. Only one interviewee reported that they were dissatisfied with the outcome of their bout. The self-reporting of these results was problematic, however, because it was retrospective. The athletes had been given time to ruminate over their performance. This raises questions around how to evaluate loss and, in particular, how to dissect the athlete's innermost emotions from their public persona. The impact of elapsed time on the response to loss also requires further exploration. The strength of this study is that the field-work observations and the collection of public statements from athlete Facebook pages adds a degree of nuance to the individual athlete responses, giving multiple dimensions to a complex theme. Strain was evidenced because of competition defeats, not only by the athletes, but also by some coaches. The author's evidence of athlete responses was cross-referenced against the criteria identified for interpreting competition loss (Conroy, Poczwardowski & Henschen, 2001), providing a framework for assessing the emotional responses to losing (as shown in Table 5.1).

*Table 5-1 - Research evidence of loss implications*

<b>Implication</b>	<b>Evidence, examples identified in this case research</b>
Experiencing personal diminishment	Wanting to "be the man" (athlete interview), rivalry between boxer and his squad mates; "gutted didn't make Olympics, but be more gutting if everyone made it but me" (athlete interview).
Demonstration of low ability	Concerns over age and number of international fights, wanting to look "commanding in the ring" (athlete fieldwork).
Tangible loss (physical/psychological)	"I have swallowed the loss now and will front up to it now" (athlete Facebook).
Wasting effort	"Fighters talk about the sacrifices they've made in their Olympic pursuits and sometimes feel resentful that the effort didn't pay off, as if they were entitled to the result they trained for" (athlete Facebook).
Self-criticism	"I lost that fight in my head" (athlete fieldwork).
Making future uncertain	"Sadly, the Rio dream is over and I'm gonna have to decide what the next big goal is gonna be" (athlete Facebook). "It is like the 2020 Olympics, you can be the best boxer but you can still get ripped off".

<b>Implication</b>	<b>Evidence, examples identified in this case research</b>
Losing a special opportunity	“Very disappointed as you could imagine, 6 years ago I set a goal and 6 years later I didn’t achieve it” (athlete Facebook).
Disappointing others	Not identified in this research.
Lack of control	“lost a very questionable decision last night ..... really hurts to have this opportunity taken away from me” (athlete Facebook).
Loss of confidence	One athlete competing in Baku after losing in China, appeared to be less confident arriving in China. On drawing the same opponent, his response suggested an over-compensation towards bravado.

The fieldwork identified that the pain of loss was generally accompanied with elevated emotions, as all the athletes questioned themselves, the results, their efforts and the perceptions of others’ opinions. Some openly admitted that they “always sulk” (athlete fieldwork) and “shed a few tears” (athlete fieldwork). A number of athletes expressed sentiments like; “I am just going to quit – I can’t seem to get my head right – peak at the wrong time – always happens in big competitions” (athlete fieldwork); Others described the experience; “in boxing, losing is a low, low feeling” (athlete fieldwork); “extremely painful loss, one of the most painful ever” (athlete Facebook); “Its brutal – it just gets taken from you” (athlete fieldwork). The effect that watching a loss (in this case by KO) had on one of the boxers was also interesting, with one athlete demonstrating fear at the prospect of his up-and-coming bout. He questioned:

“This sport is brutal I don't like seeing this shit. Why am I doing this?” (athlete).

After losing, what was commonly expressed was a desire to get back in the ring and have another attempt. This was likely explained by the timeframes between the build-up to a major competition and a loss in the first round. An athlete’s tournament can be over in 15 minutes (or less), with the next one (i.e. an opportunity to redeem oneself) potentially months away.

There were two marked instances of strain associated with managing loss. In both examples, the athletes had a reasonable expectation of performing to a high level in the qualification competition. However, one had suffered a hand injury prior to China, meaning his preparation was hampered. Losing in the second round, the athlete and his coach perceived the loss as an unfair decision:

“Lost a very questionable decision last night against a top athlete. Really hurts to have this opportunity taken away from me ...” (athlete Facebook).

“I can’t see that he lost – no matter how many times I watch it” (coach fieldwork II).

Exceeding or failing to meet expectations appeared to be a determinant of strain intensity.

Where an athlete had performance goals or expectations that were attainable in the context of the competition (refer to Section 5.4), the degree of strain experienced on losing was limited to reasonable disappointment. This was evident within conversations that included the following comments; “I wanted to look commanding in the ring” (athlete fieldwork) and “I am excited – I’ve got nothing to lose” (athlete fieldwork), as opposed to “I have to win” (athlete fieldwork).

While one athlete had reasonable expectations of qualification, his chances were negatively impacted upon by injuries and institutional pressures. The effects of this was reflected in distress levels in both the athlete and his coach (as captured in the following post);

“This means my Rio Olympics 2016 dream is dead. Very disappointed as you could imagine. 6 years ago I set a goal and 6 years later I didn’t achieve it” (athlete Facebook).

This represented not only tangible loss, but also a sense of wasted effort and a concern for the future (Conroy et al., 2001). In a media interview, the same athlete described the need to call on his own resiliency to combat his damaged pride and to look to future competition success

(namely the 2018 Commonwealth Games). His coach's coping capabilities were less adaptive. The coach was unable to accept defeat and became highly anxious and agitated. He also had emotional outbursts, expressing concerns that "everyone wants to see him fail, and then it is all my coaching at fault... [I am] just going to have to face up to HPSNZ... I am really not looking forward to it" (coach fieldwork).

The intensity of strain as a result of loss was also linked to a sense of preparedness for competition. One athlete described a state of calmness after he fought, having a sense of having left it all in the ring and done everything he could. Others provided responses such as; "you have to go in confident" (athlete interview), "I was physically the fittest I have ever been" (athlete fieldwork) and "having taken this rematch by the horns and executing our game plan so well, I'm content" (athlete fieldwork). Simpson and Wrisberg (2013, p. 110) also captured the importance of preparedness in their study, which included the conclusion that "you win your fight in the gym".

Coping strategies for dealing with loss were presented in a variety of forms, but were primarily focused on the justification of results. Athletes referred to their age or experience, the calibre of the opposition and the satisfaction with their performance. For example, one concluded that "I am only 18 and it is my first elite competition" (athlete fieldwork), whilst another explained how he "lost to the eventual gold-medallist" (athlete fieldwork). One athlete pointed out that he had lost to someone who "was ranked #8 in the world" (athlete fieldwork), whilst another posted online that; "I put my best foot forward and I'm content with my performance (athlete Facebook). Additionally, as captured in the below statement, where an athlete perceived that their opposition was of a higher calibre and they felt that they had competed admirably, there appeared to be a lesser effect on the sense of loss.

“Very close bout but can’t say I deserve it any more than the Dutchman, we both fought our hearts out” (athlete Facebook).

An athlete who lost in China to an opponent that he believed he had beaten, and who he had recently beaten at another event, responded in a different, more self-destructive manner. He showed signs of intense sadness, shame, anger, binge eating and sulking (Hanin, 1995). The athlete did not take advantage of post-competition training or international sparring opportunities that were limited at home (even though this was mid-campaign and he had been encouraged to do so). A subsequent loss in Baku (against a highly-rated athlete, which also included loss of points from referee warnings) was considerably more facilitative, despite this meaning non-qualification for the Olympics.

Some athletes were left with a considerable amount of idle time to dwell on their losses, having been eliminated on day one or two of the competition. The variability in responses between cases (both event and individual) was considerable. Some actively sought support, emotional and distraction-based strategies, opting to ‘hang-out’, review their fight videos and to talk it out with others. Others hit the gym, would run or just isolate themselves for a period. Athlete responses and behaviours, coupled with a lack of functional leadership and a historical drinking and bingeing culture, produced a lack of engagement with the training and international sparring opportunities that were otherwise unavailable in New Zealand. Clearly, this was a missed opportunity for both training and personal development, particularly of the younger athletes. It could also have been an opportunity for athletes to develop and practice functional coping strategies and develop mental strength.

#### 5.6.1 Interactions

Control and self-efficacy were the two notable internal resources that mediated athlete strain in this theme (refer to Section 2.5.1). Control refers specifically to the degree to which the boxer

felt that they had situational control over outcomes (i.e. they had competed to the best of their ability, prepared well and/or the result was a fair representation of their performance). This is mediated by the setting (e.g. the competition environment, including the draw and judging). Self-efficacy describes a belief that the boxers can overcome the losses, will bounce back and learn from the experience, and that they will do better next time (i.e. their long term goals are still achievable). The degree of strain in experiencing loss is likely to be moderated by a combination of expectations, both of self and others, and the individual's perceived importance of the event (related to criticality and career transition). Where expectations were high and a loss is incurred, a higher degree of strain may be experienced (in the form of grief and/or shame). Figure 5.5 presents a schematic of these relationships.

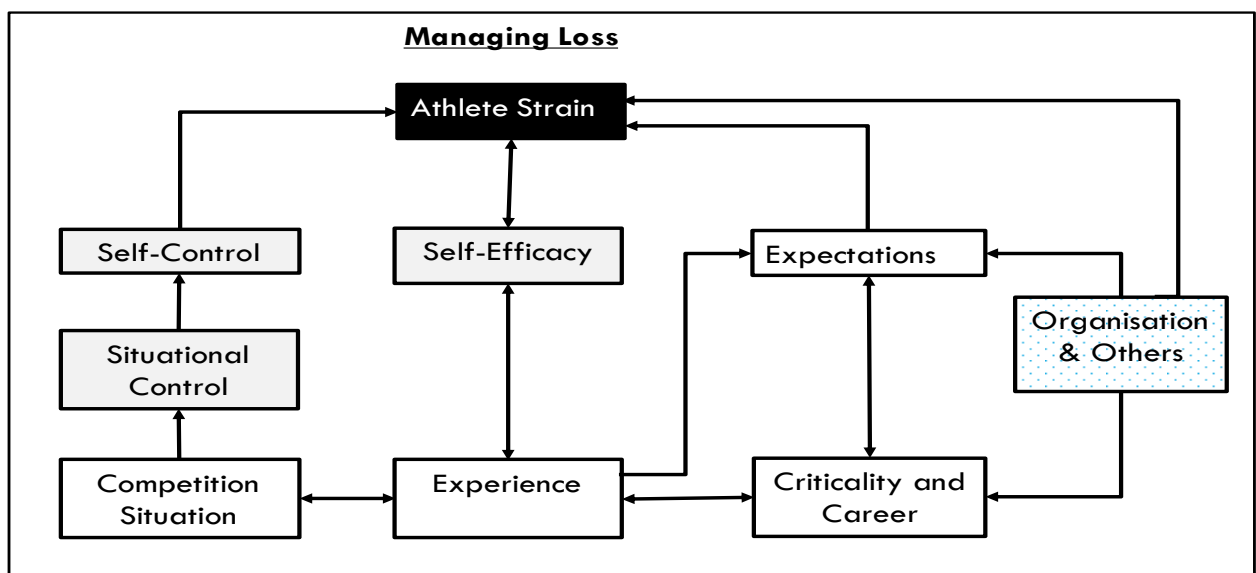


Figure 5-5 – Relationships between the components of stress for identified for performance pressure.



### 5.6.2 Discussion

This research suggests that an athlete's (and a coaches') intensity of stress, resulting from loss and their appraisal of the loss, is contingent on a complex array of factors, most notably centred

around the ‘meaning’ the loss has to the individual (Lazarus & Folkman, 1984). Existential meaning refers to both context to one’s life and identity as an individual or member of a group (Hanrahan & Andersen, 2010). There were also a number of intrinsic sports factors consistent with the boxing literature, such as: competing admirably despite loss, appearing brave, perspective to other features in their lives, and future implications to sporting career (Schinke, Bonhomme, et al., 2012; Wacquant, 1995). Research into the adaption processes of professional boxers in a knock-out tournament affirmed the significance of identity (Schinke, Bonhomme, et al., 2012), suggesting that athletes who struggled with “understanding who they were as boxers and as people” (p.835) were less capable of dealing with loss than those that that were multi-dimensional in their identities.

Finally, the athletes observed in this study called on a variety of resources when both appraising and adapting to loss, utilising emotional support and distraction from peers (including maladaptive forms in extensive partying and drinking). The social support demonstrated both positive and negative attributes to the transactions involved in coping (Rees & Freeman, 2009) They also used individual strengths, including self-control, resiliency and self-efficacy (Rees & Freeman, 2009; Schinke, 2010). Future campaigns would benefit from providing more productive distraction and directional support to enhance more facilitative coping. This would enable athletes to develop mentalities which translate losses as a challenge to do better next time and to see the loss as a learning and development opportunity (Jones et al., 2007).

## **5.7 Summary**

The five themes presented in this chapter all represent the most critical stressors, and their translation to strain observed during fieldwork and confirmed during interviews. This



highlights variability in form, time and intensity, both between and within individuals, and a dependency on the boxer's contextual frame, which is consistent with Hanin (2010) IZOF model. Variability of an individual athlete's intensity of strain is determined by exposure and experience (Hanin, 1995). It also relates to the athlete's ability to cope with these stressors, utilising appraisal and adaption tasks, in conjunction with identifiable and accessible resources (Lazarus & Folkman, 1984). While this thesis was not specifically focussed on defining athlete adaption methods, some examples of it were specifically highlighted. Most prominent were emotion and distraction, avoidance and appraisal methods (Nicholls et al., 2010b). Some responses were facilitative and some (e.g. those sighted in the coaching staff) were debilitating (Hanin, 2010). The lack of evidence suggests that these five themes, which were more strain intensive, were areas where less effective adaption was occurring. Table 5.2 summarises each of the five themes (columns) in terms of the interactions (rows) identified in the analysis.

*Table 5-2 Summary of Interactions by Theme (P=Preparation, PC=Pre-Competition, C=Competition, Post =Post Competition)*

<b>Dimensions / Resources</b>	<b>Theme 1 Coach Capability / Style</b>	<b>Theme 2 Coach Conflict / Behavior</b>	<b>Theme 3 Pressure to Perform</b>	<b>Theme 4 Nutrition / Making Weight</b>	<b>Theme 5 Managing Loss</b>
<b>Time</b>	P, PC, C, Post	PC, C, Post	PC, C	P, PC, C	C, Post
<b>Context</b>	Experience, Situation.	Situation, Location, Experience.	Situation Draw, Experience, Expectations, Criticality.	Experience, Location.	Expectations, Criticality, Career, Experience, Competition.
<b>Internal Resources</b>	Confidence, Self-Control, Situational, Control.	Commitment, Self-Control, Situational Control.	Confidence, Self-Belief, Self-Control, Situational, Control.	Commitment, Confidence, Self-Control, Situational, Control.	Self-Efficacy, Self-Control, Situational, Control.
<b>External Resources</b>	Coach, Organisation.	Coach, Organisation.	Opposition, Organisation, Others.	Organisation.	Organisation, Others.

The following chapter provides further discussion on the resources identified, and a direct response to the research question: what resources (internal/external) support an athlete's ability to manage stress for peak performance in the preparation and during significant competitive

events? In this instance, the significant competitive events relate to the two 2016 Olympic Games qualification tournaments.

## **6 Mitigating Resources in Coping**

This research set out to understand what internal and external resources could support a boxer's ability to manage stress and alleviate the impacts of strain. As such, this chapter provides a discussion on the resources identified in each of the five themes outlined in Chapter 5. The internal resources include mental strength capabilities, specifically, control (situational and self), confidence, self-belief and self-efficacy. The external resources include social support from squad members and significant others, and organisational process and structure.

### **6.1 Control**

This research submits that internal resources involving control should be separated into two constructs. The first is situational control, which is defined as the perception that an individual can govern or influence problematic situations or circumstances encountered. The second is self-control, which is defined as the ability to maintain composure under strain.

#### **6.1.1 Situational Control**

Situations such as the weather/climate, the loss of luggage and the opponent draw are uncontrollable by the individual. Regardless of controllability, however, there can be an element of expectancy. The direction of the strain is more likely to be negative, and the intensity higher, when/where-ever situations occur that are unexpected and outside an athlete's control. For example, in Baku, participants felt injustices were occurring in the refereeing and judging of bouts:

“Lost a very questionable decision last night...it really hurts to have this opportunity taken away from me” (athlete Facebook).

“They are just passive bullies – they know you just have to accept their results” (coach).

“I am done with AIBA – they have no respect for God/Humanity – People who are working so hard to be robbed of their chances” (Nigerian athlete).

The above quotes, and corresponding observations, expressed a sense of helplessness, which intensified strain in all instances. However, this lack of situational control has a human face. There is a basic expectation by the athletes that competitions will be fair and, as such, if they dedicate their efforts and perform well that they will be justly rewarded.

Developing and practicing plans for common distractions, particularly during competitions bouts, would be considered advantageous to improved situational control capabilities in response to strain. Experience would suggest that there are certain stressors that an athlete can expect will possibly and probably transpire. Interestingly, of the four athletes interviewed, only one athlete confirmed that they had ‘a plan for managing and were prepared for dealing with distractions’. Situational control can also be applied to the scheduling uncertainties.

Strain will transform over the duration of the event or campaign as knowledge and experience increases. Whilst increased strain was witnessed leading up to the draw, a greater sense of control seemed to emerge once the draw was published. This presented itself as reduced tension, worry and agitation. Once athletes knew their schedule and opponent, they could focus on the business of getting in the ring. The pressure of strain was significantly alleviated when or where-ever a sense of situational control was combined with athlete confidence and self-belief. In this situation, the athlete viewed their impending bout as a challenge. There was no specific references to situational control in the existing literature, however, Nicholls et al. (2009) did explore the relationship between the stressor, the stressor intensity and the stressor control. Having found support that stressors and coping are situation-specific variables in cross country runners, Nicholls et al. (2009, p. 285) recommended that “applied practitioners devise situation-specific coping interventions to maximise coping efficiency”.

Regardless of the situation or context, an athlete always has a choice on how they will respond to the situation. As such, this determines that control (or lack of) is an important factor in the management of stressors. This is consistent with the existential view that individuals always have choice (Nesti, 2004). As such, in connection to a loss of situational-control, this research proposes self-control (along-with confidence) as moderating effects of strain.

#### 6.1.2 Self-Control

Multiple aspects of control were identified in the existing boxing literature, both during preparation (Simpson & Wrisberg, 2013) and competition phases (Devonport, 2006; Schinke, Bonhomme, et al., 2012). During preparation, these included control of oneself and their training, control of one's body (nutrition, sleep, rest). In the competition phase, it included control of the opposition, control of the ring, control of body language (when the boxer enters the ring, or takes a punch) and the control of emotions (in particular, anger, aggression, fear and anxiety (Schinke, 2010; Wacquant, 2011). Equally, in general sports literature, self-control has been described as a component of self-efficacy (Bandura, 1997).

As captured in the following quotes, an athlete's ability to maintain self-control was expressed in many forms, but was often associated with controlling focus and emotions.

“I just shut everything out and concentrate on my own fight” (athlete interview).

“I don't want to stress about this - I just want to focus on my performance” (athlete fieldwork).

“Stress is contagious so you tend to try and avoid it” (athlete interviews).

“I need to keep my nerves under control” (athlete fieldwork).

This research also evidenced the importance of maintaining control of oneself, particularly during competition bouts. The boxers were challenged to maintain control in various

circumstances, including the athlete whose nose was broken during a fight, the athlete who expressed concern about becoming over-aroused during the bout and two athletes who were thrown by referee inconsistencies or warnings. The importance of control during competition was therefore found to be critical to not only achieving a successful result, but to also guard against potential injury. Control was also highlighted as important during the preparation and post-competition phases. For instance, the boxers were expected to control their diets, their training (especially when sparring), their social behaviour in public and their social-media content (refer to Section 5.6).

## **6.2 Confidence**

“You have to go in confident or you let yourself down” (athlete interview).

This study confirmed confidence as a mitigating resource for appraisal and adaption, identifying two key forms; ‘self-confidence’ (i.e. trust in one’s own abilities) and ‘confidence in significant others’ (i.e. trust that others will fulfil their obligations, and/or be there to support when required). The need to feel confident about oneself and others was embodied in several of the themes introduced in the previous chapter. For example, the athletes and coaches were willing to share their thought on the capabilities of the coaches (confidence in coach), the pressure to perform (confidence in own skills and abilities to compete) and the importance of making weight (confidence they could reduce weight and withstand the physical discomfort). The findings of this study are consistent with those of Hays, Maynard, Thomas, and Bawden (2007), whose research into world class sports performers identified nine sources of confidence. Six of the nine sources discussed by Hays et al., (2007) could be categorised under the heading of ‘self-confidence’, with the remaining three being linked to ‘confidence in

others'. The sources of self-confidence were innate individual factors (mental and physical skills), preparation, performance accomplishments, experience, competitive advantage, and self-awareness. The sources linked to others included coaching, social support, and trust (in team mates and support team) (Hays et al., 2007). Notably, developing confidence was also highlighted as a necessary requirement during the preparation phase, providing the boxers with the belief that they could execute the skills required, achieve the performance outcomes, and fulfil their physical and psychological demands better than opponents (Hays et al., 2007).

#### 6.2.1 Self-Confidence and Self-Belief

Developing self-confidence applies not only to training periods, but is also achieved with competition (Schinke, Bonhomme, et al., 2012; Simpson & Wrisberg, 2013). The following quote demonstrates how an athlete's self-confidence translates into self-belief leading into competition. It suggests that the boxer believed 'I have the skills, I can do this', whilst also stressing the importance of experience in gaining confidence. Furthermore, as touched upon in the previous section, it supports those who found that performance accomplishments were a significant factor in developing self-confidence for future performances (Hays et al., 2007).

"I have dealt with people of that skill level before, dealt with people of that kinda reputation ..... like say when I boxed [athlete] he was ranked 4<sup>th</sup> in the world, I was like holy shit, .... This guy is going to beat the shit out of me, I am not good enough. Then I boxed those guys .... and its like I it's going to be alright" (athlete interview).

The athlete interviews revealed a recognition around the importance of both self-confidence and self-belief to performance success. When asked to determine whether they 'had the confidence and belief in their own ability', all of the boxers provided affirmative responses and scored this factor +2 for influence on their performance. However, observations recorded within Case I did not corroborate these scores. While outwardly the athletes expressed belief

that they could achieve the goal of Olympic qualification, the hesitation and body language observed during the preparation phase suggested otherwise. Clearly, there is significant variability between boxers, and one could not expect the younger athletes or the older rookie athletes, to be fully confident. What was surprising, however, was that the four internationally experienced athletes all appeared to be experiencing confidence issues. This was magnified with a lack of trust in the competition structures (i.e. the fairness of results) and the realities of the high caliber of competition and limited qualification spaces.

Variability of confidence and self-belief levels were also recognised during the (pre)-competition periods in Case II and III. For example, the athletes who had prior losses to their drawn opponent all expressed and demonstrated lower levels of confidence and associated increases in performance pressure. A win in round one increased confidence, especially if it was unexpected. For example, the rookie athlete who followed his win by claiming “I am excited for the next fight – I’ve got nothing to lose” (athlete fieldwork). Additionally, one of the athletes competing in the China tournament had a 0:3 record against his opponent, forcing him to work extensively on building confidence and drawing on feelings of control and effort from more successful fight performances. He was the convincing victor this time round, representing a significant boost to confidence, which also carried through to his next fight. Schinke (2015) warns of the potential issue of over-confidence, suggesting that an over-confident state will affect self-awareness. Results from this study suggest that this translates to an over-inflated sense of skills and talent, and unrealistic expectations of opponents. This concern was identified in one athlete who behaved in a cocky manner, presenting himself to other competitors as an equal, despite his limited experience and technical abilities.



### 6.2.2 Confidence in Significant Others

For optimal performance, an athlete needs to feel secure that the team around them will provide the necessary skills and capabilities required of them to fulfill their role. The most prominent relationship in this study, affecting confidence was the dyadic relationship between the coach and the boxer:

“I trusted he knew what he was doing in my corner” (athlete interview).

“Yeah, unlike the coaches being a bit overwhelmed themselves. You don’t want the coaches freaking out” (athlete interview).

Confidence is closely related to commitment. As discussed in Section 5.2.4, confidence that each party will fulfil their commitments provides the athlete with collective efficacy (Cohen & Wills, 2000; Jowett, 2007; Zaccaro et al., 1995). This is also found across three of Hays et al. (2007) sources of confidence (coaching, social support and trust). Failure to fulfil this can deplete an athlete’s own confidence (refer to Section 5.2). In addition to this, a lack of confidence in this critical dyadic relationship can compound into an athlete experiencing a diminished sense of control over the situation, particularly when the boxer enters the ring. While confidence in significant others may also apply to other team members, boxers are not reliant on other athlete squad members with respect to their performances. This was adequately captured in the following quote.

“I just shut everything out and concentrate on my own fight” (athlete interview).

Confidence in other team members was not identified as a predominant feature in boxing with respect to the confidence construct. While the NZ boxers did not require confidence in other athletes as a performance resource, this research does provide evidence that they drew on squad members as source of social support. This is reflected upon further in the following section.

### **6.3 Social Support and Group Dynamics**

Research into perceived social support provides a significant correlation between perceived social support and performance, with esteem support being the most significant (Freeman & Rees, 2009; Rees & Freeman, 2009; Rees et al., 2007). Evidence suggests that presence of support can alleviate strain, whether utilised by an individual or not. Social support is resourced by the individual during both appraisal and adaption tasks either as emotional support. For example, a sense of comfort and security that someone cares, and/or through esteem support, can result in a boost to one's confidence and a sense of control (Freeman & Rees, 2009; Kristiansen & Roberts, 2010). This study also found evidence that social support was recruited from squad mates and staff, particularly during competition periods. This support varied from listening, offering a positive word, to distraction. For example, the athlete who asked the researcher to go and spend some downtime away from the village.

As evidenced in Chapters 4 and 5, when a boxer gets into the ring against their opponent, they are in there on their own. Their performance is not reliant on the efforts of their teammates. However, it was hypothesised that team or group cohesion (or lack thereof) would still be a factor in the intensity and direction of athlete strain, either positively in the form of support or negatively in the form of pressure to perform and unreasonable expectations. The boxers in the National squad came from various gyms across the country and had clearly formulated a strong dyadic relationship between themselves and their club coach. Therefore, the introduction of a 'national team coach' was problematic, as outlined in the stressors identified relating to coaching capabilities (refer to Section 5.2) and coach conflicts and behaviours (refer to Section 5.3).

Representing New Zealand at a National level, with a shared goal of achieving Olympic qualification, is a powerful motivator. This case research suggests that greater development of group cohesion would be advantageous to future National squads, as a means of supporting athletes' coping capabilities. When appraising a stressful situation, an individual athlete will appraise their social environment. Athletes are almost always part of a social group (Wolf et al., 2015). When vying for selection boxers can be competing against others, but once selection is completed, the athletes are competing in different weight classes, and the elements of interpersonal competition are reduced. The athletes not only have a shared understanding of the work, effort and challenges that it took to achieve selection, but also understand the demands of what lay ahead to perform in the prospective competitions. Therefore, development of group cohesion and interpersonal support (as a moderator to coping) could be considered applicable and beneficial. In addition, the influence of a group can lead to individual behaviours which may not be exhibited when in operating in isolation (Carron & Eys, 2012).

The requirements of combined squad training provide a mutual opportunity to prepare for competition, particularly when undertaking partner work and sparring. Combined with the shared sense of what is required to enter and potentially lose in the ring, this provides athletes with a support structure to cope with the stress of preparing and competing for international competition. Whilst this cohesion was not demonstrated across the group, the Case Studies did unearth examples of interpersonal relationships and friendships within sub-groups, some of which were demonstrably beneficial to athlete stress and coping and a source of support and encouragement. This was captured in the following quote.

“Travelling as on my own would be boring, wouldn't have as many distractions. And if I'm alone I would always be focussing on the task in front of me and this would allow for more doubt or nerves to set in” (athlete interview).

Bonds between individual athletes were apparent in those that had travelled together previously. This was evident when one of the athletes gave the other a big hug and slap after the loss of his fight, simultaneously teasing him about a particular movement. There was a distinct difference between this occurrence and the loss in the previous tournament. As the bond between these two boxers had developed across the two international tournaments. This suggests that cohesiveness assist with facilitative adaption, which can occur through a mutual understanding of the pain of loss, as well as their like-minded age, language and behaviour. The importance of establishing team spirit was discussed within the work of Simpson and Wrisberg (2013), who also acknowledged the importance of having fun and banter to help to alleviate the pressure. Conversely, where this cohesion is not developed, inconsistency in objectives can lead to team conflicts.

Where cohesiveness exists, one might expect a squad mate's loss to have the potential to affect another boxer's own preparation or performance. Whilst collective efficacy was considered important in the coach-athlete relationship, it was not considered relevant between boxers in this study. Collective efficacy takes into account the allocation, coordination and integration of combined resources through group membership. As stated earlier, this has been found to be beneficial in team sport (Carron & Eys, 2012; Cohen & Wills, 2000; Zaccaro et al., 1995). These differences can be explained by the individual nature of boxing, which is more pronounced when an athlete steps into the ring. When asked about the unexpected loss of a close friend shortly before his own bout, one boxer stated:

“You can't compare, every bout is different, depends on your opposition, you can't focus on someone else's fight. Yeah I am gutted for other fighters I am close with, but it might sound selfish but honestly I don't care that much” (athlete interview).

They are more concerned about their own performances, positions and reputations, as two athletes interviewed represented:

“I am more worried about being the man – achieving success for himself than the results of others” (athlete interview).

“gutted didn't make Olympics, more gutting if everyone made it but me” (athlete interview).

The qualification teams, which included the coaches and support staff, all had individual motivations, goals, abilities and commitment levels. Nonetheless, sharing of individual plans, routines, concerns and requirements (both prior to and during the tournament) provides team cohesion, and allows for processes that can meet individual performance needs. The potential for conflict could have been reduced through squad buy-in, agreement on a group structure, roles and responsibilities, a common set of behaviours and a way of working together in the competition environment. At the very least, it would have provided a process for dealing with issues professionally. This would have resulted in less distractions and stressors experienced by the athletes through a more supportive environment, which would have thereby enabled functional coping and optimal focus on performance goals.

There were several distinctive differences between Case II and III. First, the younger and less adaptive athletes did not attend the Baku qualifier. Second, the support team construction included three personal coaches for four of the five squad members. Third, all the athletes had experienced at least one international qualifier competition. Finally, the bonds that had been built in China carried through to Baku. Experience provided a buffer to some of the stressors which occurred in this environment, suggested that this support was a feature of athlete adaptive coping (Hanin, 2010).

The collective findings from the three cases identified features of group dynamics, including interpersonal influences in individual sports, motivational influences, social comparison,

friendships, teamwork, support and encouragement, group cohesiveness and intra-team competitiveness. These were consistent with the existing research on group dynamics in sport, much of which suggests that group cohesion, even in individual sports, provides a moderating factor for functional coping through perceived and received support (Carron & Eys, 2012; Carron et al., 2007; Cohen & Wills, 2000; Evans et al., 2013). In the context of boxing, interpersonal influence and group cohesion are helpful to manage competition-related anxiety (Evans et al., 2013).

#### **6.4 National Sporting Organisational Structure and Support**

The Olympic Games are the pinnacle event for international elite open boxing. Until 2016, Olympic-style boxing was solely the domain of amateur athletes. In 2016, Olympic boxing comprised 13 weight divisions (10 male and 3 female, totalling 286 boxers across 76 nations) (AIBA, 2016). With challenging qualification pathways, competing at the Olympics is the exclusive domain of the very best athletes worldwide. Only three Olympic medals have been earned by New Zealand boxers. David Tua won a bronze medal in 1992, Kevin Barry received a silver medal in 1984 and Ted Morgan won a gold medal in 1928 (Olympic Organisation, 2017). Not only have medals been limited, but representation for male NZ boxers has been equally scant. The last male representative competed at the 2004 Olympic Games. Female boxing was added to the Olympics Games in 2012. Alexis Pritchard, was the single NZ representative competing at 2012 London Olympic Games. She finished in the top eight (Olympic Organisation, 2017).

Competitiveness on the world sporting stage over recent years has required significant investment by governments and national sporting organisations (NSO's), demanding a more systematic and strategic approach to athlete development (De Bosscher et al., 2006; Fletcher &

Wagstaff, 2009). In 2002, the New Zealand (NZ) government introduced a sports funding policy change which required a more stringent application of policy for government funding allocations to National Sporting Organizations based on world stage performances and medal tallies (Sam, 2011). Consequently, this had significant impact on sports and the athletes that fell outside of the 10 priority areas, boxing being one.

In line with the 2002 sports funding policy change, High Performance Sport New Zealand (HPSNZ) applied a performance based system that provided support only to individuals and teams with the greatest chance of winning medals at the next Olympics or World Championships. This requires, athletes to achieve a top eight position at either the Olympics, the world championships, or in special circumstances, emerging athletes between 18-21, who medaled at other significant international competitions such as the Commonwealth Games (HPSNZ, 2015). This meant because of boxing's limited achievements at previous Olympic Games, only one athlete received funding to support campaign costs for the 2016 Olympic campaign (HPSNZ, 2015). This funding came as a consequence of a gold medal performance at the 2014 Commonwealth Games.

The financial management and high-performance management at Boxing NZ are the day-to-day responsibility of their volunteer board members. During document review, the researcher failed to find any publicly-available information regarding the high-performance programmes and processes run by BNZ. Additionally, during her attendance at the public Auckland review meeting (February 2016), the researcher noted that there was evident internal disagreement over decision making, communication and approach to the delivery of the high-performance function. Regardless of whether conflict occurs both within and/or between the board and their constituents, there was significant cause for concern for the impact on/to the elite athletes within this organisation. Additionally, the lack of established policy, structure and process

indicates that the organisational reputation and development of the sport as a whole has been compromised. This was further demonstrated and documented in Sport New Zealand's review of BNZ conducted in 2014, the findings of which led to some recommendations for both policy and process improvements (BoxingNZ, 2016). These internal dynamics are well recognised in the sport management literature, where the willingness for volunteers to share power with professional staff can make or break a transformation process (Amis et al., 2004). Although some improvements have subsequently been made since the 2014 review, the management of key stakeholders, lack of a formalised high performance strategy, and poor communication channels continue to combine to create a lack of transparency which falls well short of the critical success factors for international sporting success (Sotiriadou & De Bosscher, 2013). This continues to raise concerns for the reputation of the organisation and the confidence of its members, and ultimately the potential to fund.

Athletes who want to compete and win at an elite level must develop physical, technical and mental capabilities to perform in this high-pressure environment. It is also reasonable for them to expect a level of structure and support from associated sporting organisations, providing them with resources and a level of support to tackle this pressure. The provision of these resources, in a backdrop where small margins dictate the difference between winners and losers, can give athletes the opportunity to not just compete, but to perform at their peak (Gould et al., 1993; Jones et al., 2007). As such, NSOs must ensure due diligence in crafting an organisation that provides their elite performers with policies, structures and processes that deliver best practice, particularly when it comes to talent identification, funding support, high-performance training programmes. The recruitment and retention of coaches and support staff capable of delivering quality outputs is equally important. Conversely, poor organisational capability and resource has the potential to contribute to strain and negatively impact on an athlete's (and an organisation's) performance. At the simplest level, there is a requirement for



sports organisations to put in place the necessary frameworks, logistical elements and the best support team for a campaign (Fletcher & Hanton, 2003; Hanton et al., 2005).

The selection and appointment of staff, which involves setting clear roles and responsibilities and expectations of behaviour is crucial to a high performing culture, and vital to success in high pressure international competition environment. The findings from this study confirmed a lack of structure and process, with undefined roles and responsibilities and no leadership within BNZ. Given the criticality of an Olympic campaign, both to organisational funding and to the athletes' qualification potential, selection and development programmes should have been established and delivered well in advance of the qualification timetable. However, as captured below, selection was hastily arranged for January, leaving athletes uncertain and ill-prepared mentally, financially and physically.

“I only got selected in January, ay, and I was off to China in March and I'd come down a weight class so I was still trying to get that sorted as well ..... the pressure to find the money to go that fell more on my coach than me, but yeah it is was really tough, just not enough time to prepare” (athlete interview).

“There was only one national camp, I'd never had much to do with the boys before that, and we should have been in camp for the three weeks before we went, instead of a weekend and then sent home for three weeks, like, to prepare on our own' (athlete interview).

“Would have been good to get more sparring; like I had never fought a southpaw before, would have been really good to have got some southpaw sparring ...” (athlete interview).

Most critically, the lack of leadership encountered in all three cases created compounding stressors as the campaign progressed. Leadership is not about being the loudest, the biggest or being the most forceful (refer to Section 5.3), it is about inspiring and bringing out the best of those around them (Carron & Eys, 2012; Carron et al., 2007). The “Leaders” observed in New Zealand, Baku and China failed to provide direction and the facilitation of a common objective

and vision (Carron & Eys, 2012). This resulted in issues and conflict. As showcased in Chapters 4 and 5 of this thesis, individual agendas, personalities and politics took over, escalating as stressors of the competition arose.

This research did not substantiate the necessity to have one's personal coach travelling on international competitions as necessarily beneficial to athlete coping and performance during competition (Gould & Maynard, 2009). This research does however, concur with Schinke et al. (2015, p.79) who identify athlete personal coaches, as "stakeholders in the athlete's development". As such, they recommend integrating them into the programme from the onset of athlete entry to a National programme. Ensuring that the right support personnel are assigned and equipped to deal with the environment is critical (Gould & Maynard, 2009).

The lack of planning, structure and process created a dysfunctional environment across this applied case study research. A national training environment should provide opportunities to develop plans, negotiate roles and responsibilities, establish working norms, and develop better relationships. Additionally, this provides opportunities to work through working relationships in a training environment, allowing for issues to be resolved prior to the critical competition phase. Mutual understanding and commitment between the organisation, coaches, staff and athletes is therefore imperative. These arguments support recommendations by Sotiriadou and De Bosscher (2013) for the development of a well-structured and supported high performance programme to enable the success of athletes in elite level international competition.

## **6.5 Summary**

*"Adaption in elite sport is the athlete's capacity to act and react competently to stressors perceived as significant in a sport context, by restoring an internal sense of emotional and psychological balance" (Schinke, Battocchio, et al., 2012, p. 181)*

This research supports the definition of stress as a transactional process, initiated by situational factors called stressors on an individual. The output of stress is strain, which has direction, form and intensity dependent on the process of coping, moderated or mediated by the assessment and implementation of resources (Hanin, 1995). These stressors are also modified by temporal and contextual factors, interacting between the individual and the environment (Hanin, 1995). The coping process is initiated through the cognitive tasks of appraisal (Lazarus & Folkman, 1984). The first task of appraisal is to determine relational meaning, the second is the individual's assessment of their ability to cope with these demands, given the degree of situational control they perceive and the resources they have accessible (Lazarus & Folkman, 1984). Consequently, actions to adapt are taken by the individual and a performance outcome is reached (Lazarus & Folkman, 1984).

The objective of this research was to gain further understanding of what and how stressors impacted athletes. It aimed to provide insight into what factors were more controllable and what resources afforded more protection to athletes against the negative effects of stress, namely strain. The further purpose was to identify resources that support athletes in the management of stress, which may inform organisational insight into opportunities for improvement and development in the sport of open boxing in NZ.

Both internal and external resources, tangible and intangible, were identified as an imperative factor in coping tasks for stress. Without resources, an athlete is unable to appraise a stressful situation. At the very minimum this requires some form of mental resources (e.g. self-confidence, self-belief or self-control). An athlete will also call on a combination of external factors, which support adaptation to situation, including a sense of situational control, confidence in others, and social and organisational support. This provides the athlete with assets and means to initiate tasks, contributing information, increased effort or emotional support or release for example (Freeman & Rees, 2009; Kristiansen & Roberts, 2010).

This research confirmed that strain is real and unavoidable in an elite athlete's world. It is the form, direction and level of intensity that differs. Negative strain (distress) can result in debilitating functionality, anxiousness, worry, loss of motor control, and this can have potentially catastrophic effects (Lazarus & Folkman, 1984). This is particularly the case in a sport such as boxing, which requires a high level of focus and control when competing in the ring. The game is 'hit or be hit' (Schinke, 2010). Distress requires an athlete to divert resources towards dealing with the effects of the stressor, and away from the task at hand (Hardy & Hutchinson, 2007). Conversely, eustress or positive stress, provides an arousal state, which is deemed optimal for their needs. Positive stress is known to provide increased alertness, agility and energy (Hardy, 1996a, 1996b).

The discussion on resources presented in this chapter is developed from the themes outlined in Chapter 5, confirming transactional stress as multi-dimensional process driven by inputs that determine form (focused, worried), direction (challenge versus threat), intensity (strength of response) and dimensions, which moderate form and direction. These dimensions include timing (transitional stage of the boxer's career) and context (competition environment, personal culture and beliefs). The results of this research provide insight into how mental strength and social support can mitigate coping and affect adaption in a high-pressure sports environment. Performance accomplishments require significant investments in time, effort and finances, as well as the ability to overcome physical and mental problems. This can be unpleasant, difficult and unexpected. The need to manage and adapt to stress is therefore critical to achieving success in an elite level boxing competition. This supports boxing literature which argues that being the best technical fighter without psychological toughness is unlikely to make you a successful tournament fighter (Devonport, 2006; Schinke, Bonhomme, et al., 2012; Simpson & Wrisberg, 2013).

## 7 Conclusion

This chapter provides conclusive commentary, commencing with an introduction which outlines the relationship between the transactions of stress researched and the research question. It follows with the presentation of the author's conceptual model, developed over the course of this research project (refer to Section 3.3.6). It offers the suppositions and recommendations of the findings, including a return to the axiological lens of existentialism. Finally, it outlines the research limitations and future research opportunities.

### 7.1 Introduction

*“Stress is not what happens to us, it is our response to what happens, and response is something we can choose” (Killoran, 2017, p. 1).*

This thesis highlights both the positive and negative perspectives of this complex research topic. The lack of success, in terms of securing Olympic Games qualification, and the degree of organisational dysfunctionality encountered during this research offers few opportunities to highlight positive results. This raises the question; would these athletes have performed better in an environment with less intense stressors, and/or with more resources and less distractions?

In order to address the primary research question, this study investigated the transactional process of stress to determine when and how resources interact with this process, and broke this question into three further parts. The Primary research question was:

- *What resources (internal/external) support an athlete's ability to manage stress for peak performance in the preparation and during significant competitive events?*

The secondary research questions were:

1. *What factors do athletes encounter in the operation of their sport which require them to transact stress?*
2. *What are athletes' experiences of strain in preparing and competing in major international events?*
3. *What factors did they feel had more or less impact on their ability to deal with these stressors and performance in training and competition?*

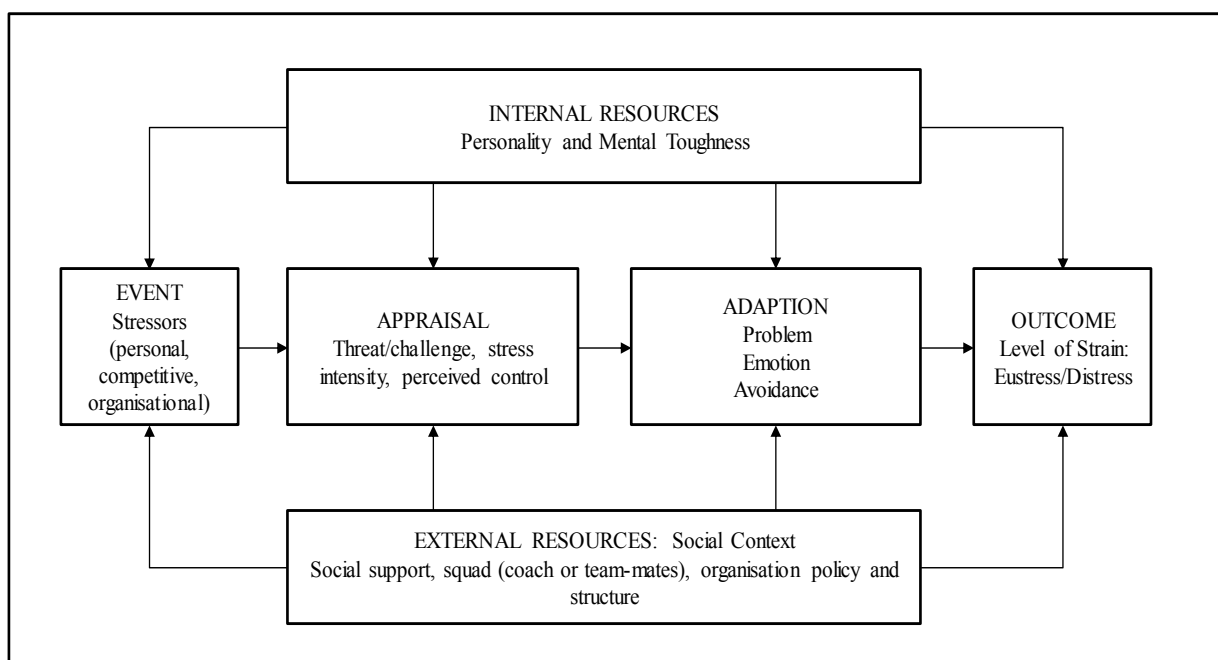
Question one pertains to the transactions or events which initiate the process of stress (i.e. the stressors). This research found consistency with stressors identified in the framework, highlighting five key themes which required athletes to utilise resources to appraise and adapt to stress. The themes were coaching capabilities and style, coach conflict and behaviour, pressure to perform, nutrition and making weight, and coping with loss. The second question helped to determine how an athlete experienced these stressors. Hanin's (2010) IZOF theory was used to determine the levels of strain during the three temporal cases. Question three allowed the author to gain additional insight into the intensity of the strain along-with the mechanisms that the athletes used to appraise and adapt to the strain. This included both internal and external resource activation. The following section draws together the transactional components (inputs, processes, outputs) into a conceptual model. This conceptual model was developed from the initial model presented in the introduction (Figure 1.1).

## **7.2 Summary of Transactional Stress**

The objective of this applied case research was to identify the relationships between variables involved in transactional stress. This involved identifying interactions, patterns and themes in

elite NZ open boxing (across three situational cases and four individual athlete interviews).

Figure 7.1 offers a revised framework, based on the findings of the extensive primary and secondary data collection and analysis process undertaken for this study. By normalising stressors - explicitly competitive stressors from the conceptual framework outlined in Fletcher et al. (2012) - and including temporal and contextual dimensionality as moderating factors, this research offers a model that could be considered more applicable across multiple sports and across all transitional phases of elite sport.



*Figure 7-1- Initial Conceptual Model adapted from Polman, Clough & Levy (2010).*

Despite the limitations of this research (refer to Section 3.4), Figure 7.2 provides further detail of stressors and confirms stress as a transactional process. Figure 7.2 also provides further definition of models presented in Vealey (2001) and Fletcher and Sarkar (2012), offering further explanation in regards to the inter-relationships between the dimensions of stress and the mediating influences of resources on coping (Hanin, 2010). The following paragraphs provide further explanation of the variables outlined in Figure 7.2.

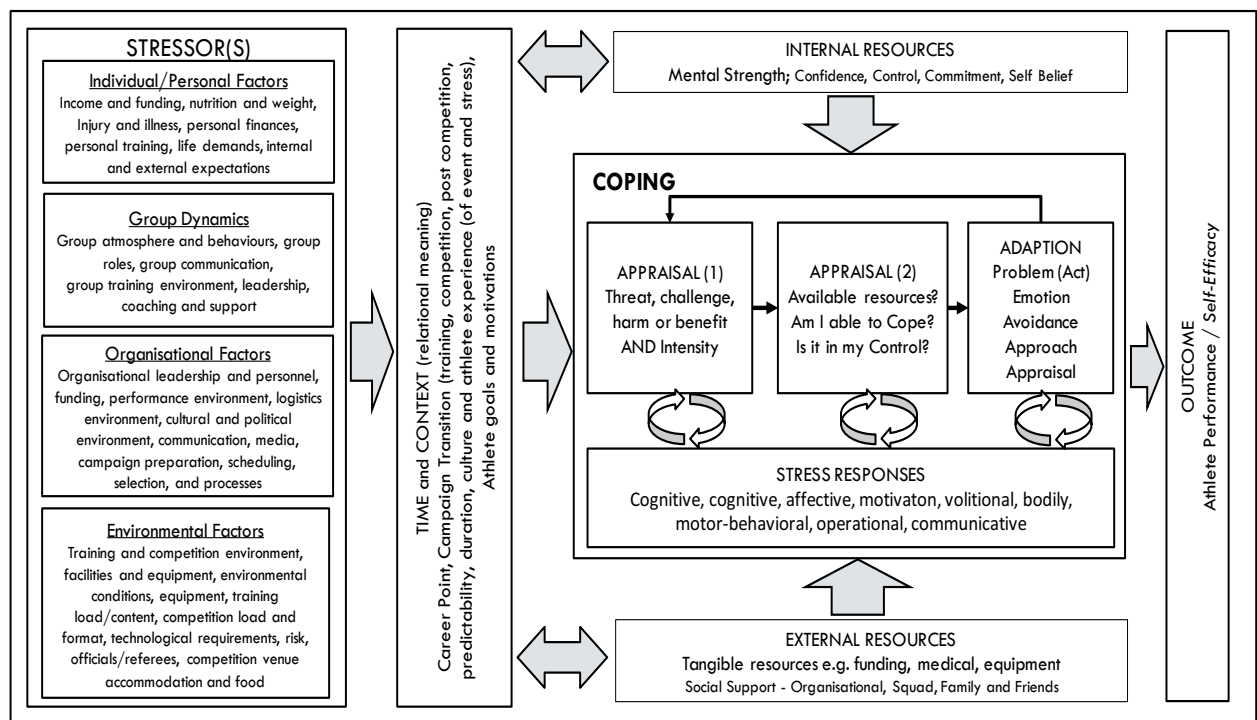


Figure 7-2 - Conceptual Model for Transactional Stress in Elite Athlete Preparation and Performance

This study proposes ‘*individual*’, ‘*group*’, ‘*organisational*’ and ‘*environmental*’ headings as more appropriate high-order classifications for this research. It argues that this provides a participant’s perspective, and allows for the contextual and temporal phases to be applied as a third dimension. The temporal perspective includes preparation, training, pre-competition, competition, and post competition (Schinke et al., 2015). The following definitions for each higher order category are proposed:

- stressors that affect the *individual* as part of their own personal situation and/or within their own personal control,
- stressors that occurred in relation to that person interacting within a *group* (for instance club team or national squad), or;
- *organisational* relate to the interaction between the individual and the organisation(s) that they operate with, or;



- *environmental*, being the physical situation or setting that the individual is involved in at the time of the event (e.g. venue, climate).

This approach is consistent with the objectives of Arnold and Fletcher (2012b), who recommended development of more generalizable themes at a high order level for all stressors (not limited to organisational) in sport. In summary; this research endorses the following characteristics of transactional stress;

1. Strain (effect of unmanaged stress) has different levels of intensity, demonstrated by variations of strain between and within individuals to the exposure of the same stress. Strain presents in multiple forms; cognitive, affective, motivational, volitional, bodily, motor-behavioral, operational, communicative (Hanin, 2010; Lazarus & Folkman, 1984). Responses, often generalised as emotions, transform with stress. They are not static but dynamic and ebb, flow and convert to/from other emotions as an individual appraises, adapts and reappraises a stressor (Lazarus 2000).
2. Factors of time and context moderate the intensity of stressors (Hanin, 2010). That is, they specify the conditions under which the response to the stressor impacts the direction and intensity of the strain incurred. It is the athletes appraisal of the stressor that determines where on the scale between eustress (e.g. excitement) and distress (e.g. anger) strain sits (Hanin, 2010; Lazarus & Folkman, 1984).
3. Strain regardless of direction requires a response by the individual to move forward. Individuals appraise strain directionally as a challenge or a threat in pre-competition and competition phases, or as a harm or benefit in post competition (Hanin, 2010; Lazarus & Folkman, 1984). Appraisal requires the athlete to determine the resources available to them to support the transaction.

4. Athletes will then apply these resources to adapt and perform the task at hand. A positive adaption will facilitate performance, where a negative adaption is more likely to result in a debilitating one.

### 7.2.1 Synergy of findings with the research framework.

Table 7.1 provides a final synergy of the thesis' main conclusions, as they relate to the existing literature reviewed in the opening two chapter of this thesis.

*Table 7-1- Synergy of findings with framework.*

<b>Part</b>		<b>Conclusion</b>
1	Stressor	Analysis of Arnold and Fletcher (2012b), Fletcher et al. (2012), McKay et al. (2008) and Woodman and Hardy (2010); provided a three higher order classifications; organisational, competitive and personal which informed the initial conceptual model (Figure 1.2). Taxonomic classification of stressors was found to be a useful framework for categorising events. The introduction of a fourth order provides future research an opportunity to distinguish between organisational (being institutional based interactions) and interactions within sporting groups and/or distinguishing between individual and team based sports.
2	Stress	<p>Dimension of strain are guided by Hanin (1995), individual zones of optimal functioning (IZOF). These dimensions included; form, direction, intensity, time and context. Time is further supported by transactional analysis offered in Schinke et al. (2015) Hanin (1995) IZOF model provided a framework to identify and evaluate experience and commentary data for strain. Temporal elements both across and inside the campaign were supported by Schinke et al. (2015). The dimensions of form, direction and intensity were used during observation as an indicator of strain. Time and context were important features framing the research analysis as these categories provided the themes establishing moderating factors during coping transactions and interactions to resources.</p> <p>Lazarus (1984, 2010) provides the transactional framework which links form, direction and intensity to appraisal, adaption and outcome. The framework provided a useful starting point to frame the multi-dimensional interactions between coping and resources identified from other scholarly literature and the findings in this research.</p>

3	Resources	This research hypothesises that resources perceived and received, internally or externally derived; provide athletes with greater ability to cope with athletic stressors (Freeman & Rees, 2009; T. Rees & Freeman, 2006). This research supports this hypothesis, and challenges future research to extend this construct to identify which and how internal and external resources support an athlete's ability to cope with the pressures of the sports environment.
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### 7.3 **Links to Existentialism**

Existentialism provides for choice. Existential meaning refers to death, life context, identity (individual or group role), connection with others and freedom (Hanrahan & Andersen, 2010). When applied to transactional stress, individual meaning is a fundamental factor in establishing primary appraisal. When an athlete's existential meaning is centred on themselves as an athlete, sporting failure can be highly distressful to the individual (Schinke, Bonhomme, et al., 2012). Nesti (2004) also argues that practitioners supporting athletes should investigate the meaning of the distress to the person, rather than simply trying to identify cause and effect. To date, stress and coping research in sport has focussed on performance anxiety, where anxiety is defined as the emotion resulting from facing an uncertain/existential threat (Lazarus, 2000). While this provides a clear link between strain and existentialism, it takes a narrow focus, which would benefit from exploring stress beyond the scope of anxiety.

While it can be debated that existentialism generally sits within the interpretivist space, rather than the post-positivist space (under which this research is conducted), this research argues that individual meaning can be established alongside reasonably stable and predictable relationships when exploring elite athlete strain during preparation and completion periods. Crucially, this research found existentialism to be a constructive lens to explore this research topic. First, it recognises that the reality of elite sport success requires sacrifice. Second, it accepts that there

is a requirement for the athlete to face up to their responsibilities, determine what they can control and what they can't, make a choice and be accountable for those choices. Finally, it recognises that boxers are not just athletes, but are also human beings. In recognising this, success remains in the athlete's hands, and talent is seen as a task and not a gift (Aggerholm, 2015).

#### **7.4 Supposition and Recommendations**

Coping is a day-to-day process in the normal course of a person's lives. In the often-extreme pressures of elite boxing, however, one must possess the capability to cope with both controllable and uncontrollable stressors and produce peak performance, whether that is in preparation and training or competing at high-calibre international competitions. Figure 7.2 demonstrates the multiplicity and complexity of factors that an athlete transacts when preparing and competing in elite level sport. This research identified that neither stressors, variables (temporal, contextual and resource factors) nor the individual's responses, transact either uniquely or in isolation, but are multi-dimensional and dynamic. These often, compounding stressors in conjunction with these moderating and mitigating variables affect the athletes experience and intensity of strain. For example, conflict between coaches provides ineffective training and uncertainty in cornering. Conversely, supporting an athlete to get medical treatment, alongside emotional support in the case of an injury, supports more facilitative adaption to strain in this instance. Additionally, it is the athlete's ability to manage these transactions that determines the direction strain tracks, from an interpretation of challenge to threat, in the form of eustress or distress.

These findings determine experience and/or prior exposure (time) and event criticality (context) as the two most identifiable moderating influences. Mental attributes of confidence, self-belief

and control, alongside social and organisational support, were highlighted as key resources applied to mitigate responses to strain and supporting adaption. These resources could be distinguished between being internal (e.g. an athlete's own mental and physical capabilities) and external (e.g. the tangible and social support available). While there is a large body of evidence supporting the varying components of mental strength in athlete performance, inconsistent applications and definitions make interpretation difficult. When investigating mental toughness as a pre-requisite to successful elite performance, some researchers focussed on the 'what' and failed to address the 'how' and 'why'. Other researchers have focussed on mental strengths, in particular confidence and control in relation to coping.

This research found mental strength to be both internally (self-confidence, self-belief, self-control) and externally (confidence in others, situational control) influenced. Mental strength attributes were key variables in supporting both appraisal and adaption tasks in transactional stress. This research thereby assists developing new knowledge, providing a framework for examining 'why' mental strength acts as a resource for superior sports performance. This study also provides some evidence as to how resources are applied in coping with sporting pressures. That is, an athlete draws on mental attributes to determine firstly, whether they will be able to cope and strive with the situation in front of them, and then to convert these attributes to control their response to the situation. For instance, they translated confidence into the self-belief that they were more skilled or stronger than their opponent, or self-control to monitor their emotional responses to a conflict situation, or increase determination to improve future performances after a loss.

The importance of external resources was also highlighted in this thesis, including both tangible and intangible assets. This study raised important questions about the nature of individual combat sport and the requirements for squad cohesion and support. Discord in interviews

suggested that athletes are protective of their need for another athletes' support. However, when challenged on the practicalities of training and competing as an individual, findings suggested tangible resources to coping through training partnerships and sparring are provided by other boxers in the squad. Intangible resources were also provided, such as companionship and emotional support. This was particularly critical when faced with the existential reality of competition loss and more remarkably in failure to qualify. This suggested that peer support was more critical than the dyadic relationship between athlete and coach in some facets of sports activity. However, it should be noted that this finding may be skewed by the magnitude of capability and behavioural issues displayed by coaching staff in all three cases. As one athlete stated, these issues were not unique to this case study, but the consequence of a culture that was well established. As such, experienced athletes appeared to have fostered coping strategies to adapt to these issues. In some instances, this was by avoidance, diversion, through stronger and more established athlete bonds, or in individual mental strengths. Less experienced athletes also accessed internal mental capabilities or gravitated to other available sources of support. Furthermore, what was difficult to establish was whether specific situations of strain altered the results pursuant to athlete performance. At best evidence suggests that this was performance neutral.

This research concludes that in attempting to understand strain on boxers, and its consequential effects on performance, it is crucial to retain an athlete perspective. While commonality does apply, every individual and every individual encounter is essentially unique and specific. One size won't fit all. An athletes' existential meaning (i.e. their individual motivations, goals, individual abilities and commitment levels) should not be overlooked. Nonetheless, the sharing of individual plans, routines, concerns and requirements can provide squad cohesion while still allowing for processes that meet individual performance needs. The researcher's attendance and observations at such critical international events provided additional nuance to athlete

reactions. This may not have been achieved in the more traditional retrospective and self-reported methods, which has limited much of the research published to date.

In response to these applied case study findings, this research recommends development of a national performance programme that is athlete-centric. A BNZ high-performance programme should provide a framework for the operation of sporting activities which includes a robust network of scientific and social support that is conducive to the development of peak performance. Resources provided within this high-performance environment should involve organisational and coaching support. This should include tangible tasks (e.g. medical, technical, financial, logistical) and intangible activities (e.g. talking/listening, comforting, informational, directional). The findings support experience and prior exposure to situational variables as a mediating factor to facilitative coping, particularly in relation to performance anxiety. Greater opportunities to simulate athletes to varying situations and scenarios (both positive and negative) should be included within the training and preparation environments. This should include increasing quantity and quality sparring and competitive bouts. In all instances, this will serve to increase both technical and physical capabilities, as well as self-confidence and self-control resources. It would thereby better equip athletes to deal with the pressures of elite level sport, and minimise or adapt to any consequential effects of strain.

Furthermore, the researcher recommends that BNZ establish high performance programmes that support coaching and support staff development. This should include the development of communication channels, and working models between national and personal coaches.

Appointment of national squad staff, including coaches, should be merit based. It should consider both technical and financial capabilities, as well as leadership and squad compatibility. This is particularly the case on international duty. This should be accompanied by clear roles and responsibilities and an agreed method of operation. Increasing coaching capabilities will not only increase the quality of technical and informational support to athletes, both in training

and competition environments, but will also provide a more intimate understanding of individual athlete requirements for optimal performance. Schinke (2007) suggests provision of athlete 'biographies' for individually-focussed, optimal coaching support. Developing elite-level coaching staff from a larger pool of coaches will assist in expanding squad options and allow coaches to gain expertise necessary for international experiences (Schinke, 2007). Future consideration should be given to providing opportunities to develop coaching staff by accompanying and observing others in order to obtain experience. Additionally, more education for athletes and personal coaches should be included in national high-performance programmes, especially around expectations, preparation requirements and provision of information.

In summary, all athletes must develop capabilities and coping mechanisms to perform under pressure. This must apply across situations where they have varying measures of control, experience and/or expectancy. To enable athletes to achieve this, this research supports the importance of establishing greater understanding of athlete strain, by further examining the inter-relationships between the dimensions in the transactional process of stress. This includes the appraisal and adaption of resources. By developing this knowledge, sporting organisations will be better equipped to provide athlete-centred structures, processes and support to enable the best opportunities for success on the world stage.

## **7.5 Limitations and Future Research Implications**

This research adopted the individual's zone of optimal performance (IZOF) as a framework for evaluating the dimensions of stress in this case study (Hanin, 2010). While IZOF offered merit to understanding these drivers, the model failed to support an explanation of the relationship between dimensional elements and performance. While some attempt was made to translate the effects of strain on performance in this research, the results were limited in both sample size



(four individual cases) and definition (retrospectively and subjectively assessed). Although the selection of athletes for these interviews was purposeful, covering varying experience levels and across three cases, future research should look to pre-determine the performance expectations of athletes (and potential coaches) at varying points along the campaign. The adoption of the instrument developed by Gould et al. (2002), as the basis for semi-structured interviews, provided some comfort that an adapted version of this approach would be beneficial in future research (refer to Appendix C).

The strength of this research is in the stratification of cases over time, across events and across transitional periodicity. A methodology which incorporates participation-observation based fieldwork offers a trusted insider's viewpoint. In doing so, it enhances opportunities and understanding of athlete's perspective, including both deliberate and inadvertent actions and behaviours. This is particularly beneficial where fieldwork includes critical competition periods. The case study methodology provides an opportunity to develop relationships with many people involved in the project, and thereby engage in situations and events close to the 'coal face', which would be otherwise unavailable to researchers (Swanborn, 2010).

Additionally, the inclusion of individual athlete cases, albeit limited in size, along with document analysis, including social media sources, provided for triangulation of results. While improved by data triangulation, generalisability is limited to the context of the case study.

Future research should look to expand this knowledge by building on this research method and investigating these relationships in other sports. This includes, but is not limited to, extending to other individual combat sports. Given that each individual circumstance is unique, a better understanding of this process (in the context of an individual) will enable more efficient and effective support of elite athletes. By understanding athletes' specific resource requirements, through different transitions (e.g. career, campaign, competition), it is anticipated that this

institutional knowledge can be applied to implement athlete centred programmes that provide resources to minimise negative athlete strain, particularly in relation to significant campaigns such as the Olympics.

## **7.6 Concluding Remarks**

Stress was generally regarded by boxers in this study as an emotion that indicated a sign of weakness and should be hidden or ignored. This research contradicts stress as an emotion, but provides additional support to Fletcher et al.'s (2006) definition of stress as a transactional process. Operating with stress is unavoidable in the high-pressure environment of elite performance sport. Therefore, athletes and the sporting organisations trusted to collaborate with them need to recognise stress as a normal and acceptable process in their sporting endeavours, and ensure sufficient attention is given to planning and preparing for typical stressors. For example, they need to ensure open lines of communication are in place to facilitate support when required. Focus should be on minimising the outcome of unmanaged stress, specifically high-intensity strain, namely distress. Sporting organisations should work with athletes to improve individual, group and organisational capabilities to minimise the negative impacts on performance and personal well-being. The findings of this study have several important implications for future practices in the operations of high-performance sport at Boxing NZ, in particular the need to develop concise and published structures and process for the management and support of their high-performance programmes and athletes.

# APPENDIX A: SYNTHESIS OF KEY RESEARCH IN STRESSOR'S

Analysis Categories	Arnold and Fletcher (2012) - Taxonomic List <small>A model of performance and its antecedents (classification of environmental stressors in sports performance)</small>	Fletcher, Hanton, Mellalieu & Neil (2012) <small>A Conceptual Framework of organisational stressors in sports performance</small>	McKay, Lavallee, Niven & White (2008) <small>Sources of strain among elite UK track athletes</small>	Woodman and Hardy (2010) <small>Assess study of organization stress in elite sport</small>
Context Transition Stage Criticality of event Mental Preparation/Strength	Logistical/Environ Weather Conditions Perf and Personal Career Transitions		Environmental Conditions Weather conditions Lane and Race conditions	
Social Support		Relationships Support Network	Competition Concerns Self Doubt/Lack of Confidence Doubts about ability Pressure from others Good training body issues Lack of support in training Social Support/Perform	
Competition Environment		Intrinsic to Sport Training and competition environment	Environmental Conditions Lane and Race conditions	
Atmosphere	Logistical/Environ Distractions Logistical/Environ Physical Safety			
Logistics	Leadership/Person Spectators	Intrinsic to Sport Travel and Accommodation arrangements		Environmental Accommodation
Facilities and Equipment	Logistical/Environ Travel			
Venue	Logistical/Environ Facilities and Equipment	Intrinsic to Sport Training and competition load	Training Issues Changes in Training Set Up Competition Concerns Underperforming in training	
In Competition Training Load and Content	Logistical/Environ Accommodation		Training Issues Competition Concerns Perception of competitors Delays in competition	
Competition Load	Logistical/Environ Structure of Training	Intrinsic to Sport Training and competition hours		
Competition Format	Logistical/Environ Competition format			
Technological Requirements	Logistical/Environ Technology	Intrinsic to Sport Technical and Technological Changes		
Officials and Referees	Logistical/Environ Rules and Regulations	Intrinsic to Sport Intrinsic to Sport Org structure/climate Org structure/climate Org structure/climate Media attention	Underperforming in Comp letting others down Facing others following a poor perf.	
Managing wins Managing losses				
Organisational Leadership and personnel	Leadership/Person Governing Body		Governing body factors	
Performance Environment				Environmental Training Environment
Training Environment				Team Issues Team Support
Team Resources	Leadership/Person Performance Feedback			
Policy and Process				
Campaign Management				
Logistics Management				
Travel and Accommodation	Culture/Team Cultural norms	Intrinsic to Sport Org structure/climate Political Environment Inadequate communication channels	Timetabling Finding appropriate std competition	
Cultural Environment	Leadership/Person Media			Team Issues Communication
Political Environment				
Communication - Organisation				
Nutrition	Perf and personal Diet and Hydration	Intrinsic to Sport Nutritional	Competition Concerns Injury and Illness	Personal Nutrition
Injury and illness	Perf and personal Injuries	Intrinsic to Sport Exposure to hazards and risk of injury	Injury and Illness Lack of social/medical support injured	Personal Injury
Income and Funding	Perf and Personal Finances	Athlete Career Income and Funding	Competition Concerns Concerns about preparation Changes in Training Set Up Concerns about Training Content Underperforming in training Practicalities of training Changes to lifestyle as result of demands Personal relationships Time demands	Environmental Finances
Life Demands				
Expectations				
Expectations from Self				
Expectations from Others				
Institutional Pressure				
Leadership				
Capability				
Style				
Team composition				
Personnel/Resources	Logistical Selection Leadership/Person Support Staff	Athlete Career Position insecurity		Team Support
Team Roles and Responsibilities	Cultural/Team Roles	Roles in Sport Org. Org structure/climate No sense of belonging		Team Support
Team Dynamics				Team atmosphere
Team Bond				
Atmosphere	Cultural/Team Teammates at atmosphere and support	Org structure/climate Relationships Personality type	Interpersonal Relationships Interpersonal conflict	
Team member (athletes) Conflict	Cultural/Team Teammates behaviour/interactions			
Leadership and Coaching	Leadership/Person Coaching behaviour/interactions			
Coaching Style/Behaviour	Leadership/Person Coaching personality/attitude			Coaching Styles
Coach Conflict	Cultural/Team Communication			Communication
Communication - Team				

## **APPENDIX B: RESULTS OF ANALYSIS OF FIELD OBSERVATIONS**

Stressor Category/Theme		-	+	-	+	-	+
INDIVIDUAL		Case I		Case II		Case III	
* *	Nutrition and Weight	2		11		5	
*	Injury and Illness	1		9		4	
	Income and Funding	2					
	Personal Training						
	Life/Personal Demands	2		1			
	Managing Self Expectations	1		4		2	
	Managing Others Expectations (including institutional)	1		5		4	
* *	Dealing with Performance Outcomes			12	2	7	
GROUP		Case I		Case II		Case III	
* *	Group Operational Function and Direction (leadership)	6		14	2	10	
	Group Atmosphere/Behaviour	4	1	1	2	1	4
	Athlete Personalities/Behaviour			1		6	
	Group Communication			1			
* *	Coaching Capability/Style and Behaviour	1		10		7	1
	Support Team Capability/Style and Behaviour			3	1	1	

Stressor Category/Theme		-	+	-	+	-	+
ORGANISATIONAL		Case I		Case II		Case III	
	Political and Cultural Environment	1				3	
	Policy, Structure and Funding	3				3	
	Campaign and Event Management			4			
	Logistics Management	5		1	1	1	
	Team Selection and Structure	5		2		4	1
	Communications and Media	1				5	
ENVIRONMENTAL		Case I		Case II		Case III	
Physical Environment							
	Accommodation/Meals			3		3	1
	Venue and Facilities			3	1	2	
	Atmosphere						
	Logistics			1			
	Equipment			1			
Task Environment							
	Activity Structure (load and format)	1		2	1	2	
	Support Resources (medical, physio etc)						
*	Competition Draw and Opposition			3		8	
	Technical Requirements			1	1	2	
	Officials, Referees and Results			1		2	

Frequency counts of key stressors identified in analysis of fieldwork notes by Case

(‘-’ are occurrences where negative responses are identified to stressor, ‘+’ where positive responses are identified to stressor, \* represents significant theme across 1 case, \*\* significant theme across multiple cases)

## APPENDIX C: PROFILE INSTRUMENT FOR CASE INTERVIEWS

For each of the following potential stress factors identify whether in your experience the statements were (T) true or (F) false for each campaign, and whether the presence or otherwise affected (A) your stress levels (0-5) and (B) had a negative (-1 to -3) neutral (0) or positive (+1 to +3) affect on your competition performance

China															Azerbaijan														
For each of the following potential stress factors identify whether in your experience the statements were (T) true or (F) false for each campaign, and whether the presence or otherwise affected (A) your stress levels (0-5) and (B) had a negative (-1 to -3) neutral (0) or positive (+1 to +3) affect on your competition performance																													
Factor		(0) Stress Level (H)					Effect on Performance					Factor		(0) Stress Level (H)					Effect on Performance										
T	F	0	1	2	3	4	5	-3	-2	-1	0	+1	+2	+3	T	F	0	1	2	3	4	5	-3	-2	-1	0	+1	+2	+3
<b>Individual Performance</b>																													
<b>Performance Preparation</b>																													
1		I had a clear plan and strategy to reach my goals for this campaign					0																						
2		I had competed in previous international tournaments at this level					0																						
3		I had confidence and belief in my own ability					0																						
4		I had a plan and was prepared for dealing with distractions					0					0																	
5		I had my weight under control for this competition					0					0																	
6		Training load and intensity during competition period fitted my needs					0					0																	
7		My progression through the competition was manageable (load/intensity)					0					0																	
<b>Personal Support and Expectations</b>																													
8		I was aware of the expectations of significant other people and/or organisations					0					0																	
9		My family and friends were a positive source of support					0					0																	
10		I was concerned about my opposition for this performance(s)					0					0																	
11		My personal coach was present at this event					0					0																	
12		My coach had unrealistic expectation for my performance(s)					0					0																	
13		I had realistic expectation for my performance(s)					0					0																	
14		I was positive about the competition draw when it published					0					0																	
<b>Managing Outcomes</b>																													
15		Variables outside of my control disrupted my pre-performance competition preparation					0					0																	
16		Coaches implemented the pre-agreed plan pre and during my competition performance(s)					0					0																	
17		I lost composure during my competition performance(s)					0					0																	
18		I was able to adjust tactically to various situations that arose during competition					0					0																	
19		I experienced injury/illness during the competition					0					0																	
20		I was satisfied with the outcome(s) of my competition performance(s)					0					0																	
21		The refereeing and judging was a fair reflection of my performance(s)					0					0																	
<b>Organisation and Business</b>																													
1		Media interactions were supportive of my campaign and performance					0																						
2		Sufficient funds available for proper training and pre-event competitions					0																						
3		Sufficient funds were available for competition costs					0																						
4		I felt supported by my sporting organisation (BNZ)					0																						
5		I felt supported by my sporting organisation (SNZ)					0																						
6		The method and timing of team selection was fair and effective indetermining top athletes					0																						
7		National squad training camps were available for group development					0																						
8		Preparations for tournament were dealt with efficiently and effectively					0																						
<b>Personal</b>																													
1		Personal issues outside of sport made optimal training difficult					0																						
2		Personal issues outside of sport affected my competition					0																						
3		My personal income and finances allowed me to focus on training and competition					0																						
4		Conflicts arouse between my family and team management/coaching staff					0																						
<b>Preparation Training Period (prior 12 months)</b>																													
1		I over-trained in preparation for this competition					0																						
2		I under-trained in preparation for this competition					0																						
3		I had easy access to the right training environment and equipment					0																						
4		I had easy access to the right sports science support					0																						
5		National squad training camps were constructive in my preparation					0																						
6		I had my weight and nutrition under control					0																						
7		I experienced injury/illness leading up to the competition period					0																						
8		I trained and competed internationally in preparation for this tournament					0																						
9		I had trust in my personal coaches' wisdom and experience					0																						
10		My coach was totally committed to helping me					0																						
11		I experienced coach-athlete conflicts during preparation					0																						
12		I had a clear plan for my training and preparation for this campaign					0																						
<b>Squad Competition Factors (from arrival to departure of competition site)</b>																													
<b>Group Dynamics(includes boxers, coaches and management team)</b>																													
1		We had positive squad leadership and support					0					0																	
2		We had a strong squad chemistry and cohesion					0					0																	
3		We had good lines of communication within the squad					0					0																	
4		Dealing with Individual personalities/behaviour were difficult for me during this period					0					0																	
5		Coaches did not know me before the event and lacked insight into my needs					0					0																	
6		I had trust in coaches wisdom and experience during pre-competition training					0					0																	
7		I had trust in coaches wisdom and experience during performance (warm-up/coming)					0					0																	
8		The support team were totally committed to helping me					0					0																	
9		The support team were able to deal with any issues that arose					0					0																	
<b>Environment and Equipment</b>																													
10		My training environment for preparation for this competition met my needs					0					0																	
11		The village environment and rooming was conducive to my performance					0					0																	
12		My requirements for pre-competition/competition were met (food, medical, etc)					0					0																	
13		I had enough time to adjust to the travel prior to competition					0					0																	
14		I had all the necessary equipment to support my pre-competition needs					0					0																	
15		I experienced problems with my equipment during competition					0					0																	
16		External communications were adequate for my needs					0					0																	
<b>Adapted From:</b>																													
Gould, Daniel; Greenleaf, Christy; Chung, Yongchul; Guinan, Diane																													
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