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**ATHLETE SATISFACTION AND THE PEAK EVENT: ADAPTING THE
ATHLETE SATISFACTION QUESTIONNAIRE (ASQ) TO A NEW
ZEALAND SETTING**

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requirements for the degree of
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ABSTRACT

This research explored athlete satisfaction and the peak sporting event. Most athletes are achievement oriented individuals searching for ways of increasing their competitive edge. Consequently, an athlete's satisfaction is a central variable controlling motivational forces throughout the development and execution contexts of successful goal-related outcomes. As a topic of interest, satisfaction is understood as a subjective domain-specific response articulated by an athlete when reflecting on all aspects of the achievement of a specific goal. It is psychologically dynamic based on both individual and environmental factors informing the articulated response. It is, therefore understood as a 'discrepancy' construct representing the difference between what one wanted to achieve and what one did achieve.

The research adopted an adapted mixed method approach. Because of the exploratory nature of the research a priori hypotheses were not tested. The combined participant cohorts across the two studies were New Zealand athletes ($n = 381$) from a wide variety of team and individual sports. Online data collection methods were utilised to access a broad participant base.

The primary aim of Study One was to develop confidence in the data collection tool to be utilised in Study Two, the Athlete Satisfaction Questionnaire (Riemer & Chelladurai, 1998). The difference between both environments was considered conceptually disparate enough given the original survey instrument setting, North American Collegiate (highly professional amateur athlete program dedicated to elite sporting performance) and the

current New Zealand (recreational – amateur elite athletes) sport setting, to warrant further investigation. Particular emphasis was placed on incorporating the ‘voice’ of the athlete in developing a better understanding of athlete satisfaction in the New Zealand setting. In general, Study One results showed the ASQ to be an appropriate survey instrument for administration in the New Zealand setting, although the re-distribution of the underlying factor structure of the instrument allowed for more context relevant data analysis in Study Two.

Study Two focused on investigating athlete satisfaction and a peak sporting event as an intervening variable and explored how satisfaction changed over time with respect to a peak sporting event, with particular attention given to gender and sport affiliation (team versus individual sport). Results from Study Two indicated no statistically significant differences in satisfaction between genders. In contrast, differences in athlete satisfaction trajectories between team and individual sport athletes were found. The findings relating to team and individual differences in satisfaction were interpreted using Hobfoll’s (1989) ‘Conservation of Resources’ Model which placed athletes in a context of managing and evaluating their immediate performance environment. An interpretation of the results in the model showed that athlete satisfaction for individual sport athletes increased leading to an event based on an athlete’s perceived control over the goal achievement process. In contrast, the reduction in satisfaction post event was interpreted as indicating goal achievement causality included more factors than an individuals’ pre-event assessment. Consequently, the range of resources utilised and their effect on goal achievement were incorporated more into the causal explanation after the event than before.

A further finding from the research process was that the hierarchy of satisfaction responses by team versus individual sport athletes differed substantially both before and after their identified peak sporting event, which can assist significant others to maximise situation-specific interaction with an athlete. From an applied perspective, such an understanding of the dynamics of athlete satisfaction both before and after a peak sporting event increases the likelihood of delivering appropriate responses to the athlete at different times during the athletic experience.

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CHAPTER ONE

AN OVERVIEW OF THE RESEARCH

1.1 INTRODUCTION

“Golf is deceptively simple and endlessly complicated; it satisfies the soul and frustrates the intellect. It is at the same time rewarding and maddening - and it is without a doubt the greatest game mankind has ever invented.”

Arnold Palmer

(<http://www.thinkexist.com/quotes/arnold-palmer/>)

My interest in the notion of satisfaction came from considerable time spent in professional sport, both as an athlete and later as a coach. Satisfaction appeared, albeit subjectively, to be a pivotal element in the willingness of the individual, whether a team or individual sport athlete, to go forward and ‘do it all again’. The first conscious experience with satisfaction was personal. Having spent time as an elite Small-bore Rifle shooter (an individual sport) I noticed a pronounced shift in the way I experienced satisfaction in sport once I became a team sport athlete (Volleyball). Moving from the ‘self’ oriented individual athlete to a more externally focussed team athlete provided an opportunity to reflect on those differences. A move from my practitioner environment into academia provided scope to investigate these observations as well as a range of other questions relating to the concept of athlete satisfaction.

Athletes compete! And by the very nature of their endeavour put themselves into positions of stress which is expressed in a wide range of human emotions, sometimes within very short time frames. Athletes and those supporting athletes are therefore interested in maximising the potential of such factors if they represent an opportunity to increase the likelihood of a positive performance outcome.

When asked, most athletes can quite readily report whether or not they have experienced satisfaction. In fact, few people in general go through life without having experienced some sense of satisfaction from the achievement of their conscious or subconscious goals. It is generally agreed by contemporary researchers that satisfaction as a response, is a psychological state resulting from the varying degrees of attainment of dispositional or environmental performance goals (Bandura, 1977; Diener, Emmons, Larsen, & Griffin, 1985; Locke, 1969; Riemer & Chelladurai, 1998).

Furthermore, Forgas, Williams, & Laham (2005) suggest that satisfaction causality is predominantly environmentally driven. Consequently, there has been a tendency to concentrate on those elements, rather than including factors such as an individuals' "idiosyncratic perception, interpretation, response to, and communication of-", their satisfaction (p.7). Therefore, to gain a more accurate understanding, all factors relating to what causes or perpetuates satisfaction must be considered. In saying that, there is no underlying suggestion that satisfaction is the greater good and that dissatisfaction should be eliminated. Many athletes, particularly those involved in task or competitive mastery would expect to experience a certain degree of dissatisfaction, which may provide important

regulatory feedback in the overall quest for better performance. However, recognising and appreciating the conditions in which athletes feel satisfied may contribute to efforts which avert the more negative performance consequences attributable to dissatisfaction (D. P. Schwab & Cummings, 2001). For example, when an athlete centres their sense of dissatisfaction on poor performance alone, individuals supporting the athlete may choose to search out and utilise specific aspects of the experience which are highly relevant to the athlete at that particular time to engender heightened feelings of satisfaction for the athlete.

One specific aspect of athlete satisfaction yet to be fully investigated is how ‘time’ affects the satisfaction response. A common term utilised in the sport context is ‘the Olympic cycle’ or ‘the World Championship cycle’ (time between the previous and next event) indicating an ever present interest in time and the athletic experience. Consequently, when considering that an athlete undertakes a journey to a performance goal, usually in the form of a peak sporting event such as a championship, the limited amount of satisfaction research in the context of time and an intervening variable is surprising.

A particularly influential study which helped provide direction to the development of the current research framework came from the field of ‘subjective well-being’. Specifically, Suh, Diener and Fujita (1996), postulated that, from a retrospective viewpoint, the articulation of experiences surrounding a specific event transitioned from a ‘situational’ (actor) to a ‘dispositional’ (observer) perspective (Brickman & Campbell, 1971; Heider, 1958; E.E. Jones & Nisbett, 1971; Kelley, 1967; Moore, Sherrod, Liu, & Underwood, 1979; Suh, Diener, & Fujita, 1996). The important context that Suh, et al’s research was able to

provide was that caution is required when obtaining feedback from research participants as the type of response expected is also influenced by time. As a result I chose to expand their research framework, which focussed on retrospective evaluations of subjective well-being following an event, by exploring how time affected satisfaction responses both pre- and post event. This specific approach seemed an important step as it acknowledges the wider range of performance development from training, competing and analysis which are all central components of the athletic endeavour. Given the above discussion, the primary aim of this thesis is the exploration of athlete satisfaction in relation to a peak sporting event.

Underpinning this aim were the following objectives:

1. Develop a conceptual and theoretical understanding of satisfaction and the influence time has on the satisfaction response through examining existing applied and theoretical research literature.
2. Informed by the findings from objective one, identify an appropriate survey instrument and test its appropriateness for administration in the current research setting.
3. Utilise the survey instrument to explore athlete satisfaction in relation to a peak sporting event.

Having defined the aim and objectives of this thesis, a methodology is proposed to investigate and meet the listed objectives. Consequently, the present thesis investigated differences in satisfaction between males and females and also between individual and team

sport athletes in a New Zealand setting. Anecdotally, New Zealand would seem no different to the overriding majority of countries which engage in sporting activity in that it has the full spectrum of activity, ranging from recreational to elite. What makes the New Zealand setting worthy of comparison is not the New Zealand context per se, but comparing it to the unique elite sport microcosm which is the North American collegiate sport setting in which the original Athlete Satisfaction Questionnaire was designed. As explained later in the thesis, North American intercollegiate sport is an environment where amateur status can be maintained as an athlete but at the same time enjoy highly professional administration, competition, and physical and psychological development support in the quest for athletic excellence. It would be fair to say that it is unique in the world and thus worthy of comparison (Smith, 1985).

Study One had three interlinking phases of investigation which focussed on Riemer and Chelladurai's (1998) Athlete Satisfaction Questionnaire (ASQ) as the survey instrument of choice. The ASQ predominantly assists individuals in sports organisations, such as managers and coaches, to better understand the dynamics of athlete satisfaction as a facet of performance improvement.

Although the ASQ had been established as a reliable and valid measure in North American collegiate team sport settings, a review of the questionnaire development literature as well as research surrounding athlete satisfaction exposed a number of limitations. In particular, Riemer and Chelladurai's (1998) suggestions "those facets of satisfaction applicable or relevant to individual sport athletes are but a subset of those salient for team sport athletes"

(p.150). A similar argument was proposed for gender differences. However, differentiation between male and female team and individual sport athletes' satisfaction responses was not explored by Riemer and Chelladurai. Consequently, it is a topic of substantial interest to this investigation.

A further limitation of the ASQ emerged from the literature relating to the response options available to athletes. Riemer and Chelladurai (1998) defined satisfaction as "a positive affective state". However, this single dimensional description of satisfaction seems to lack the ability to represent the wider range of affective responses expected as part of the athletic experience. Therefore, the present thesis developed and used a bi-polar (satisfaction-dissatisfaction) response option into the ASQ.

The second study, informed by findings from study one, explored the dynamics of athlete satisfaction longitudinally using a peak sporting event selected by the individual respondent as an intervening variable. Although the subjective well-being research noted earlier provided the initial direction for the current investigation, no previous studies specifically exploring athlete satisfaction incorporating both pre- and post (specified peak) event data capture were found. Consequently, the exploratory nature of the research (Babbie, 1989; Stebbins, 2001) meant that, in the first instance, no expectation of the shape or trajectories of athlete satisfaction pre- and post event were assumed. Thus, no a priori hypotheses were tested (Eys, Loughhead, & Hardy, 2007; Gaudreau, Amiot, & Vallerand, 2009). The final stage of the research process explored the hierarchy of the items utilised by respondents to articulate satisfaction with their athletic experience.

A better understanding of the dynamics of athlete satisfaction in relation to a peak sporting event (as defined by the athlete) has practical benefits primarily for those people interacting with athletes such as administrators, managers, coaches, and significant others who wish to provide more effective support to the athlete. In other words, this research is a further attempt at ensuring that ‘no stone is left unturned’ when looking for ways to maximise an athletes’ likelihood of achieving desired performance outcomes.

In summary, athlete satisfaction is an intuitively interesting phenomenon, and it is important to understand what influences athlete satisfaction as a way to perpetuate its occurrence. Doing so requires confidence in the instrument used to capture context relevant data and to ensure that it is applicable in the New Zealand setting. Furthermore, investigating the influence of time provides unique insight into what it is to be satisfied as an athlete at different points on the experiential journey. Additionally, understanding response differences between groups increases the likelihood that athletes receive the most appropriate support as they endeavour to maximise their performance.

1.2 THESIS OVERVIEW

Following this introductory chapter, Chapter Two defines and conceptualises athlete satisfaction with the intention of highlighting the gap in the literature that this thesis is attempting to fill. Chapter Three introduces the research questions and forms the methods section. Furthermore, the chapter introduces the pathway undertaken for identifying the

ASQ as the survey instrument of choice for Study One. Both Chapters Four and Five investigate the transferability of the ASQ into a new research setting. The research undertaken in these two chapters is both exploratory and comparative. Qualitative data is collected and, through content analysis and a process of peer review, extrapolated into quantitative data for statistical analysis. Thereafter, a factor analysis is performed to identify the composition of the ASQ in the new research setting. Chapter Six investigated differences both between and within two specific variables, gender and sport affiliation in the newly factored ASQ. Particular focus was given to the factorial and item hierarchy of team and individual sport athletes' responses. Results from this study were used to inform the exploration undertaken in Study Two (Chapter Seven) which focused on the relationship between athlete satisfaction and an athlete specified sporting event. Chapter Eight provides overall conclusions, presented limitations and future directions for research.

CHAPTER TWO

DEFINING AND CONCEPTUALISING SATISFACTION

Kenenisa Bekele, 1st in Men's 10,000m at the Prefontaine Classic, Eugene OREGON: "I did my best. It was my fastest this year. The pace was a slow pace and around 4km I wanted to go faster, then I was getting cold. I'm satisfied. It was OK. I liked the crowd very much. The weather was nice; I like the fresh air very much. I like the sun".

(<http://www.flotrack.org/articles/view/422-athlete-quotes-from-prefontaine-classic>, 2008)

2.1 INTRODUCTION

Satisfaction as a topic is not easy to define or conceptualise, yet it is readily reported in a wide range of personal and social circumstances. The importance of satisfaction is often reflected in self-help books, the general media and internet websites, e.g. in 2008, Google registered 143,000,000 references to satisfaction, and 2,560,000 for dissatisfaction, signifying an ever present societal interest. Athletes, business people and community-based service networks regularly make the connection between satisfaction and performance. More specifically, elite athletes often discuss their satisfaction with a particular performance outcome, but equally suggest that there was 'room for improvement' or extenuating circumstances affecting their actual performance. Andy Roddick (professional tennis player) once reported after a win against Roger Federer:

INTERVIEWER: "You talked about the mental aspect of the game. Does your current satisfaction with your personal life translate to confidence on the court?"

ANDY RODDICK: I knew it was either going to go one way or the other. Either the engagement was going to be the end of me if I would have lost the first round, or the reason I beat Roger tonight. I think it's somewhere in the middle. I think being happy and content off the court is only going to help in my mind”.

(<http://www.tennis-x.com/story/2008-04-04/i.php>).

The above statement from Roddick highlights that satisfaction is a complex phenomenon relating to how we develop, think, behave and interact as individuals. Given the breadth of the topic it is not surprising to find a vast body of literature on satisfaction spanning various disciplines. Therefore, my purpose in this chapter is to introduce satisfaction both conceptually and theoretically as it informs this specific research process. In reviewing the relevant literature the major characteristics and methodological issues associated with the study of athlete satisfaction are introduced and discussed.

The chapter begins by providing an overview of the history of satisfaction research before introducing a definition of the construct. Following on, satisfaction is differentiated from similar psychological constructs before a range of perspectives from which satisfaction can be understood are highlighted. In particular, cognitive, social and behavioural, and trait and state perspectives are introduced before concluding with a discussion surrounding factors relating to the person and situation as they influence an individuals' idiosyncratic satisfaction response. In each specific context a brief conceptual introduction is provided before, where pertinent to an understanding of the athlete satisfaction perspective, examples of earlier research add value to a broader explanation of the topic under review.

2.2 A BRIEF HISTORY OF THE STUDY OF SATISFACTION

As a relic of psychology's drive for recognition, research in the area of satisfaction was initially rejected because of its internal nature and thus lack of observability (Lawler, 1973). When research finally did take place (see Hoppock's (1935) "*Job Satisfaction*" which is acknowledged as providing a break-through into formal research) it was based on work motivation within an organisational effectiveness context (Thierry, 1998). As a consequence of its acceptance in the realm of scientific inquiry, the study of satisfaction enjoyed relatively high exposure during the humanistic era of the 1950's and more recently (1970's and 80's) with the increased emphasis on goal setting and social learning research (Bandura, 1977; Locke, 1969; Maslow, 1970). In particular, Locke's (1969) article "What is Job Satisfaction?", appeared to give direction to the development of psychometric scales measuring satisfaction such as Smith, Kendall and Hulin's (1969) Job Descriptive Index. Consequently, research focussing on single or global dimensions of the satisfaction construct within a range of contexts has stimulated the development of an extensive and wide-ranging empirically based body of literature (see Fig 2.1).

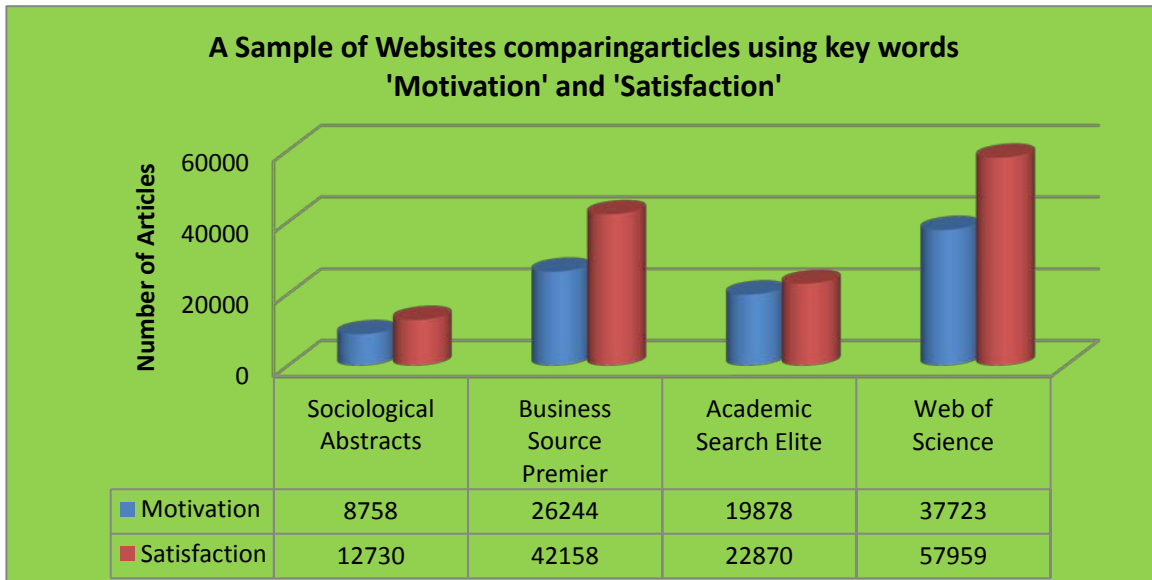


Figure 2.1 Examples of bibliographic databases showing comparisons between key words 'Motivation' and 'Satisfaction'

Despite the vast amount of research (as shown in Fig 2.1), and that satisfaction is a well recognised and common experience for most people it is surprising that no unified approach to its investigation has emerged. One possible reason is the lack of a convenient approach to the manipulation of satisfaction in the favoured experimental setting. Often the researcher is limited to times and settings of the respondents' choice. The exceptions to this are spontaneous responses generated after a specified experience such as exploring customer service satisfaction. Generally, without the luxury of immediacy in most settings researchers are required to ask respondents to recall a time when they felt satisfied, or when necessary to guide them to recall their satisfaction response to a specific past event. However, research by Suh, Diener and Fujita (1996) suggested that recalling past events has consequences in relation to the type of individual response (situational or dispositional) expected from such a data collection strategy. Therefore, investigating satisfaction, in this instance over time, can prove methodologically troublesome for researchers.

Another reason for the proliferation of research into, but limited theoretical development of the topic is that satisfaction as a construct does not belong to any one discipline; it can be studied by, for example, psychologists and sociologists alike and on rare occasions by anthropologists and biologists.

Since the topic has generated interest in a number of disciplines interpretations of research findings have often been varied. A possible reason may be the struggle to justify a separation of satisfaction from motivation theory. Thierry's (1998) meta-analysis of satisfaction literature showed that, in particular Maslow's "Hierarchy of Needs" (1943), Adams' "Equity" (1963), and Herzberg's (1959, 1966) "Two-factor" theory, are thought by some researchers to be satisfaction theories in their own rights. Interestingly, Thierry (1998) himself suggests that these so called 'satisfaction theories' are somewhat limited because they simply provide descriptions of 'ways' to measure satisfaction and are not theories per se (p.254).

Intuitively, it could be argued that the lack of a satisfaction theory independent from motivation theory is grounded in the provision of 'common sense' conclusions and high results congruence in the research to date (Crotty, 1998; Oldroyd, 1986; Tashakkori & Teddlie, 2003). This viewpoint is further supported with the acceptance of satisfaction as a 'global construct' including specific facets intrinsically linked to motivation theory (Cofer & Appley, 1968; Lawler, 1973; Lawler & Porter, 1967; Locke, 1990; Madsen, 1974; Robinson, 2004; D. P. Schwab & Cummings, 2001; Thierry, 1998). As a consequence, there

appears to be no compelling reasons to undertake the development of research methods and resultant theoretical models that would guide satisfaction-specific methodologies.

In summary, the literature gives an impression that the topic has a disjointed set of theoretical underpinnings and empirical foundations, which could account for its fragmented development as a research topic. And although satisfaction as a concept lacks a unified research framework, exploration of the topic has continued unabated.

2.3 DEFINING SATISFACTION

Houghton's (2000) online dictionary provides a broad definition of satisfaction as:

1. *"the contentment you feel when you have done something right", which incorporates terms such as: 'contentment', 'pride', 'complacency', 'self-complacency', 'self-satisfaction', 'fulfilment', 'gloating', 'glee', and 'dissatisfaction'.*
2. *"State of being gratified; great satisfaction" incorporating terms such as: 'gratification', 'emotional state' and 'quality of life'.*
3. *"compensation for a wrong" incorporating terms such as: 'atonement', 'expiation', and*
4. *"The act of fulfilling a desire, or need or appetite", incorporates such terms as: 'change' and 'gratification'.*

Houghton's definitions are found in the information media of today. Although several studies have added significant value from the standpoint of stimulating empirical work and

conceptual development, their wide-ranging use as everyday generalisations has helped them lose their specificity. However, it would seem from the extant literature that providing a satisfaction response still seems to have an intuitive and familiar feel to individuals with most people able to respond without needing a clarification of the meaning of the construct. As such, a single, universally accepted definition of satisfaction has not been adopted by scholars.

In an attempt to focus meaning in the current research Wright's (2005) conceptualisation of loneliness informs the development of a definition of satisfaction. From a theoretical position, satisfaction can be described as a reflective act that incorporates various subjective clusters of feelings, thoughts and behaviours which lead a person to conclude that they are positioned somewhere on a continuum between feeling very satisfied and feeling very dissatisfied. From a more real world perspective, if the individual is asked to define satisfaction, a broad range of personal anecdotes are provided, usually in the form of vague, experientially-driven feelings which are situated somewhere on this satisfaction – dissatisfaction continuum. Therefore, difficulties emerge in a research setting when attempting to integrate relatively objective concepts of the social and psychological condition with the experiential aspects of the phenomenon.

Satisfaction is regarded as a domain specific subjective construct (Jex & Britt, 2008) which has the performance of a specific task as its reference point. For example, when playing volleyball, it could be seen as difficult to define what it is to block an opponent's attack in the 5th and final set compared to the 4th set of a gold medal match. A technical definition could be the "use of the arms to hinder the penetration of the ball into the oppositions'

space” (FIVB, 2009, p. 29). However, such a definition lacks experiential context. It is generally easier for the individual to describe the emotional experience of blocking the ball, the strategic and emotional significance of the action toward the outcome of the game, the clarity of the action from a technical or visual viewpoint (“the ball went straight down from the block, and we won the point”) and so on. Contrast this experiential explanation with that of the technical the differences experienced between the descriptions of satisfaction are exemplified and as such suffer from criterion deficiency.

The definitional ambiguity encountered by researchers naturally confronts them with a broad range of explanatory nuances. Given such diverse definitions, it appears that satisfaction is made up of a myriad of subjective and emotional responses that come together as a multifaceted experience. In other words, realistic definitions of the satisfaction construct encompass both subjective and multidimensional aspects, and thus constitute degrees of perceptual, cognitive, physiological and emotional (affective) factors which vary according to situation (Riemer & Chelladurai, 1998; Tomkins, 1962).

When explaining satisfaction in a research context, it is considered too simplistic to dichotomise satisfaction into ‘satisfaction’ and ‘dissatisfaction’, or to refer to individuals as ‘satisfied’ and ‘dissatisfied’. Yet, such a strategy was employed in early satisfaction research. Academics in particular, tended to develop isolated and prescriptive methodologies which assessed satisfaction experiences in an attempt to define a level at which the individual is either satisfied or dissatisfied. An early example is Herzberg’s (1959) two-factor “Motivator/Hygiene” theory and although somewhat contentious as a theory due to its lack of measurement criteria (Hackman & Oldham, 1976), it has been

influential in the development of later satisfaction research. Herzberg postulated that satisfaction relates to motivation factors because of an individual's intrinsic desire to meet organisational goals. In contrast, hygiene (dissatisfying) factors relate to the working environment such as pay equity, or working conditions. The two-factor theory gave credence to a separation of affective states by suggesting that "the opposite of dissatisfaction is not satisfaction, but, simply, no dissatisfaction" (Mullins, 2005). Researchers thus postulated that 'satisfaction, a positive affective state (Riemer & Chelladurai, 1997) and dissatisfaction, a negative affective state, possessed distinct explanatory elements (Vlachopoulos, Karageorghis, & Terry, 2000; Watson, Clark, & Tellegen, 1988)

However, a dichotomous perspective seems to be inadequate as an explanatory mechanism for the dynamic nature of affective states. This applies particularly to sport, which generally contains both satisfying and dissatisfying aspects, often within short time-frames during the athletic experience. Therefore, within the confines of this specific research, satisfaction is defined as a bi-polar construct encompassing the complete range of positive and negative affective states. An indication of the bipolar nature of the satisfaction construct is found in Locke's (1969) Organisational/Industrial 'Range of Affect' theory. Locke determines satisfaction to be informed by the discrepancy between what one wants in a job and what one has in a job. In addition, how much the individual values a given facet of work (e.g. the degree of autonomy in a position) moderates the satisfaction response when expectations are or are not met. In other words, when the individual values a particular facet of a job, satisfaction is more greatly impacted both positively (when expectations are met) and negatively (when expectations are not met), compared to a person who does not value that

facet. It would therefore seem that a range of factors contribute to the satisfaction response, and that these factors are found at different points on the satisfaction continuum. To conclude, King (1970) supports Locke's hypothesis by suggesting that satisfaction and dissatisfaction are generally no longer considered as belonging on separate scales, and Warr (2007) adds to this argument almost 40 years later by stating that separating satisfaction and dissatisfaction, "at both a conceptual or empirical level, can no longer be justified" (p.235).

2.4 SUMMARY

A collective summary of the term satisfaction appears to provide two points of convergence. Firstly, satisfaction is the result of goal-directed activity by the individual. Secondly, cognitive processes have a moderating influence on feelings of satisfaction. In other words, satisfaction is a subjective experience and as such, it is a reflective, domain specific and self-perceived notion revealing how the individual experiences the discrepancy between their wants/expectations and perceptions of what has been achieved (Locke, 1969; Porter, Lawler, & Hackman, 1975; Riemer & Chelladurai, 1998). In this context, most contemporary theorists agree (to varying degrees) that satisfaction is a psychological state that is discrepancy oriented, and that the wider the discrepancy, the more pronounced the difference between 'great satisfaction' and 'great dissatisfaction' will be (Locke, 1969).

Having defined 'satisfaction' and its position within a theoretical framework of understanding the next phase is to differentiate it from other closely related terms. The following section seeks to achieve this differentiation.

2.5 DISTINGUISHING SATISFACTION FROM SIMILAR PSYCHOLOGICAL CONSTRUCTS

It is evident from the literature that satisfaction is one of a family of related terms used to explain affective states. As a topic of interest, satisfaction is understood as a subjective domain-specific response articulated, in this research context, by an athlete when reflecting on all aspects of the achievement of a specific goal. It is psychologically dynamic based on both individual and environmental factors informing the articulated response. It is, therefore understood as a ‘discrepancy’ construct representing the difference between what one wanted to achieve and what one did achieve.

Therefore, a specific objective of this section is to introduce the concepts of ‘contentment’, ‘happiness’, ‘joy’ and ‘gratification’ in order to differentiate them from satisfaction. To allow for a distinction amongst these terms, both the elements that create the similarities as well as the differences will be discussed. Furthermore, consistent with the bi-polar explanation of satisfaction, each of the four terms is understood within a continuum context, e.g. contentment-to-discontentment.

2.5.1 CONTENTMENT

Contentment and satisfaction share a great deal of commonality. For example, both satisfaction and contentment are considered discrepancy-based constructs where the individual possesses an ability to compare and contrast experiences (reflection) and produce the situationally appropriate affective response (Forgas, Wyland, & Laham, 2006; Tomkins,

1962; Tomkins & Izard, 1966). Although the mechanisms of both constructs seem similar, the defining difference is contentment's somewhat more spiritual sense in which individuals seek to increase contentment or decrease discontentment through finding balance or harmony in life (Borowitz & Weinman Schwartz, 1999). This explanation contrasts with the satisfaction construct which appears to gravitate in meaning toward more specific, goal-related activities. A simple analogy is when asking a person if they are feeling 'satisfied' at that moment, the response may be "satisfied with what?", thus implying a causal link to a specific event. However, asking the same question using contentment ("Are you feeling contented at the moment?") may produce a more general appraisal of that individual's life feeling (or subjective well-being) at that point in time.

2.5.2 HAPPINESS

Happiness has been described partly as a quest for self-discovery which translates directly into a way of travelling through life, though it is a journey without a destination (Ardell, 2008). Similar to contentment, happiness is considered an umbrella term. In this instance, happiness relates to the variety of positive and negative evaluations of the events happening to individuals' bodies and minds, and the circumstances in which they live. Also consistent with contentment, happiness requires cognitive appraisal or reflection and satisfaction is considered to be a sub-set of happiness (Forgas, et al., 2006; Prinz, 2004; Tomkins, 1962).

2.5.3 JOY

As opposed to the more global measure which is Satisfaction (Chipperfield, Perry, & Weiner, 2003), the term 'joy' is best explained as a discrete emotion (Consedine, Magai, & King, 2004). Descriptors such as vigour, feelings of strength, confidence, competency (Izard, 1991), as well as its positive influence on the creation of social bonds are strongly linked to the concept of joy. When understanding this from a cognitive appraisal perspective, joy is closely associated with 'play' and a reduction in psychological stress. Joy also tends to occur at times and in situations of familiarity and perceived safety (Izard, 1991). In this context joy may also be considered consistent with a response following the successful completion of goal-directed behaviour. The differentiation between the two concepts occurs, however, when explaining the concept from an emotional hierarchy perspective. Similar to satisfaction, once task activity is terminated; evaluative feelings are initiated and are based on the individual's perception of- and actual task difficulty. In contrast to satisfaction, however, joy is considered an articulation of a higher level of stimulus. In other words, it is a more immediate response to the successful outcome! As the individual transitions to a lower level of excitation the stimuli associated with the original outcome are reduced, thus the affective state transitions from joy to the lower intensity state of satisfaction.

2.5.4 GRATIFICATION

Gratification is the one term that appears to have the closest definitional similarity to satisfaction. Consistent with satisfaction, gratification is considered a motivator of

behaviour and is defined as a pleasurable emotional reaction to the fulfilment of a desire or goal (Mischel, Shoda, & Rodriguez, 1989). Although the two terms seem to explain the same concept in that they are reflective, affective and goal related, differences emerge between them when evaluating their meaning in terms of what is received (gratification) and what is achieved (satisfaction). As such, the happiness state associated with gratification would seem to be more closely associated with the immediate reaction of outcome achievement. In contrast, satisfaction is more closely related to a response encompassing the 'processes' of achievement as well as the achievement itself.

2.6 PERSPECTIVES OF SATISFACTION

2.6.1 COGNITIVE PROCESSES PERSPECTIVE

Cognitive theorists have tended to define satisfaction in terms of an individual's expectations in relation to goal-related activity. Their theories argue that the primary determinants of satisfaction derive from the discrepancy between what was desired versus what was achieved (Jex & Britt, 2008; Locke, 1969; Locke & Latham, 1984). It is the individual's subjective perception of the discrepancy gap which is the source of the feedback response. The perceived discrepancy, although cued by cognitions, is primarily associated with the myriad of feelings or emotions which make up the affective state. It would therefore be doubtful that individuals who are in the process of specific goal-directed activity would then be able to label themselves as being somewhere on the bi-polar satisfaction/dissatisfaction continuum unless cognitions were also present. For instance, if cognitive indicators include the conscious desire for a successful outcome, a response can

be heightened or reduced by changes in a person's (subjective or objective) standards in relation to achieving the said outcome. Cognitive factors can also be responsible for an individual's subjective satisfaction response. Furthermore, the degree of satisfaction experienced by the individual will differ between those who believe that environmental factors are for example inherently uncontrollable and who attribute negative or positive qualities to themselves (Anderson & Arnoult, 1985). This is particularly relevant to the sporting environment where athletes tend to attribute successful outcomes to their own actions, whereas failure to reach expected outcomes tend to be the responsibility of external forces such as the opposition, weather or inter-personal conflict (Morris & Summers, 2004; Weiner, 1992, 2010).

2.6.1.1 Appraisal

Individual appraisal is also an important determinant of a satisfaction response. If, for example, an individual feels dissatisfied, but does not perceive the cause of dissatisfaction to be in some way threatening to overall goal achievement then the response can be classified as a momentary state related exclusively to current activity. According to Tomkins (1962), the momentary state is an indication of the primacy of the dissatisfying event relative to the long-term framework from which a response can be drawn. As such, it has won the priority race for inclusion in the conscious mind. From the opposing perspective, when appraisal takes in the overall achievement process thus far and the discrepancy between the desired and actual outcomes is perceived as only slight, there is a reduction in the stimulus causing the higher state of momentary dissatisfaction. The

appraisal process is therefore a cognitive underpinning for determining an individual's satisfaction response (Tomkins, 1962).

2.6.2 SOCIAL AND BEHAVIOURAL PERSPECTIVES

2.6.2.1 Social Perspectives

Having explained satisfaction from a cognitive perspective, both social and behavioural perspectives are also present as explanatory pathways. These are particularly highlighted in Deci and Ryan's (1985) foundational description of Self-Determination Theory. Their sub-theory 'Basic psychological needs theory' explores, along with the need for autonomy and competence, the negative effects on the individual when social contexts (relatedness) fail to fulfil basic psychological needs (Rochester, 2010). More simply, it would seem that individuals develop a need for positive regard from others (Allen, 2008). Wright (2005) utilised two experientially similar constructs to inform the need for individuals to develop positive regard from others, namely emotional and social satisfaction. Emotional satisfaction tends to be associated with feelings regarding relationships between individuals, such as close attachment relationships. In general, Wright (2005), and Karreman, et al. (2009) indicated that both social and emotional satisfaction tend to be related to the source of the interpersonal relationship, in that emotional satisfaction is related to one-on-one relationships, whereas social satisfaction is related to desired relationships with groups who share similar goals.

When translating the terminology into an athletic context, particularly from an ‘organisational effectiveness’ (Rierner & Chelladurai, 1998) perspective it is the bi-directional leadership relationships between ‘actor’ and ‘observer’ (E.E. Jones & Nisbett, 1971; Malle, 2006; Watson, 1982) which are of interest. Although top-down perspectives in which leadership is projected on the athlete has been widely researched, beginning in earnest with Chelladurai and Carron’s (1978) introduction of leadership within an athletic context, little research has emerged where the central theme was athletes controlling their immediate performance environment. Eys, Loughhead and Hardy’s (2007) athlete leadership dispersion investigation and Karreman, Dorsch and Rierner’s (2009) satisfaction in interactive sport teams assessing group-level effects on athlete satisfaction and leadership were the two studies identified in this category.

Eys, et al’s (2007) study of athlete leadership dispersion set out to investigate the relationship between “individual perceptions of athlete leadership across three types of leadership functions, i.e. task, social, external (TSE), and satisfaction” (p.281). Their study was based on previous findings by Loughhead and Hardy (2005) where it was found that athletes exhibited a number of leadership behaviours such as social support, positive feedback and democratic decision-making to a greater degree than coaches. Eys, et al’s (2007) research involved 218 university athletes representing 13 teams from two Canadian universities (mean age = 20.6yrs, SD = 2.06yrs). Results tentatively indicated that when leadership dispersion was balanced between tasks, social and external factors (irrespective of the number of leaders in a team) team members exhibited the highest levels of satisfaction.

In general, the study produced a number of interesting, albeit weak findings in relation to athlete satisfaction and the concept of within-team leadership. Of particular relevance to this thesis was the longitudinal approach to the research and gender differentiation in the data collection strategy, albeit with incomplete consideration given to gender differentiation in the analysis phase. Further limitations related to the timeframe of survey administration. Consistent with Petlichkoff's (1993) study discussed later in the chapter student athletes were not asked to respond during playoffs. A probable rationale is that all research participants would be involved in the regular season and that participation in a playoff scenario would be less likely. However, the exclusion of high value data exploring the more psychologically rigorous "play-offs" seems counterproductive to a broader understanding of satisfaction.

In the second study investigating athlete leadership over time, Karreman, Dorsch and Riemer (2009) looked at group level effects which normally align with constructs such as 'group cohesion' and 'collective efficacy'. Furthermore, the authors also considered intra and interpersonal constructs such as 'athlete satisfaction' and 'athletic leadership' (p.721). Although conceptually different to Eys, et al's (2007) leadership study, participants in this study were also from Canadian 'Interuniversity' interactive sports teams, as opposed to 'coactive' sports teams involving individual sport athletes such as an athletics or swim team members (Karreman, et al., 2009). Participants were 212 athletes (Male; n = 41 and Female; n = 171) from 16 sports teams (Female teams; n = 13 and Male teams; n = 3). Mean age was 20.1yrs with an SD of 1.96yrs. Data collection took place through the distribution of a revised version of the Athlete Satisfaction Questionnaire (4 subscales) and Chelladurai and

Saleh's (1980) Leadership Scale for Sport (LSS), a 40-item scale with 5 dimensions which in this instance was used to measure the participants' perceptions of their coaches' leadership behaviours. Both questionnaires were administered using web based (n = 23) and pen and paper (n = 189) approaches.

Consistent with their hypotheses, the researchers found large group level effects for all leadership behaviour and satisfaction dimensions. In addition, smaller effects were associated with satisfaction dimensions and individual-level constructs. However, because the researchers utilised Interrater Agreement (IRA) scores which rely on 'best guess' and "sufficient consensus" (Karreman, et al., 2009, p. 729) to inform results, generalisations using this specific approach are weak. Two further limitations were noted relative to the research strategy utilised in the current research. Firstly, the authors failed to indicate the time line for survey administration and secondly, and consistent with Eys, et al's (2007) study, the definitional context of 'team' excluded other forms of the athletic endeavour such as individual sport athletes who may also consider themselves to be a part of a wider team i.e. in a coactive team setting or an individual sport athlete acknowledging the contribution of their support personnel to their performance environment.

From a conceptual perspective, although leadership can be considered a more positive social/emotional interactional context, the negative aspects of reduced emotional and social satisfaction may lie in such constructs as 'competitiveness'. For example, possessing a competitive attitude usually suggests an athlete's focus is on winning, and consequently there is an overriding aim to outperform other competitors, team mates or individuals

striving for the same position on a representative team. Because the athlete would need to be competitively minded in order to surpass others and thus achieve a level of superiority, such behaviour could result in the athlete not trusting, confiding in, or socialising with fellow competitors in order to gain a competitive advantage. This association between a competitive attitude and interpersonal relationships has received some support in the literature. Hibbard (2000) in his investigation of competitiveness, achievement and interpersonal relationships amongst high school seniors suggested that superiority competitiveness, or the desire to win in particular, is associated with lowered self-esteem and higher depressive symptomology. Furthermore, competitiveness was associated with poorer quality social traits and negative socio-emotional outcomes for females. Hibbard also found that increased competitiveness was associated with greater discord in relationships for both genders. In other words, it would seem difficult to suggest that relationships that are upheld by performance related effects would last (Buering, 2001, personal communication). Riskind and Wilson (1982) summarised by suggesting that in order to constantly strive to outperform others required markedly improving one's performance and sacrificing friendships and relationships in the process. Indeed, it is these actions which may, over time, result in less trusting, secure or meaningful relationships and thus have negative consequences for an individual's satisfaction. Finally, Wright (1992) went so far as to demonstrate that a competitive attitude towards life can have a destructive effect on interpersonal relationships. In contrast to such findings, Riskind and Wilson (1982) suggested the opposite viewpoint by indicating that highly competitive individuals are rated as more attractive than those who are uncompetitive. Highly competitive individuals also had superior ratings on measures of respect and perceived career success. Taken from this

perspective, competitiveness may in fact attract social interaction. This specific perspective could also be supported by Karreman, et al's (2009) findings discussed earlier which indicated that higher levels of satisfaction are linked to higher cohesion in the competitive athletic environment.

2.6.2.2 *Behaviourist Perspectives*

Having established the importance of the social context to the athletic experience, focus shifts to the behaviourist perspective on satisfaction. Behaviourists suggest that satisfied individuals tend to report or exhibit more positive interactional qualities (e.g. openness) and tend to be happy with the degree of intimacy in their social interactions (Robbins & Rosenfeld, 2001; Wuerth, Saborowski, & Alfermann, 1999). Social skills and competence, according to this perspective are necessary for developing and maintaining social relationships. These specific skills provide an environment where feelings of satisfaction can be articulated through both verbal and non-verbal means of communication (Darnis-Paraboschi, Lafont, & Menaut, 2005; Everhart, 1996). In contrast, a lack of social skills and perceived competence culminating in a perceived lack of acceptance by peers can lead to behaviour that tends to reduce rather than increase inter-personal contact.

A further domain where feelings of dis/satisfaction are promoted can be found in the popular media, where feelings of in/adequacy are cultivated by artificially heightening the need for approval and creating unrealistic expectations about how the world perceives 'winners' and 'losers'. Social norms therefore both indicate when we should begin to

consider ourselves to be satisfied or dissatisfied, and also cause dis/satisfied people to feel a range of emotions which promote feelings of acceptance or rejection. Irrespective of the social norms, understanding such behavioural expectations helps explain how individuals' satisfaction is influenced by the results of their performance. In either situation, there remains a consistency with the discrepancy postulate discussed earlier, that satisfaction for the individual in the athletic context remains conditional upon the match between themselves, their sporting achievement/s and expected social behaviour. For instance, a professional athlete living in another country may find it somewhat distressing that they are unable to participate in team banter because of a lack of understanding of the language if only for the reason that socialising as a team bonding mechanism is the expected norm amongst the particular cohort. Here the expectation of conversing with team mates in a social setting enhances a feeling of togetherness. This viewpoint is supported by 'belongingness' research conducted by Janis (1963), in which WWII soldiers increased group identifications under combat conditions. Whereas the life of an athlete is rarely threatened, high levels of anxiety and a need for strong bonds to develop with others who are intrinsically linked to the reduction of that stress, is a pre-requisite to future success. Being unable to foster relationships may elicit feelings of dissatisfaction for the individual.

When transposing Horowitz, French and Anderson's (1982) model of loneliness into a satisfaction context, the development of dis/satisfaction can be conceived as falling into three 'clusters', incorporating cognitions, emotions and behaviours. The first step in the process reflects thoughts of the performance achieved in any specific sporting context and how the acceptance of that performance may be integrated with the social environment. In

other words, the performance is somehow consistent with the expectations of the social environment. Once the individual thinks they have succeeded or failed, or somewhere in between, the second cluster involves a constellation of emotions dependent on the person's outcome perception. The final cluster in the process reflects behavioural outcomes such as increasing or decreasing social interaction and commitments, being more or less assertive in their social interaction and finding ways to increase or decrease social engagement. This final stage instigates a self-perpetuating cycle, whether satisfied or dissatisfied, in which the individual behaves in such a way as to create a further opportunity to foster positive feelings. These feelings would lead to positive emotions and getting closer to situations which promote these positive social interactions, i.e. striving for more sporting success, or engaging with people/groups who positively acknowledge the achievements of the individual.

2.6.3 TRAIT AND STATE SATISFACTION

Because there are useful elements in the many theories in which satisfaction is embedded, most research on satisfaction is not based on any one particular theory. Even theorists who belong to one particular 'camp', often admit that satisfaction is more complex than any one specific theory allows. For example, when discussing dissatisfaction, cognitive theorists argue that a perceived and unchanging goal achievement deficiency is only one of several factors which lead to the use of that particular description. When investigating psychological constructs such as 'happiness' (Ardell, 2008), 'contentment' (Borowitz & Weinman Schwartz, 1999), 'loneliness' (Shaver, Furman, & Buhrmester, 1985) and 'anger' (Lazarus,

2000; Ruiz & Hanin, 2004), a broader holistic or interactional view may be helpful by embedding dimensions such as life changes, transitional periods, personal dispositions and person-situation interactions into the investigative framework. Viewed this way, satisfaction can assume both state and trait qualities over the course of a lifetime.

Overall, cross-situational generality and time are features that distinguish trait from state satisfaction (W. P. Morgan, 1980b; Singleton, Straits, & Straits, 1993). In the context of state satisfaction, the feelings can be short-lived as the experience is based on novel situational characteristics, such as success or failure at a specific goal related activity (Haney & Long, 1995). The consequences of a state of satisfaction not only relate to the individual, but also to future action, an example of which is the motivation for social contact after goal-related activity. In this instance, social connection, acceptance (Hill, 1987) and identification (Porter, et al., 1975) tend to be central influences and motivators for human behaviour by driving or reducing the desire for social activity (Gerson & Perlman, 1979) from both the initiator's and receiver's context. An example of this came from a personal experience as a young international shooter. A fellow competitor who had recently won a World Team Championship title asked me how I had performed in my last event. I started to talk about my negative experience when he stopped me from talking and said "Hey, if you have something negative to say, go tell the Russians!!" Therefore, when relating to negative performance, not only is there difficulty in attempting social contact with peers in a sporting context; peer acceptance comes mostly from higher performance (everyone wants to talk to winners), and rejection stems from others wishing to avoid negativity at all costs (Curtis & Ennis, 1988).

In contrast to state satisfaction, trait satisfaction can readily be explained within the 'perfectionist' framework postulated by Gotwals, Dunn, and Wayment (2003). Perfectionists as such are understood as individuals who enter evaluative situations and reflect on their performance based on a set of criteria such as 'Personal Standards', 'Concerns over Mistakes', 'Doubts About Actions', 'Parental Criticism', 'Parental Expectations', and 'Organisation' (Frost, Marten, & Lahart, 1990).

Two distinct types of perfectionism are accepted as informing the construct. Both stem from descriptions provided by Hamachek (1978), who labelled them as 'normal' and 'neurotic' perfectionism. More recently Gotwals, et al. (2003) have changed these descriptors to 'maladaptive' and 'adaptive' perfectionism. Adaptive perfectionists and maladaptive perfectionists are similar in that they set high personal performance standards. However, differences between both forms of perfectionism emerge in the individual's perceptions relating to that performance. 'Adaptive' perfectionists appear able to accept limitations at both a personal and environmental level and maintain a view of themselves as somewhat successful (and thus experiencing satisfaction) even in the absence of perfection. Maladaptive perfectionism however, is based on a negative assessment of the performance where there is an intense focus on errors (Frost, Marten, Lahart, & Rosenblate, 1990) and a feeling of being threatened by the idea of negative environmental evaluations such as those provided by significant others (Blatt, 1995; Gaudreau & Antl, 2008). As a consequence, because of the very rare occurrence of perfection the individual would typically experience the performance as dissatisfying. Suffice it to say; at least some level of perfectionism in an athletic context would seem to be a necessary part of the athletic endeavour. Indeed, Hardy,

Jones and Gould (1996) consider perfectionism a “trademark” trait in striving for sporting excellence.

In summary, the conceptual distinction between short-term (situational) and persistent (internally-derived) satisfaction may seem arbitrary. However, even situational factors such as consistently winning must get to a point where they penetrate appraisal or attributional biases. For example, a pessimist would likely experience internal and stable attributions for their successes upon repeatedly experiencing winning. An anecdotal example comes from my own interactions with an elite athlete who considered himself to be ‘less than confident’ when asked about the likelihood of winning major events. He was in fact winning consistently on the big stage and thus began to question his own evaluative objectivity through reflective statements such as “I don’t really get it, I must be playing some good ball right now” (Scheuerpflug, 2000, personal communication). Generally, the distinguishing features of construct differentiation are the perception of causality and the time-relatedness of satisfaction that will determine the way in which a person experiences the construct. Knowing why some, but not all individuals feel satisfied in certain situations may provide the foundation for distinguishing people with different levels of susceptibility to the positive and negative effects of goal-directed activity. And, from the perspective of circularity, its resultant impact on the social environment, and consequently future goal-directed activity.

2.6.4 FACTORS RELATING TO THE PERSON

Researchers have linked satisfaction to a wide variety of individual characteristics. Without minimising the structural and environmental factors that affect satisfaction it is equally important to recognise that certain dispositional characteristics do predispose individuals to experience differing levels of satisfaction, compared with others. As such demographic, affective, personality, and behavioural factors can play a determining role in the experience of satisfaction.

2.6.4.1 Demographic Factors

Studies Relating to Ethnicity or Age and Athlete Satisfaction

Having undertaken a comprehensive review it was found that studies exploring the relationship between ethnicity and athlete satisfaction are few. An example of the limited research in the area is provided by Gano-Overway (1996) who investigated differences between goal perspectives of ethnic groups and their relationships to beliefs, affective responses and coping strategies. The research produced statistically significant, albeit weak, differences between cohorts on the primary variables. In general, the lack of research in the area may indicate the absence of substantial findings researchers expect from an investigative focus, particularly in comparison to other contextual groupings such as ‘athletes’, or factors such as leadership or social connection.

Similar to ethnicity, little evidence exists to suggest that age is a variable of interest to athlete satisfaction researchers. Where such research has taken place it appears predominantly in controlled settings such as adolescent or tertiary education environments

(Adamsen et al., 2009; A. Smith & Petrie, 2008). This contrasts somewhat with the industrial/organisational context in which the population of interest may span 15 – 65 years of age, or as found in the domain of subjective well-being where the entire life span may be represented. In conclusion, it would appear that very little research has been undertaken focussing on ethnicity or age.

Studies Relating to Gender and Athlete Satisfaction

A review of the literature indicated that in general the relationship between gender and athlete satisfaction remains somewhat unclear. A number of studies concluded that gender differences are significantly associated with self-reported satisfaction (Bromley, 2000; Brown & Frankel, 1993; Coffman, 1999; Maday, 2000; Newton & Duda, 1993; Riemer & Chelladurai, 2001). In particular, research conducted by Riemer and Chelladurai (2001) and Lindauer (2000) found statistically significant differences in athlete satisfaction exist between men and women. As a consequence, Lindauer (2000) recommended that gender differences be taken into account in satisfaction research. Lindauer's study also found differences between team and individual sport athletes (to be discussed in the following section).

A further study of coach-athlete interactions between 150 German 2nd and 3rd Division football players and five female and five male coaches conducted by Pfeffer and Gallitschke (2008) showed differences between coach genders particularly in the areas of democracy, social support and rewarding behaviour. In a further study by Coffman (1999), both genders rated satisfaction with leadership differently, although the coaching cohort showed

similar leadership practices across genders. And finally, female athletes derived the most satisfaction from having a female coach.

In contrast, studies by Polman, Rowcliffe, Borkoles and Levy (2007) indicated that gender did not appear to influence attributions for achievement situations by competitive swimmers. Furthermore, Digelidis, Kotsaki, et al. (2005) concluded that no significant differences in gender were identified in a study of motivation, goal orientations and perceived athletic ability of junior and senior Greek high school students. Finally, literature discussing the relationship between athlete satisfaction and 'sport disengagement' (Deaner, 2000) also indicated no such relationship.

As an adjunct to the polarised arguments discussed thus far, Maday (2000) could only find mean differences in gender on six of eleven subscales in his research on goal orientation and satisfaction in runners, thus indicating a somewhat more centralised position. Similarly, Lightheart (2006) found in her study on the fulfilment of basic psychological needs that differences between genders did not exist in relation to global self-esteem. However, in terms of psychological need, satisfaction and self perceptions, men showed meaningful differences in relation to competence and physical self worth. Furthermore, men experienced less social physique anxiety than women.

Generally, there appears to be enough discrepancy in the results relating to athlete satisfaction and gender that further investigation is warranted. As a consequence, the

variable was explored in the current research in order to both provide confidence in the findings as well as adding further to the body of knowledge in the area.

Sport Affiliation (Team vs. Individual Sport) and Athlete Satisfaction

Based on the definition found in Forsyth (2006), a group consists of two or more individuals who can identify themselves as a distinct collective, and who interact interdependently on a task which all agree to fulfil (A. G. Johnson, 1995; U. Johnson, 1997; Keyton, 2002; Turner, 1982). For example, a Rugby player is reliant on other members of the team whilst involved in on-field activity to play the game.

A second 'team' environment is also found in the literature. The 'coactive' team do not work interdependently on a specific task, however, results from individual performances are accrued to provide a team score (Carron, Colman, Wheeler, & Stevens, 2002), i.e. a track and field team accrues individual results from different athletic disciplines such as discus or sprinting to form an aggregated 'team' score. Conceptually it may be argued that a co-active team member is somewhat different from a true individual sport athlete, the definition of whom centres on there being no reliance on others as part of the act of achieving e.g. a triathlete who must ride, run and swim alone thus relying on self-contained resources (Forsyth, 2006). In this instance a possible delineation between the co-active and individual sport athlete is somewhat difficult because the co-active team members' own performance may be influenced both positively or negatively based on the performance of other teammates. However, such an argument could also be relevant, not only for team mate interactions but for all manner of interpersonal interactions such as the coach/athlete or

athlete/significant other dyads. Therefore, to remain consistent with what it is to be an individual athlete, in other words, no interdependence in the execution of their sport, this study focuses only on the individual athlete as independent of others compared to the team athlete who is in an interdependent relationship with others in the execution of their athletic endeavours.

Based on the above definitions, existing literature showing differences in team and individual sport contexts is available. For example Baker Yardley, et al. (2003) and Lindauer (2000) examined coach behaviours and athlete satisfaction, while Pfeffer, Wuerth, & Alfermann (2004) the subjective perceptions of the coach-athlete interaction (leadership). In addition, five studies indicated the inclusion of individual sport athletes in their research, albeit without differentiation between groups in the results (Butcher & Hall, 1983; Gaudreau & Antl, 2008; Gravely & Cochran, 1995; Pensgaard & Ursin, 1998; Stephan & Bilard, 2003). In contrast, Petlichkoff's (1993) study, discussed earlier in this Chapter, differentiated between individual and team sport athletes at both the data collection and analysis levels. In general, the majority of literature relating to individual athletes was found in settings such as Killea-Jones' (2005) 'athlete as a student', or more predominantly, in the context of individuals within team environments (Bromley, 2000; Jordan, Gillentine, & Hunt, 2004). Given the above, it is interesting to note that there was a dearth of literature relating directly to individual sport athletes and the relationship to satisfaction over time.

In general, the review has thus far indicated that the majority of research utilised team sport athletes. In contrast, the discrepancies highlighted in the extant literature surrounding both

gender and sport types suggest differences in these constructs may be present. Therefore, studying these differences is considered important to developing a broader understanding of athlete satisfaction and the peak event construct, specifically within the current research setting.

2.6.4.2 Affective and Attachment Factors

As a broad statement, satisfaction is characterised by negative and positive emotions and tends to be correlated with feelings on a spectrum between happiness/sadness, excitement/anxiety, activation/boredom, self-embellishment/self-deprecation, and inclusiveness/marginality. With regards to dichotomous affective responses satisfaction, in contrast to dissatisfaction, has been linked to good psychological health. Satisfaction is associated with dispositional characteristics such as optimism (Albinson & Petrie, 2003), openness (Bono, Boles, Judge, & Lauver, 2002), happiness (Kavanagh & Bower, 1985) and self esteem (Gotwals, et al., 2003) and is strongly negatively correlated with sadness (Kavanagh & Bower, 1985; Thompson, 1998) and depression (Backmand, Kaprio, Kujala, & Sarna, 2003; S. L. Cresswell & Eklund, 2003; Diment & Terry, 2003). As a general observation, it would seem that these relationships are circular. In other words, where an athlete is currently positioned on the satisfaction-dissatisfaction continuum influences that individual's outlook and, consequently, cognitive appraisals and affective responses about future goal directed activity. At the same time, the athlete's position on the satisfaction-dissatisfaction continuum is influenced by the outcome of goal directed activity.

Consequently, the causal direction of the relationship between these factors and satisfaction is unclear (D. P. Schwab & Cummings, 2001).

For the large majority of people, however, satisfaction is not a permanent condition as results of goal directed activity and the perceptions of those results can vary for the individual and significant others. Examples are found in studies conducted by both Laurin and Nicolas (2009) and Gaudreau, et al. (2009). Gaudreau, et al's study took place within an athlete centred, albeit adolescent male context. A total of 265 adolescent French Canadian Ice Hockey players ($M = 16.3\text{yrs}$; $SD = N/A$) involved in the Quebec AAA Hockey Leagues completed three waves of surveys over the first 11 weeks of a competitive season. The goals of the study were to map out distinct trajectories of both positive and negative affect over time as well as studying the effect of team selection "as a seasonal turning point likely to deflect some, if not all, of the trajectories of affective states" (p. 309). To study these factors four self-report measures were chosen. Results produced some interesting findings. For example, athletes who had gained selection into their respective representative teams maintained a high positive affect. Contrastingly, those not selected "suffered a significant decline in positive affect" (p.311), which is consistent with earlier findings suggesting such perceived negative evaluation by others in relation to a specific performance can significantly alter the satisfaction experience (Albinson & Petrie, 2003; Riemer & Chelladurai, 1998). Additionally, athletes who initially were satisfied with their performance found, upon reflection, that their achievements, when related to their previous performance or that of others, were not as positive as initially perceived. Therefore, it would seem the importance of social attachment or relatedness (Allen, 2003; Mageau & Vallerand,

2003; Vallerand, 1999) to one's perception of satisfaction is an important factor in understanding satisfaction as a construct.

2.6.4.3 Personality Factors (Satisfaction)

Research has consistently identified the big 5 personality traits (Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness) as factors relating to self-reported satisfaction (Costa & McCrae, 1980; McCrae & Costa, 1987). As outlined in a review of the personality literature by Rogulj, Nazor, Srhoj and Bozin (2006) Extraversion in particular seems to possess a slightly higher rating than other traits when discussing, for example, elite athletes.

Extraversion as a factor of personality is associated with people who tend to be gregarious, outgoing and enjoy social company, prefer risk-taking opportunities and require stimulation. From this description, extroverts are likely to be more active and deliberate in seeking out social contacts and situations as well as challenging environments such as sport participation. However, a recent study conducted by Gee, Dougan, Marshall, and Dunn (2007) investigated the utilisation of a normative personality profile as part of a 15 year study attempting to predict athlete success in the NHL. The researchers found that key character traits spread across the big 5 were significant predictors of future performance instead of individual traits, and specifically ahead of factors such as weight and height. In this instance, competitiveness, team orientation, self-confidence and analytical disposition were identified.

2.6.4.4 Behavioural and Social Competence Factors

Although satisfaction is primarily a private psychological experience, it also manifests itself in the behavioural realm. This is particularly evident when underpinning the concept with Mischel and Shoda's (1995) Cognitive-Affective Processing System which is articulated as a "dynamic network of cognitive, affective, motivational, and behaviour generation units that interacts with situational factors to produce both coherence and cross-situational behaviour" (p.1). Behaviourally, affective responses on a dissatisfaction-satisfaction continuum are often found to range from dissatisfaction related elements such as self-focus, social withdrawal, and lowered risk-taking to an outward focussed, gregarious and high social and performance risk taking situation more attune to high satisfaction. As a consequence, satisfied athletes tend to be more assertive, which may promote a willingness to engage in higher levels of social interaction and challenges associated with the athletic experience.

In contrast, athlete dissatisfaction manifests itself in the behavioural and social competence realms found in literature relating to the maladaptive context of behaviour of perfectionists discussed earlier in the chapter. Gotwals, et al. (2003) connected self-esteem with athlete satisfaction by revealing two factors relating to satisfaction with a) current sport performance and b) perceived athletic competence in a study of 87 inter-collegiate athletes. Results from the study indicated that maladaptive perfectionist tendencies are equated with dissatisfaction because of a lower level of self esteem and as noted in an earlier study "habitually condemning oneself for mistakes and shortcomings" (Lynch, 1988, p. 159).

Limitations of the study in relation to the current research are centred on the utilisation of individual sport athletes only, which limited the opportunity to generalise the results to the broader athlete community. Additionally, having administered surveys to participants at least 24 hours prior to competition the approach negatively impacts on understanding the wider dimensions of variables such as satisfaction by failing to examine perfectionist tendencies across a broader range of time i.e. pre- and post event as well as longer timeframes within each of those individual frameworks. Similar findings are noted in Linderman's (1994) study on the relationship between perfectionism, self-esteem and eating disorders in athletes.

In contrast, satisfaction manifests itself in behaviour by way of increased likelihood of participation in activities which involve greater effort and mastery, positive interactions within a team environment (both task and socially oriented), as well as external support (Scanlan, Carpenter, Lobel, & Simons, 1993). In particular, a study investigating social agents, achievement goals, satisfaction and academic achievement in youth sport by Papaioannou, Ampatzoglou, Kalogiannis and Sagovits (2008) indicated a strong positive link between mastery and satisfaction in sport. More importantly, the authors suggest that mastery climates should be established not only in sport, but also family and peer contexts as all social contexts appear responsible for the formation of positive athlete behaviours.

From a behavioural and social competence perspective athlete satisfaction is not only associated with performance, but also with a range of social network factors including contact with significant others such as family (Goff & Fick, 1997), friends and peers

(Karanauskiene, Kardelis, & Kardeleine, 2007). Denny and Steiner (2009) also demonstrated a relationship between satisfaction and internal/external loci of control in four domains (family, friends, academics and recreation). The authors discuss the extent to which individuals believe that they can control events or outcomes themselves that are attributable to external circumstances (Rotter, 1975). Their regression modelling, investigating different aspects of happiness and satisfaction, noted that internal factors were more powerful correlates than external factors throughout all variations of data analysis. Further support for these findings was reported in Kwiatkowski (2007) who emphasised the notion that athletes performing at the highest level indicated the strongest levels of internal locus of control. In other words, higher level athletes tended to believe that rewards are obtained largely due to their own efforts rather than external factors (Burke & Straub, 1976).

Research by Ryan (1989) found a reciprocal relationship between interpersonal skills and satisfaction. In general, the study found that individuals who participated in collegiate sport were more satisfied and noted a positive development of interpersonal skills. These results link with the circular notion of performance and satisfaction indicated by Schwab and Cummings (2001) in their review of the area. In contrast, no specific research in the athlete satisfaction domain was found pertaining to dissatisfaction and its effect on interpersonal skills; however, studies investigating this connection were found in other domains. For example, Imel (1999) discusses the concept within the organisational/industrial psychology context by suggesting the necessity of increasing interpersonal skills as a method of combating workplace dissatisfaction. Furthermore, Plath (2001), as part of his German

labour market research, suggests the need for further social communication competence development for individuals as a method of risk reduction relating to dissatisfaction with life and work. Plath's findings are intuitively interesting for the current research when extrapolating the concept of social communication competence into the athlete experiential realm. In other words, athletes increasing their communication competencies can be seen as an integral aspect in controlling their personal performance environment.

In many ways, an individual's personality and behavioural characteristics tend to intensify the experience of satisfaction through internalising these feelings and projecting them as part of future action. Given the evidence regarding personal characteristics and the behaviour of satisfied athletes, it could be argued that, for example, satisfied athletes entertain cognitions and exhibit behaviours that enhance their social competencies and willingness to perform. However, it remains relatively unclear what aspects of an individual's cognitive, affective and interpersonal processes are antecedents and what aspects are consequences of satisfaction. This is particularly evident in the statement by Schwab and Cummings (2001) that "even recent theoretical work has not accounted for a sufficient number of the variables which may influence the strength and perhaps direction of the relationship between, [in this instance] satisfaction and performance" (p.428).

2.6.5 FACTORS RELATING TO THE SITUATION

Many sporting situations, ranging from working collaboratively to achieve a training goal to receiving a favourable review in a newspaper, can induce feelings of satisfaction. For

example, open sources of communication such as Sunday newspapers are packed with reviews of weekend sport. By definition, satisfaction experienced as a result of external influences includes the social environment. Furthermore, recent studies investigating coaching behaviours (Andrew, 2009), significant others (Boiche` & Sarrazin, 2009), and peers (Papaioannou, et al., 2008) indicated that, in many ways, the environment, whether it be based on interaction with significant others or broader social institutions such as the media, provide the participant and readers with key influences relating to the social nature of their sporting endeavours.

Unfortunately, most speculations about how situational factors influence satisfaction have not been subjected to empirical investigation. Some examples of the few studies that have touched upon situational factors as causing or perpetuating athlete satisfaction relate to a diverse range of factors such as the medical and paramedical services at German Olympic Training Centres (Emrich, 1996), choosing a university (Seifried, 2009), and the role of romantic relationships on performance and wellbeing (Jowett & Cramer, 2009). As a general observation, such studies are overshadowed by the majority of research in the area which focus on the dispositional characteristics of the individual. Considering that the feeling of control over one's environment, particularly from a performance perspective, is seen as a cognitive determinant of an athlete's feeling of satisfaction, it is surprising that less emphasis has been given to situational factors.

Where research has focussed more on the athlete experience relating directly to performance the external factor/s which influence athlete satisfaction are classified as

precipitating events (Headey & Wearing, 1989). Generally speaking, any unique event that is of interest to the athlete can be considered a potential precipitating factor for satisfaction. As opposed to predisposing factors such as age or stable personality traits, precipitating events include, for example, a national championship campaign, a contest against a traditional rival or a benchmark comparative test of performance.

Four examples of studies in the area are of relevance. Firstly, Blanchard, Mask and Vallerand's (2007) undertook research using a total of 312 high school and collegiate basketball players. Results from this cohort indicated that situational factors such as perceptions of personal and team performance precipitated athlete satisfaction both within games as well as over an entire sporting season. Where Blanchard, et al. (2007) utilised a longitudinal approach to their research a limiting factor was the utilisation of a single gender (males) playing a team sport (basketball). Therefore, generalising findings to a wider population from this highly specific participant cohort is particularly challenging.

Secondly, Gaudreau and Antl's (2008) study investigated dispositional perfectionism and focussed responses on specific competitions identified by coaches "to ensure that the motivational relevance of the situation would be sufficient... (p.362). Consequently, 73% of respondents perceived the event to be the most important of the season, while for the remaining respondents it was one of the most important. Such an approach is an acknowledgment of an ever-present need to incorporate such intervening variables into the research framework to understand the hierarchical nature of the construct and to focus responses for investigations. This study incorporated a particularly good demographic

range. For example, the study utilised both team and individual sports as well as male and female athletes. Although longitudinal in nature the overriding limitation of the study was its short duration which was expressed as an average of 66 hrs pre-event and 70 hrs post event. As discussed earlier, such an approach fails to provide a developmental understanding of athlete satisfaction over the course of the athletic experience which includes both training and competition environments. Furthermore, although the study utilised athletes as their cohort of interest general life satisfaction as opposed to athlete satisfaction was investigated. Therefore, it is unlikely that all dimensions relating to satisfaction within the athletic experience as they relate to perfectionism were captured to the same extent as a sport specific satisfaction survey instrument such as Riemer and Chelladurai's (1998) Athlete Satisfaction Questionnaire.

Thirdly, Laurin and Nicolas' (2009) conscientiousness, self-determination and satisfaction study was undertaken within the confines of four French Soccer Academies. The general hypothesis proposed by the researchers was that "at any given time the trainee's soccer and school self-determination and conscientiousness would be positively related to satisfaction" (p.175). The prospective longitudinal research took place over a period of one year in which 81 academy members ($M = 15.8\text{yrs}$, $SD = 1.7\text{yrs}$) completed surveys once every four months. The findings went some way to supporting the hypothesis, albeit with differences in the dynamics at each separate time point. For example, the authors observed a reduction in the mean scores of satisfaction and soccer self-determination over time. The first data analysis indicated that school self determination was the most important. By mid-year both

factors were of similar importance, and at the last data point, soccer related self-determination was the exclusive predictor.

Limitations of the study can be found at the contextual level. Examples are the utilisation of an exclusively team oriented and single gender setting (soccer academy for males). Furthermore, few sports have dedicated training environments such as football in which high paid/high profile careers are a possible if not sought after outcome. Also, a possible strong predictor of each of the elements investigated in this specific research is whether the teams were successful in their competition environments. In other words, although an academy athlete might have autonomy and be conscientious as described by Self-Determination Theory (R. M. Ryan & Deci, 2000), their teams' relative position on the competition ladder may be a strong factor influencing these psychological constructs. Having undertaken the investigation over the period of a full year it is surprising that no reference is made to the actual performance of the academy team, whether a seasonal standing or in relation to a specific peak event, when attempting to understand the athletes' satisfaction levels. Based on the above limitations, particularly when discussing gender, sport affiliation differences and an apparently exclusively 'prospective' research design, the research findings do not lend themselves well to generalisation.

Lastly, a study by Pensgaard and Ursin (1998) involving Norwegian athletes (n=91) focussed primarily on stress, control, and coping in which athlete satisfaction is listed as a variable of interest in relation to their competitive experiences at the 1994 Lillehammer Winter Olympics. The authors noted that certain stressors seem to negatively impact overall

performance. To obtain these results the authors asked participants to complete a questionnaire which incorporated four different time points; days before, hours before, during competition, and after competition. 76% of respondents returned their questionnaire within two months of the 1994 Lillehammer Winter Olympic Games. Respondents were asked to identify a number of variables including satisfaction in four temporal categories; days before, hours before, during competition and after competition. Results indicated a pre-event tendency to experience stress related primarily to 'expectations', 'the coach' and 'injury problems'. However, stressful situations were moderated by the athlete's perception of control. For example, where the coach was involved as a stressor, athletes perceived a lack of situational control. In comparison, negative thoughts and the competition environment were linked to athletes perceiving more situational control. Overall, the results obtained by Pensgaard and Ursin provide a good example of the situational effects of satisfaction with leadership where stress is attributed to coach-athlete interactions.

To summarise, the results obtained by Pensgaard and Ursin provide valuable insight into predominantly pre-event satisfaction causality. Although the study illuminates the influence of particular stressors on the athletic experience, limitations within the research context are noted. For example, when relating the research to a longitudinal methodology the data collection process would appear to be based on a singular instead of multiple data collection event, i.e. a single survey asking participants to provide responses relating to four different time points. This is particularly troublesome when incorporating the concept of attributional shifts as discussed by Moore, Sherrod, Liu and Underwood (1979), and later by Suh, et al. (1996) who suggest that elapsed time between event and response collection may impact on

the type (as opposed to quality) of response provided by athletes. In other words, there is an inherent risk of a change in an athlete's causal perception when asked to accurately recollect feelings associated with an event (pre-, during and after).

2.7 CONCLUSION

As a uniquely subjective experience, satisfaction is formed on the basis of personality configuration, cognitive appraisal, and on the interaction that a person has with his or her environment. In other words, satisfaction is primarily a private phenomenon experienced by the individual themselves, and secondly by loved ones or those involved in social interaction with the athlete (such as coaches, managers and team mates) in the hours, days and months following goal related activity or a series of goal related activities. Consequently, satisfaction is a multidimensional and multifaceted experience. Because of the limitations exposed during this review relating to the theoretical and conceptual depth of understanding in the area it can only be tentatively concluded that factors relating to the person have a stronger influence in domains such as satisfaction (Denny & Steiner, 2009). Such an explanation would appear to support the scant literature relating to the strength of situational determinants on athlete satisfaction. Furthermore, satisfaction is a bi-polar, as opposed to a uni-dimensional, construct encompassing the complete range of positive and negative affective states. However, an understanding of how such interactions jointly affect athlete satisfaction has, unfortunately, been overlooked in much of the research literature. These conclusions do not however negate the need to further investigate the influence of environmental factors on athlete satisfaction. In particular, when considering that an athlete

tries to control as much of their performance environment as possible in order to facilitate the likelihood of a positive outcome.

This research set out to investigate athlete satisfaction in relation to a peak sporting event. In doing so the research strategy acknowledges the multi-dimensional and multi-faceted nature of the construct whilst differentiating between the salient variables of ‘Gender’ and ‘Sport Affiliation’. The research also used a peak sporting event identified by the individual athlete to highlight possible changes in the trajectory of satisfaction as a consequence of the achievement experience. Based on the notion of examining athlete satisfaction and a peak sporting event hierarchical differences in satisfaction responses by athletes at different time points provided insight into what it is to be satisfied as an athlete when time is considered a factor. No previous research was found which explored these combined processes.

This chapter has reviewed and discussed the literature pertinent to understanding what it is to be satisfied as an athlete. It has provided a theoretical overview of the athlete satisfaction and explored how different factors influence it within an experiential context. As a consequence, a primary gap in the literature has been highlighted which this study attempts to fill. In the next chapter I will introduce the research questions, together with the methodology used to answer them.

CHAPTER THREE

METHODS

3.1 INTRODUCTION

The aim of this Chapter is to introduce the methods that informed the research process. The Chapter begins by introducing the research questions providing direction to the investigation. Following on, an adapted mixed methods strategy to topic exploration is introduced. Of particular interest to the data collection context is the utilisation of the longitudinal survey approach. Thereafter, the next sections of the Chapter focus on the pathway to choosing a specific survey instrument for the research process. Finally, the Chapter concludes by introducing the Athlete Satisfaction Questionnaire (ASQ) as the preferred survey instrument as well as discussing specific theoretical and conceptual changes idiosyncratic to this current research context; specifically, embedding the previously discussed ‘bi-polar’ response framework in the Athlete Satisfaction Questionnaire and highlighting differences between the original North American Collegiate and the current New Zealand setting.

3.1.1 RESEARCH QUESTION 1

Due to the predominantly confined research settings such as collegiate or adolescent sport environments, differences in age and ethnicity are generally statistically insignificant and

thus seemingly less of a factor in athlete satisfaction research. In contrast, there seems to be a wider interest in gender as a variable, as results across a number of findings within an athlete satisfaction research context indicated that gender and its influence on satisfaction are not well understood. Therefore, where possible in the research undertaken in this thesis, comparisons were drawn between previous and current research settings. Consequently, the first research question was developed to add another layer of understanding to this already disparate context by asking what is the relationship between athlete satisfaction in relation to a peak sporting event and gender within the confines of this specific research setting?

3.1.2 RESEARCH QUESTION 2

In general, sport affiliation and athlete satisfaction relative to a peak sporting event seems to be an under researched area. An example of which is Riemer and Chelladurai's (1998) closing comments suggesting that their Athlete Satisfaction Questionnaire can be utilised confidently with both team and individual sport athletes. However, this assumption is challenged based on the discussion thus far surrounding the *interdependent* versus *independent* nature of performance development. Therefore, the team versus individual sport setting is of specific interest to the current research. Consequently, the second research question seeks to clarify the relationship between athlete satisfaction relative to a peak sporting event and sport affiliation within the confines of this specific research setting?

3.1.3 RESEARCH QUESTION 3

When the above research questions are answered leading to possible scale refinement, the next stage is the investigation of athlete satisfaction and a peak sporting event. Scant literature relating to the influence of time on athletes' satisfaction responses was identified by the present study. Based on the lack of findings in the area a third and final research question investigates what the dynamics of athlete satisfaction are when influenced by an individually defined peak sporting event?

Having defined the research questions the following chapters focus on them. As outlined in Chapter One the research process is undertaken in two distinctive studies, study one and study two. Study One is separated into three chapters, chapters four, five and six, investigating the transferability of the Athlete Satisfaction Questionnaire as a data collection instrument into the current research setting.

Study Two, Chapter seven explores research question three. Investigating these aspects not only added further value to an understanding of the phenomenon but made the successful attempt to fill the gap in the literature more likely.

3.2 RESEARCH METHODOLOGIES

“The qualitative/quantitative distinction is itself somewhat arbitrary...What we really need is an effort to integrate both these methods, to take advantage of both procedures and combine their outcomes...Thinking this through would be far more useful than method bashing. If we are truth seekers, then there should be not a qualitative truth and a quantitative truth”

(Liebersson (1992), cited in Axinn & Pearce, 2006, p. 3)

It became apparent whilst exploring methodological approaches, as highlighted in the above quote, that one's research direction can be challenged by others with differing perspectives. And importantly, whether a researcher has the 'right' to choose the methodology for their research?, Or, is the very act of 'choosing' placing the data itself in jeopardy of becoming lost in an idiosyncratic perceptual translation? (Oldroyd, 1986) Acknowledging that this particular dilemma also exists in this specific research, the conclusion drawn has been not to choose the 'right' methodology, but to ensure whatever pathway is chosen is transparent for future readers (Axinn & Pearce, 2006; Campbell & Stanley, 1963; Tashakkori & Teddlie, 1998, 2003). The following section introduces mixed methods and discusses possible limitations.

3.2.1 MIXED METHODOLOGIES

Mixed methodology research is represented by the notion that each research project or approach is unique and may possess different dimensions which may not necessarily be

summarised using a simple quantitative/qualitative dichotomy (Axinn & Pearce, 2006). Thus, a number of researchers argue that mixed methods research provides a viable framework within which the use of a multiplicity of sources of information and approaches helps to gain insight into areas such as the social or psychological world (Axinn, Fricke, & Thornton, 1991; Axinn & Pearce, 2006; J. W. Cresswell, 2003; Tashakkori & Teddlie, 2003). It is also suggested that the very nature of its multiplicity ensures that bias found in singular methodological approaches can, in some way, be negated by the replication of empirical evidence across mixed methods (Visser, Krosnick, & Lavrakas, 2000). Thus, the positive consequence of this approach is a substantial increase in the confidence in the empirical results (Rosenbaum, 2001).

Complementary to the above discussion, a further perspective is the effect I have as a researcher on the research process. Christensen (1991) states from a positivist perspective, that “investigators attempt to acquire information that is devoid of personal beliefs, perceptions, biases, attitudes and emotions” (p.11). Contrastingly, philosophers such as Kuhn (1980) and Popper (1963) ascribe to more constructivist/anarchistic paradigms and argue that such empiricist claims are difficult, if not impossible to fulfil. This discrepancy is highlighted when discussing the ‘hard’ vs. ‘soft’ sciences. Whereas, the certainties of the natural ‘hard’ sciences may allow researchers to work in mostly controlled laboratory settings, in an exclusively empirical way, researchers in the ‘soft’ or social sciences are often confronted with more uncontrolled settings and a significantly larger number of variables (Cofer & Appley, 1968). And it is the plethora of variables which complicate the process of obtaining the certain results that the empiricists claim to achieve (Guba, 1990;

Tashakkori & Teddlie, 2003). From a personal perspective, choosing a 'mixed method' approach is thus an acknowledgement that as a researcher I do influence the research process. Therefore, in order to maximise the potential of the data (in an explanatory capacity) acknowledging the influence of the researcher, and the chosen research process is an important step in a robust articulation of the findings.

Sufficed to say, the chosen research tradition also possesses inherent limitations. In particular, when placing the information within a defined theoretical boundary the data is then only processed within the theory's idiosyncratic range of convenience. Therefore, any argument about right or wrong is nullified as an explanation is simply a different construction within which the interpretation of the data takes place (Kelly, 1955, p. 229). However, the fundamental activity of understanding and following a formal research process increases the likelihood that a more objective articulation of the findings leads to others understanding the findings in their idiosyncratic research context (J. W. Cresswell, 2003; Crotty, 1998). Based on the above insights, the utilisation of a mixed methods approach seems most advantageous to the current research process.

Lastly, as part of the review of mixed methods approaches the definition of what 'mixed methods' means in the research environment is not altogether clear. For example, Axinn and Pearce (2006) consider mixed methods to be the use of at least two of the five data collection methods they identify. In contrast, Tashakkori and Teddlie (2003) and Cresswell (2003) discuss mixed methods as utilising both qualitative and quantitative collection and

analysis methods in the same body of work. Based on these definitions the latter strategy was chosen (see Table 3.1 below).

Study	Data Collection		Data Analysis	
	Method	Approach	Method	Approach
1	Phase 1 Cross-sectional Survey Approach “without regard to differences in time” “open-ended survey” (Brady & Johnson, 2008; Trochim, 2009)	QUAL	Descriptive	Content Analysis
		QUAN	Statistics	Descriptive
Phases 2+3	Cross-sectional Survey Approach Athlete Satisfaction Questionnaire (ASQ) (Riemer & Chelladurai, 1998)	QUAN	Statistics	Inferential Descriptive
2	Longitudinal Survey Approach (de Vaus, 2000) Administration of the ASQ (see above) in three waves	QUAN	Statistics	Inferential Statistics

Table 3.1 Research Methods employed in current research

3.2.2 RESEARCH METHODS

Both studies and their respective research frameworks highlighted above will be discussed in detail in the following Chapters. This section focused on introducing the data collection methods and the efficacy of their application in the current research.

3.2.3 SURVEYS

Surveys, in the form of questionnaires, are a particularly practical strategy that maximises the potential for large data capture (Fowler, 2009; Kish, 1965; Visser, et al., 2000). Of particular advantage is the ability to utilise standardised questions which ensure a level of comparability in the information obtained from individual respondents. Due to the standardised nature of the questions (both open and closed formats), this type of data collection is commonly categorised as quantitative research (Axinn & Pearce, 2006; J. W. Cresswell, 2003; de Vaus, 2000; Tashakkori & Teddlie, 2003). However, surveys themselves are not quantitative per se. It is the process of coding responses and the application of a numbering system which creates a quantitative framework (Lieberson, 1992), from which statistics can be produced (Bickman & Rog, 1998; J. W. Cresswell, 2003; Fowler, 2009; Tashakkori & Teddlie, 2003; Visser, et al., 2000).

An advantage of a survey approach is the use of the Internet as the data collection medium. It is considered a cheap (Andrews, Nonnecke, & Preece, 2003; Fowler, 2009) and effective method of accessing a large participant population. Furthermore, the removal of researcher/participant interactional bias is seen as beneficial in reducing the negative consequences of coercive interaction by an inexperienced interviewer (Axinn & Pearce, 2006; Fowler, 2009; Visser, et al., 2000). However, the negative aspect of this strategy is that experienced analysts do not have access to accompanying verbal or behavioural responses from participants (Axinn & Pearce, 2006).

Disadvantages to this method are highlighted using the “total survey error” framework discussed by Visser, Krosnick et al. (2000). These authors suggest that four significant factors affect social/psychological research meeting its primary goal of accurately measuring a specific construct. These are:

1. Coverage Error, or possible bias when, from the pool of potential participants, some portion of that survey population is not included.
2. Sampling error, or the random differences that invariably exist between any sample and the population from which it was selected.
3. Non-response error or the possible bias created when data are not collected from all sample members.
4. Measurement error, or distortions in the assessment brought on by respondents’ own behaviour, interviewer behaviour or questionnaire variability.

To conclude, surveys containing standardised questions (both open-ended and closed) provide the research participant with a mechanism with which to articulate a personal perspective of satisfaction. Furthermore, having acknowledged the efficacy of incorporating both data collection methods within a single investigative framework the ‘mixed method’ approach seems well suited to investigating the socio-psychological dimensions of athlete satisfaction.

3.2.4 LONGITUDINAL STUDIES

The longitudinal survey approach is both an explanatory and descriptive tool which allows a researcher to examine change or stability. To be considered longitudinal, a study must be utilised to collect data at least twice and in contrast to a more traditional experimental

approach does not typically have a randomised control group. Although the lack of a control group is problematic, it can be somewhat alleviated by a sufficiently large and diverse sample (de Vaus, 2000; Magnusson, Bergman, Rudinger, & Toerestad, 1991). Both of these conditions are met in the current research and will be discussed in more detail in Study One.

Three key longitudinal survey designs; 'prospective', 'retrospective' and 'prospective-retrospective' (P-R) longitudinal designs were identified. Prospective designs focus on exploring change before a specific event or throughout the natural course of, for example in sport, a competitive season. An example of a prospective approach utilised in sport was Laurin and Nicolas's (2009) examination of changes in satisfaction of academy football players during their respective sport seasons (see Chapter 2).

In contrast to prospective designs, retrospective designs focus on exploring change after a specific event, for example, post-operative care, an accident or a sporting event such as a championship game or race. Further to the example provided earlier in the thesis through the investigation of effects on Subjective Well-Being by Suh, et al. (1996), a further example based on research relating to childbirth experiences is provided by Conde, Figueiredo, Costa, Pacheco, & Pais (2008). Their findings indicated that within a period of 6 months post partum, positive changes in perceptions of, in this case, well-being was observed. However, their particular approach would appear limited in its ability to accurately assess the causal nature of the effects the birthing experience had on well-being due to a lack of pre-birth experiential data. Additionally, difficulties emerge in the ability of the respondent to be cognisant of their level of satisfaction, the extent of being aware of the

conceptual referent for their feelings and a willingness to disclose those feelings in an honest and unencumbered way (Nunnally, 1978). As a consequence, limited information is to be gained in relation to the intensity of satisfaction or its duration (short-lived or long-term feeling).

Because a peak event is the central variable of interest in a longitudinal sense for this specific research, the integration of both single approaches to create a prospective-retrospective design is preferred. An example is provided in a study investigating change over time for divorcees by Lucas (2005). Lucas reviewed an 18-year panel study of 30,000 German citizens to examine reaction and adaptation to divorce. And showed negative correlations with life satisfaction were noted as one approaches divorce, and a gradual rebounding over time. Thus, Lucas suggests the association between divorce and life satisfaction is due to both pre-existing differences and lasting changes following the event. Further studies using Prospective-Retrospective designs are found in other life domains such as the effect of disabilities on life satisfaction (Powdthavee, 2009) as well as self-efficacy beliefs (Berentson-Shaw, Scott, & Jose, 2009). In relation to disabilities and their effect on life satisfaction Powdthavee's study drew data from a national survey beginning in 1991 and continuing to the present day. Although able to determine life satisfaction both before and after a critical event or process ending in disability, participants were not consciously aware that a specific event such as a disability would occur. Thus, the study differentiates itself from the peak 'sporting' event because data obtained from athletes is influenced by the conscious nature of the experience. An example of the conscious role of the intervening variable for the individual is found in Berentson-Shaw, et als (2009) self-

efficacy and birth experience study noted earlier in this section. Similar Prospective-Retrospective approaches are relatively new strategies in sport psychology research with no studies using this approach directly relating to athlete satisfaction and a peak sporting event being found. Therefore, reasons for acknowledging the centrality of the conscious athletic experience in survey design choice relates specifically to factors such as enjoyment (LeUnes & Nation, 2002; Pfeffer, et al., 2004), and from a goal attainment viewpoint (Locke & Latham, 1984; D. P. Schwab & Cummings, 2001), the necessity for conscious reflection for future performance improvement (Pfeffer, et al., 2004). In other words, in an athletic context the event itself matters as part of the reflective process both before and after its occurrence! The utilisation of a longitudinal research approach allows these changes to be investigated by having both individual and aggregate tracking and measures taken forward for future analysis (Axinn & Pearce, 2006; de Vaus, 2000; Fowler, 2009; Reis & Judd, 2000; Visser, et al., 2000).

3.2.5 DEVELOPING PARAMETERS FOR CHOOSING THE SURVEY

INSTRUMENT

The aim of this section is to bring together the conceptual and scientific aspects of investigating athlete satisfaction in relation to a peak sporting event. It begins with an explanation of the process undertaken to arrive at the Athlete Satisfaction Questionnaire (Riemer & Chelladurai, 1998) as the preferred survey instrument for the current research. In contrast to earlier single dimensional tools the Athlete Satisfaction Questionnaire possessed a range of design elements which were considered positive, such as its 'self-report' nature

and multi-dimensionality. Throughout the process of choosing the Athlete Satisfaction Questionnaire, limitations were identified and discussed.

3.2.6 METHODOLOGICAL APPROACHES TO ASSESS SATISFACTION

An important step in the research process is investigating possible methodological approaches for athlete satisfaction research. Underpinning the search for an appropriate methodology is the assumption that a satisfaction response is by its very nature a private and thus subjective experience often with no outward signs or objective measures that can be accurately assessed by an independent observer. Single-item direct inquiry for example is one possibility for assessing an individuals' satisfaction. However, limited information is to be gained in relation to the intensity of satisfaction or its duration (short-lived or long-term feeling), as this specific method has been found to be unreliable within psychometric theory (Nunnally, 1978).

Additional sources of data such as behavioural observations, experiments and interviews can help control method variance. However, when assessing individual levels of satisfaction problems arise with each of these techniques. Interviews for example, have a real potential to produce rich data from respondents. However, the researchers perceived proximity to the source of that satisfaction, particularly when it is in the form of a significant other such as a coach may be problematic due to the social desirability aspect or stigma associated with a particular response (Nunnally, 1978). In fact, research suggests that face-to-face interviews tend to induce more socially desirable responses and lower accuracy than computer-administered or paper-and-pencil questionnaires (Podsakoff, MacKenzie, Yeon-Lee, &

Podsakoff, 2003). Furthermore, observer ratings of social skills are unrelated to measures of global satisfaction and consequently affective or behavioural cues alone are not sufficient to identify satisfaction. Highlighting this observation is the media who often take the liberty of using words like 'satisfied' or 'dissatisfied' to describe a particular athlete's behaviour. For example, the same photo of a newly crowned world champion football coach (Franz Beckenbauer) walking the stadium after Germany's 1990 World Cup final win produced a range of explanatory statements from different media sources. *Geschafft!* (We did it!), *Gluecklich!* (Happy), *Zufrieden!* (Satisfied) were all words used to describe the same photograph. Because of the range of interpretations possible by independent observers caution is urged when attempting to label individuals as 'satisfied' or 'dissatisfied' from behavioural observations, as judgements of this nature may not be accurate or representative of what the individual is experiencing at that particular time.

A further approach is the use of self-report methodologies, albeit these are often viewed negatively by researchers (Spector, 1994). Overall it is generally accepted that the use of self-reports provide a valid indicator of people's feelings toward specific topics or themes in a range of domains such as sport (Riener & Chelladurai, 1998). From both a practical and plausible viewpoint there would appear to be no more effective way than gauging the individuals' perceptions of their satisfaction. Asking individuals to discuss satisfaction may intuitively appear easier because of the common nature of the term in every day settings. However, the use of an anonymous instead of a focussed research questionnaire which did not refer directly to satisfaction may reduce methodological bias but result in time loss and higher levels of data redundancy. Therefore, a self-report scale attempting to measure

satisfaction must be particular about tapping self-perceived satisfaction attributes or deficits, and not behavioural situations which may not accurately reflect the experiential nature of satisfaction.

In contrast, the sole reliance on self-report data is also a limitation. Self-report methods, particularly applied to cross-sectional research designs, have been criticised due to potential common method variance contamination and percept-percept inflation. In other words, some of the observed variance between research variables are attributed to the measurement technique rather than due to true construct relationships (Spector, 1994). Most researchers agree that common method variance and percept-percept inflation are potential problems in behavioural research, particularly in surveys where all the variables are collected in a cross-sectional manner from the same respondents (Cook & Campbell, 1979; Crampton & Wagner, 1994; Gerhart, 1998; Podsakoff, et al., 2003). There are however, a range of procedural solutions countering common method variance associated with cross-sectional designs, such as temporal separation of each measure, ensuring the anonymity of respondents, and the improvement of scale items. However, the most common strategy is to collect data from multiple sources (coaches, team-mates or family and friends) and the use of multiple data collection methodologies for the constructs of interest (Podsakoff, et al., 2003). Such triangulation of data might inevitably provide a solution, for example, in organisational/industrial studies; however there are potential limitations in regards to athlete satisfaction research. For example, and as noted earlier, the information gained from behavioural observations or from significant others may be misleading considering the

construct of interest is related to an individual's perception or appraisal of satisfaction-related factors.

3.2.7 EXPLAINING THE DEVELOPMENTAL PATHWAY FROM GENERIC TO ATHLETE SATISFACTION SURVEY INSTRUMENTS

This section introduces the journey athlete satisfaction researchers have taken refining the survey tools available to them. Although a range of survey instruments informing the development of dedicated athlete satisfaction surveys are found in the following section, Table 3.2 (see below) lists the more influential scales as a means of guiding the overall discussion. The scales are discussed in further detail throughout this section.

Scales used by researchers with Components allowing Athlete Satisfaction to be discussed	Dedicated Athlete Satisfaction Questionnaires
Perceived Motivational Climate in Sport Questionnaire (PMCSQ) (Balaguer, Duda, & Crespo, 1999; Newton, Duda, & Yin, 2000)	Scale of Athlete Satisfaction (SAS) (Chelladurai, Imamura, Yamaguchi, Oinuma, & Miyauchi, 1988)
Leadership Scale for Sport (LSS) (Chelladurai, et al., 1988)	Athlete Satisfaction Questionnaire (ASQ) (Riemer & Chelladurai, 1998)
Ohio Sport Satisfaction Questionnaire (Lesyk & Kornspan, 2000)	
Group Environment Questionnaire (GEQ) (Carron, Widmeyer, & Brawley, 1985)	
Task and Ego Orientation in Sport Questionnaire (TEOSQ) (L. King & Williams, 1997)	

Table 3.2 Survey instruments incorporating Athlete Satisfaction dimensions

As a general comment, before sport specific survey instruments became prevalent researchers tended to extrapolate existing surveys with satisfaction markers into the sport setting (Bebetsos & Theodorakis, 2003). For example Davis' Interpersonal Reactivity Index and Barrett Lennard's Relationship Inventory (designed to indicate nurses empathy toward patients) were incorporated into Bumps' (1988) research on the influence of coach empathy on, among other elements, athlete satisfaction. Or more notably Johnson and Norem-Hebeisen's (1977) Social Interdependence Scale was refined for sport specific settings by LaPoint, Johnson, Johnson and Krotee (1978) before its utilisation in Johnson, Johnson and Krotee's (1986) research on the 1980 U.S. Olympic Ice Hockey Team. Further topic areas such as Total Quality Management (TQM) as discussed by Chelladurai and Riemer (1997) and work place satisfaction (Case, 1998; Robbins & Rosenfeld, 2001) have utilised industry based survey instruments for sport specific research. An example is the Job Satisfaction Scale which was utilised because of its ability to be conceptually linked to the athlete satisfaction perspective. In other words, there is a perceived connectivity between it and job satisfaction variables such as the athlete-organisation relationship, and an employer-employee relationship (Mawson, 1993; Riemer & Chelladurai, 1998). As a survey instrument, the Job Satisfaction Scale in particular focussed on outcomes related to 'involvement', 'stress' and 'attendance' as well as characteristics such as relations with co-workers and position (job) security. It is thus unsurprising that due to the perceived conceptual links between topic areas that such scales as discussed thus far were initially used to inform research in other domains such as athlete satisfaction.

In contrast to Weiss and Friedrichs' (1986) modification of Smith's Index of Organizational Reactions with its six subscales for use in the athletic context, the developers of the Job Satisfaction Scale went a step further than simply referencing the source of their particular inspiration in the literature. Instead the authors initiated a stringent and rigorous scale development approach which was later applied by researchers such as Riemer and Chelladurai (1998) to their investigations into athlete satisfaction scale development. In addition to the earlier practice of transposing material from one life domain into another to create surveys, the literature indicated a methodological approach where sport specific and non-specific measures were used collaboratively. For example, in a study on training practices and overtraining of Swedish athletes Kentta, Hassmen, et al. (2001) used a survey instrument that included sport specific (training behaviour) as well as non-specific items (psychosocial stressors).

Although different models of survey design are evident in the existing literature, what is considered important for the general conceptual framework underpinning the decision relating to athlete satisfaction scale selection is explained in Buckley Carragher, et al's (1992) review of Smith, Kendall and Hulin's (1969) development of the Job Descriptive Index (JDI). Buckley and colleagues conclude that future researchers cannot be confident about the results of job satisfaction measures or the relationships which have been reported between job satisfaction and criteria of interest unless they are a) used in conjunction with other instruments, as found with the Kentta, et al's study, or b) confirmatory factor analysis is undertaken in an attempt to reduce the effects of random and systematic measurement error. These comments are also supported by Chelladurai and Carron (1978) and later

Summers (1991) by suggesting that an application of mainstream [leadership] theory to sport situations may, in fact, not adequately account for the distinctness of sport.

Therefore, given the discussion above it was decided to utilise a survey instrument designed for sport from within the sport domain. Two approaches were considered. Firstly, combining multiple instruments as found in Lattimore (2000) which asked participants to complete the Perceived Motivational Climate in Sport Questionnaire (PMCSQ), Beliefs About Effective Coaching Strategies in Gymnastics (BAECSG), Task and Ego Orientation in Sport Questionnaire (TEOSQ) and a modified Motivational Response Questionnaire (MRQ). Pragmatically, this multiple ‘sport-related’ questionnaire approach is considered limited. In particular, methodological warnings about dimensional redundancy and respondent boredom (Alreck & Settle, 1995; Pallant, 2007) as well as empirical limitations such as estimating reliability and random error effects (Tabachnik & Fidell, 2007; Zeller & Carmines, 1980) made the utilisation of multiple inventories heavy on individual items less attractive. The second approach considered was the combination of dimensions from individual surveys to create a new multi-dimensional survey instrument. However, this approach has been criticised by Smith, Kendall, et al. (1969) who suggest that the inherent danger of such an approach is that only the dimensionality of the selected factors may be revealed and not the dimensionality of, in this case, athlete satisfaction itself. Further critique of both approaches suggested that where one or more physical scales are represented in a multi-dimensional instrument, the scale may combine and confound apparently distinguishable physical components (Marsh, 1996). As a counter argument, Shields and Gardner (1997) did show that when enough diligence is applied to this

technique there is the possibility of a more statistically valid scale as a consequence. In this instance the researchers were able to combine a dimension from each of two scales and reliability scores improved. However, the literature review found the combination strategy and the methodological diligence required to produce a valid tool to be rare. An exception to this observation was the ‘Sport Satisfaction Scale’ designed for a specific study conducted by Granito and Carlton (1993) in which the authors argued for the importance of satisfaction with participation ahead of the concept of success. They considered that since investigating the relationship between locus of control and job satisfaction had produced consistent findings that the same could apply in the team sport setting. Although their scale indicated adequate internal consistency (Cronbach’s alpha coefficient of .73) the researchers failed to utilise the prime beneficiaries in scale development, instead relying partly on a similar industrial/organisational-based scale used by LaRose (1981). Furthermore, six additional researcher-generated questions completed the scale. Not surprisingly, results indicated that correlations between locus of control and player satisfaction were not significant, and that overall the study failed to fully account for all aspects of player satisfaction. Although alternative explanations were discussed such as controllability of the number of games played at the time of testing, the general conclusion was that further development of a sport satisfaction measure was necessary to ensure an accurate reflection of the aspects of athlete satisfaction.

3.2.7.1 Prime Beneficiary Perspective

In addition to the above discussion, a number of studies indicate how the prime beneficiary perspective has been neglected in past scale development. For example, Lesyk and

Kornspan's (2000) utilisation of Lesyk's (1995) Ohio Sport Satisfaction Index which states that self-reports were undertaken using 15 'commonly stated beliefs' listed by the author about the benefits of sport participation. Or Kamphoff and Gills (2005) adaptation of satisfaction questions from Widmeyer and Williams' (1991) research on group vs. individual sport cohesion research which, along with the lack of prime beneficiary involvement in survey design is also noted as possessing "no psychometric properties" (p.295). Furthermore, the Perceived Motivational Climate in Sport Questionnaire (PMCSQ) also possesses an athlete satisfaction dimension along with its two main dimensions (task-involving and ego-involving). Its initial pool of 106 items were generated from (reworded) relevant items contained in the Classroom Achievement Goals Questionnaire (Ames & Archer, 1988) or developed by the investigators. The three items in the scale representing satisfaction with team membership were also developed by the authors. A final example is Unruh's (1998) 'athlete satisfaction with athletic training services' research in which a scale was developed using a description of duties designed within an industrial/organisational setting. These particular studies show the inherent weakness of this approach as the targeted beneficiaries' (the athletes themselves) interpretation of the tasks, roles and expectations of the variables influencing their satisfaction were not investigated.

The instrument closest to providing a solid platform with which to study athlete satisfaction was designed to support a cross-national study conducted by Chelladurai, Imamura, et al. (1988) investigating athlete satisfaction with leadership and personal outcomes as well as the relationship between leader behaviours and satisfaction. This section of their investigation initially became a subscale of the Leadership Scale for Sport (LSS), a 40-item

scale (2 versions, 'leadership preference' and perceived leadership scales) which measures five dimensions of leader behaviour in sport. As part of their literature review Chelladurai, Imamura, et al. (1988) acknowledged the multifaceted nature of satisfaction in relation to coaching leadership. They indicated variables such as individual performance and growth, team performance, and team climate. Based on the athlete satisfaction perspective toward leadership a further 18 items were incorporated from within those factors to develop the Scale of Athlete Satisfaction. Following a factor analysis a two-factor 10-item subscale explaining 79% of the variance (7 items for satisfaction with leadership with a Cronbach's alpha of .95, and 3 items for satisfaction with personal outcome at .86) was completed. A summation by the researchers in the cross-national research indicated that separate factors of satisfaction with the team itself and its performance did not emerge.

Interestingly, Chelladurai, et al. (1988) suggest that 'great confidence' can be placed in the two measures of satisfaction used in the study. They suggest that the factor loadings and internal consistency estimates were quite high as well as the criteria for item selection was 'stringent'. Whereas the first two points invoke confidence in a robust empirical development process for the scale, the last point referring to item selection can be challenged. In particular, the lack of evidence suggesting that the central figures, the athletes, has not been incorporated in the scale development process. This is best highlighted in an observation in which the researchers discuss that it was unfortunate "separate factors of satisfaction with the team itself and its performance did not emerge" (p.386). It would appear difficult to ascertain how these factors could materialise out of items that were generated from previous research and not the athlete themselves? A further,

more poignant observation from the authors suggest the need for a more elaborate design and methods that will measure various aspects of athletic involvement which may *include* leadership and team performance as part of a comprehensive scale.

Based on these observations, the question was asked; if such an attempt was made to incorporate dimensions from separate measures with their inherent limitations as discussed above, could the time be better spent investigating a contextually appropriate survey instrument that had been developed ‘from the ground up’? Certainly Chelladurai, Imamura, et al’s (1988) suggestion that future research may assist in the construction of more elaborate design and methods in the development of a comprehensive scale of athlete satisfaction would appear relevant. Therefore, in order to remain consistent with the previously defined search parameters, the decision was made that time was better spent with the latter of the two approaches.

Having chosen to search for ‘developmental’ instead of ‘transposed’ and/or ‘integrative’ design philosophies, challenges relating to the *type* of developmental design were found. For example, choosing general statement questions which examine levels of satisfaction regardless of their source such as “Are you satisfied with your sport?” (MacDonald & MacIntyre, 1997) simple and less cumbersome this approach may initially appear, the overriding limitation is that researchers may not be able to confidently ascertain the contextual intentionality of the response. Therefore, “the inclusion of the major facets, or at least a multiple item measure” (MacDonald & MacIntyre, 1997, p. 6) was undertaken to increase validity and response clarity. In this sense, the ‘facet’ approach attempts to

determine and measure the most relevant dimensions of athlete satisfaction, thus helping understand the ‘structure’ of the topic.

In summary, there are studies utilising subscales and dimensions of athlete satisfaction. A recent example is Bray, Beauchamp, Eys, & Carron’s (2005) investigation into the effects of role clarity on role ambiguity and athlete satisfaction using five subscales of the Athlete Satisfaction Questionnaire. The research pre-Athlete Satisfaction Questionnaire saw attempts to broaden the dimensionality of athlete satisfaction as highlighted in a number of studies from this section of the thesis. For example, the Scale of Athlete Satisfaction (Chelladurai, et al., 1988) has been interpreted in this research as the beginning of a more critical relationship between researchers and the topic of athlete satisfaction in general. However, none of the scales investigated for the current research indicated a conscious effort on behalf of the researchers to investigate more fully what it is to be satisfied as an athlete. In other words, the need to include the voice of the prime beneficiary in scale development is an almost universally neglected aspect of survey construction.

Based on the above arguments, the Athlete Satisfaction Questionnaire was identified as the survey instrument most likely to provide athletes with the best opportunity to express their satisfaction with the sporting experience. Consequently, the following section introduces the survey instrument and discusses its applicability in a New Zealand setting.

3.3 THE ATHLETE SATISFACTION QUESTIONNAIRE (ASQ)

The Athlete Satisfaction Questionnaire (ASQ) is a multi-dimensional survey instrument that Riemer and Chelladurai (1998) consider to be psychometrically sound and useful across a variety of settings (Bray, et al., 2005; Riemer & Chelladurai, 1998; Sullivan & Gee, 2007). As such the authors suggest that the ASQ assesses the most salient features of athletic satisfaction by distinguishing between ‘performance’, ‘leadership’, ‘team’, ‘organization’, and the ‘individual athlete’. It incorporates 15 facets which are listed as follows:

individual performance (3 items); team performance (3 items); ability utilization (5 items); strategy (6 items); personal treatment (5 items); training and instruction (3 items); team task contribution (3 items); team social contribution (3 items); ethics (3 items); team integration (4 items); personal dedication (4 items); budget (3 items); medical personnel (4 items); academic support services (3 items); and external agents (4 items) (Chelladurai & Riemer, 1997)

The complete version of the ASQ has 56 questions. These are presented on a uni-dimensional 7-point Likert scale anchored at 1 (*not at all satisfied*) and 7 (*extremely satisfied*). Higher scores reflect greater satisfaction (Bray, et al., 2005). These anchors differ from research conducted by one of the two primary ASQ developers (Chelladurai) who in his cross-national studies with Japanese researchers utilised bi-polar anchors ‘extremely dissatisfied’ and ‘extremely satisfied’ (Chelladurai, et al., 1988; Chelladurai & Ogasawara, 2003). Although these anchors are also found in other satisfaction scales such as Kamphoff and Gill’s (2005) jealousy in sport research it is not consistent with the ASQ developed by Riemer and Chelladurai (as discussed above).

Although Chelladurai, Imamura, et al. (1988) suggest that satisfaction may be affected by any factors influencing performance, the contexts of leadership and team sport would seem the most popular. The majority of leadership research thus far has investigated coach – athlete/s or athlete – athlete/s formal and informal interactions. Results show strong positive correlations between positive leadership interactions and athlete satisfaction in a range of research settings (Eys, et al., 2007; Kocak & Akioglu, 2005; Wang & Henrich, 2007; Yusof, 2002). ‘Team’ research included not only leadership but a number of other independent variables such as team building (Blessing, 2004), goal orientation (Maday, 2000), role clarity (Bray, et al., 2005) and intra team communication (Sullivan & Gee, 2007). In all cases results indicated positive relationships between the independent variable and higher levels of satisfaction. For example, Bray, et al’s (2005) study indicated that higher levels of ‘role clarity’ for those requiring it equalled higher levels of individual satisfaction.

In summary, Russell’s (1982) comments that specific scale constructs are potentially advantageous in more accurately identifying experiential variability would seem to support the development of the ASQ as an instrument more closely aligned to the paradigm. However, Riemer and Chelladurai (1998) have also identified limitations stemming from the statistical development of the scale. For example, they have not included in their item refinement process and factor comparisons with other satisfaction scales the dimension of the ‘opposition’ as this relates to specific athletic contests. Such dimensions may in fact be strong satisfaction indicators for athletes. In particular, when considering the immediate link with a particular opponent or competition and its influence on the overall athletic experience, i.e. not wanting to compete against individuals or teams who display ‘maladaptive behaviours’ (J. G. H. Dunn et al., 2006). Therefore, it seems advantageous to

include, where possible, the voice of the athlete beyond the limitations of statistical analyses. This particular approach is evident in Chapter Five where all data collected are included in the evaluative framework.

3.3.1 EMBEDDING A BIPOLAR FRAMEWORK OF SATISFACTION IN TO THE ASQ

As a general observation, the ASQ has more dimensionality than previous scales investigating athlete satisfaction (see earlier discussion). However, in its current form confident administration is limited to specific contextual and methodological settings. From a contextual perspective, the ASQ is grounded on the assumption that satisfaction is a positive affective state, thereby excluding dissatisfaction from the explanatory framework. Early research into ‘Affect’ (Tomkins, 1962) led in particular by Herzberg’s (1959) two-factor model gave early credence to this separatist argument by suggesting that “the opposite of dissatisfaction is not satisfaction, but, simply, no dissatisfaction” (Mullins, 2005). Therefore, it was postulated that ‘satisfaction, a positive affective state (Riemer & Chelladurai, 1997) and dissatisfaction, a negative affective state possessed distinct explanatory elements (Vlachopoulos, et al., 2000; Watson, et al., 1988)

Furthermore, the advent of Positive psychology (Compton, 2005), which:

- a) Delineates itself from the more treatment based models of psychology that endeavour to “repair damage within a disease model of human functioning” (Seligman & Csikszentmihalyi, 2000), and

b) Influences practitioners to find approaches for achieving positive subjective experiences (Seligman & Csikszentmihalyi, 2000) such as satisfaction by way of a constant interface with satisfying experiences (Edmunds, Ntoumanis, & Duda, 2008; Granito Jr & Carlton, 1993; Mouratidis, Vansteenkiste, Lens, & Sideridis, 2008), would appear to be consistent with the ASQ's focus on positive elemental experiences.

In contrast, an indication of the bipolar nature of the satisfaction construct is found in Locke's (1969) 'Range of Affect' hypothesis. Locke suggests that dependent on the level of 'importance' an individual places on the 'have-want' discrepancy the wider the affective reaction between 'great satisfaction' to 'great dissatisfaction' will be. Locke's position has not only been supported by empirical studies in the area of job satisfaction, but also in "Quality of Life" (QOL) research (Chia-Huei & Yao, 2006; Suh, et al., 1996). In particular, Suh, et al. (1996) summarised the results of their zero-order correlations by indicating that negative events crossed over to and correlated inversely with Positive Affect. Furthermore, when the opposite type of event was controlled, both negative and positive Affect was influenced by events of both valences. In other words "...Positive Affect and Negative Affect may be separable, but "not totally independent" (p.1098). And finally, Warr (2007) further strengthens the efficacy of a bipolar approach by suggesting that separating satisfaction and dissatisfaction, "at both a conceptual or empirical level, can no longer be justified" (p.235).

In summary, embedding bipolar, as opposed to uni-dimensional anchors has theoretical merit. As a result of this observation, the current research approach undertaken in this thesis incorporated dissatisfaction as an integral element in understanding athlete satisfaction.

3.3.2 THE BI-POLAR AND MULTIDIMENSIONAL NATURE OF ATHLETE SATISFACTION

3.3.2.1 *Bi-polarity*

As mentioned earlier in the thesis, academics in particular have tended to develop isolated and prescriptive methodologies which investigate and assess satisfaction experiences. This approach may not be tenable in domains such as sport. Examples from the sporting context which corroborate the viewpoint that satisfaction should be considered a bi-polar construct where satisfaction and dissatisfaction are located on the same continuum are found in research by Cox (2002) who suggests that prior to competition athletes will find themselves experiencing a range of positive and negative emotions as a necessary element of their peak performance. Argyle (1996) also suggests that individuals' mental states possess a 'range' of dynamics from the positive through to a variety of negative Affects, which may also be broadened, in a clinical sense, to encompass mental disturbance and illness (p.14). In addition, maladaptive behaviours (e.g. anger/depression), and psychosocial and emotional problems such as loneliness, tension and anxiety can also be linked to the athletic experience (J. C. Dunn, Dunn, & Bayduza, 2007; Kunesh, Hasbrook, & Lewthwaite, 1992; Weiss & Duncan, 1992).

3.3.2.2 *Multidimensionality*

Over the past decades, a number of measures have been developed to assess various aspects of satisfaction. Some of these scales measure satisfaction or dissatisfaction as distinctly individual dimensions (Slocum-Gori, Zumbo, Michalos, & Diener, 2009) by capturing the concept under investigation using a single global measure. This unitary conceptualisation of satisfaction implies that being satisfied is undifferentiated in nature, and is experienced in the same way by all satisfied people regardless of environment. Although these measures have been utilised, satisfaction researchers generally acknowledge the contextual factors of where the satisfaction feelings might stem from. For example, when asked about satisfaction using a global measure, the individual may be thinking about their intimate relationship(s), their workplace, their education setting, their extended family, sport or their social relationships in general.

Consequently, Riemer and Chelladurai (1998) argue that satisfaction is a multidimensional construct and therefore should be measured using multidimensional instruments which indicate that satisfaction can result from several different personal or social situations, can be experienced in many different ways, and need not affect all areas of one's functioning. Further, multidimensional conceptualisations particularly in the sport realm describe satisfaction as a multifaceted phenomenon with various manifestations, such as social and task oriented elements.

In summary, researchers have taken two different approaches to the measurement of satisfaction. Single dimensional or global scales view satisfaction, regardless of whatever is causing the individual to feel their level of satisfaction, by focussing on the commonalities underlying the experience of satisfaction for all individuals. Multidimensional measures on the other hand, attempt to differentiate among various hypothesised manifestations of satisfaction.

3.4 RESEARCH DEMOGRAPHY

As a general comment, Sherman, Fuller, et al. (2000) suggest researchers acknowledge the environmental context in which a survey instrument is developed. When athlete satisfaction research began to emerge in the 1980's, the large majority of studies focussed on North American (Canadian and United States) university students. However, a search of the literature indicated that the definition of 'amateur' can be considered different between the United States (Padilla & Boucher, 1987) and other international settings (Sherman, et al., 2000). For example, Smith (1985) suggested that North American universities may call their sport amateur, but in fact practice professionalism. Smith's summation is supported when incorporating North American universities' financial data where up to 3.5% of a university's annual operational budget is dedicated to intercollegiate sport. This particular figure equates to, in some cases, hundreds of millions of dollars for high ranking schools (NCAA, 2008). When one considers that involvement in sport at a New Zealand tertiary education institution is predominantly an informal activity, lacking tangible organisational resources (USNZ, 2008) then the differentiation between the environments helps to provide insight into possible response anomalies between both athlete groups.

As alluded to above, a new research setting involves the utilisation of new cohorts and thus new perspectives to what are inevitably the same set of questions. Consequently, the next section introduces both the original North American setting in which the Athlete Satisfaction Questionnaire was developed and the current New Zealand research setting.

3.4.1 NORTH AMERICAN COLLEGIATE SPORT

North American universities generally utilise a two-tiered system for sport offerings. These two independent levels adhere to specific strategic agendas.

- The Intercollegiate Athletics Department (IAD) is an organisation dedicated to facilitating the development of both sporting performance in an exclusive domestic competition structure and academic achievement of a selected group of priority sports and athletes. Intercollegiate athletes are considered sporting amateurs but are able to train and compete in predominantly professional environments.
- ‘Recreational’ and ‘Intramural’ sports function as part of the social fabric of the university setting and thus cater for individuals wishing to participate in sporting activities that are not linked to the Intercollegiate Athletics program (UCLA, 2008). Its main objective is to provide quality sports programs for students, staff, alumni and the general public with an emphasis on participation (UCalgary, 2008). At this specific level there is little to no strategic emphasis placed on the critical synergy between higher education and elite sport performance which underpins the operational philosophy of the Intercollegiate Athletic Departments.

3.4.2 ATHLETES IN THE CURRENT RESEARCH SETTING

Having chosen a two-study approach to the investigation of satisfaction and the peak sporting event in a New Zealand context, participant cohorts were established to broaden the research demography. Firstly, New Zealand tertiary education students involved in representative sport provided an easily accessible cohort for athlete satisfaction response capture. However, this particular cohort cannot be considered representative of sport representatives as a whole. Therefore, an expansion to include National Sports Organisations and their representative athletes was undertaken. This strategy is discussed later in Study One.

Suffice it to say, a direct contrast to the North American university sport system can be drawn with the New Zealand tertiary education environment to provide an example of where athlete responses to questions relating to satisfaction may be found. For example, New Zealand tertiary education providers do not have Intercollegiate Athletic Departments. All sport is found somewhere on a ‘Recreational’/‘Intramural’ through to club/provincial representative continuum with two annual inter-university competition events (New Zealand Universities Winter and Summer Games). This particular approach can also be defined as amateur, relatively poorly organised with athletes expected to predominantly self-fund their sporting activities (USNZ, 2008). Whereas both North American universities and New Zealand tertiary education providers allow mature students as competitors, New Zealand places no age restriction on representative students in the domestic sport setting. Age

restrictions only become evident when athletes compete in international University competitions (Rule 1.6 FISU Regulations).

3.5 SUMMARY

This chapter explored a large quantity of research discussing survey instruments employed to investigate athlete satisfaction and athlete satisfaction in relation to a peak sporting event. Early attempts to understand the phenomenon involved the utilisation of predominantly single dimensional aspects of athlete satisfaction such as ‘cohesion’, ‘leadership’, ‘organisational effectiveness’, ‘coaching’ and ‘performance’. However, informed by Glover’s (2009) critique of Thurston’s (1935) discussion on ‘simple structure’ the efficacy of “doggedly attempting to construe a world of utterly independent "dimensions" and associated constructs in splendid isolation" (p.1) is challenged. In other words, satisfaction is a multi-dimensional construct which is considered more representative of a ‘real world’ perspective.

Based on these conclusions the ASQ has been shown to be the best data collection option to address the multi-faceted/multi-dimensional nature of athlete satisfaction. However, limitations to the ASQ were exposed and discussed. These included general statements by Riemer and Chelladurai (1998) which implied that the ASQ was a suitable evaluative tool for males and females as well as team and individual sport athletes. The studies undertaken in the following chapters seek to investigate their assumption.

CHAPTER FOUR

INVESTIGATING THE ATHLETE SATISFACTION QUESTIONNAIRE IN THE NEW ZEALAND TERTIARY EDUCATION SETTING

STUDY ONE, PHASE ONE

4.1 INTRODUCTION

Since the development of the ASQ a little over a decade has passed. In this time the ASQ has received some support as an instrument for measuring athlete satisfaction. Specifically, North American researchers have accepted its validity. For example, Bray (2005) (Canadian Ice Hockey players), Karreman (2009) (Canadian Intercollegiate; multiple sports), and Maday (2000) (US Runners) undertook their research without investigating its appropriateness in their specific research context. In contrast to the acceptance of the ASQ by North American researchers, Nunnally (1978) suggests: “...most measures should be kept under constant surveillance to see if they are behaving as they should. New evidence may suggest modifications of an existing measure or the development of a new and better approach to measuring the attribute in question...” (p.87). Most importantly in the context of the current research, Riemer and Chelladurai (1998) suggest that although there is a likelihood that the ASQ will “fit equally well in an entirely new sample, judgment should be reserved until such a procedure is carried out” (p.148). Following this advice, Kocak and Akioglu (2005) (Turkey), Tsigilis, Masmanidis and Koustelios (2009) (Greece) and Singh and Surujlal (2006) (South Africa) undertook exploratory analyses to ensure that the

instrument was appropriate for their specific research settings. An exception to this approach was Yusof's (2002) study of Malaysian school children.

Based particularly on Nunnally's earlier comment this phase of the research investigated whether the items informing the development of the original ASQ were the same in the New Zealand context. Thereafter, content analysis was undertaken and the resulting data set subjected to peer-review for coding. Only then was an Exploratory Factor Analysis of the new data set undertaken, which was consistent with the approach taken by the international researchers discussed in this section.

As discussed earlier in this thesis, separating satisfaction and dissatisfaction into distinct explanatory elements is considered conceptually inconsistent. However it is an important explanatory step for the current research, as it allows the reader to compare current (satisfaction as a positive affective state) data with that from the original ASQ research (Chelladurai & Riemer, 1997; Riemer & Chelladurai, 1998). Furthermore, a separation of the two affective dimensions of athlete satisfaction help an understanding of how the constructs are drawn together to create a bi-polar response framework.

In this chapter as well as chapter five the focus will be on the transferability of the ASQ into a new research setting.

4.2 METHOD

4.2.1 DATA COLLECTION

4.2.1.1 Procedures

New Zealand tertiary educational institutions' sport studies departments ($n = 7$) were invited to participate in the administration of an item generation survey focussing on capturing responses relating to athlete satisfaction. Each institution was sent a 'letter of assistance' and an electronic copy of the survey web-link. With a strong emphasis placed on a distribution procedure that did not "offend or intrude inappropriately" (Andrews, et al., 2003, p. 189), email lists of prospective respondents were not requested from participant institutions. Consistent with this strategy, those institutions supporting the research ($n=6$) were asked to distribute an invitation to participate in the current research to potential athletes. Within seven days of receipt the tertiary institutions were requested to forward the survey information to potential participants via their email distribution lists and report back that they had done so. This particular strategy was chosen ahead of an invitation/survey combination email after a meta-analysis by Andrews, et al. (2003) concluded that high non-response rates have been noted when emails contained both the invitation to participate and the actual survey itself. Furthermore, Andrews, et al. (2003) concluded that although this method of recruitment does not address non-response rates, overall distribution lists which target the primary survey population do increase coverage, thus facilitating a higher survey participation probability. The approach also supported the likelihood of a reduction in evaluation apprehension by respondents as well as counter-productive socially desirable,

lenient or acquiescent responses (Cho & LaRose, 1999; S. L. Wright, 2005). All six institutions complied with the initial distribution request.

The delivery of the survey took place using the ‘online’ questionnaire administration tool “Survey Monkey” which, as Andrews, et al. (2003) suggests, provides automatic verification and ‘response capture’ in a dedicated data base. This approach also allows for a significantly faster, less cost intensive data collection and analysis than the traditional pen and paper (PP) survey method.

Adding the ‘online’ approach to Survey Administration

The development of Riemer and Chelladurai’s (1998) ASQ utilised a single survey ‘pen and paper’ (PP) method for data collection. Bandilla, Bosnjak and Altdorfer (2003) suggest, “one can safely assume” that, for example, the online medium will continue to be of rising benefit to researchers, particularly when accessing “the young and individuals with higher education” (Bandilla, et al., 2003, p. 240). Contrastingly, Demeris (2006) discusses the dangers of “progressive de-humanization” through an expanding interest in online data collection methods. Although this debate continues the Bandilla, et al. (2003) research counters Demeris’ methodological anxiety by indicating that when demographic data from a survey is held constant no significant differences between ‘online’ and ‘PP’ responses are found. In addition to Bandilla, et al’s justification there were further reasons for utilising the online survey approach as presented in the following summary.

- *Social variables.* Whereas older respondents may still consider the internet slightly challenging and thus prefer a more traditional method of response (Lonsdale,

Hodge, & Rose, 2006), younger respondents are more likely to provide a richer source of qualitative data when using an online survey compared to the PP approach (Fenlason & DeMay, 2002).

- *Survey Supervision.* Because of the independent nature of the online survey approach individuals are able to access a specific survey at a time of their choosing (Lonsdale, et al., 2006). In contrast, invitation to participate, and the administration of the PP survey requires a more cost intensive and time consuming approach. A particular concern is the introduction and administration of the survey in a face-to-face setting. Such an approach could be seen as coercive and thus alter an individual's willingness to participate. However, both Bandilla, et al. (2003) and Lonsdale, et al. (2006) indicated that mean scores using both approaches produced a "surprisingly high level of agreement" (Bandilla, et al., 2003, p. 241). Consequently, with neither approach showing benefit ahead of the other, the online approach was chosen.
- *Financial Incentives.* Bosnjak and Tuten (2003) suggest that most web surveys possess some form of financial incentive for participation. When compared to no incentive or altruistic motives cash incentives can double response rates (Tuten & Bosnjak, 2000). Whereas it had been shown that in PP mail out surveys a pre-payment system is most effective at increasing overall completion rates, this was not corroborated using a web-based approach. Here it was found that 'only' prize draws significantly increased willingness to participate, the number of individuals starting

the survey, increased actual participation, and a reduction in the number of incomplete surveys (Bosnjak & Tuten, 2003). Based on the costs involved in administering PP surveys with the highest likelihood of success, it was decided that the financial incentive approach used in online research (as discussed above) was appropriate for this research.

4.2.1.2 Measures

Riener and Chelladurai's (1998) item generation questionnaire was adapted to provide participants with 14 open-ended questions relating to satisfaction and dissatisfaction. Ethics approval was sought and accepted by the Massey University Human Ethics Committee. Examples from the Item Generation Questionnaire presented on the Survey Monkey website are:

1. *Please describe, in as much detail as possible, your most satisfying sport experience ever and state why it was the most satisfying for you?*
2. *Please describe in as much detail as possible, your least satisfying sport experience ever and state why it was the least satisfying for you?*

Within the 14 question survey, participants were also asked to respond more broadly than from simply their individual perspectives by listing what they considered the global determinants of satisfaction to be as well as any other thoughts about the construct. Descriptive data, including demographic information such as age, gender and ethnicity were collected utilising relevant questions from the New Zealand Census (2008). Respondents

were also asked to list their primary sport where their participation had been at representative level (The full survey can be found as Appendix 1).

4.2.1.3 Participants

The current survey participants were athletes from New Zealand Universities (n=171), who had achieved representative status in their particular sport. Females were the majority participant group at 58% (n=99) and males 42% (n=72). The age range of participants was 17-43 years with an average age of 21.2 years (SD = 4.018). In addition, 41 team and individual sports were represented (See Appendix 2).

4.2.2 DATA ANALYSIS

For the purposes of data analysis a multi-layered approach was used. The initial phase consisted of two sections:-

1. Demographic data were analysed to provide an explanatory framework for the current research setting, and
2. Content analysis of the Item Generation Questionnaire responses took place using the qualitative data analysis tool HyperRESEARCH (Dupuis, 1994).

HyperRESEARCH enabled participant responses to be coded, organised, retrieved and later compared (where relevant) to the items found within the original ASQ. At this early stage no judgement was made regarding the relevance of captured items to athlete satisfaction. The underlying philosophy was to assess the data from an idiosyncratic perspective as an

individual's interpretation of meaning "is more accurately a process of insightful intervention, discovery or disclosure" (van Manen, 1990, p. 79). The analysis approach undertaken is thus considered an acknowledgement of the value or importance an individual places on any given satisfaction facet. It was felt that the strategy of including all facets from the current study in the analysis process was not only plausible from both a conceptual and theoretical viewpoint, it would also assist in addressing the original authors' concern at the potential loss of "meaningful facets" due to a lack of empirical support (Rierner & Chelladurai, 1998, p. 137).

4.2.2.1 Factor Allocation by Peer Review Group Members

In this second section the allocation of facets of athlete satisfaction from the item generation phase took place. As a first step, a peer review panel was called in to being and invited to:

- Collapse individual participant responses into facets through the utilisation of HyperRESEARCH.
- Allocate (both as individual members of the panel and later as a collective) facets exposed from the content analysis (n = 221) into the eight dimensional categories provided in the original ASQ development process, and
- Provide a consultative option in the case of discrepancies arising from both the initial content analysis phase and the secondary phase in which the data were subjected to factor analytic techniques.

Members of the Peer Review Group included the lead researcher and two post graduate students. One of the independent panel members was a former international athlete (female)

and the second a representative football player (male). Both were also completing a Masters qualification in sport. Difficulty with response allocation was anticipated because of the addition of ‘dissatisfaction’ to the item generation questionnaire. To reduce researcher bias (Rosenthal, 1966; Sackett, 1979) through data dredging (Ioannidis, 2005) the two postgraduate students were not cognisant of Riemer and Chelladurai’s (1998) original research process, which did not include dissatisfaction as a response option for participants. Any responses not aligned with the eight ASQ categories were ‘put to one side’ and discussed further when the peer review group came together to compare results.

4.2.3 RESULTS

As noted in chapter three, results from study one are interpreted from both exploratory and comparative contexts. In particular, this approach provided opportunities to compare what are essentially new findings (because of the absence of research utilising the ASQ in a New Zealand setting) with those of previous studies.

4.2.3.1 Descriptive Statistics

Consistent with the ‘comparative’ strategy for articulating new findings in this chapter the following table presented data from the current and Riemer and Chelladurai’s (1998) athlete satisfaction item generation phases. As shown (see Table 4.1), little meaningful demographic comparison was achieved with Riemer and Chelladurai’s (1998) initial item generation phase.

Author/s	Participant Numbers	Status	Gender (%)	Age (Years)
Rierner & Chelladurai (1998)	n = 74	North American Current and Former Collegiate Athletes	N/A	N/A
Current Study (2009)	n = 171	NZ University Students with representative status in sport	Female (n = 99) (57.9%) Male (n = 72) (42.1%)	17-43 yrs (SD = 4.018) M = 21.21 yrs

Table 4.1 Comparative Athlete Demographic Data between the original ASQ research and the current study

Cross tabulation Sport Type, Gender and Ethnicity

With a strong investigative focus on the specific variables of ‘gender’ and ‘sport affiliation’, the following table presents the differential nature of the two cohorts. See Table 4.2.

Type				%
Individual Sport		Male	22	13%
		Female	41	24%
			63	
Team Sport		Male	47	28%
		Female	57	33%
			104	
Not Specified			4	2%
		TOTAL	171	100%

Table 4.2 Team/Individual sport and gender and cross tabulation

In general, the results indicate that team sport athletes were the dominant demographic. Although team sport athletes provided a greater number of participants the gender split is less pronounced than in the individual sport athlete cohort where there are almost twice the numbers of females involved in individual sports as males.

4.2.3.2 *Sport Affiliation*

A total of 41 sports (team sports $n = 17$, and individual sports $n = 24$) were listed under sport affiliation. A number of athletes from two sports (Rowing and Sailing) provided no differentiation between crew and individual participation and were consequently removed from the data analyses that required that specific differentiation. However, their demographic data remained embedded in the descriptive analysis process. The following table provides an example of the sports represented in the current sample (see Appendix 2 for a full listing of sports).

Sport	% of Research Population	% of National Population (SPARC, 2008)
Rugby	12.4% (21 participants)	5.7%
Football (Soccer)	10.1% (17 participants)	6.8%
Athletics	4.1% (7 participants)	Less than 1%
Tennis	1.2% (2 participants)	9.3%
Underwater Hockey	0.6% (1 participant)	Less than 1%

Table 4.3 Example of participation distribution for current research versus national demographic data

In comparison to the current data, item generation data in Riemer and Chelladurai's (1998) original research, does not indicate specific sport affiliation amongst its stage one participants ($n=74$; current and former collegiate athletes). However, later data analysis indicated the use of athletes from three team sports for ASQ scale refinement. The results obtained by Riemer and Chelladurai from their 'team only' investigation confirmed their postulate that the ASQ is primarily designed for team sport athletes.

Consistent with Riemer and Chelladurai's findings as mentioned above, results from the current study indicate a positive bias toward 'Team' sport athletes. Team sport athletes appear to have a more complete opportunity to express their satisfaction through the original item generation questionnaire than their individual sport counterparts (see Table 4.4). This specific finding may indicate an issue with Riemer and Chelladurai's (1998) suggestion, that the ASQ is applicable across both sport types.

Sport Type and Gender	Percentage of explanatory facets of satisfaction/dissatisfaction utilised
Individual Female	39.4%
Individual Male	54.1%
Team Female	89.0%
Team Male	75.2%

Table 4.4 Differentiation between Gender and individual or team sport groups and the percentage of facets used in each group compared with overall facet numbers

4.2.3.3 Differentiating Satisfaction and Dissatisfaction Data

This section focuses on a content analysis of current research participant responses to Riemer and Chelladurai's (1998) amended (14 items instead of 7) item generation questionnaire. Data were placed into HyperRESEARCH in separate 'satisfaction' and 'dissatisfaction' response categories. Peer reviewers undertook a content analysis with 2888 individual responses collapsed in to 221 (satisfaction; n = 109 and dissatisfaction; n = 112) preliminary facets of athlete satisfaction. Once analysed as individual categories the data were then combined to provide an interpretative framework consistent with the bi-polarity postulate discussed earlier in the thesis.

‘Satisfaction’ data

Here the current research’s facets relating to satisfaction inducing experiences into the original ASQ framework. The resultant content analysis indicated a 99.85% overall facet-to-category fit. Four responses (0.15%) did not meet the criteria. Allocation of these non-fit responses is discussed later in this study (see section 4.2.3.4). Therefore, the following data table is representative of 1856 individual satisfaction responses (see Table 4.5).

ASQ Categories	No. of Responses per Category	%	No. of Facets per Category	%
1. Ind. Task Outcomes	941	50.7%	50	48.5%
2. Ind. Social Outcomes	236	12.7%	7	6.8%
3. Ind. Task Processes	211	11.4%	21	20.4%
4. Team Task Processes	180	9.7%	12	11.7%
5. Team Task Outcomes	150	8.1%	5	4.9%
6. Team Social Processes	115	6.2%	4	3.9%
7. Team Social Outcomes	19	1.0%	2	1.9%
8. Ind. Social Processes	4	0.2%	2	1.9%
	1856	100%	103	100%

Table 4.5 Current Research Responses relating to the Athlete Satisfaction Questionnaire categories (Satisfaction)

In table 4.5, the first column indicates the hierarchy of satisfaction categories. The second column represents the sum total of responses identified within a specific facet, allowing a comparison between response and facet percentages. For example, seven facets (6.8% of overall facets) were allocated to the category of Individual Social Outcomes. However, the number of responses within those seven facets was 12.7% of total responses recorded. A possible interpretation of this discrepancy could be, for example, that although individuals mention social outcomes often, they are basically discussing common themes through the use of more global statements. For example:

“Because when everyone in a team gets along it makes playing together easier as you have better trust, communication and teamwork. It is more fun when you can laugh at each other, help others out and go through the good and bad times together”.

“Team mates, it’s just great getting to know people in a sporting context and developing friendships which last a long time”

In contrast to the more global statements discussing individual *social* outcomes, 21 facets were identified by the peer review group to explain 211 individual *task* responses which may mean that task processes are more complex. This is further evidenced when interpreting the data within a broader ‘task’, as opposed to ‘social’, context in which individuals discussing ‘tasks’ utilise a wider range of explanations (85.5%) than in the ‘social’ context (14.5%). For example,

“They always put effort into trainings and games. Had a good attitude and were focused in trainings”

“Me and the other senior players and forwards could make really effective ‘p c’ movements that worked for everyone”

In addition to the social versus task context, ‘Individual’ satisfaction needs are highest amongst all respondents at 74.8% (n = 1392) compared with ‘Team’ satisfaction variables at 25.2% (n = 464). And ‘Outcome’ orientation by individuals (72.5% of all responses) indicates dominance over ‘Processes’ (27.5%).

To summarise, two interpretations of the data were undertaken. Firstly, differences between explanatory nuances were highlighted. For example, the items necessary for an athlete to articulate their satisfaction with social situations is small in comparison to those needed to explain the technical and tactical differences found within each of the 41 sports represented

in the study. Secondly, based on the current ‘satisfaction’ findings, athletes are predominantly focussed on individual factors relating to the tasks that lead to a successful outcome. Differentially, athletes are less interested in social outcomes, team factors, or the processes required when completing a task.

‘Dissatisfaction’ data

This second data set introduced the results of the item generation questions related to dissatisfaction inducing experiences. Results showed dissatisfaction responses produced a less parsimonious fit at 82.7% for dissatisfaction versus 99.85% for satisfaction data. This discrepancy is further discussed under “Satisfaction as a bi-polar construct” later in the chapter. Consistent with the previous Table 4.5 the left column indicates the hierarchy of categories of athlete satisfaction.

ASQ Categories	Facets per Category	%	Responses per Category	%
6. Team Social Processes	40	35.7%	413	40.2%
2. Ind. Social Outcome	16	14.3%	177	17.2%
1. Ind. Task Outcome	10	8.9%	150	14.6%
5. Team Task Outcome	23	20.5%	90	8.8%
4. Team Task Processes	7	6.3%	11	1.1%
3. Ind. Task Processes	3	2.7%	8	0.8%
8. Ind. Social Processes	1	0.9%	2	0.2%
7. Team Social Outcomes	0	0%	0	0%
Category 9. Uncontrollable <i>(incorporates the following facets)</i>				
9a. Officiating	2	1.8%	12	1.2%
9b. Injuries	1	0.9%	84	8.2%
9c. Lack of Competitive Opportunity	6	5.4%	61	5.9%
9d. Life priority	3	2.7%	20	1.9%
TOTAL	112	100%	1028	100%

Table 4.6 Current Research Responses relating to the Athlete Satisfaction Questionnaire categories (Dissatisfaction)

The data from the above table indicates three primary areas of dissatisfaction. Foremost dissatisfaction appeared to be strongly linked to social elements (Team Social Processes) of sporting activity. For example,

“A team-mate drinking and partying the night before a major event”

“Their inability to gel with the rest of the team, thinking they are awesome when they aren’t that special”

This is followed by results linking task-related categories (1, 5, and 9) together. Examples of statements related to outcome dissatisfaction are:

“Worrying too much about their own games after they've played them instead of looking to the next game and what they can do better there”.

“Were not always desperate to win, in other words they didn't mind losing”

“...being in a team and giving your all and the team giving nothing”.

Finally, the least active dissatisfaction response block belonged predominantly to categories in which respondents maintain some level of situational control (3, 8, and 7). For example,

“One team mate in particular had to disagree at everything I said, difficult to lead a team with that type of distraction”

“Did not pay attention in trainings, especially when planning moves, and then in game situations did the wrong thing, which stuffs up the plan”

In particular, these explanations can be supported by not only the dissatisfaction, but also the 'satisfaction' data. For example,

“When I was in a basket Ball club in Japan, I was quite satisfied when I could feel that I could be a part of the reason of winning. Supporters cheered me as well as team mates. That feeling was great”

“Motivating younger skaters at training to want to train hard and encouraging them to keep working at it”

In contrast, the data indicates lower levels of satisfaction responses are found in categories in which lower levels of individual control were evident. For example,

“Being on a volleyball team where I knew my input into the season wasn't as much as I would of liked to give but was never given the chance or the opportunity to show my strengths or have a coach that would try to grow me. It was like the older I was the less effort I was given and there was nothing I could do change their attitude towards me. Frustrating as I wanted to get better but there was no time or service for this to happen”

4.2.3.4 Incorporating statistically weak and ‘non-fit’ items into the athlete satisfaction construct

A further discrepancy related to the development of the ASQ concerns Riemer and Chelladurai's (1998) omission of statistically weak facets from further analysis. As discussed earlier in the chapter, all satisfaction responses were included for exploratory analysis in acknowledgement of the idiosyncratic nature of the current research setting and the mixed method approach to data analysis. As shown in Table 4.6 in the previous section the peer review group suggested a definition for a ninth category to encompass the non-fit responses ('negative performance attributions'). However, the term "uncontrollable" was chosen as a way of a) encapsulating both positive and negative performance attributions, and b) creating a sub-category where anomalous items, for example Riemer and Chelladurai's (1998) statistically insignificant items, can be placed. This particular category incorporated 4 facets, 'officiating', 'injuries', 'Lack of Competitive Opportunity', and 'Life Priority'.

In relation to Riemer and Chelladurai's (1998) earlier research into athlete satisfaction, only 'injuries' is found as a facet within the ASQ. The peer review group established for this specific research concluded that the North American perception of the questions focused on the effectiveness of the post injury response by 'medical personnel'. In contrast, New Zealand athletes were indicating awareness at the loss of situational control which resulted in injury. Generally speaking, the results show a different focus by the New Zealand research participants relating to the term 'injuries'. For example,

“The injuries you receive from hockey like getting hit by the ball”

“The injuries that I have gained through playing such as being targeted by other players in opposite teams”.

“The injuries I got. Not the injuries that you get from freak accidents on the field, but the accidents that were caused by deliberate intention of the opposition”.

In summary, the findings suggest dissatisfied athletes are focussed on social factors ahead of their individual performance factors. Furthermore, the least dissatisfying elements of the athletic experience are individual and process related factors. Contrastingly, the important factor for satisfaction is the individual task outcome.

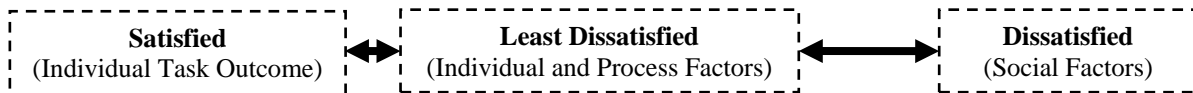


Diagram 4.1 Interpreting findings using a satisfaction/dissatisfaction continuum

These results indicate a hierarchical discrepancy (calculated by the number of participant responses aligned to a specific athlete satisfaction category) between how dissatisfaction and satisfaction are interpreted by participants when introduced as separate constructs, albeit, when placed on a response spectrum (as shown in Diagram 4.1), results disparity is diminished. The following section focuses on this specific approach to interpreting results.

4.2.3.5 A bi-polar approach to athlete satisfaction response interpretation

As discussed in the literature review in chapter two, coupled with the example provided in the previous section (see Diagram 4.1), justification for the fusion of the single dimensional

constructs of satisfaction and dissatisfaction into a bi-polar construct is made. A bi-polar approach to understanding athlete satisfaction is based on providing research participants with an opportunity to more fully express their satisfaction through a broader affective interpretation of the athletic experience. To investigate the efficacy of such an approach, the closeness of fit between both single item constructs (satisfaction and dissatisfaction) was ascertained. A total of 6.3% (n = 182) of overall responses were considered non-fit items. Inverted, this result indicated an excellent overall fit (93.7%) of the same individual explanatory facets being identified in both satisfaction and dissatisfaction analyses. Having achieved such a robust result, it would appear that the utilisation of a bi-polar response framework not only has theoretical but also empirical support. Although an excellent fit was established for satisfaction and dissatisfaction items, the findings also highlighted two hierarchical perspectives of note. Their ranking can be seen in Table 4.7 below.

Study One	(Satisfaction)	(Dissatisfaction)
Individual Task Outcome	1	4
Individual Social Outcome	2	2
Individual Task Processes	3	7
Team Task Processes	4	6
Team Task Outcome	5	5
Team Social Processes	6	1
Team Social Outcomes	7	9
Individual Social Processes	8	8
Uncontrollable	9	3

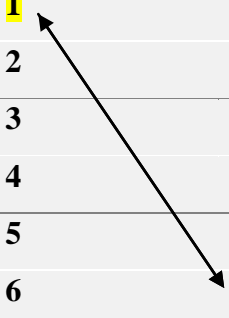


Table 4.7 Hierarchy of satisfaction and dissatisfaction responses across athlete satisfaction categories

The above findings indicate that existing categories were, generally speaking, hierarchically dissimilar. Of particular note is inversion of ranking “Individual Task Outcome” which was the top satisfaction category and the second to last category in terms of dissatisfaction. However, because of the high congruence between satisfaction and dissatisfaction responses, (as indicated in Diagram 4.1), a bi-polar interpretation of the findings is possible. As a consequence, it would seem that it is a change of terminology, for example from ‘least dissatisfied’ to ‘satisfied’ which broadens the spectrum of meaning of the individual item used by the individual respondent, thus facilitating the positive utilisation of a bi-polar framework for interpreting results.

The second hierarchical discrepancy noted from the above table was the positioning of category nine in the dissatisfaction table. In this case the four new response facets were mentioned more often than four of the existing categories, thus indicating their relative importance within the dissatisfaction construct. Both of these hierarchical discrepancies are elaborated on in the discussion section of this chapter.

4.3 DISCUSSION

Having already developed an understanding of athlete satisfaction from both conceptual and theoretical perspectives, the primary aim of this chapter was to begin an empirical investigation into the transferability of the ASQ to a new research setting. Based on limitations exposed in the preceding chapters, for example, the lack of prime beneficiary perspectives in the development of scales relating to athlete satisfaction (Riemer &

Chelladurai, 1998) as discussed in chapter three, the investigation itself was both comparative and exploratory. This particular approach ensured that new insights could be added to an already existing, albeit limited, body of knowledge on the topic. In particular, the utilisation of a mixed method approach as discussed in chapter three sought to ensure that the 'voice' of the prime beneficiary was an integral aspect of a more complete understanding of athlete satisfaction. To achieve the overriding goal of this research phase two objectives were articulated.

1. To compare research demographics between the original ASQ development and the current research setting.

Underpinning the design of the current research was the objective of ensuring strong internal validity by remaining, where possible, consistent with the original development phase of the Athlete Satisfaction Questionnaires' data collection methods (Elmes, Kantowitz, & Roediger, 2006). Although possible from a methodological perspective, eventual comparative demographic data from the original research undertaken by Riemer and Chelladurai (1998) was limited (See Table 4.1). Based on the overall review of the literature in the area, it has been assumed in this research that the lack of relevant demographic data in different phases of their research did not indicate a less rigorous approach, but was a reflection of the assumptions that one makes as researchers in the North American collegiate sport setting.

Drawing together the limited comparative demographic data showed that few similarities exist between the original North American and New Zealand research settings. For

example, Riemer and Chelladurai (1998) provided only vague data relating to sport affiliation. At one stage of their research they indicated the utilisation of three team sports. In contrast, the current New Zealand research setting involved 41 team and individual sports. Consequently, the broader representation of sports should assist with results generalisations.

Adding to the challenges posed to the current research, there is also the question of generalising the results to wider populations when utilising focussed cohorts of students such as those found in the University setting. Meta-analyses conducted by Gordon, Slade, et al. (1986) and Peterson (2001) suggest that researchers should exercise caution when extending results obtained by using college students and making generalisations to broader non-college student populations. This particular threat to external validity (Brewer, 2000; Shadish, Cook, & Campbell, 2002) was moderated in the current research by the inclusion of a broader participant demographic. Although the average age of respondents compared favourably with the North American collegiate sport setting, the New Zealand cohort possessed a broader overall range (17-43yrs). As discussed in Chapter Three the possibility to include a broader demographic, whether sport affiliation or age related, is due to a less organisationally stringent engagement with sport in the New Zealand University context. In other words, the New Zealand university sport setting is less structured, less competitive and thus more comparable to the North American 'Intra-mural' sport offerings. Consequently, differences between research cohorts were expected.

2. Investigate the efficacy of a bi-polar approach to data response collection.

A key methodological change in the current study was the inclusion of dissatisfaction as an anchor for the previously single dimensional satisfaction continuum used by Riemer and Chelladurai (1998). Based on Locke's (1969) Range of Affect hypothesis, adding dissatisfaction to create a bi-polar response continuum was considered a more inclusive approach to understanding the broader affective dynamism of satisfaction experienced by athletes. However, in order to explore this possibility the original process of capturing participant responses using the single dimensional constructs of satisfaction and dissatisfaction took place. This specific strategy allowed the current research to compare the satisfaction data as well as exploring the new dissatisfaction dimension.

Helping justify this particular approach, Spector (1994) suggested that if research measures have been carefully developed and constructed they should be resistant to common method variance. In this instance, the differential response rates and high results congruence for satisfaction (the positive affective state) questions between the original and current research process indicated the strength of those original item generation questions. Although untested, it seemed plausible that the identical questions using dissatisfaction as opposed to a satisfaction marker should enjoy similar confidence levels. In fact, results from the item generation process indicated an excellent dissatisfaction response fit to the underlying structure of the ASQ. Reasons for the comparatively small number of non-fit responses were twofold. Firstly, facets of athlete satisfaction were excluded from the original ASQ development process due to a lack of statistical strength (Riemer & Chelladurai, 1998), even

though in one particular case the facet had been identified in the original content analysis process. Consequently, statistically weak items were included in this specific data analysis as a way of negating Riemer and Chelladurai's (1998) self-assessed limitation. Secondly, by simply adding the new 'dissatisfaction' dimension, a broader range of responses became available, and overall in the analysis process any non-fit items, albeit small in number, were identifiable.

In a general sense, the closeness of fit between satisfaction and dissatisfaction responses using the item generation questionnaire would seem to negate the argument made by Vlachopoulos, et al. (2000) and Watson, et al. (1988) that these two constructs possess distinct explanatory elements. Based on these findings, the small level of aggregated difference between perceptions of affective states was not considered enough to challenge Locke (1969) and Warr's (2007) position encouraging the utilisation of a satisfaction-dissatisfaction (bipolar) continuum in future research.

4.4 CONCLUSION

This phase of the research has provided a level of confidence in the facets of the ASQ. However, the research also showed that the 'satisfaction' dimension alone does not ensure the broader dynamics of the athlete satisfaction construct are represented fully in the current research context. Consequently, including dissatisfaction responses has a) provided the respondent with a stronger 'voice' as they attempt to articulate their idiosyncratic satisfaction as athletes, and b) enabled researchers to ascertain response importance for

athletes through the hierarchical interpretation of the satisfaction and dissatisfaction item generation data. Sufficed to say, this phase of the research has successfully integrated both affective states into a bi-polar response framework, thus ensuring that both satisfaction and dissatisfaction constructs may be viewed equally (Gillham, 2000; Suh, et al., 1996).

In general, the ASQ is transferable into the New Zealand research setting. Therefore, Phase Two undertook a factor analysis to determine how to best represent the facets of athlete satisfaction in the later research phases. A new participant cohort was established and the ASQ with an incorporated bi-polar response framework was utilised in the second phase of research presented in Chapter 5.

CHAPTER FIVE

INVESTIGATING THE UNDERLYING STRUCTURE OF ATHLETE SATISFACTION QUESTIONNAIRE DATA CAPTURE FROM THE CURRENT RESEARCH COHORT

STUDY ONE, PHASE TWO

5.1 INTRODUCTION

Having undertaken an item generation and peer review process in the previous chapter, this second phase of Study One was designed to add a further dimension to the investigative process. In particular, the decision to broaden the research framework was informed by Carron, Widmeyer and Brawley's (1985) suggestion to researchers that differences can be expected between constructs that are considered distinct from a conceptual perspective which, through empirical methods of analysis, may indicate dependent measures. In other words, combined with the process undertaken in Phase One this second approach was instigated not to look for one explanation as much as it was to provide a more open and balanced assessment of the data under investigation at this particular point in time (Altrichter, Posch, & Somekh, 1996; Bryman, 2009; J. W. Cresswell, 2003; Crotty, 1998; O'Donoghue & Punch, 2003). For the purposes of the current research Phase Two follows Tabachnik and Fidell's (2007) and Pallant's (2007) Exploratory Factor Analysis pathway as a means of investigating the underlying structure of ASQ responses in the current research context. Because a new participant cohort was formed, demographic data is also presented.

5.2 METHODS

5.2.1 DATA COLLECTION

5.2.1.1 *Procedures*

Seven New Zealand tertiary education institutions' sport studies departments and 56 National Sporting Organisations (NSO's) were invited to participate in Phase Two of the current research. The ASQ was sent to the education institutions and NSO's who forwarded the survey to individuals located on their respective data bases. In contrast to Stage One, educational institutions and NSO's were asked to provide distribution numbers ($n = 491$). Seven and 21 days after the initial invitation the organisations were asked to re-send the link in an attempt to further increase participation rates.

5.2.1.2 *Measures*

Participants were instructed to complete a revised version of Riemer and Chelladurai's (1998) ASQ using a 7-point Likert scale ranging from Very Dissatisfied (1) to Very Satisfied (7). Scale scores were based on a sum of item responses. Demographic data captured in this phase was used to inform not only this specific phase of the research but it also constituted Wave One of the longitudinal study discussed later in Study Two. Because of this research approach respondents were asked to report their sport affiliation, representative status, age and gender (NZCensus, 2008).

5.2.1.3 Participants

New Zealand athletes who had achieved representative status in sport were the source of research participants. Of the 491 potential respondents, 223 completed the survey, thus providing an actual overall return rate of 45%. A variety of team and individual sports (n=40) and their derivations, i.e. Shooting sports were represented by Small-bore and Clay Target shooters, were used (see Appendix 3 for a full listing). Female athletes made up the majority of participants at 58% (n=129) and males 42% (n=94), averaging 20.90 years within the 17 – 30 year band width. 16 (6%) respondents were under 17 years of age and 57 (21%) above 30 years.

5.2.2 DATA ANALYSIS

Because of the linear process required to ascertain the appropriateness of Factor Analysis for this specific data set both the procedure and results are combined. This approach ensures that the justification for method application and the resultant findings provide the reader with a coherent explanatory pathway. Thereafter, item-to-factor allocation is presented and explained.

5.2.3 RESULTS

The first step of the data analysis process investigated survey responses for significant lost data. In this instance, of the 223 surveys collated in this phase of the research 13 respondents had significant lost data (more than 30% of questions left unanswered) and

were excluded from the analysis. Consequently, a total of 210 surveys were available from which demographic and empirical data were drawn for analysis. To undertake Factor Analysis using the complete data set of 56 items a 'Listwise' deletion was undertaken, reducing the sample size to 162 surveys.

To assess the appropriateness of factor analysis on the data set ($n = 162$), the Kaiser-Meyer-Olkin (K-M-O) measure of sampling adequacy (.92) and the Bartlett test of sphericity were obtained. The result was significant (approx. Chi-square = 10302; $df = 1540$; sig .000), supporting the factorability of the correlation matrix. Item-total correlations were generally high, with 44 of the 56 items generating correlations greater than 0.45. The results were subjected to exploratory factor analysis to determine the underlying factor structure. To allow for correlations between factors the chosen method for extraction was principal axis factoring with oblique rotation (Direct Oblimin) using the statistics program SPSS Version 16.

Principal Factor Analysis revealed the presence of 10 components with Eigenvalues exceeding 1.000, which is considered a common criteria for factor usefulness (Leech, Barrett, & Morgan, 2008). Using the guiding principles of the Screeplot examination in which the 'elbow' of the screeplot can help determine component retention, a four component solution appeared most likely.

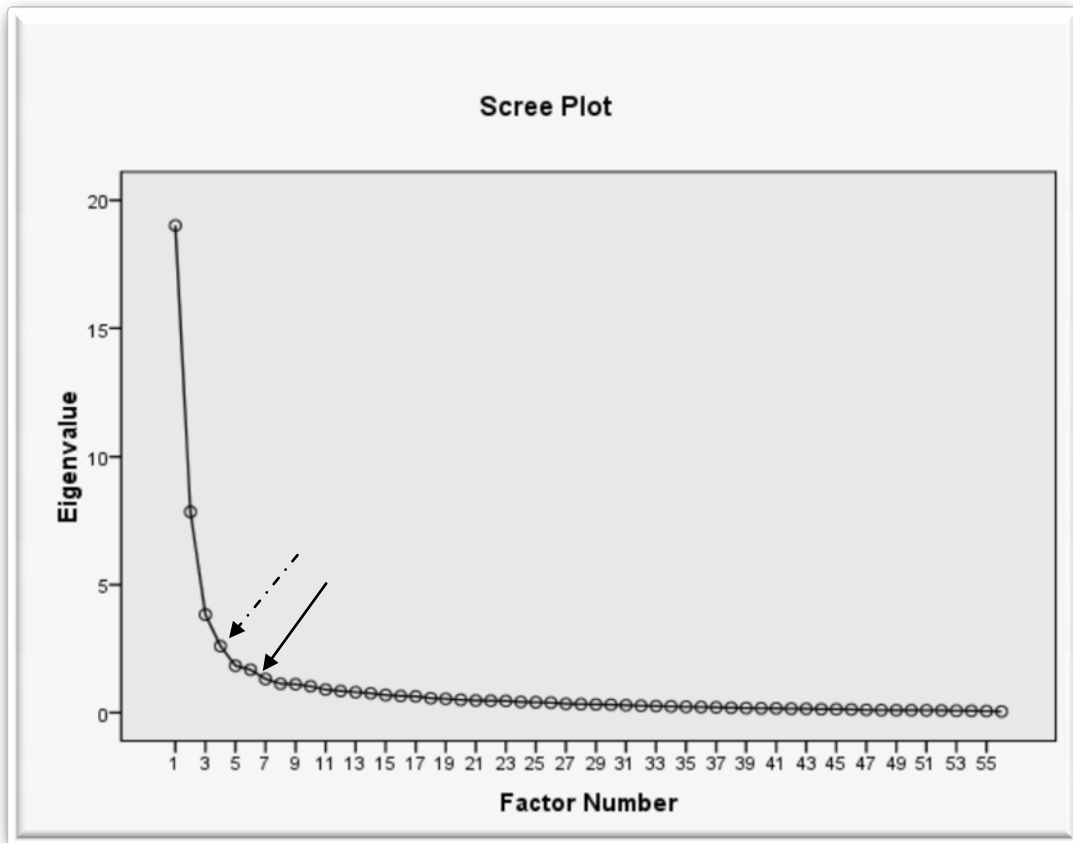


Figure 5.1 Screeplot for factor retention highlighting 4 and 6 factor solutions

However, Pallant (2007) and Tabachnik and Fidell (2007) stated that it is prudent to remember that the technique of Factor Analysis is about ‘exploration’, and thus the interpretation of the data is reliant on the researchers’ judgement, rather than “hard and fast statistical rules” (p.190). In other words, the researcher can determine the number of factors that best describe the underlying relationship amongst variables. Therefore, four, five and six component analyses were undertaken based on their relative positions on the screeplot elbow (see Fig. 5.1 above). In addition, because of the exploratory nature of the research it is considered of value to maximise simple structure (Pallant, 2007). The Direct Oblimin with Kaiser Normalisation procedure was the preferred method for explaining factors as it provided useful insights into the degree of correlation between factors. However, there is

also an acknowledgement that in order to obtain simple structure both orthogonal, in this research Varimax, and the oblique method are to be examined and the “clearest and easiest” rotations reported (Kline, 1994; Pallant, 2007). Having settled on the six factor solution, a parallel analysis was conducted as it has been shown to be the most accurate measure compared to Kaiser’s criterion (Pallant, 2007), which tends to overestimate the number of components. Results of the procedures discussed above are found in Table 5.1. Furthermore, the Table presents the individual classifications of each of the six factors. These are discussed in depth in the following section.

Factor	Items per Factor	Actual Eigenvalue from PCA	Accumulated Percentage	Criterion value from parallel analysis	Factor Retention	Classification <u>Satisfaction (with)</u>
1	19	33.953	33.953	2.1778	Yes	“Team Affiliation”
2	9	14.012	47.965	2.0591	Yes	“Coach Interaction”
3	4	6.838	54.803	1.9752	Yes	“Medical Support”
4	8	4.640	59.443	1.9063	Yes	“Individual Performance”
5	7	3.272	62.715	1.8356	Yes	“Coaching Strategy”
6	9	2.993	65.708	1.7731	Yes	“(External) Support”

Table 5.1 Summary data confirming the utilisation of Factor Analysis and the presentation of factor classifications

5.2.3.1 Factor Classification

This section presents the results of the Factor Analysis and classifies the six factors identified in the previous section. Classification, albeit a somewhat subjective process (Miller, Acton, Fullerton, & Maltby, 2002), was achieved using a dual approach. Firstly, communalities were ascertained. A key point made by Pallant (2007) is that “it is often

better to interpret the communality values after you have chosen how many factors you should retain” (p.196). Communalities assist in identifying factors that may be candidates for exclusion from the analysis (Schwab, 2010), with scores below .30 requiring further investigation (Pallant, 2007). Communalities data are recorded on each of the factor tables found in this section. Once the factor set has been completed a subscale ranking of key words in the dominant items (higher factor loadings) inform the overall factor title (Child, 1990).

Factor One – “Satisfaction with Team Affiliation”

Factor One produced 22 items spread over two sub categories explaining 71.2% of total variance. The removal of three weak items produced a single factor 19-item scale, instead of a two-factor, solution (Table 6.1). Two of the three items ‘amount of money spent on my team’ and ‘fairness of the team’s budget’ were initially considered weak as they both loaded comparatively well with Factors One (Satisfaction with Team Affiliation) and Six (Satisfaction with Environmental Support). As a consequence, because a confident empirical allocation of items was not possible the peer review group from Study One was asked to make suggestions for either re-allocation or maintenance of the status quo. This process led to the relocation of the two items to Factor Six as both were interpreted by the reviewers as discussing ‘support’ mechanisms. A third item was discussed further (‘the extent my role matches (matched) my potential’). The item would tend to indicate that an athlete perceives an external force, in this case most likely the team as a collective or the coach controls whether he/she believes that their utilisation for the achievement of performance is being maximised. This item loaded equally with both Factor One and Four

(Satisfaction with Individual Performance). Thus, the peer review group also questioned the result ambiguity for this item and recommended further analysis to ascertain whether a better fit could be established. Due to the inconclusive results thus far, and a desire from a conceptual perspective to maintain the item, subscale reliability tests were conducted with the item both included and removed from Factors One and Four. The decision to utilise Cronbach's Alpha (CA) coefficient (a measure of internal consistency) to assist in defining item appropriateness was initially informed by the size of category one which numbered 20 items. Pallant (2007) indicates that in cases where less than 10 items are present that a mean inter-item correlation may be more appropriate. However, and as in this case, when more than 10 items are available for analysis Cronbach's alpha is the preferred option. Whereas a positive coefficient above .70 indicates scale reliability (Gaur & Gaur, 2006; Leech, et al., 2008), Pallant (2007) suggests further refinement with CA scores above 0.8 should be considered preferable for factor analysis. Reliability statistics for the 20-item scale indicate 94.3% (n = 198) of participants' responses using a listwise deletion were valid. The results are:

	CA before removal	CA after removal	Summation
Factor One	.977	.978	Removal increased factor reliability
Factor Four	.815	.795	Removal decreased factor reliability

The result supported placement of the item in Factor Four and consequently removal from Factor One. The overriding justification is the weakening of Factor Four with the items removal and its decline below the CA level considered appropriate by Pallant (2007). In contrast, removal of the item from Factor One did increase factor reliability.

	Factor	Communalities
Degree teammates accept (accepted) me on a social level	0.94	0.81
My social status on the team	0.92	0.76
My commitment to the team	0.92	0.78
Role I play (played) in the social life of the team	0.90	0.78
Teammates' sense of fair play	0.88	0.73
Degree teammates share (shared) the same goal	0.88	0.80
Extent all team members are (were) ethical	0.88	0.75
Degree I do (did) my best for the team	0.86	0.74
My teammates' 'sportsmanlike' behaviour	0.85	0.70
Guidance I receive (received) from my teammates	0.85	0.78
How the team works (worked) to be the best	0.83	0.75
Constructive feedbacks I receive (received) from my teammates	0.81	0.63
Extent teammates provide (provided) me with instruction	0.79	0.73
Team member's dedication to work together toward team goals	0.79	0.71
Team's overall performance this season	0.74	0.66
Extent to which teammates play (played) as a team	0.68	0.64
Degree my role on the team matches (matched) my preferred role	0.67	0.59
Extent the team is meeting (has met) its goals for the season	0.66	0.60
Team's win/loss record this season	0.50	0.40

Table 5.2 Hierarchical Description of Factor One Items

Communality scores for Factor one range between 0.40 and 0.81, indicating generally that the items do fit well together. Classification of the factor began with the identification and acceptance of the two primary descriptors. Firstly, 'satisfaction' as the key variable, and secondly, 'team' as the overriding thematic for Factor one. A third descriptor 'affiliation' indicated that the individual is being asked to comment on whether membership in the team is a good place to be? The three common elements support an overall classification of Factor One as "Satisfaction with Team Affiliation".

Factor Two - “Satisfaction with Coach Interaction”

Factor Two consists of 9 items and represents 68% of total variance explained. Based on the low number of items (less than 10 as required for Cronbach’s alpha) an inter-item correlation was performed. Pallant (2007) noted that inter-item and Corrected Item-Total correlational analyses informed the overall acceptance of the items within a factor. This same procedure was carried out for all remaining factors. Factor Two results indicated an inter-item correlation of .63 with a range between .38 and .87. This would suggest a somewhat weaker relationship between items. Therefore, a second validation (Corrected Item-total Correlation) was undertaken. Results indicate the lowest item-total value was .51 and thus above the .3 level which Pallant (2007) considers the items are at least measuring something from the scale as a whole.

	Factor	Communalities
The level of appreciation my coach shows when I do well	0.89	0.74
Coach's loyalty towards me	0.84	0.76
Recognition I receive (received) from my coach	0.84	0.80
Friendliness of the coach towards me	0.82	0.66
Extent the coach is (was) behind me	0.82	0.76
Instruction I have received from the coach this season	0.76	0.67
Training I receive (received) from the coach during the season	0.72	0.65
Coach's teaching of the tactics and techniques of my position	0.55	0.48
The tutoring I receive (received)	0.45	0.25

Table 5.3 Hierarchical Description of Factor Two Items

Communalities scores for Factor Two range between 0.25 and 0.80. Seven of the eight items have communalities above the 0.3 threshold discussed previously. The single item not reaching the 0.3 threshold “The tutoring I receive (received)” did not have cross-loadings which would weaken its position within Factor Two. Therefore, the item was retained.

Factor classification again incorporated the key variable ‘satisfaction’ with the overriding thematic ‘coaching’. The third descriptor acknowledged the interactional nature of both the social and performance relationship between coach and athlete. Therefore, the classification of Factor Two is “Satisfaction with Coach Interaction”.

Factor Three - “Satisfaction with Medical Support”

Factor Three consists of four items explaining 82.5% of total variance explained. The mean inter-item correlation value is .77, with values ranging from .70 to .83. This analysis suggested quite a strong relationship among items.

	Factor	Communalities
Competence of the medical personnel	0.89	0.79
Fairness with which the medical personnel treats all players	0.85	0.80
Medical personnel's interest in the athletes	0.84	0.76
Promptness of medical attention	0.82	0.72

Table 5.4 Hierarchical Description of Factor Three Items

Communalities for Factor Three range between 0.72 and 0.80. Factor Three is a parsimonious factor with all items strongly supporting one thematic. In this instance, the title definition remains consistent with the key variable ‘satisfaction’ and the overriding thematic ‘medical’. The third descriptor ‘support’ has been chosen to acknowledge the range of personal and impersonal ‘logistical’ obligations associated with medical interventions. In contrast, the word ‘assistance’ was not utilised as it was deemed to be aligned more closely with an impersonal ‘logistics’ type descriptor. Therefore, the classification of Factor Three is “Satisfaction with Medical Support”.

Factor Four - "Satisfaction with Individual Performance"

This factor consisted of eight items explaining 47% of total variance explained. The Inter-Item correlation mean was .37 with a range between .2 and .6. The Corrected Item-Total correlation range was .39 to .63. In summary, this factor is not particularly strong overall, but it has met the minimum requirements for maintaining all items within the factor.

	Factor	Communalities
Degree to which I have reached my performance goals during season	0.72	0.57
Improvement in my performance over the previous season	0.67	0.60
Level to which my talents are (were) employed	0.67	0.49
The improvement in my skill level	0.55	0.42
My enthusiasm during comps	0.53	0.30
Degree my abilities are (were) used	0.45	0.60
Extent to which my role matches my potential	0.40	0.55
My dedication during practices	0.35	0.19

Table 5.5 Hierarchical Description of Factor Four Items

Communality scores for Factor Four were between 0.19 and 0.57. Although one item does not reach the 0.3 expectation discussed in Pallant (2007) all other items ($n = 7$) did so. Consistent with the approach undertaken in Factor Two the item was retained. Classification for Factor Four again included the key variable ‘satisfaction’, as well as the overriding thematic ‘Individual Performance’. These descriptors adequately capture the underlying themes of the factor and thus no third descriptor was assigned.

Factor Five - "Satisfaction with Coaching Strategy"

This factor consisted of seven items explaining 64% of total variance explained. The Inter-Item correlation mean was .56 with a range between .32 and .85. The Corrected Item-Total

correlation range was .56 to .88. This factor is relatively strong overall and has met the minimum requirements for maintaining all items within the factor.

	Factor	Communalities
Coach's game plans	-0.77	0.84
Coach's choice of strategies during games	-0.74	0.79
Coach's choice of moves/tactics during competitions	-0.73	0.81
Amount of time I play (played) during competitions	-0.49	0.28
How the coach makes (made) adjustments during competitions	-0.46	0.60
Manner the coach combines (combined) the available talent	-0.40	0.47
Tactics used during games	-0.40	0.33

Table 5.6 Hierarchical Description of Factor Five Items

Communality scores for Factor Five were between 0.33 and 0.84. Therefore, all items are retained in the Factor. In contrast to Factor One, which also incorporated ability utilisation and the teams influence on the strategic direction of the athletic task, Factor Five explains the influence placed on the strategic situation by the coach. Therefore, the title assigned to Factor Five incorporates the key variable ‘satisfaction’ and the overriding thematic ‘strategy’ as well as the controlling interactional influence i.e. the coach. Therefore, Factor Five was classified as “Satisfaction with Coaching Strategy”.

Factor Six - “Satisfaction with (External) Support”

This factor consists of two sub categories explaining 58.6% (F1 = 6 items and 44.5%; F2 = 3 items and 14.1%) of total variance explained. The Inter-Item correlation mean was .37 with a range between .19 and .72. The Corrected Item-Total correlation range was .43 to .64. Individually, the factors loaded as follows:

Factor	Inter-Item Correlation	Corrected Item-total Correlation
	Range (Total)	Range
Sub - Category 1	.29 to .67 (.41)	.47 to .65
Sub - Category 2	.51 to .68 (.57)	.56 to .68

In summary, this factor is relatively weak overall, but has met the minimum requirements for maintaining all items within the factor. Results indicated that when separated into its two sub-categories stronger relationships between the items result.

	Factors	Communalities
Amount of money spent on my team	0.83	0.59
Fairness of the team's budget	0.79	0.61
Funding provided to my team	0.74	0.53
Supportiveness of the fans	0.5	0.26
Media's support of our program	0.42	0.36
Local community's support	0.41	0.27
Academic support services provided	-0.85	0.66
Personnel of the academic support services (i.e., tutors, counselors)	-0.83	0.72
Support from the university community	-0.56	0.36

Table 5.7 Hierarchical Descriptions of Factor Six Items

Communality scores for Factor Six were between 0.26 and 0.72. Two items did not reach the 0.3 expectation discussed in Pallant (2007). Consistent with the earlier retention justification both items were retained within the current factor. For the purposes of definition, the key variable ‘satisfaction’ again remains embedded in the title definition. Consistent with Factor Three there is an acknowledgement that the external focus of the factor may involve both personal (psychological) and logistical support. Therefore, the classification of Factor Six is “Satisfaction with External support”.

5.3 DISCUSSION

The central aim of this phase of the research was investigating the factorial arrangement of the ASQ in the New Zealand setting. By doing so, a redistribution of the items within factors representing the underlying structure of the ASQ was achieved, culminating in a six-factor solution. The following discussion focuses on the salient points of the investigation. In the first instance, data collection methods and demographic data will be briefly discussed before critiquing the data analysis strategy. Thereafter, a comparison between the newly formed and original ASQ categories allows discussion on the efficacy of an already developed scale in a new research setting. Overall, this process was undertaken to support the next phase of the research in which specific variables of interest such as sport affiliation and gender, and their relationship to the newly positioned factors could be explored.

5.3.1 DATA COLLECTION

The data collection survey delivery and response collection did not differ from that followed in Phase One. The range of research participants was however broadened through the inclusion of National Sporting Organisations (NSO's) to accommodate the development of more global generalisations than could be drawn from Phase One of the study. Disappointingly, only a small number of NSO's chose to support the research by sending the invitation to their representative athletes. A summary of common responses by administrators during follow up was that many representative athletes were already undertaking a plethora of surveys as members of this specific (representative sport)

demographic. Thus, NSO's were not willing to either expose their already busy athletes to more paperwork for the sake of it, or clearly indicated that they did not wish to burn out their athletes, as they wanted their own survey engagement with their athletes to produce quality responses. Those NSO's that did support the research provided excellent respondent numbers. For example, two of the three most significant contributors in this regard (Equestrian New Zealand and Target Shooting New Zealand) provided 36% of overall Phase Two respondents. Lastly, the data collection strategy was developed to be relevant to the target group (the majority of athletes are young adults). In comparison to many North American studies where localised data collection takes place usually for extra credit on university courses thus ensuring high participation rates, the 'nationwide' response capture in the current setting provided a satisfactory return rate of 45%. Although adequate, further development of the data collection strategy as part of an overall research profile should endeavour to increase return rates.

5.3.2 DATA ANALYSIS

The data analysis strategy for this phase of the research incorporated Factor Analysis to investigate the underlying structure of the ASQ in the current research setting. Initially, attention turned to issues such as sample size and factorability of the ASQ items. In relation to sample size the number of available responses for specific analyses was between 162 and 210. Sample size above 100 is considered adequate, but not 'excellent' for a proper analysis (Gaur & Gaur, 2006). Although Tabachnik and Fidell (2007) prefer at least 300 cases for factor analysis, they do concede that a smaller sample size (e.g. 150 cases) "should be

sufficient if solutions have several high loading marker variables above .80” (p.613). And Riemer and Chelladurai (1998) discuss a minimum of five participants per item ($5 \times 56 = 280$) is required for this form of analysis. Although 21 of the 56 items (37.5%) exceeded the .80 assumption, thereby justifying the utilisation of factor analytic techniques with a reduced sample size, the current sample size must also be considered as a limitation in this research.

A further indication of the appropriateness of Factor Analysis is the assessment of factor loadings. In this instance, values less than 0.5 suggest that the variables will not factor well. Leech, Barrett et al. (2008) lift this figure to 0.7 to indicate that there are sufficient items for each factor. Both consider values over 0.9 are ‘marvellous’ for proceeding with factor analysis (Tabachnik & Fidell, 2007). The initial K-M-O was .92, exceeding all the recommended values, including Kaiser’s own value of .6 (Kaiser, 1974; Tabachnik & Fidell, 2007). Based on the results provided by these two assessments Factor Analysis was considered appropriate for examining the underlying structure of the current results.

An Exploratory Factor Analysis revealed that the 56 items of the ASQ produced the cleanest results profile when extracted into six correlated factors. Assisting the results profile was the strategy of not being confined by a hard and fast rule when examining the scree plot (Pallant, 2007; Tabachnik & Fidell, 2007). In contrast, testing different extractions ensured that the best fit for the data was established. This result differs from other research settings. For example, Riemer and Chelladurai (1997) identified eight factors and Singh and Surujlal’s (2006) study of satisfaction in universities in Gauteng, South

Africa, five factors. In particular, this last study's factor loadings indicated that 'Support' combined to produce a single 13 item factor. In contrast, using the same scale in the current setting produced two independent factors across the 13 items. Overall, such results vindicated the utilisation of Factor Analysis to inform the correct allocation of items in their respective investigative settings. To summarise, this result suggests that the context (situation and setting) is influencing the perception of what it is to be satisfied as an athlete. Thus, transferring the original ASQ into a new research setting, particularly outside the original survey development environment (North American collegiate sport) without undertaking a factor analysis is inappropriate.

Having confirmed that a Factor Analysis of the data was indeed an appropriate strategy, results from the current setting indicated that items loaded highly onto their respective factor, with minimal cross-loadings. Where cross-loadings did occur, the decision to retain the items within the scale for further analysis was based on the statistical evidence of the initial factor structure (Pallant, 2007) as well as each factor meaningfully relating to one another, as judged by a peer review process (Riemer & Chelladurai, 1998). Generally, the factors formed during analysis revealed conceptually meaningful groupings. When comparing the current research factors with the subscales defined in Riemer and Chelladurai (1998), tentative support for their postulate that the ASQ can be utilised in other research settings is given, even when considering that items from three of their 15 subscales were found across multiple factors. For example, 'ability utilisation' was embedded in three different factors which indicated that athletes may interpret the use of their abilities to:

- a) The team and how they as a collective best utilise the athlete,

- b) Themselves and whether they as an individual believe they are maximising their own efforts, and
- c) Whether the coach also performs this function.

This specific result is certainly not counterintuitive to the antecedents to athlete satisfaction justifications provided by Riemer and Chelladurai (1998). However, having the placement of a previously parsimonious subscale across three different factors is a strong indication that further refinement of the contextual descriptors may provide a more accurate survey instrument for utilisation in any new research setting.

5.4 CONCLUSION

Although somewhat laborious, the combination of investigative procedures found in Phase One and Two of the current study has vindicated the necessity to acknowledge and explore the differences between research settings when the setting is demographically and contextually different from its original! At this juncture of the research process, the contribution to knowledge is minor considering the already documented need to follow such a rigorous procedural pathway. As a result, the findings of this specific research lend further support to the adoption of this specific strategy. Where new knowledge has been gained relates to two facets of the investigation thus far. Firstly, the utilisation of a bi-polar survey response framework positively altered how an athlete can articulate their satisfaction. Secondly, the research process provided valuable insight into what it is to be satisfied as a New Zealand athlete. Consequently, tangible value has been added to the overall understanding of athlete satisfaction as a topic.

The third and final phase of Study One investigated the relationship between athlete satisfaction and two key variables, gender and sport affiliation. These two variables are tested against each of the six individual factors identified in Phase Two. The purpose of doing so is to ascertain how the variable is best presented i.e. split gender variable (male OR female) or single variable (Gender), before its eventual utilisation in Study Two.

CHAPTER SIX

INTERPRETING GENDER AND SPORT AFFILIATION IN RELATION TO ATHLETE SATISFACTION IN THE NEW ZEALAND RESEARCH SETTING

STUDY ONE, PHASE THREE

6.1 INTRODUCTION

The previous two phases of Study One investigated the transferability of the ASQ into a new research setting and how the newly won data are presented in a factorial sense. Having achieved these two benchmarks, phase three's objective was to investigate the relationship between targeted variables, specifically Gender, and Sport Affiliation and the athlete satisfaction construct. Doing so would provide the last study of the thesis with a set of guiding assumptions when articulating its findings.

As discussed in Chapter Two investigating gender differences compared favourably as a variable of interest ahead of other demographic factors such age and ethnicity. An exploration of the literature surrounding both 'satisfaction' and 'athlete' themes and gender has however been inconclusive in relation to whether a 'within variable' bias exists. For example, are male athletes more likely to be satisfied than female athletes? Or, whether a separation of genders into independent male/female variables is necessary for the presentation of demographic findings? These are the questions this chapter explores.

Additionally, and consistent with the approach undertaken in the investigation of ‘gender’ as a variable of interest to the current research, a second layer of investigation examines the differences between team versus individual sport athletes. Where ‘within-variable’ differences did emerge the data were presented hierarchically to highlight changes in the response sets. Undertaking this specific strategy in Study Two was based on Riemer and Chelladurai’s (1998) assumptions relating to gender and sport affiliation. In both cases the authors generalised their findings across the dichotomous variables without investigating whether differences exist. Furthermore, investigating athlete satisfaction in New Zealand is contextually different to the North American collegiate setting. Consequently, understanding the dynamics of athlete satisfaction in relation to these two important variables within the current research setting may provide new insight into athlete satisfaction in general.

6.2 METHODS

6.2.1 DATA COLLECTION

The research process that unfolded in this study was consistent with the pattern of presentation found in the previous two chapters. The initial wave of data collected for this third phase of the research was captured in Chapter Five. As a consequence, the majority of demographic data related to this specific phase of the research has been presented in Chapter Six. The key objective for phase three was testing for gender and sport affiliation variable independence as well as presenting any dichotomous variable data hierarchically.

6.2.1.1 Measures

A Chi-square test for independence explored the relationship between the two categorical variables. Cross-tabulation using a 2 x 2 design comprising Gender (Male/Female) and Sport Affiliation (Team and Individual Sport athletes) provided a descriptive analysis of the demographic data relevant to this research phase. Thereafter, distributions were checked for normality and skewness. It was also anticipated that consistent with observations by Tabachnik and Fidell (2007), and Morgan, et al. (2004), cases within the social science context such as those found in this specific study are less likely to be normally distributed. Consequently, normal distribution is an important assumption when wishing to use parametric data analysis methods (Thode, 2002), which are considered more “powerful” than non-parametric designs (Pallant, 2007, p. 109). A pairwise deletion was undertaken and a box plot analysis performed to inform whether to proceed with data analysis using parametric or non-parametric statistics. Additionally, the elevated prominence of extroversion amongst (elite) athletes (Rogulj, et al., 2006) indicated that satisfaction data would likely be positively skewed.

Tabachnik and Fidell (2007) and Miller, et al. (2002) warn that although the use of a statistical significance test is pervasive in the social science context, its ability as a standalone assessment criteria has been questioned. Therefore, not only were independent samples *t*-tests which include *p*-values (confidence intervals around effect size estimates) utilised, but also ‘effect’ sizes (η^2) (G. A. Morgan, et al., 2004) were reported (see also Page 37 in Tabachnik and Fidell, 2007 for a short summary).

Finally, β -values from Standard Multiple Regressions were employed to indicate hierarchical differences at the factorial level between dichotomous variables. In addition, the influence of each variable on overall explanatory variance was provided through ' R^2 ' scores. Consistent with Phase Two the statistical analysis package SPSS 16 was utilised.

6.2.2 DATA ANALYSIS

6.2.3 RESULTS

6.2.3.1 Demographics

Descriptive data from the 2 x 2 cross tabulation (Gender*Sport Affiliation) indicated that females represented 65% (n = 129) of the research cohort in comparison to males at 35% (n = 78). Sport Affiliation showed a similar differential with 62% of the research cohort involved in individual sports compared to 38% for team sport participants. As a general summary, female *individual sport* athletes comprised the largest response cohort with 44%. The smallest was male *team sport* athletes at 17%.

6.2.3.2 Initial Test for Variable Independence

Conducting an initial test for variable independence saw a pairwise deletion reduce the number of cases available for analysis from 210 to 203. To reach this specific figure at least 80% of cells have a minimum expected cell frequency of 5 or more (Pallant, 2007). Results indicated a minimum expected count of 24.7. Following an analysis of the Box Plot, seven

cases were considered outliers. All seven cases had more than 30% missing data so were excluded from further analysis. This left a total of 203 valid responses for testing. Results from the ‘normal’ and ‘detrended normal’ Q-Q plots were as expected with a normal distribution. However, both Kolgoromov-Smirnov (.000) and Shapiro-Wilk (.002) tests indicated a non-normal distribution, albeit not a particularly surprising result with large samples (Pallant, 2007). Having removed outliers, scores were thereafter considered to be normally distributed. Justification is also found in Morgan, et al’s (2004) statement discussing box plot results suggesting that, “if the whiskers are approximately the same length, and if the line in the box is approximately in the middle of the box, then you can assume that the variable is approximately normally distributed” (p.60).

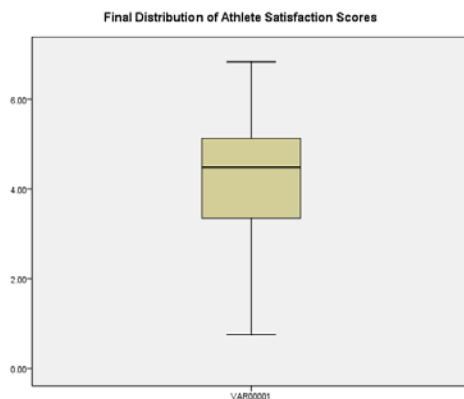


Diagram 6.1 Box Plot scores for final distribution of Athlete Satisfaction Scores

Having earlier discussed the likelihood of positive skewness for results relating to athletes, the following diagram supports this specific assumption (see below).

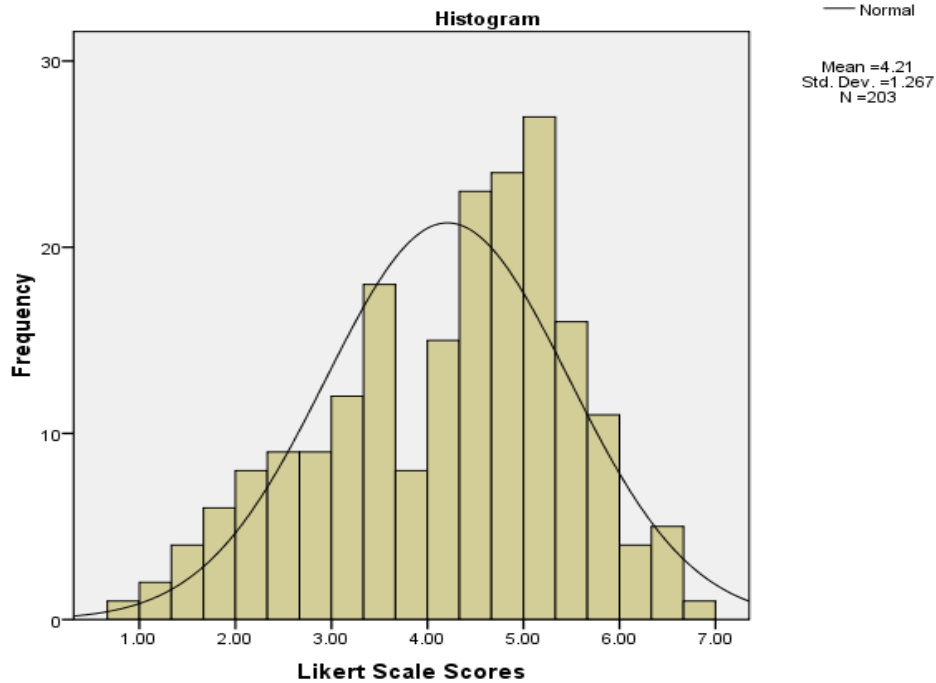


Diagram 6.2 'Skewness' histogram of Athlete Satisfaction Questionnaire data

Following the above analyses, a Chi-square test for independence was performed and the fit to the observed frequencies was good, χ^2 , (1, n = 207) = 4.93, p = .026, phi = -0.17 (Tabachnik & Fidell, 2007). Considering that each of the discrete variables is sufficiently independent to continue, a second layer of analysis was conducted. Independent samples t -tests were performed to ascertain whether significant differences in the mean scores between firstly gender and athlete satisfaction and secondly sport affiliation and athlete satisfaction could be identified. See tables in Appendices 4 and 5.

6.2.3.3 *Gender*Satisfaction*

An independent-samples *t*-test was conducted to compare the satisfaction scores for males and females. There was no significant difference in scores for males ($M = 4.14$, $SD = 1.28$) and females, $M = 4.12$, $SD = 1.41$; $t(204) = .095$, $p = .92$ (two tailed). The magnitude of the differences in the means (mean difference = .02, 95% CI: -.37 to .41) was very small ($\eta^2 = .004$). Cohen's *d* was -.059 and the effect-size *r* was .28. Because data indicated some significance further *t*-tests were undertaken to identify specific factors that may need further exploration. Two values informed the level of statistical significance of the six factors of athlete satisfaction. Firstly, *p* scores below 0.05 indicated likely significance between independent variables. Secondly, η^2 informed by Cohen's (1988) scale for determining effect sizes (small $r = .01$; medium $r = .06$; large $r = .1$) was used for final clarification of the significance levels.

Factor	Male		Female		<i>t</i>	<i>p</i>	Mean Diff.	95%CI	η^2	Sig.
	Mean	SD	Mean	SD						
(1) Team Affiliation	90.0	35.1	78.2	43.6	2.026 (159)	.04	11.8	-.47 – 24.08	.02	No
(2) Coach Integration	44.7	19.1	49.2	19.6	1.555 (194)	.12	-4.5	2.89 – -10.19	.01	No
(3) Medical Support	23.3	11.9	23.2	13.7	.049 (159)	.96	.09	-3.6 – 3.8	.001	No
(4) Individual Performance	10.8	9.8	15	9.9	-2.875 (200)	.004	4.2	-7.05 – -1.3	.04	Yes
(5) Coaching Strategy	40.8	8.2	43.5	9.3	-2.032 (193)	.04	-2.7	1.33 – -5.32	.02	No
(6) External Support	26.3	14.6	26	13.9	.147 (198)	.88	.31	-3.82 – 4.44	.0001	No

Table 6.1 Independent *t*-test for Gender and Athlete Satisfaction

Results of Table 6.1 indicated that variable independence for Factor 4 and gender was medium-to-small. Factors One, Two and Five had small or small-to-medium significance, and Factors Three and Six were not significant between male and female athletes. In general, these results indicated that differences between genders and the six factors of athlete satisfaction identified in this research are minimal.

6.2.3.4 *Sport Affiliation*Satisfaction*

An independent-samples *t*-test was conducted to compare satisfaction scores for team and individual athletes. There was a significant difference in scores for individual sports ($M = 3.85$, $SD = 1.47$) and team sports, $M = 4.65$, $SD = .93$; $t(205) = 4.769$, $p = .000$ (two tailed). The magnitude of the differences in the means (mean difference = -.8, 95% CI: -1.2 to -.42)

was large to moderate ($\eta^2 = .11$. Cohen's d was - 0.67 and the effect-size r was .32). Having established a differentiated results pattern between team and individual sport athletes a further battery of t -tests was conducted to ascertain significance at the factorial level. See Table 6.2 for results.

	Sport Affiliation										
	Individual		Team								
Factor	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	Mean Diff.	95%CI		η²	Sig.
(1) Team Affiliation	70.8	47	101.8	15.9	-6.602 (157)	.000	.308	-42.2 – -19.7		.22	Yes
(2) Coach Integration	47.2	21.2	48.1	16.2	-.360 (184)	.74	-.964	-6.61 – -4.68		.0006	No
(3) Medical Support	19.7	14.2	28.8	8.5	-5.705 (159)	.000	-9.1	-12.3 – -6.0		.14	Yes
(4) Individual Performance	12	10.3	15.8	9.1	-2.808 (200)	.006	-3.9	-6.62 – -1.2		.04	Yes
(5) Coaching Strategy	42.9	9.8	41.9	7.4	.839 (193)	.40	1.039	-1.40 – -3.48		.003	No
(6) External Support	23.5	14.9	30.2	11.8	-3.552 (189)	.000	-6.71	-10.4 – -3.0		.06	Yes

Table 6.2 Independent t -test for Sport Affiliation and Athlete Satisfaction

In contrast to the Gender*Satisfaction analysis significant differences could be identified between Sport Affiliation and Satisfaction. In particular, highly significant p -values and large effects sizes can be noted for Factors One, Three and Six. Factor Four was significant, but possessed a moderate-to-small effect size. Factors Two and Five were not significant. The findings for Factors Two and Five, which both relate to coaching, indicated that these factors can be explored as a single variable. In other words, coaches influence team and individual sport athletes in the same ways.

Having found statistically significant differences between team and individual sport athlete satisfaction, β -scores from Standard Multiple Regressions were employed to expose hierarchical differences at the factorial level (Factor ranking). Preliminary analyses were conducted to ensure there was no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. Results indicated that none of the variables provided a significant unique contribution to the equation. Furthermore, R^2 analyses showed differences in how much of the variance in the model can be attributed to the dependent variable (individual sport athlete 10.5% and team sports 32.5%). This finding suggested that the model is less informative for individual sport athletes.

In addition, differences in the hierarchical structure of factors between both variables were explored. See Table 6.3 below.

Variable	Individual Sport		Team Sport	
(Satisfaction with....)	Factor Ranking	β	Factor Ranking	β
F1: Team Affiliation	6	.58	2	.92
F2: Coach Interaction	1	.41	5	.24
F3: Medical Support	3	.12	6	.06
F4: Individual Performance	2	.07	1	1.16
F5: Coaching Strategy	5	.06	4	.32
F6: External Support	4	.03	3	.71

Table 6.3 Hierarchical structure of the 6-factor model of the Athlete Satisfaction Questionnaire (differences between team and individual sports)

Results indicated both individual and team sport athletes had different priorities in relation to the articulation of athlete satisfaction. For example, individual sport athletes ranked

interaction with their coach as the most important factor influencing their satisfaction with the athletic experience. In contrast, team sport athlete satisfaction is most influenced by their individual performance.

A final level of contrast is shown in the following example indicating the differences between both groups at the 'item', as opposed to the above 'factorial', level. Results indicated that although the item "Extent my role matches (matched) my potential" is the most important item for team sport athletes, it ranked 5th (of 8) for individual sport athletes. See below for a hierarchical analysis of Factor One items.

Factor 4: Satisfaction with Individual Performance	Individual Sport	Team Sport
Name of Item	Rank	Rank
Improvement in my performance over the previous season	1	2
Degree my abilities are (were) used	2	5
My enthusiasm during comps	3	7
Degree to which I have reached my performance goals during season	4	8
Extent my role matches (matched) my potential	5	1
My dedication during practices	6	4
The improvement in my skill level	7	3
Level to which my talents were employed	8	6

Table 6.4 Item loadings for satisfaction with Individual Performance (Factor 4)

6.3 DISCUSSION

Phase three of Study One explored the relationship between athlete satisfaction and two demographic variables of interest for the current research, gender and sport affiliation. Furthermore, the results informed the research strategy undertaken in Study Two which focussed on athlete satisfaction and a peak sporting event. Doing so meant the achievement of objective three as outlined in Chapter One of this thesis. In the first instance, phase one of Study One ascertained that the ‘dimensions’ of athlete satisfaction as outlined in the ASQ are salient for both team and individual sport athletes. This was particularly evident in the almost completely parsimonious fit between ‘satisfaction’ (positive affective state) dimensions of the original ASQ and the current satisfaction data set (99.85% fit). Limitations were however noted when incorporating the dissatisfaction data which showed a less than parsimonious 83% fit. Having understood the factorial dynamics of the ASQ in the current research setting, a contribution to knowledge was achieved by exposing ‘hierarchical’ differences between team and individual sport athletes’ satisfaction responses.

6.3.1 STATISTICAL ANALYSES

The utilisation of statistical methods to investigate topics within the social sciences can be somewhat challenging. In particular, Pallant (2007) suggests that many scales have skewed scores. However, “this does not necessarily indicate a problem with the scale, but rather reflects the underlying nature of the construct being measured” (p.62). To take account of whether the results had any practical or theoretical significance (Leech, et al., 2008;

Tabachnik & Fidell, 2007), the examination of distribution scores, box plot results, the removal of outliers and the utilisation of effect size calculations were undertaken. The results indicated differences between variable groups such as male and females or team and individual sport athletes were of practical benefit to this thesis' research process going forward. Furthermore, based on the exploratory nature of the current research, it was not sufficient to simply ascertain that differences between athlete groupings existed. The utilisation of 'standard multiple regression' provided insight into the level of influence factors, and consequently items, had on overall athlete satisfaction (Leech, et al., 2008). The results are presented in the following section of the discussion.

6.3.2 GENDER

The investigation of gender and its relationship to satisfaction was a core research objective for this thesis. Initially a number of other variables such as educational attainment (Kiefiuk, 1996; Melin, Fugl-Meyer, & Fugl-Meyer, 2003), income (Lerch, 1982; Ohkusa, 2001; Yusof, 2002), and ethnicity (Gano-Overway, 1996) were explored. Two reasons for not investigating these variables further were, a) the literature indicating their weak relationship to athlete satisfaction and consequently, b) their practical significance (Leech, et al., 2008; G. A. Morgan, et al., 2004; Tabachnik & Fidell, 2007) in informing the thesis questions.

In relation to the current analysis, one factor, 'Satisfaction with (Medical) Support' did register a 'moderate to small' level of statistical significance. Although weak, Satisfaction with Medical Support had the highest level of significance of all six factors investigated.

However, the overall conclusion was that it had little practical significance to the overall findings. This specific choice was reinforced in Study Two where hierarchical differences between factors were measured and ‘Satisfaction with Medical Support’ did not register any items in the top 30 (of 56) for either team or individual sport athletes. Although the general summary for this aspect of the research is that gender differences do not exist in a practically significant sense, having shown a moderate-to-weak difference between males and females (in one of the six factors of athlete satisfaction) does suggest that the relationship between the two variables remains somewhat unclear. A possible explanation for the discrepancy in results could be that in the context in which the factor was originally developed, the North American collegiate sport setting, medical support is a central component of the athletic environment. In other words, there are dedicated medical personnel supporting collegiate athletes. Contrastingly, New Zealand athletes who formed the current research cohort, particularly those who do not have a formal status within the New Zealand high performance environment (carded athlete) are reliant on the wider medical fraternity for support as opposed to dedicated centralised practitioners (NZASNI, 2005). Therefore, the differential result found between men and women is likely a result of unidentified factors between the specific gender and New Zealand medical support personnel. Further investigation of this specific aspect is required, albeit not within the confines of this specific research process.

As a general summary, findings from the current ‘gender’ investigation can be interpreted as showing the construct to be a uni-dimensional as opposed to a dichotomous variable. In other words, variable independence within the gender*athlete satisfaction analysis has not

been clearly established. Because previous research in the area failed to produce consistent results across the gender variable a generalisation is that it is the research context, as opposed to a fundamental male/female dichotomy, which appears to be the primary determinant of how gender data is to be articulated. It is therefore necessary for future researchers to investigate their specific research setting to identify if gender differences are statistically significant before articulating findings.

6.3.3 SPORT AFFILIATION

Current data analysis investigating sport affiliation (team or individual sport) and satisfaction showed that two factors (Factor 2: Satisfaction with Coach Interaction and Factor 5: Satisfaction with Coach Strategy) did not show a significant difference between team and individual sport athlete responses and satisfaction. The result contrasts with Baker, Yardley & Cote (2003) in which preferred coach behaviours based on sport affiliation were noted in six of the seven factors explored. Furthermore, Pfeffer, Wuerth and Alfermann's (2004) coach-athlete interaction study indicated differences in preferred leadership behaviours between the two groups with individual sport athletes preferring (among other elements) instructive and mastery climates compared to team sport athletes where instructive behaviour by the coach was negatively correlated. Intuitively, an assumption of the interactional perspective of the coach/athlete relationship is that coaches have more resources to give to individual sport athletes compared to team sport athletes. This assumption is particularly highlighted in Lorimer and Jowett (2009) who indicated that individual sport coaches possess higher statistically significant levels of "Empathic

Accuracy” than their team sport counterparts (p.152). Therefore, the lack of statistical significance separating team from individual sport athletes in relation to their perception of coach related activity seems somewhat counterintuitive. However, in this instance neither p values nor η^2 values supported a differential perspective. Thus, the statistical findings clearly indicate team and individual sport athletes perceive coaching related factors similarly. Therefore, similar to gender, a non-differentiated perspective of athlete satisfaction was used to represent these two factors in future results articulation.

In contrast to the findings surrounding coach related factors, statistically significant differences exist between the other four (of six) factors of athlete satisfaction. They are Satisfaction with: Team Affiliation, Medical Support, Individual Performance and External Support. Having established these differences at the factorial level presented the opportunity to then explore team and individual athlete responses at the item level by investigating the hierarchical nature of athlete satisfaction for both cohorts. Doing so represented a tangible contribution to knowledge as a hierarchical understanding of athlete satisfaction from both team and individual sport perspectives was not investigated by Riemer and Chelladurai as an aspect of their development of the ASQ.

Results indicated that both team and individual athletes, whilst sharing common items within factors did not share the same hierarchical structure in relation to those responses. It can therefore be concluded that both groups are fundamentally different in the aspects of their sporting experience that have the most influence on their satisfaction. Aside from the theoretical implications of the findings, they also have wide ranging practical value. For

example, as previously noted in a study by Pensgaard and Ursin (1998) in which stress, control and coping in elite Norwegian winter sport athletes was discussed, the coach was considered a major source of stress by some athletes. In addition, Scanlan, Stein and Ravizza (1991) also noted four sources of stress in their participant cohort, of which one was negative significant-other relationships. Considering the negative influence significant others (coaches included) can have on satisfaction with the athletic experience, gaining insight into which facets of athlete satisfaction create a more positive environment for the athlete can only be beneficial to the athlete when under stress conditions.

From an applied perspective, the coach of a team athlete, informed by the summary of data shown in Table 6.4 would have the highest chance of facilitating a satisfying experience for the athlete by focussing attention on how the allocation of responsibility within the team helped to maximise their potential as an athlete. In contrast, an individual athlete is likely to react most positively to a coach who focused on the level of improvement the athlete had shown over time. Such a level of information being crafted into support statements or performance analyses would strongly aid the creation of an environment conducive to more effective support for the athlete.

In conclusion, both theoretical and practical aspects of athlete satisfaction in relation to gender and sport affiliation were explored. In particular, the exposure of differences in how those factors investigated in this phase of the research were interpreted has added to a fundamental understanding of athlete satisfaction both in general and more specifically in the New Zealand context. Additionally, the exploration of the hierarchical nature of factors

and items within the research context has added both a theoretical and practical contribution to knowledge. Having done so, the investigation undertaken in the following Chapter is fundamentally better informed about what it is to be satisfied as a team and as an individual sport athlete.

CHAPTER SEVEN

INVESTIGATING ATHLETE SATISFACTION AND A PEAK SPORTING EVENT

"Win or lose, don't talk to me about the game until 24 hours after we finish. I want facts, not emotion"

Thomas Sykora, Head Coach, USC Giessen, 1996

STUDY TWO

7.1 INTRODUCTION

The above statement came from a highly agitated player attempting to engage our coach after a particularly difficult loss. When interpreting the coach's reasoning for the statement to the athlete, it seems a connection was being made between the ability of an athlete to describe their sporting experience from different perspectives, and that these perspectives can change in a short space of time. During that evening the opportunity arose for me to discuss my observation with the coach and his response was:

"Right now it's too much about him, and not enough about us, even though he is thinking it's about us, it's really about him"

(Sykora, 1996, personal communication)

He went on further to add that because of the competitive environment we found ourselves in as professional athletes neither he nor the athlete would be able to talk appropriately

about the loss without first allowing their emotional states to change from one which was aggressive and combative to one that was more analytical and detached. He reasoned that everyone needed at least a good night's sleep before beginning any reflective process in which information could be gathered that could add value to the future development or success of the team.

Irrespective from which perspective this specific exchange is interpreted, be it from the coach's, athletes or the team's, 'time' seems to be an important factor in the type of information available to researchers in relation to an athletes' lived experience. As an extension of this observation Study Two explored the final aim of this research by investigating athlete satisfaction and a peak sporting event (as defined by the athlete). Intrinsic to a better understanding of the dynamic nature of the satisfaction experience for athletes is also acknowledging an athlete's 'reason for being' which is to compete, the expression of which usually involves attendance at a peak sporting event.

Where satisfaction is considered by theorists to be a consequence of the individual reflecting on outcomes linked to goal directed behaviour, the type of information expected when studying athlete satisfaction varies relative to the evaluative proximity of the athlete to their peak event. However, it is also understood that athletes expend energy and are committed to attaining their optimal performance not only at competitive events, but also possess high levels of commitment to their preparation or performance analysis, which takes place both before and after the event.

When transposing the theoretical assumptions of Suh, et al's (1996) 'situational-to-dispositional' observations from their Subjective Well-Being research a particularly important element of the current research process is the immediacy of data capture. In order to obtain consistent responses which are similar in their contextual structure the designated peak event becomes the referent. However time points were established to focus the athlete toward providing immediate 'situational' responses instead of providing collective appraisals in which longer term satisfaction perspectives were embedded such as those found in Gravely and Cochran's (1995) single time point (over a calendar year) investigation into intercollegiate athlete retention.

When considering the experiential journey undertaken by athletes it is surprising that so few studies were found that utilised this broader approach to investigating the phenomenon. However, the utilisation of a prospective/retrospective design incorporating situational data capture to studying athlete satisfaction was expected to increase the likelihood that a more informed 'picture' of what it is to be satisfied as an athlete relative to a peak sporting event is available to the investigator (Alreck & Settle, 1995; Bickman & Rog, 1998; Brewer, 2000; Crotty, 1998; de Vaus, 2000). A contrasting argument may be however, that researchers have accepted that satisfaction is either a relatively stable construct and thus significant changes over time are not expected. Or, there is fundamentally little to be gained by investigating the phenomenon as it is the current response, which allows a third person such as a significant other or organisation to intervene (Turman, 2008). To summarise, exploring athlete satisfaction using a collection of singular time points with a peak sporting event as the referent variable has theoretical merit, as no previous research was found which

incorporated the broader preparation, application and evaluation of the athletic experience and each factors resultant influence on satisfaction.

Parallel to the theoretical development of the athlete satisfaction paradigm undertaken in this specific study, findings are expected to add tangible practical value to those wishing to support their athletes as effectively as possible through the development of appropriate supportive statements based on a correct interpretation of item (explanatory) hierarchy (Chia-Huei & Yao, 2006; Gagne`, Ryan, & Bargmann, 2003).

Investigating athlete satisfaction in relation to a peak sporting event is therefore inherently interesting from both theoretical and practical perspectives. Consistent with previous stages of the research process described earlier a similar set of processes for data collection, analysis and presentation were undertaken. Following the analysis of the results the chapter concludes with a discussion and conclusions section that brings together the findings which are compared and contrasted with the existing literature.

7.2 METHODS

7.2.1 DATA COLLECTION

Having earlier discussed the advantages and disadvantages of utilising specific research designs to explore athlete satisfaction in relation to a peak sporting event (see Chapter Three), a combined prospective/retrospective longitudinal survey design was utilised for data collection. This approach to data collection is often chosen for large scale or nation-

wide studies in order to gauge changes in the population with regard to any number of variables from chronic illness to job stress to weekly food expenditures (D. R. Johnson, 1995), and in this instance, athlete satisfaction.

Intrinsic to the data collection strategy was the utilisation of the amended ASQ and the resultant findings generated from Study One. Although cumbersome, Study One provided insight into the dynamics of the ASQ outside the realm of its original design. Consequently, a strong understanding of its properties was obtained informing its utilisation in Study Two. Of particular importance to that understanding was the investigation into the relationship between gender*athlete satisfaction and sport affiliation*athlete satisfaction.

7.2.1.1 Procedures

Data collection was undertaken over a period of six calendar months beginning with the delivery of the ASQ during Phase two of Study One. Research participants were invited to take part in the longitudinal survey by providing contact details to signify their willingness to receive further questionnaires. In addition to the first survey which was re-coded as Wave 1 (Magnusson, et al., 1991) of the longitudinal study, those participants who agreed to participate received the identical survey at both three month (Wave 2) and six month (Wave 3) intervals. Consistent with the earlier data collection strategy ‘Survey Monkey’ provided the electronic medium for survey administration which included delivery, collation and some descriptive evaluation of data. Two hundred and ten responses (n = 210) were available for analysis. Reminders were sent to participants within 10 days of each data point requesting completion of the survey.

7.2.1.2 Participants

As mentioned above, the participants for the longitudinal study were the same as the ones described in chapter 6.

7.2.1.3 Measures

Participants completed a variation (see Appendix 8) of the multi-factor 56 item ASQ and were instructed to answer all questions using a 7-point bi-polar (Satisfaction/Dissatisfaction) Likert scale at three time points (see Procedures). Where questions posed on the survey instrument were not applicable to the particular athlete, for example team related questions being posed to an individual sport athlete, an eighth answer option was provided (N/A or Not Applicable). Participating athletes also indicated their chronological position relative to their identified peak sporting event for the competitive year. Eight possible time points were available to respondents, more than 6 months before, 3-6 months before, 1-3 months before, 0-1 month before, 0-24 hours post event, 0-3 months post event, 3-6 months post event and more than 6 months post event. Responses were combined to create two large data sets (pre-event and post-event). In particular, this specific approach provided insight into hierarchical response differences not only from a pre- and post-event, but also team and individual sport perspectives.

7.2.2 DATA ANALYSIS

Since this study's aim was to 'explore' and present the dynamics of athlete satisfaction in relation to a peak sporting event, the data analysis approaches do not attempt to explain why differences within variables may emerge, but to expose them. This specific strategy allowed the 'fit' between the data and the theory to take precedence ahead of a hypothesis based approach to explanation (Babbie, 1989; Glaser, 1992; Stebbins, 2001). The initial analysis of the data was designed to present a non-differentiated perspective of the athlete satisfaction data, which indicated the uni-dimensionality of the variable under investigation. For example, in the context of this research environment 'gender' is a non-differentiated variable because findings from phase three, Study One indicated no explanatory benefit when separating gender into 'male' and 'female' sub-variables. In addition to gender, two factors relating to sport affiliation (both aligned to coaching) were also found to be undifferentiated. As the hierarchical positioning of factors embedded in the six factor model of athlete satisfaction in the current research context was shown in the previous Chapter, the analysis undertaken in this chapter also focused on presenting the hierarchical difference in a 'prospective/retrospective' context at the 'item' level. In this instance, the top 10 (non-differentiated) items of importance for athletes in relation to their peak sporting event are presented. Results of this analysis are of particular interest to those intending to add value to the athletic experience by way of verbal feedback to the athlete/s. Results of the analyses of the other factors of the model are found in Appendix 7.

A second analysis was also conducted to present the data from a 'differentiated' perspective. Findings from the sport affiliation/athlete satisfaction research in the previous

chapter indicated that four of the six factors in the 6-factor model showed differences between team and individual sport athletes' responses. They are:

- Satisfaction with Team Affiliation,
- Medical Support,
- Individual Performance, and
- Environmental Support.

Consistent with the approach in the non-differentiated data presentation, this section also utilised a single example to highlight differences between team and individual sport athlete responses. In this instance, data from Factor Four "Satisfaction with Individual Performance" is presented. Factor four was chosen based on the findings from chapter six (Diagram 6.3) which indicated that it was the most important factor for team sport athletes. Choosing the most important team ahead of individual sport athlete result was also based on the individual sport athlete's most important factor producing a non-differentiated finding. Analyses relating to the other three factors can be found in Appendix 8. Data analysis was conducted using the statistical analysis package SPSS, version 16.

7.2.3 RESULTS

7.2.3.1 *Non-Differentiated Perspective of Athlete Satisfaction*

Non-differentiated findings relating to athlete satisfaction are represented by ‘gender’ and ‘coaching’ (Factors 2 and 5 from the previous phase of research) variables. Overall the results indicated a rise in satisfaction three months prior to the peak sporting event. Furthermore, the higher level of satisfaction continued up to three months post event before a gradual decline. See Diagram 7.1.

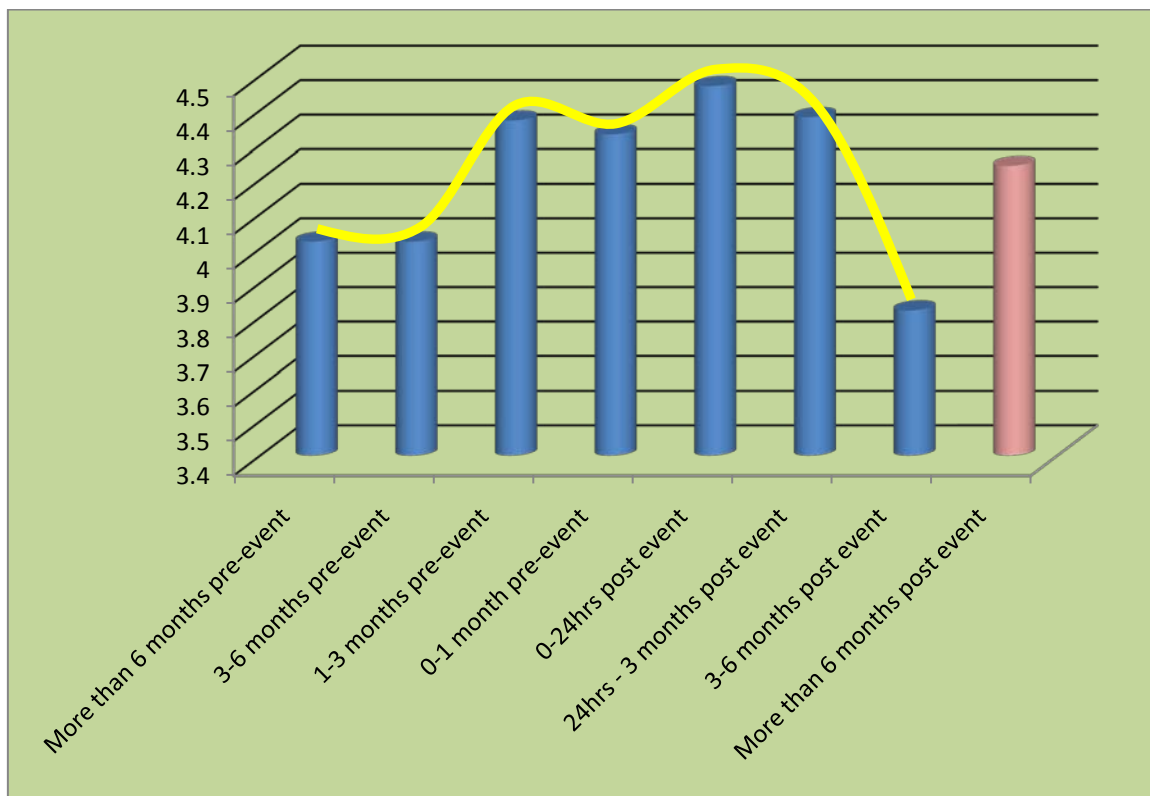


Diagram 7.1 ‘Non-Differentiated’ Athlete Satisfaction

In addition to the non-differentiated view of athlete satisfaction, β -scores from standard multiple regressions were used to highlight differences relating to item importance for this

specific athlete cohort. In this instance, the top 10 prospective and retrospective items as indicated by participants are presented. Furthermore, the number in brackets (top 2 prospective and retrospective responses) within the table represents the same item's position on the opposite side of the table. See Table 7.1.

Prospective	Retrospective
My social status on the team (12)	Role I play (played) in the social life of the team (49)
Team's win/loss record this season (27)	Coach's game plans (12)
Extent teammates provide (provided) me with instruction	The improvement in my skill level
Coach's teaching of the tactics and techniques of my position	Amount of time I play (played) during competitions
Degree my role on the team matches (matched) my preferred role	Instruction I have received from the coach this season
Degree teammates accept(accepted) me on a social level	Improvement in my performance over the previous season
Coach's choice of strategies during games	Supportiveness of the fans
Extent the team is meeting (has met) its goals for the season	Teammates' sense of fair play
Recognition I receive (received) from my coach	Coach's teaching of the tactics and techniques of my position
Extent my role matches (matched) my potential	Coach's choice of moves/tactics during competitions

Table 7.1 Top 10 (of 56) items of Athlete Satisfaction from a non-differentiated pre/post event perspective

Results show that none of the items in the top 10 match across the prospective and retrospective data sets. Consequently, the findings indicated a fundamental difference in items importance both before and after a peak sporting event (see Table 7.1).

This observation was further supported when the items exhibited in the top 10 were aligned with their 'home' factor. In this instance, the dominant factor pre-event was Factor One: Satisfaction with Team Affiliation totalling six of 10 items. The next most important was coaching (3 items). Satisfaction with Individual Performance has one item in the group and Factors Three and Six were not represented in the top 10.

In contrast, retrospective data showed a different pattern by indicating that coaching factors (5 items) were dominant in the top 10. Whereas both Team Affiliation and Individual performance had two factors each and Satisfaction with External support, one item. Again, Factor 3 was not represented. In conclusion, athletes seem to be looking for support from significant others (9 of the top 10 items) who are closely linked to their attempt to achieve performance gains. In relation to the post event perspective, factors relating to coaching dominate (5 items). However, the distribution of items in the top 10 across 5 of the 6 factors would tend to suggest that athletes consider evaluative input after an event from a wider range of perspectives to be important.

7.2.3.2 Differentiated Perspective of Athlete Satisfaction

In this section, results of the differentiated perspective of athlete satisfaction are presented. Because of the ‘neutrality’ of the two coaching factors discussed in the previous section i.e. the factors are the same across both individual and team sport, their inclusion into the differentiated analysis is the result of having analysed the data at a factorial level. In other words, within the six factor model developed in Study One, coaching factors were an important antecedent of athlete satisfaction for both groups. Therefore, their inclusion in this investigation is an important step in understanding the ‘differentiated’ context of athlete satisfaction and athlete satisfaction.

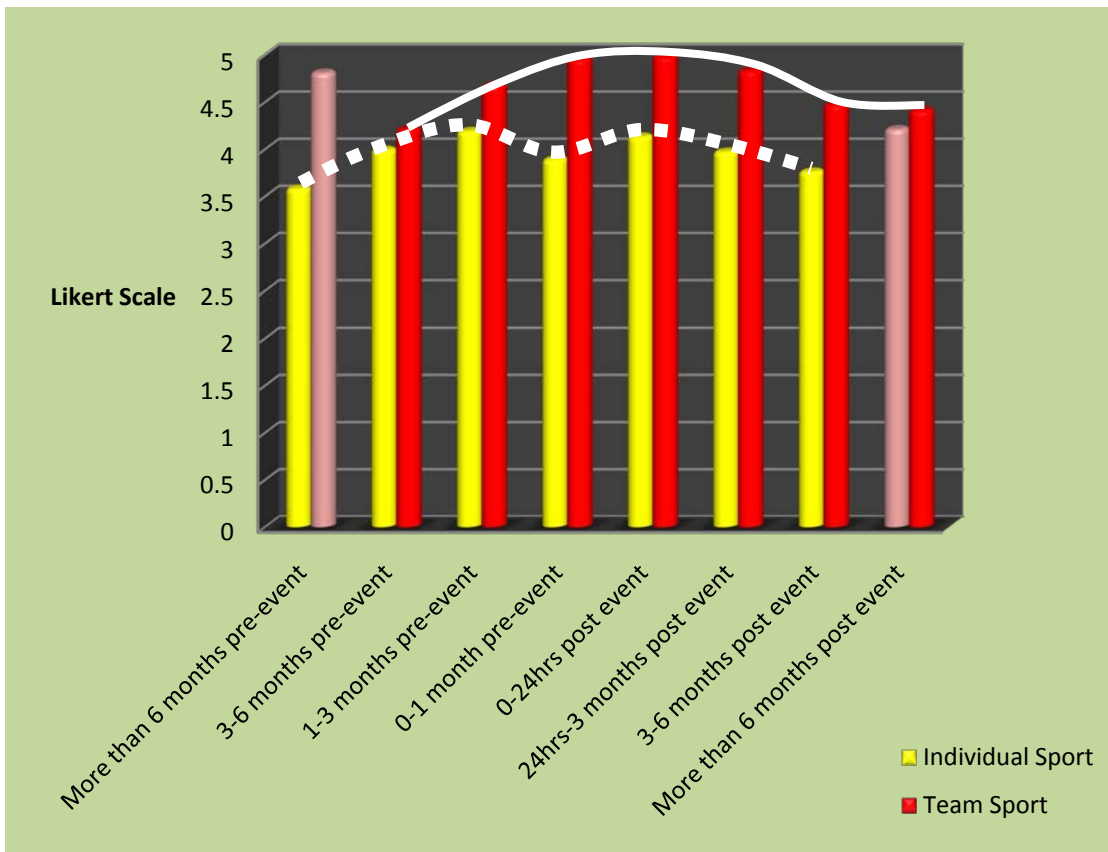


Diagram 7.2 Differentiated Perspective of Athlete Satisfaction

Having differentiated between team and individual sport athletes, results of the current analysis were presented independently and comparatively (Diagram 7.2). Firstly, individual sport athletes utilising the ASQ to articulate their satisfaction levels showed a positive increase in the satisfaction trajectory before an event. The opposite is shown post event where there is a negative satisfaction trajectory. As a general statement, it would appear that the shape of the satisfaction trajectories are at least partly similar for both team and individual sport athletes, particularly when interpreting the data within the 3-6 months (either side) range of the peak sporting event. Where differences emerged between both cohorts is at the level of satisfaction experienced. For example, satisfaction levels for individual sport athletes only rose above the midpoint (Y-axis number 4.0; which denotes

“neither satisfied nor dissatisfied”) on two occasions. In contrast, team sport athletes do not go below the 4.0 threshold at any stage of their athletic experience. Based on these findings, it would seem that overall team sport athletes were more satisfied than individual sport athletes with their sporting experience.

The second data set to be examined was the hierarchical nature of the differentiated ‘items’ informing athlete satisfaction. To reduce tedium a single factor was selected for presentation based on its importance to the team sport cohort (see Table 7.3).

Factor 4 Individual Performance				
<i>Individual Sport</i>				
	Prospective		Retrospective	
	β		β	
q26 Level to which my talents are (were) employed	0.37	q26	q7	0.30
q16 My dedication during practices	0.17	q16	q24	0.20
q32 My enthusiasm during comps	0.14	q32	q32	0.20
q6 Degree to which I have reached my performance goals during season	0.09	q6	q6	0.08
q38 Extent my role matches (matched) my potential	0.07	q38	q16	0.07
q41 The improvement in my skill level	0.06	q41	q26	0.06
q24 Improvement in my performance over the previous season	0.01	q24	q38	0.05
q7 Degree my abilities are (were) used	0.00	q7	q41	0.01
<i>Team sport</i>				
	Prospective		Retrospective	
	β		β	
q24 Improvement in my performance over the previous season	0.46	q24	q7	0.58
q32 My enthusiasm during comps	0.38	q32	q6	0.28
q16 My dedication during practices	0.37	q16	q16	0.27
q6 Degree to which I have reached my performance goals during season	0.23	q6	q41	0.18
q26 Level to which my talents are (were) employed	0.19	q26	q26	0.16
q41 The improvement in my skill level	0.14	q41	q32	0.04
q38 Extent my role matches (matched) my potential	0.08	q38	q24	0.03
q7 Degree my abilities are (were) used	0.04	q7	q38	0.03

Table 7.2 Differences in satisfaction between team and individual sport athletes, a pre/post event perspective

The above findings were interpreted by highlighting differences between team and individual sport athletes at the item hierarchy level using β -scores produced from Standard Multiple Regressions. To make hierarchical interpretation of items simpler the two columns were placed together (see highlighted ‘q’ or question numbers) and examples highlighted. Furthermore, two specific aspects of the data are presented as examples. Firstly, within-variable differences, for example, q24: “Improvement in my performance over the previous season” was the most influential item for the team sport athlete. In contrast the same item is ranked 7th (of 8) for individual sport athletes. Secondly, between-variable differences, for

example, q24 (team sport/prospective) was ranked No. 1. In contrast, the same item (and position) in the individual sport data is ranked 7th! This specific finding supported the contention which had developed through the findings of the research thus far that there is a fundamental difference in how team and individual sport athletes interpret and articulate their idiosyncratic satisfaction responses.

7.3 DISCUSSION

In Chapter Seven I set out to explore the effect of time on the athlete satisfaction response. As a consequence of the wide ranging review of the literature in the area, a number of aspects relating to the investigation emerged to form the basis of the current discussion. Firstly, a satisfaction response is a multi-dimensional (Riener & Chelladurai, 1998) psychological construct, with influences shaping its final articulation by the individual being drawn from a wide range of internal and external forces. Secondly, by the nature of the athletic experience it is a dynamic construct encompassing both negative and positive affective states. Thirdly, by describing athlete satisfaction as a dynamic psychological construct, the concept of ‘time’ as an important component influencing its articulation is acknowledged. Fourthly, when articulating athlete satisfaction it is also important to incorporate an individuals’ reason for being, in this instance it is involvement in the competitive experience. As a consequence the influence a peak sporting event has on athlete satisfaction is an intuitively interesting aspect of the phenomenon. Fifth, little effort has been undertaken by the research community to incorporate a longitudinal approach to athlete satisfaction investigation, even though it is contextually consistent with the notion of

a 'lived experience' taking place over time. Sixth, a small number of studies were located which investigated athlete satisfaction using a pre-/post test data collection framework, however, no studies were found in which the combination of a specific peak event was used as the intervening variable and the resultant findings differentiated between team and individual sport athletes.

Based upon these set of observations guiding the current research process, the athlete satisfaction relative to a peak sporting event research undertaken in this thesis was exploratory. Consequently, the presentation of findings was not based on a priori assumptions in relation to expected results, specifically those focussing on the trajectories of athlete satisfaction for team and individual sport athletes. The strategy undertaken in this phase of the research saw previously captured data placed within a longitudinal framework to present the trajectories of athlete satisfaction. Due to the longitudinal nature of the research process, eight time points were established (four pre and four post-event) allowing participating athletes to indicate their satisfaction at the time of survey (prospectively or retrospectively) in relation to their identified peak sporting event. Supported by findings from the previous chapter three different trajectories of athlete satisfaction were investigated. Firstly, the non-differentiated (no within-variable differences) was followed by the differentiated (both team and individual sport) perspectives of individual and team sport athletes. As a strategy for interpreting the three athlete satisfaction trajectories, a secondary layer of investigation focussed on developing an understanding of the hierarchical perspective (Wu, 2008) of those salient items from the Athlete Satisfaction Questionnaire which were used by individual athletes to articulate the satisfaction response.

Consequently, a number of models were investigated in an attempt to present the data within a consolidated theoretical framework. Although no a priori assumptions were developed to interpret the specific findings of the research, the process of defining satisfaction earlier in the thesis did provide guidance as to the theoretical tradition in which the construct is embedded. Therefore, it is the family of social cognitive and cognitive affective theories which narrowed the focus in the search for the most parsimonious fit between the data and any explanatory theory. Although this specific family of theories informed the overall direction for understanding the current findings, a distinction was made in terms of the intuitive nature of the fit between the findings and the models investigated. In other words, the easier the data seemed to fit into a model under investigation the more preferable the theory was for the explanatory process. Having chosen a results presentation strategy which Borgatti (1996) described as “essentially presenting a situation to a specific theory and asking what it would expect as an outcome” (para. 8) for interpreting the current findings, the approach is an acknowledgement of the ‘exploration’ context in which this phase of the research is embedded. Consistent with the earlier suggestion that ‘satisfaction is not necessarily the greater good’ because being dissatisfied may provide individuals with important regulatory feedback in their quest for better performance, so it is in this phase of the research where the presentation of a range of theoretical explanatory options is preferable to a single explanation of the current data.

7.3.1 CAUSAL ATTRIBUTION AND SELF-DETERMINATION THEORY

In the first instance, causal attribution (Kelley, 1967, 1973), a model focussing on the maintenance of an individual's self-esteem through attributing 'success' with the self and 'failure' with external causes was explored (Rees, Ingledew, & Hardy, 2005; Weiner, 1992, 2010). Within this specific framework the findings were the exact opposite as expected. For example, in the post event context, athletes placed more emphasis on internally derived factors than pre-event. In contrast to causal attribution theory where more emphasis on the self equates to perceiving higher levels of ownership of positive outcomes, such as those creating feelings of satisfaction (as a means of maintaining self-esteem), the current results showed a decrease in satisfaction, even with an increase in internally derived facets of satisfaction being employed in the analysis. Such a trend undermines this specific interpretation of the pre-event results.

A further alternative was examined using the meta theory Self-Determination Theory, or SDT (Deci & Ryan, 1985, 2002). In this instance, similar discrepancies were noted, in particular, when interpreting the results from the three key dimensions of the theory. For example, an increase in satisfaction has been attributed to the individuals' perception of increased 'autonomy'. However, the current findings are somewhat counterintuitive to this basic assumption. Specifically, when satisfaction is increasing, a higher reliance on external factors is evident. Furthermore, where satisfaction is decreasing the attributional shift (Heider, 1958; E. E. Jones & Davis, 1965; Moore, et al., 1979) toward the self is prominent. When interpreting the results from both 'competence' and 'relatedness' contexts pre-event findings would be considered consistent with the basic theoretical underpinnings of the

constructs, i.e. higher levels of satisfaction could be a result of higher levels competence or relatedness. However, as the attained level of these constructs does not change post event and thus these dimensions of SDT are not being thwarted, it is somewhat counterintuitive that the level of satisfaction reported by the respondents should reduce (Rochester, 2010). Overall, utilising SDT as an explanatory framework for the current findings seems to present a less intuitive model fit.

7.3.2 DYNAMIC EQUILIBRIUM THEORY

In contrast to the more attributional perspectives discussed above, exploration also focussed on the ‘equilibrium’ context of the current data sets. For example, the ‘bell-curve’ trajectories presented earlier in the Chapter are consistent with Set-Point, or Dynamic Equilibrium Theory (Headey & Wearing, 1989). Set-Point theory postulates that an individual has a base-line starting point of cognitive-affective constructs such as satisfaction and it is the influence of an intervening variable which alters their trajectory. Furthermore, once the influence of the intervening variable dissipates the individual returns to their, in this case, satisfaction set point. Consistent with the utilisation of the ‘Set-Point’ metaphor, the current findings could also be interpreted within an extension of Moore, et al’s (1979) situational-to-dispositional retrospective attribution model. However, an alteration of the model would be necessary to incorporate prospective data. Such an alteration would explain the satisfaction response at both ends of the bell curve being more consistent with an athlete’s personal disposition. In contrast, reported satisfaction closer to the event is

influenced by the situational demands of the intervening variable. For example the model would incorporate:

- Disposition (lowest satisfaction furthest from event) to
- Situation (highest satisfaction at closest proximity to event) to
- Disposition (lowest satisfaction furthest from event).

Although Set-Point theory provides one possible explanatory framework for presenting the current data, the overriding limitation to this perspective is found when attempting to explain differences in the set-point between team and individual sport athletes. Particularly when incorporating the overarching explanation provided in Costa and McCrae's (1980) seminal work suggesting high congruence between extroversion and successful performance (which was later transferred into the sport realm), there would seem to be no evidence to suggest that team sport athletes should possess a higher satisfaction set-point in relation to their sporting experience compared to their individual sport athlete counterparts. Therefore, the utilisation of this specific theory is possible, but because of the different set points found between team and individual sport athletes, less fitting to the data.

7.3.3 GOAL-SETTING THEORY

Further 'discrepancy-based' theories such as goal setting theory (Ivancevich, 1976; Locke, 1990; Locke & Latham, 1984) were investigated. From a standalone perspective goal setting theory fails to explain a bell-curve data type arrangement of the current findings. For example, an athlete whose satisfaction is increasing toward an event may be experiencing

goal congruence, i.e. the discrepancy reduces between what the athlete/s wants to achieve and what their current position is (Locke, 1990; Wu & Yao, 2006). However, when success or failure is the outcome a relatively stable outcome attribution, in this instance portrayed in the level of satisfaction, should be evident. All data sets presented in the earlier diagrams in this chapter do not show post event response stability but a gradual reduction in satisfaction over the course of the study. Therefore, goal setting theory seems unable to adequately attribute for such shifts in satisfaction.

Where goal setting theory does in fact contribute to an explanation is within a more focussed 'systems theory' perspective where the individual is self-regulating the process of achievement. The sub-theory within systems theory explaining the current findings is Hobfoll's (1989) 'conservation of resources' model which has as its underlying supposition that individuals "strive to retain, protect, and build resources and what is threatening to them is the potential loss of these valued resources" (p. 513). In relation to the athletic context, the individual is interpreted as an active agent in the 'management' of their particular activity. When placing the current findings into this specific context, an increase in satisfaction leading toward a peak sporting event would be an expected outcome. Specifically, when external resources such as coaches and significant others (Latham & Saari, 1979), as well as environmental feedback such as results in lesser performance diagnostic situations are 'controlled' effectively (Hill, 1987) there is a sense of support which equates to a reduction in the have-want discrepancy discussed in the previous paragraph.

The interesting results variation between team and individual sport athletes in the last month before the peak event can also be explained in this way. For example, the team sport athlete who ‘manages’ all aspects of their performance environment is able to maintain a consistent increase in satisfaction leading to the event itself. Because of the nature of the team sport environment they maintain reliance on others (teammates) throughout the athletic experience to achieve performance outcomes. In contrast, the decrease in satisfaction in the month before a peak event for individual sport athletes as noted in Diagram 7.2 may be a result of the realisation that although the management of the environment has increased leading to the peak event, the individual is wholly reliant on him/herself to achieve the performance outcome. In other words, the individual athlete may be experiencing increased anxiety at the inevitable reduction of support inherent in individual sport activities, which may also increase the perception that a reduction in the ‘have-want’ discrepancy is under threat.

The ‘conservation of resource’ model is considered an intuitively better fit compared to the other models and theories discussed thus far, not due to each options’ ability to easily account for an increase in satisfaction leading up to an event, but because of what happens leading away. As shown in both diagrams earlier in the chapter there is a contrasting picture of satisfaction post event with its gradual reduction over time. Where an athlete perceives for example ‘autonomy’ before an event, they now must perceive less ‘autonomy’ after the event. Consequently, an evaluation of higher levels of autonomy based on an increased emphasis on items discussing individual performance factors in post event attributions should result in an increase in satisfaction. However, the opposite finding is presented in the

data. Although theorists may find more complex ways of explaining the data, as this evaluation is not an attempt to discredit or undermine the potential of the theories and models discussed earlier in the chapter to explain the data, they continue to lack a certain convergence with the current results.

It would thus seem that Hobfoll's 'conservation of resources' model continues to provide the best 'fit' (Borgatti, 1996; Glaser, 1992) between the current findings and an explanatory framework. From a hierarchical perspective the data indicated that the shift in attributions post event created a more balanced arrangement of feedback dimensions compared to pre-event. When employing Hobfoll's interpretation of an "appraisal of resources" (p.519), this shift in attributions tends to indicate a stronger focus on exploring causality across a wider range of factors in order to evaluate the effectiveness of overall (including both externally and internally-derived) resource management, and consequently, success (Gee, et al., 2007). And it is because of the broader range of options from which to gather 'feedback' that become available to the athlete post event that provided less certainty when trying to ascertain what aspect of the performance process was responsible for the inevitable performance outcome.

In summary, the exploratory nature of this specific phase of the research makes an interpretation of the findings based on a specific theory unattractive. It would seem more appropriate to explore possibilities including their limitations as a way of better understanding how the data fits into theoretical contexts (Babbie, 1989; Berger & Luckmann, 1966; Bickman & Rog, 1998; Glaser, 1992; Stebbins, 2001). Although

Hobfoll's (1989) model seems to provide the most harmonious fit between the data and theory the decision to focus on this particular direction only illuminates the subjectivity involved in such a decision (Zeller & Carmines, 1980). However, such an approach is not necessarily a negative aspect of the research process when considering that even when applied to statistical analyses a certain level of subjectivity in relation to data exclusion/inclusion and interpretation is evident and accepted (Pallant, 2007; Patton, 1990; Podsakoff, et al., 2003; Spicer, 2005; Tabachnik & Fidell, 2007; Thode, 2002).

7.3.4 DATA INTERPRETATION

Having explored the contextual nature of the current findings, focus is now drawn to exploring perspectives within the data. Interpretation of the current results suggested rather unsurprisingly that commonalities exist between the 'shape' of trajectories of both differentiated and non-differentiated data sets. In a general sense, particularly noticeable aspects of the three sets of satisfaction trajectories were the anomalous results at different ends of the time spectrum. In this instance, both the non-differentiated and team sport satisfaction trajectories indicated a much higher level of satisfaction more than six months before an event. Contrastingly, individual sport athletes' results showed a marked increase in satisfaction more than six months post event. A possible explanation of the finding relates to the cyclic nature of the competitive experience. In other words, six months after a peak sporting event is likely to also be six months before the same event, albeit a year apart. Therefore, it is possible that the data collection strategy is measuring the same aspect of satisfaction.

When excluding the above anomalous results from the data presentation (see rose coloured data points in tables 8.1 and 8.2), a more consistent curvilinear trajectory pattern across both team and individual sport athletes is found, albeit each with differing levels of satisfaction. Both data sets generally indicate a similar increase and decrease in satisfaction leading up to and away from a peak event. Additionally, attributional differences emerge between data on both sides of the intervening variable. For example, athletes (pre-event) attribute more importance to items relating to external factors such as support from others and the definitions surrounding success. Less than 10% of descriptors used pre-event were related to more internally focussed attributions such as personal improvement. In contrast to the pre-event findings, the number of internally focussed descriptors utilised post event tripled, thus creating a more balanced evaluative framework between internal and external attributions.

When focussing on each specific finding, in the first instance, a non-differentiated perspective incorporating three variables was presented. As discussed in Chapter Six, no practical significance between athlete satisfaction and 'gender' was exposed. Although the gender findings are clear in their non-significance relative to within variable bias, an interesting finding relating to the coaching factors (2 of the 6-factor solution developed in Phase Two) has been exposed in the current research by their non-differentiation between team and individual sport athlete responses. This specific result contrasts with a number of studies indicating differences between team and individual sport athletes in their interactions with coaches. For example, Pfeffer, et al. (2004) showed differences between both team and individual sport athletes in terms of the facets influencing perceptions of

satisfaction in German athletes. Additionally, Baker, et al. (2003) indicated that team sport athletes achieve high satisfaction with their coaches when they demonstrate a number of preferable coaching behaviours. The extent of influence achieved from the demonstration of these behaviours is markedly less for individual sport athletes.

In contrast to the above findings are results focusing on preferences for coaching behaviour by Lindauer (2000) in which significant differences between team and individual sport athletes were found in the factors 'Democratic Behaviour (DB), Autocratic Behaviour (AB), Positive Feedback (PF), and Social Support (SS). However, no differences were found in Situational Considerations (SC) and more importantly in the dimensions of Training and Instruction, which in a hierarchical context were the most important items (6/9) in the top 10 (retrospective and prospective) items utilised by respondents in this specific research (see Table 7.1). Furthermore, the higher representation of coaching factors across both prospective and retrospective phases of the current research is consistent with a number of other studies relating to athlete satisfaction and leadership in which the coach-athlete dyad is a significant factor influencing an individuals' satisfaction response. For example, Davis and Jowett's (2010) research revealed a link between the perception of the athlete-coach relationship, attachment and eventual satisfaction with sport. Similarly, Gagné, et al. (2003) suggested in their study relating to positive emotions and higher self esteem that "training contexts where coaches support the autonomy of athletes...are likely to help athletes experience sustained positive emotions" (p.386). Overall this allows findings related to coaching to be generalised across a wider range of demographic variables than the following differentiated data.

The second set of findings to be discussed relate to those factors of the ASQ identified in Chapter Six where statistically significant differences were found between team and individual sport athletes. In this instance, the analysis undertaken in Chapter Six, which informs this phase of the research, indicated four factors of the six-factor model met the ‘differentiated’ criteria. Results of this aspect of the data suggested that hierarchical differences in the items used to articulate athlete satisfaction exist between both team and individual athletes, as well as pre- and post event. An example of these differences was provided in Table 7.2. Firstly, hierarchical differences between individual sport and team sport athletes pre-event appeared to focus on performance in relation to event proximity. For example, findings representing individual sport athletes’ satisfaction responses are interpreted as interest in whether the preparation for the specific event in question was appropriate, i.e. a stronger ‘proximal’ focus relative to the peak sporting event chosen by the individual athlete. Although team athletes seem to be interested in the same feedback, their point of reference was more distal, i.e. performance from the previous season. In general however, the hierarchical nature of pre-event satisfaction has good inter-variable congruence with 2nd, 3rd and 4th items on the list found in the same hierarchical position.

When exploring differences in item hierarchy between team and individual sport athletes post event no difference was found in relation to the most important item for both groups. Thereafter however, substantial differences emerged. A particularly good example is found in q6: “Degree to which I have reached my performance goals during season” which for team sport athletes became an important item in relation to the articulation of the satisfaction response. Where similarities between both distal and proximal viewpoints for

team sport athletes emerged, their most recent performance related stimulus was the focus of their satisfaction response. Individual sport athletes differ from team sport athletes in respect to post event analysis by reflecting on distal comparisons i.e. current performance in relation to the previous season. This represents the polar opposite finding of their team sport counterparts.

When investigating ‘within-variable’ item hierarchies, differences are found in both team and individual sport cohorts. For example, in the pre-event context team sport athletes are least interested in informing their satisfaction response with information regarding how their abilities were used within the team setting. However, post event this specific item became the most important factor in their analysis. Similar differences also emerge between pre- and post event analyses by individual sport athletes. These within-variable results support the earlier ‘conservation of resource’ model which focuses on more externally-oriented items of athlete satisfaction pre-event and more balanced internal/external search for causality findings post event (see highlighted data cells in Table 7.2).

A final comment relating to the exploration undertaken in this specific study centres on a more tempered approach to understanding athlete satisfaction and the peak event. In particular, statisticians in general warn of misinterpretations of results of statistical analyses by seeing bigger differences than are pragmatically present (G. A. Morgan, et al., 2004; Pallant, 2007; Tabachnik & Fidell, 2007). This is a particularly relevant criticism in light of the small differences (Likert scale scores) between the highest and lowest levels of satisfaction recorded by athletes. However, this criticism of the data is not supported in the

current research context based on the overall breadth of scores across the research cohort. Average scores of participating athletes ($n = 210$) began at a little over 1, and end slightly above 6.5 (out of 7) therefore indicating a wide representation of athlete satisfaction responses.

Although the impact on the overall research of small differences between low and high satisfaction scores is a more subjective process when interpreting statistically based results or simply making a practical judgement, what seems most valuable to a better understanding of athlete satisfaction and the peak event is the consistency of the satisfaction trajectory between all three variables discussed in this study. This specific observation has high practical significance from two perspectives. Firstly, it seems possible that an athlete's satisfaction progress leading to a peak event can be tracked with some degree of empirical confidence. Based on the within-variable and between-variable findings progress toward specific goals may become more 'manageable' for both athlete and supporting entities and thus allow for interventions, based on consistent or anomalous results, to take place. In other words, this particular assessment mechanism has the potential to provide early indications of the issues affecting progress toward a specific sporting outcome.

Secondly, there is opportunity for significant others such as coaches, friends, family or mentors to gain a better understanding of what the individual or team sport athlete find most important at different stages of the athletic experience (Robbins & Rosenfeld, 2001). In particular, the ability of those individuals or entities supporting an athlete to craft

situationally appropriate responses will increase the likelihood that those interactions are of tangible value to the athlete in their quest for optimal performance.

Having now completed both studies, the next phase of the thesis is to bring together the findings into a general discussion and conclusions section. The following Chapter will be informed by the combination of the theoretical, contextual and practical nuances necessary to gain a broader understanding of athlete satisfaction.

CHAPTER EIGHT

DISCUSSION AND CONCLUSIONS

8.1 INTRODUCTION

Initial impetus to undertake athlete satisfaction research came from my personal desire to understand differences between my ‘individual sport’ and ‘team sport’ lives. In particular it was difficult to understand why satisfaction assumptions in one environment had not engendered the same feelings in the other. Consequently, I needed to focus my attention onto a range of new and unfamiliar factors that would satisfy and thus motivate me to want to come back and do it all again the next day. The opportunity to explore this dilemma further and learn more about satisfaction as a motivating factor has been explored in this research.

Following a review of the literature a gap was identified relating to the study of athlete satisfaction and peak sporting events. More specifically, the investigation indicated a dearth research on the topic, including the core aspect of their involvement in sport, namely competing. Considering that competing is such a cornerstone of the athletic experience (as opposed to recreational or non-competitive sports people) it seemed that the combination of these topics was a neglected area worthy of further exploration.

To achieve a better understanding of the topic a formal process of investigation was developed including three research objectives: a) develop a conceptual and theoretical

understanding of satisfaction in relation to a peak sporting event through an in-depth examination of existing applied and theoretical research literature, b) informed by the findings from the first objective, identify a survey instrument and test its appropriateness for administration in the current research setting (Study One), and c) utilise the survey instrument to explore athlete satisfaction in relation to an individually defined peak sporting event (Study Two).

Because of the lack of literature in the area informing the current research the development of the research strategy involved articulating ideas and concepts guiding its construction. Firstly, this research was exploratory. Although segments of the research process could be found in previous studies no research was found where all aspects of the context under investigation were connected. Secondly, as I did not want to exclude important contextual insights, a mixed method approach was employed. Thirdly, based on the ‘peak event’ context in which the research process evolved a longitudinal data collection approach was adopted. Particularly influential in the decision relating to which longitudinal survey approach to utilise was the work of Suh, Diener, et al’s (1996) subjective well-being research which identified differences in the type of responses expected from individuals based on their time-related proximity following a specific peak event. A further extension of this ‘retrospective’ approach to understanding the topic was initiated so that data were collected both pre- and post event.

Under the headings of the two studies undertaken I will review the key findings and discuss the contributions to the theory and practice of athlete satisfaction that this research has

provided. Possible directions for future research are also outlined. The chapter concludes by outlining both limitations and future research.

8.2 STUDY ONE

After an extensive literature review process, the Athlete Satisfaction Questionnaire was identified as the most appropriate survey tool to use in the current New Zealand research setting. Although a number of researchers utilised the questionnaire in their non-North American collegiate based studies (Bebetsos & Theodorakis, 2003; Eys, et al., 2007; Karreman, et al., 2009; Kocak & Akioglu, 2005; Singh & Surujlal, 2006; Tsigilis, et al., 2009; Yusof, 2002), its underlying ability to inform researchers by encompassing all aspects of the athlete satisfaction paradigm had not been tested.

Surrounding the developmental framework of the ASQ coupled with theoretical assumptions about a) what it means to be an athlete (Gotwals, et al., 2003; Pensgaard & Ursin, 1998; Riemer & Chelladurai, 1998; van Manen, 1990), and b) the concept of ‘affective states’ (Brustad, 1988; Mischel & Shoda, 1995; Schimmack, 2003; Tomkins, 1962; Tomkins & Izard, 1966; Watson, et al., 1988), a discrepancy emerged in relation to the utilisation of affective states to inform scale development. From an earlier theoretical standpoint it was argued that a differentiation between satisfaction and dissatisfaction as separate affective states was available (Mullins, 2005; Tomkins, 1962; Vlachopoulos, et al., 2000; Watson, et al., 1988). However, when considering the range of affect experienced by athletes during their athletic experience, such an approach has little practical significance to

understanding what it means to be satisfied as an athlete. As a consequence, a bi-polar satisfaction/dissatisfaction, as opposed to a single-dimensional 'satisfaction only' continuum for data collection (as found in Riemer and Chelladurai's original scale development research) was transposed into the instrument. This specific data collection strategy consequently produced an extension to the available findings.

Providing a bi-polar response scale ensured not only a theoretical advancement by redefining the range of affectivity within the survey instrument, but also practical advancement of the ASQ by providing respondents with a better opportunity to articulate meaning to their lived sporting experience.

A further aspect of theoretical significance was the effect a new research setting would have on the interpretation of ASQ results. For example, Riemer and Chelladurai (1998) suggested that the ASQ is likely to be of utility in a different research setting, however, testing would be required to confirm the assumption. Therefore, this specific research followed the lead provided by a number of other international studies (Bebetsos & Theodorakis, 2003; Eys, Hardy, Carron, & Beauchamp, 2003; Singh & Surujlal, 2006) and followed Riemer and Chelladurai's above suggestion. Having done so, differences emerged in the underlying structure of the instrument thus supporting the original author's cautionary statements. Six correlated factors emerged from initial content and exploratory factor analyses using a New Zealand athlete population. The factors represented satisfaction with team affiliation, coach interaction, medical support, individual performance, coaching strategy and environmental support. This specific result is somewhat different from the eight original dimensions

embedded in the ASQ. Two possibilities seem plausible when attempting to explain the factorial differences between both research settings. Firstly, the type of athlete participating within the New Zealand research context may be contextually different to the original research cohort. Secondly, the inclusion of dissatisfaction responses into the evaluative framework may have facilitated the reduction of dimensions of satisfaction necessary for the articulation of athlete responses. Based on the above discussion, further research incorporating the newly identified facets of athlete satisfaction into the ASQ seems warranted in order to produce a survey instrument more representative of the athletic experience.

A number of current findings have provided support to aspects of the original ASQ design. For instance, Riemer and Chelladurai (1998) utilised a small athlete demographic to investigate athlete satisfaction. For instance, current and former collegiate athletes (no further demographic definition provided) and male athletes from three team sports were utilised to develop the survey instrument. In the context of which participant cohort to engage, Peterson (2001) warns of the excessive use of university students in soft sciences research. This specific observation was incorporated in the planning of the current research framework and thus a substantially broader research demographic was engaged, with athletes ranging from 17 – 43 years, dispersed amongst 44 team and individual sports. As a consequence it was anticipated that the current findings would provide a better representation of the athlete satisfaction paradigm.

Considering the limited breadth of athlete demographic utilised by Riemer and Chelladurai findings showed high congruence with those from the current research. A possible reason for the level of accuracy achieved by such a small demographic may rest with Riemer and Chelladurai's utilisation of the 'prime beneficiaries' for item generation, as opposed to earlier athlete satisfaction scales such as Granito and Carlton's (1993) Sport Satisfaction Scale or Lesyk and Kornspan's (2000) Ohio Sport Satisfaction Index.

A second assumption by Riemer and Chelladurai investigated in this study was the nature of athlete satisfaction responses between team and individual sport athletes. Although individual sport athletes were not identified as a cohort utilised in the development of the ASQ, Riemer and Chelladurai (1998) indicated their belief that facets relating to individual sport athlete satisfaction were but a subset of team sport athlete responses. However, differences were exposed in relation to the level of 'importance' (Wu & Yao, 2006) placed on specific items for team and individual sport athletes when articulating their satisfaction responses. Consistent with earlier research in the area, 'individual sport' athletes considered coach interaction as the most important factor in their definition of what it means to be satisfied with the athletic experience (Baker, et al., 2003; Balaguer, et al., 1999; La Rose, 1981; Summers, 1991). In contrast, 'team sport' athletes focussed on their individual performance as the most important mechanism for their satisfaction. This specific result is also consistent with earlier 'causal attribution' research which discussed the hedonic nature of attributions by suggesting that satisfied individuals [athletes] considered themselves the predominant reason for their success (Kelley, 1973; Polman, et al., 2007). As an addendum to this specific point, no plausible explanation could be extended to the data to suggest that

‘dissatisfaction’ responses would be fundamentally different to these findings. Therefore, Riemer and Chelladurai’s ‘individual sport athlete subset’ contention has been supported through the findings within Study One. The disparity in ‘importance’ findings between both cohorts indicated an ever present need to investigate whether between-variable or within-variable differences exist.

Furthermore, the current research findings indicated that the ASQ provided excellent representation of satisfaction as a positive affective state. However, the survey instrument is somewhat limited due to the lack of a broader interpretation of satisfaction-specific affective responses. In other words, ‘satisfaction’, the positive affective state, alone does not capture all dimensions of the psychologically dynamic nature of the athlete satisfaction environment. This specific finding provides a previously untapped perspective which can inform development of the ASQ to become more representative of the dynamic nature of the athletic experience.

In summary, when adding to an existing knowledge base two sets of findings should be highlighted. Firstly, the current findings supported the necessity of investigating the underlying structure of the ASQ in a new research setting. In this instance, a reduction in dimensions as well as their re-definition to be more representative of the New Zealand setting was achieved. Secondly, differentiation at the between and within-variable levels was important as the findings indicated that each setting possesses its own idiosyncratic articulation of the results.

The current research findings support Riemer and Chelladurai's (1998) statement, that the items relating to satisfaction from an individual sport athlete perspective are the same as those utilised by team sport athletes from the perspective of 'satisfaction' the positive affective state. However, further investigation is necessary to firstly incorporate 'dissatisfaction' items, re-test the model and report any new findings.

8.2.1 PRACTICAL IMPLICATIONS OF STUDY ONE FINDINGS

Having underscored the theoretical value of the current research, the practical significance of the findings from Study One are highlighted. In its current form the ASQ as a standalone survey instrument provides little insight into what it is to be satisfied as an athlete across their lived experience. In particular, questions remain as to the psychological and contextual nature of its employment. In other words, unless otherwise stipulated the questionnaire can only indicate a generic appreciation of the satisfaction environment as it fails to take into account variables such as 'mood states' (Diment & Terry, 2003; Schwarz & Clore, 1983) during data collection or 'dispositions' (McCrae & Costa, 1987; Mischel, 1977; Mischel & Shoda, 1995; Rogulj, et al., 2006) when applied. In this sense it seems the survey instrument has little practical value to investigators.

In order to negate such limitations the ASQ can also accommodate larger groups of athletes such as teams providing aggregated results which can indicate a general 'team climate'(Carron, et al., 1985). Such findings may provide those individuals supporting athletes the impetus to examine the utilisation of an intervention strategy if satisfaction

levels are showing a negative trend. Furthermore, an aggregated approach to data analysis and findings presentation could provide valuable insight into what specific facets of satisfaction are most important for that particular cohort. In general, information gained from the above approach could allow support personnel to target specific discussion themes for either inclusion or exclusion when entering dialog with a group or individual.

Although the process of investigation undertaken in Study One of this current research seems cumbersome and on occasion prone to redundancy, it is more importantly a reminder that due diligence produces clarity of process and confidence in the findings for future research endeavours, be they my own or others. Oftentimes as a researcher I have been advised to have faith in the findings of others. Without fail however, every study explored in the journey that was this thesis showed limitations. Therefore, I believe that the very nature of the exploratory research strategy undertaken to produce this research required diligence in all matters so that a future expansion on the findings could be undertaken with confidence in the process informing it.

In addition to providing confidence in the research process for future investigators, the findings from Study One also provided me with a sense of confidence when developing the research framework for the second study in this thesis.

8.3 STUDY TWO

As noted earlier in this thesis, the initial impetus to study athlete satisfaction and the peak sporting event was provided by Suh, et al's (1996) subjective well-being research. The fundamental argument utilised by these researchers was that time is a significant mediator of an individuals' satisfaction response. Their findings indicated that an attributional shift occurred from a situational perspective to a dispositional perspective in relation to the type of answers they were receiving from research participants. Based on their observations I undertook to investigate whether satisfaction also possessed a similar dynamic nature. Such an exploration required a theoretical and conceptual investigation of strategies used previously for athlete satisfaction research in which time was considered an intervening variable.

As discussed in chapter three of the thesis, the majority of previous athlete satisfaction research had been conducted using cross-sectional data collection approaches. Interestingly, those few longitudinal studies that were identified encompassed a broad range of data collection strategies ranging from exclusively prospective or retrospective designs to the combined prospective-retrospective design approach.

As with all refinement processes the literature available incorporating the chosen longitudinal approach (prospective/retrospective) became smaller in number. Three studies were found using an intervening variable to explore differences in athlete satisfaction over time (Gaudreau, et al., 2009; Pensgaard & Ursin, 1998; Reinboth & Duda, 2006). However,

this is where the contextual similarities ended. Although all three studies could be said to support the proposition that athlete satisfaction is a dynamic construct when examined over time, each possessed limitations such the number or range of sports utilised, single gender or the non-utilisation of the ASQ for data collection, all of which reduced their ability to be generalised across contextual boundaries.

Interwoven with the development of a research design for this specific study was a focus on an athlete's reason for being i.e. performing in competitive environments. Thus the investigation included an intervening variable which was the peak sporting event identified by each research participant.

The current research entered new investigative territory firstly, by utilising the ASQ with team and individual sport athletes, and secondly by focussing on gathering data relating to a peak sporting event both before and after its occurrence.

Results of the current research provided a bell-shaped curve of athlete satisfaction in relation to a peak sporting event, albeit with between-variable discrepancies when using differentiated (team vs. individual sport athlete) and non-differentiated data models. Using a [closeness of] 'fit' metaphor as discussed by Borgatti (1996) in the previous Chapter a range of theoretical options were presented as possible ways of explaining the current findings.

Although all theories presented seemed flexible enough to develop a coherent explanation of the data, the most intuitive interpretation of the findings has its foundation in Hobfoll's

(1989) ‘conservation of resources’ model, in this instance an athlete-to-significant other management element . In other words, athletes manage their environments pre-event and then draw feedback to determine causality from a wider range of sources post event. The consequence of this approach is the athletes’ satisfaction response.

A particularly interesting consequence of choosing the above explanatory model for the current research is to challenge the definition of what it means to be in a team. For example, Forsyth (2006) explained the inter-dependent nature of performing as a conceptual definition for membership in a ‘team’. In addition, an individual athlete’s performance whereby their results are aggregated provided the definition of a ‘co-active’ team. And lastly, the lack of either of the earlier elements defined the individual athlete. However, when acknowledging the results in relation to Hobfoll’s (1989) conservation of resources model it would seem that the delineation between athletes who rely on others whilst in preparation for- or in the act of performing (the ‘team’ athlete), and those who do not (the ‘individual’ athlete), becomes blurred. An example of such a contrast can be found between, for example, a partner who through the dynamics of their relationship is there for the athlete, and the mother who works a second job to get their son to a competition! Both are considered ‘significant others’, however, the definitional shift is underpinned by the notion that the ‘two jobs’ mother is more in the performance-related consciousness of the individual athlete, whereas the ‘partner’ is meeting an everyday life expectation.

Given the above, I suggest a new category, the “*associative team*” be introduced to complement Forsyth’s current inter-active/co-active and non-team definitions. The new

definition acknowledges that a support network of significant others surrounds the individual athlete, irrespective of sporting code, and who are perceived by the athlete as *directly* influencing the outcome of their achievement processes, and whose resource/s are conscious to the athlete and thus in need of management/control. Therefore, the ‘associative team’ and ‘associative team member’ is defined as the group of significant others or individual significant other identified by the athlete as *directly* influencing the achievement of their performance goals.

Continuing with the differentiation theme the results of the current study indicated differences in the trajectories of satisfaction between team and individual sport athletes. Specifically differences emerged between the starting and finishing points on the satisfaction continuum. This finding indicated that team athletes were generally more satisfied than individual sport athletes. Possible reasons for this particular discrepancy may be found in the earlier section of this discussion where substantial differences emerged in the number of facets of satisfaction used by the two cohorts to express their feelings (see Table 4.4). Furthermore, and consistent with the earlier ‘associative team’ analogy, individual sport athletes may experience less satisfaction as the nature of individual sport participation means a greater emphasis is placed on controlling more of their environment. Such a necessity may be a catalyst for less overall satisfaction than team sport athletes who have more available resources i.e. associative team members and actual team members, as opposed to only associative team members for individual sport athletes to spread the performance load amongst.

Furthermore, between variable differences at the sport affiliation level emerged when focussing on the hierarchical nature of athlete responses. A number of studies were identified acknowledging a differentiation between team and individual sport athletes with particular emphasis on satisfaction with coach-athlete interactions (Baker, et al., 2003; Devinatz, 1980; U. Johnson, 1997; Lindauer, 2000; Pfeffer, et al., 2004). Although single perspectives provided a more focussed insight into the relationship between one variable and another (J. W. Cresswell, 2003; de Vaus, 2000) the strategy failed to provide a broader generalisation into the wider domain underpinning the research framework. This study's findings using the multi-dimensional ASQ are of particular interest to a broader understanding of what it means to be satisfied as an athlete, as the questionnaire acknowledges that the socio-affective dynamics of athlete satisfaction are broader than singular interactions. In other words, it is unlikely that utilising a context specific e.g. leadership scale will provide the holistic causal insight necessary to make broader contextual generalisations.

Based on the above justification and a lack of ASQ utility in within-variable (team versus individual athlete) investigations thus far, this study provided the opportunity to present a new set of findings. As shown in the previous Chapter, data were separated not only at the within-variable level, but also each variable was separated into prospective and retrospective groupings to ascertain response differences not only between those participant cohorts, but also either side of the peak sporting event. It can therefore be concluded that fundamental differences exist between team and individual sport athletes relating to what aspects of the sporting experience engender the greatest satisfaction. An extension of this

specific finding was the identification of response differences when ‘time’ was incorporated as a variable.

8.3.1 PRACTICAL IMPLICATIONS OF STUDY TWO FINDINGS

When defining the practical benefits of understanding the broader dynamics of athlete satisfaction, the ‘organisational effectiveness’ context in which a ‘top-down’ (associative team members – athlete relationship), or ‘observer’ perspective is utilised is beneficial (E.E. Jones & Nisbett, 1971; Malle, 2006; Watson, 1982). For example, associative team members could manipulate situations to enhance the quality of interactional outcomes between themselves and the athlete. Two specific strategies were discussed in the previous Chapter. Firstly, and similar to the current research process, associative team members may wish to gauge an athlete’s current satisfaction level and place these findings alongside a previous set of findings. Such a strategy would allow monitoring of athlete progress in relation to an expected athlete satisfaction trajectory. For example, in a pre-event context, the coach as an associative team member may discover an anomalous reading where satisfaction is too high. Such a result may provide feed forward information regarding an athlete’s propensity toward complacency. The coach is thus in a position to utilise the findings to provide correction to a more consistent satisfaction trajectory. The strategy may also benefit the athlete who indicated a negative trajectory. In a post-event context, the intervention by an associative team member would be based on a feedback/analysis process. In such cases high or low deviations in the data trajectory may indicate an incorrect focus by the athlete on the essential elements involved in their performance. In other words, an

expected trajectory probably indicated that the athlete has correctly incorporated a broader feedback framework than the athlete who deviated by focussing on singular aspects of their performance, i.e. the athlete only acknowledged their new partner as the reason for their success or failure.

The first practical benefit may be that studying satisfaction levels for athletes in relation to peak sporting events provides valuable feedback for ascertaining whether the athlete is tracking appropriately both toward or following performance execution at a peak event. The second practical benefit relating to the utilisation of a longitudinal approach to investigating athlete satisfaction was response ‘importance’ (Locke, 1969; Locke & Latham, 2002; Wu, 2008). Current findings indicated that not only did differences exist between team and individual athletes in relation to the aspects of satisfaction which have the greatest influence on their feelings of satisfaction, but also at what point on the athlete experiential continuum they are to be found. As an example, Pensgaard and Ursin’s (1998) Winter Olympian research indicated that the coach was a significant cause of agitation/stress before an event. What the researchers failed to indicate was what exactly it was that caused the negative coach influence. When bringing together the current ‘conservation of resources’ approach with Pensgaard and Ursin’s research a possible explanation is an athlete-coach interactional perspective where individual sport athletes may consider the interaction with their coach/s as negative because the coach is not fulfilling their current needs. In other words, the athlete has failed to manage their resource correctly and thus there is a drop in satisfaction immediately before an event. Based on the current findings such an explanation is plausible for the individual sport athlete. However, such a shift may be less evident in a team setting

because there are less opportunities for the individual athlete to experience the same intensity of relationship with the coach due to the coach spreading his/her resources more widely amongst the entire group. In other words, because the proximity of the athlete to the coach is generally less in a team sport, as opposed to individual sport setting, less opportunity is available where a reduction in satisfaction can occur.

When explaining the current findings from the coach-to-athlete relationship two aspects of the relationship are evident. Firstly, coaches may be articulating their personal situational interpretation to the athlete which may conflict to those affective/emotional states being experienced by the athlete, i.e. the athlete may be receiving messages that lack situational value to them. Secondly, an inexperienced coach may simply wish to reduce the likelihood of inappropriate situational responses by ascertaining what common themes are important to their particular type of athlete at any specific time along the experiential continuum.

In summary, the current research added tangible value to the athlete experience by allowing associative team members in particular to acknowledge differences between athlete groups and craft intervention strategies or appropriate responses which maximise the benefit of their interactions with their athlete/s.

8.4 LIMITATIONS AND FUTURE RESEARCH

An initial limitation for the current research framework involves the breadth of the athlete demographic utilised from which conclusions can be drawn. In this instance, the demographic used is only a section of the possible New Zealand athlete community, albeit in a variety of team and individual sports. Consequently, the findings are not representative of all athletes in New Zealand or athletes in a general sense. Future research in this area should focus on expanding each subset of the current demographic in order to study possible differences in satisfaction amongst for example ‘elite’ athletes versus ‘school’ representative athletes and New Zealand European athletes versus, for example, New Zealand Maori athletes. Doing so may provide valuable insight into whether the satisfaction an athlete experiences differs based on their level of representation or whether ethnic/cultural biases toward satisfaction responses are present.

A further limitation was the continued utilisation of the ASQ in the research process after embedding a bi-polar response continuum. Having chosen to not undertake further psychometric development of the ASQ may have reduced the validity and reliability of any findings. Future research should therefore focus on the psychometric development of the survey instrument by embedding items that are more representative of the broader affective range expected as a result of the athlete experience.

A further question that remains unanswered relates to the substantial differences in the number of items used to articulate satisfaction responses between team and individual sport athletes. Where team sport athletes utilised almost all items available to them as they

indicated what satisfaction meant to them, individual sport athletes utilised a comparatively much smaller number (see Table 4.4). In addition, individual sport athletes indicated an overall lower level of satisfaction compared to their team sport counterparts (see Diagram 7.2). The findings thus far seem to suggest that the ASQ is less appropriate as a tool for articulating what it means to be satisfied as an individual sport athlete. Based on the overall findings an interesting avenue for future research is exploring new ways to better represent what it means to be satisfied as an individual athlete. In particular, the development of a new set of item generation questions (see Chapter Four) or the use of structured interviews with individual athletes may expose a level of understanding previously untapped.

Furthermore, this research focussed on the assumption that athletes are primarily involved in preparing for a single peak sporting event in any one year. From an unsubstantiated perspective, multiple event calendars seem to be more common for athletes as the opportunities for broader exposure are provided. An example is found on the IAAF Website where competitive track and field athletes have complex competition calendars incorporating multiple ‘event windows’ such as their National Championship, a Continental Championship, Diamond League and World Championship in any one year. Add to that the Olympic year and an athlete has a great deal of competitive stress where results at any of these events can mean continued participation at the elite level through the achievement of results translating into sponsorship or government funding. Consequently, a broadening of the parameters of this research to explore the dynamics of athlete satisfaction over multiple events would also seem a worthy exercise for future researchers.

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APPENDICES

APPENDIX 1 ATHLETE SATISFACTION ITEM GENERATION QUESTIONNAIRE

Introduction Page

Dear Participant,

This survey is part of my PhD research into Athlete Satisfaction. The research is designed to help me understand 'Athlete Satisfaction' for individual sport athletes within the New Zealand sporting environment.

By completing this questionnaire you are indicating that you agree with the Information Sheet details listed below.

If at any stage, you would like to clarify any aspect of the questionnaire please don't hesitate to contact myself or my Supervisor Dr. Sarah Leberman, Sport Management and Coaching group, Dept. of Management, Massey University, Palmerston North. Tel: (06) 350 5799 xt 2785 or S.I.Leberman@massey.ac.nz

Thank you for supporting my research.

Kind regards

Warren Smith

1. Information Sheet

Participant Recruitment

The method of recruitment has seen the researcher utilise the internet to access participants. Contact has been made with colleagues and national organisations that have the target group of athletes under their jurisdiction.

Project Procedures

The data collected will assist the researcher to better understand the environment in which 'Athlete Satisfaction' in New Zealand takes place.

Once the data has been obtained it will be analysed and reproduced for the Doctoral Thesis. The data may also be utilised in the presentation of papers to journals specific to the area of study.

All data will be stored in a fireproof, lockable cabinet situated on the Massey premises. The documentation is only accessible by the researcher.

If you would like to obtain a copy of the research findings please indicate this to the researcher. All participants are welcome to review their personal data. On completion of the research all participants have the opportunity to indicate their interest in obtaining a summary copy of the research findings.

Confidentiality and anonymity will be maintained throughout this research. Every participant can access their personal data upon request.

Participant involvement

It is envisaged that each participant will need to budget approximately 40 minutes of their time to complete the survey.

Participants rights

As a participant in this study you have the right to:

- decline to participate
- decline to answer any particular question
- withdraw from the study (at any time)
- ask any question about the study at any time during participation
- provide information on the understanding that your name will not be used unless you give permission to the researcher to do so.

Would you like to obtain a copy of the findings from this research upon its completion?

1. Athlete Satisfaction in New Zealand

This survey is designed to investigate athlete satisfaction from a purely New Zealand context.

This survey has been extended and is now to be completed before the 10th October 2006.

1. Your Gender?

- ☐ Male
- ☐ Female

2. Please indicate your age.

3. Which Ethnic Group do you belong to?

- ☐ New Zealand Maori
- ☐ Maori
- ☐ Samoan
- ☐ Cook Island Maori
- ☐ Tongan
- ☐ Niuean
- ☐ Chinese
- ☐ Indian
- ☐ Other (please specify)

4. Please write down what you consider your main sport.

5. Please indicate your highest level of current or past sporting performance in your main sport

	School Team	Club Team	Provincial Team	Regional Team	National Team
Year	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

6. Have you been a representative in any other sport? If so, please indicate below.

7. Please indicate below your highest representative level and year you reached this status in your other sport

	School Team	Club Team	Provincial Team	Regional Team	National Team
Year	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Please outline below the most satisfying aspect of participating in your sport?

Please outline the aspects you dislike(d) most about participating in your sport?

Please describe, in as much detail as possible, your most satisfying sport experience ever and state why it was the most satisfying for you?

Please describe in as much detail as possible, your least satisfying sport experience ever and state why it was the least satisfying for you?

Please outline one factor which, as an athlete, causes(d) you the greatest amount of satisfaction and why?

Please outline one factor which, as an athlete, causes(d) you the greatest amount of dissatisfaction and why?

Please detail one thing about your (current or former) coach that caused you to be satisfied with his/her leadership?

Please detail one thing about your (current or former) coach that caused you to be dissatisfied with his/her leadership?

Please detail one thing about the club where you compete(d) that caused satisfaction?

Please detail one thing about the club where you compete(d) that caused dissatisfaction?

List one thing about a team-mate or team-mates, which caused you to be satisfied with them?

List one thing about a team-mate or team-mates, which caused you to be dissatisfied with them?

Imagine you have been asked to determine an athlete's level of satisfaction. What information would you require to make a good estimate of his/her satisfaction level? Please be as specific as you can.

Please express any other ideas, beliefs, or thoughts about athlete dis/satisfaction which you might have.

Thank you for taking the time to complete this questionnaire. Please indicate below if you would like to be placed in the draw for a \$100.00 voucher of your choice by adding a current email address in the box provided. Your email address will remain strictly confidential and will only be used for the purpose of drawing a winner for the voucher. After the draw is complete (30th October 2006) all email details will be deleted from the data collected.

http://www.surveymonkey.com/MySurvey_EditPage.aspx?sm=1%2bK1n66jlWpNmzPRfpaiLpptUWiXhZxSvUoMP8F7dLN7ojPW6%2bKtbInnPCSOgEMYZFMVBRpCkCThwyVHxkv2FjNO2XpdloiWMZCGT%2fVPI4%3d&TB_iframe=true&height=475&width=650

APPENDIX 2 SPORTS REPRESENTED IN STUDY 1, PHASE 1

		Frequency	Percent	Valid Percent	Cumulative %
Rugby	(Team)	21	12.3	12.4	12.4
Football (Soccer)	(Team)	16	9.4	9.5	21.9
Netball	(Team)	14	8.2	8.3	30.2
Rowing	(Team)	12	7.0	7.1	37.3
Volleyball	(Team)	13	7.6	7.7	45.0
Field Hockey	(Team)	10	5.8	5.9	50.9
Athletics	(Individual)	7	4.1	4.1	55.0
Basketball	(Team)	7	4.1	4.1	59.2
Triathlons	(Individual)	6	3.5	3.6	62.7
Equestrian	(Individual)	5	2.9	3.0	65.7
Swimming	(Individual)	5	2.9	3.0	68.6
Cricket	(Team)	4	2.3	2.4	71.0
Squash	(Individual)	4	2.3	2.4	73.4
Touch Rugby	(Team)	4	2.3	2.4	75.7
Canoe Polo	(Team)	3	1.8	1.8	77.5
Martial Arts	(Individual)	3	1.8	1.8	79.3
Surf life saving	(Individual)	3	1.8	1.8	81.1
Badminton	(Individual)	2	1.2	1.2	82.2
Dance	(Individual)	2	1.2	1.2	83.4
Gymnastics	(Individual)	2	1.2	1.2	84.6
Ice Hockey	(Team)	2	1.2	1.2	85.8
Cycling	(Individual)	3	1.8	1.8	87.6
Netball Umpiring	(Individual)	1	.6	.6	88.2
Tennis	(Individual)	2	1.2	1.2	89.3
Trampoline	(Individual)	2	1.2	1.2	90.5
Artistic Roller Skating	(Individual)	1	.6	.6	91.1
Barefoot Waterskiing	(Individual)	1	.6	.6	91.7
Beach Volleyball	(Team)	1	.6	.6	92.3
Horse Polo	(Team)	1	.6	.6	92.9
Inline Hockey	(Team)	1	.6	.6	93.5
Lawn Bowls	(Individual)	1	.6	.6	94.1
Motocross	(Individual)	1	.6	.6	94.7
Orienteering	(Individual)	1	.6	.6	95.3
Power lifting	(Individual)	1	.6	.6	95.9
Rugby League	(Team)	1	.6	.6	96.4
Sailing	(Individual)	1	.6	.6	97.0
Small bore Rifle Shooting	(Individual)	1	.6	.6	97.6
Snowboarding	(Individual)	1	.6	.6	98.2
Softball	(Team)	1	.6	.6	98.8
Table Tennis	(Individual)	1	.6	.6	99.4
Underwater Hockey	(Team)	1	.6	.6	100.0
Total		169	98.8	100.0	
Missing		2	1.2		
		171	100%		

APPENDIX 3 STUDY ONE, PHASE TWO PARTICIPANT SPORTS

Adventure racing	Cycling	Triathlon	Sport climbing
Athletics	Dance	Netball	Squash
Badminton	Equestrian	Netball Umpiring	Surf life saving
Barefoot Waterskiing	Golf	Polocrosse	Swimming
Basketball	Gymnastics	Rifle Shooting	Table Tennis
Beach Volleyball	Highland Dancing	Rowing	Tae Kwon Do
Body sculpting	Hockey	Rugby	Tennis
Boxing	Karate	Rugby League	Water Skiing
Canoe polo	Weight Lifting	Soccer	Volleyball
Cricket	Muay Thai Kickboxing	Softball	Wakaama

APPENDIX 4 INDEPENDENT *T*-TEST RESULTS FOR INDIVIDUAL FACTORS (1 – 6) AND THE AGGREGATED 56 –ITEM ASQ.

Group Statistics					
Gender					
	Female	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with Team	1	66	90.0000	35.10205	4.32076
	2	124	78.1935	43.55609	3.91145

Independent <i>t</i> -test Satisfaction with Team Affiliation and Gender								
Levene's		<i>t</i> -test for Equality of Means						
F	Sig.	<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
9.104	0.003	1.898	188	0.059	11.806	6.221	-0.466	24.079
		2.026	159	0.044	11.806	5.828	0.296	23.317

An independent *t*-test was conducted to compare the satisfaction with "Team" scores for males and females. There were significant differences in scores for males ($M = 90.00$, $SD = 35.10$) and females, ($M = 78.19$, $SD = 43.56$); $t(159) = 2.026$, $p = .04$). The magnitude of the differences in the means (mean difference = 11.81, 95% CI: 0.3 – 23.3) was very small ($\eta^2 = 0.02$).

Group Statistics					
Gender					
	Female	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with trainer	1	70	44.7143	19.06141	2.27827
	2	126	49.2063	19.55068	1.74171

Independent t-test Satisfaction with Coach Interaction and Gender								
Levene's		t-test for Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
0.106	0.745	-1.555	194	0.122	-4.492	2.889	-10.189	1.205
		-1.566	146	0.119425	-4.492063492	2.867769	-10.1599	1.175723

An independent *t*-test was conducted to compare the satisfaction with "Trainer" scores for males and females. There was no significant difference in scores for males ($M = 44.71$, $SD = 19.1$) and females, ($M = 49.21$, $SD = 19.6$); $t(194) = -1.555$, $p = .12$). The magnitude of the differences in the means (mean difference = -4.5, 95% CI: -10.2 – 1.2) is small ($\eta^2 = 0.01$)

Group Statistics				
Gender				
Female	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with trainer strategy 1	70	23.3143	11.92798	1.42567
2	130	23.2231	13.71937	1.20327

Independent t-test Satisfaction with Coaching Strategy and Gender								
Levene's		t-test for Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
4.545	0.034	0.047	198	0.963	0.091	1.945	-3.745	3.928
		0.049	159	0.961	0.091	1.866	-3.593	3.776

An independent *t*-test was conducted to compare the satisfaction with "Trainer strategy" scores for males and females. There was no significant difference in scores for males ($M = 23.31$, $SD = 11.93$) and females, ($M = 23.22$, $SD = 13.72$); $t(159) = .03$, $p = .96$). The magnitude of the differences in the means (mean difference = 0.1, 95% CI: -3.6 – 3.78) was insignificant ($\eta^2 = .001$)

Group Statistics				
Gender				
Female	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with medical support	1	10.7746	9.84044	1.16785
	2	14.9542	9.87916	.86315

Independent t-test Satisfaction with Medical support and Gender								
Levene's		t-test for Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
0.780	0.378	-2.875	200	0.004	4.180	1.454	-7.046	-1.313
		-2.878	144	0.005	-4.180	1.452	-7.050	-1.309

An independent *t*-test was conducted to compare the satisfaction with "Medical support" scores for males and females. There was a significant difference in scores for males ($M = 10.77$, $SD = 9.84$ and females, $M = 14.95$, $SD = 9.88$); $t(200) = .38$ $p = .004$). The magnitude of the differences in the means (mean difference = 4.2, 95% CI: -7.05 – -1.3) was closer to moderate than small ($\eta^2 = 0.04$)

Group Statistics				
Gender				
Female	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with individual performance	1	40.7714	8.17059	.97657
	2	43.4720	9.28368	.83036

Independent <i>t</i> -test Satisfaction with Individual performance and Gender								
Levene's		<i>t</i> -test for Equality of Means						
F	Sig.	<i>t</i>	<i>df</i>	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
0.164	0.686	-2.032	193	0.044	-2.701	1.329	-5.322	-0.080
		-2.107	159	0.037	-2.701	1.282	-5.232	-0.169

An independent *t*-test was conducted to compare the satisfaction with "Medical support" scores for males and females. There was a significant difference in scores for males ($M = 40.77$, $SD = 8.17$ and females, $M = 43.47$, $SD = 9.28$); $t(193) = .38$ $p = .04$). The magnitude of the differences in the means (mean difference = -2.7, 95% CI: -5.3 – -.01) was small ($\eta^2 = 0.02$)

APPENDIX 5 INDEPENDENT *T*-TESTS FOR SATISFACTION AND SPORT AFFILIATION (INDIVIDUAL SPORT AND TEAM SPORT)

Group Statistics					
AffilMixed		N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with Team	1	119	70.8319	46.96001	4.30482
	3	72	101.8194	15.86859	1.87013

Independent <i>t</i> -test Satisfaction with Team Affiliation and Affiliation								
Levene's		<i>t</i> -test for Equality of Means						
F	Sig.	<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
120.135	0.000	-5.411	189	0.000	0.308	5.727	-42.285	-19.690
		-6.602	157	0.000	-30.988	4.693	-40.258	-21.717

An independent *t*-test was conducted to compare the overall satisfaction scores for individual sport and team sport athletes. There were significant differences in scores for Individual athletes ($M = 70.83$, $SD = 46.96$) and Team athletes, ($M = 101.82$, $SD = 15.87$); $t(157) = -6.602$, $p = .000$. The magnitude of the differences in the means (mean difference = .31, 95% CI: -40.3 – -21.7) was large ($\eta^2 = 0.22$).

Group Statistics					
AffilMixed		N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with trainer	1	123	47.1707	21.19570	1.91115
	3	74	48.1351	16.17060	1.87979

Independent t-test Satisfaction with Coach Interaction and Affiliation								
Levene's		t-test for Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
5.273	0.023	-0.337	195	0.737	-0.964	2.864	-6.613	4.684
		-0.360	184	0.719	-0.964	2.681	-6.253	4.324

An independent *t*-test was conducted to compare the overall satisfaction scores for individual sport and team sport athletes. There was no significant differences in scores for Individual athletes ($M = 47.17$, $SD = 21.2$) and Team athletes, ($M = 48.14$, $SD = 16.17$); $t(184) = -0.337$, $p = .72$). The magnitude of the differences in the means (mean difference = -0.964, 95% CI: -6.3 – 4.3) was very small ($\eta^2 = .0006$)

Group Statistics

AffilMixed		N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with trainer	1	124	19.7097	14.16843	1.27236
strategy	3	77	28.8442	8.52869	.97193

Independent t-test Satisfaction with Coaching Strategy and Affiliation								
Levene's		t-test for Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
52.412	0.000	-5.109	199	0.000	-9.134	1.788	-12.660	-5.609
		-5.705	199	0.000	-9.134	1.601	-12.292	-5.977

An independent *t*-test was conducted to compare the overall satisfaction scores for individual sport and team sport athletes. There were significant differences in scores for Individual athletes ($M = 19.71$, $SD = 14.17$) and Team athletes, ($M = 28.84$, $SD = 8.53$); $t(199) = -5.705$, $p = .000$). The magnitude of the differences in the means (mean difference = -9.134, 95% CI: -12.3– -6.0) was large ($\eta^2 = .14$)

Group Statistics

	AffilMixed	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with medical support	1	125	11.9600	10.31472	.92258
	3	78	15.8462	9.11268	1.03181

Independent t-test Satisfaction with Medical Support and Affiliation

Levene's		t-test for Equality of Means						
F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
6.495	0.012	-2.728	201	0.007	-3.886	1.424	-6.695	-1.077
		-2.808	178	0.006	-3.886	1.384	-6.617	-1.155

An independent *t*-test was conducted to compare the overall satisfaction scores for individual sport and team sport athletes. There were significant differences in scores for Individual athletes ($M = 11.96$, $SD = 10.31$) and Team athletes, ($M = 15.85$, $SD = 9.11$); $t(178) = -2.808$, $p = .006$. The magnitude of the differences in the means (mean difference = -3.9, 95% CI: -6.6– -1.2) was moderate ($\eta^2 = .04$)

Group Statistics

	AffilMixed	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with individual performance	1	123	42.9431	9.81075	.88461
	3	73	41.9041	7.39588	.86562

Independent <i>t</i> -test Satisfaction with Individual Performance and Affiliation								
Levene's		<i>t</i> -test for Equality of Means						
F	Sig.	<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
3.547	0.012	0.061	194	0.435	1.029	1.328	-1.581	3.659
		0.839	183	0.402	1.039	1.238	-1.403	3.481

An independent *t*-test was conducted to compare the overall satisfaction scores for individual sport and team sport athletes. There was no significant differences in scores for Individual athletes ($M = 42.94$, $SD = 9.81$) and Team athletes, ($M = 41.9$, $SD = 7.4$); $t(183) = .839$, $p = .402$). The magnitude of the differences in the means (mean difference = -1.04, 95% CI: -1.4– 3.5) was very small ($\eta^2 = .003$).

Independent <i>t</i> -test Satisfaction with Environmental Support and Affiliation								
Levene's		<i>t</i> -test for Equality of Means						
F	Sig.	<i>t</i>	<i>df</i>	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI	
							Lower	Upper
10.274	0.002	-3.372	199	0.001	-6.709	1.989	10.632	-2.786
	X	-3.552	189	0.000	-6.709	1.889	-10.435	-2.983

An independent *t*-test was conducted to compare the overall satisfaction scores for individual sport and team sport athletes. There were significant differences in scores for Individual athletes ($M = 23.5$, $SD = 14.9$) and Team athletes, ($M = 30.2$, $SD = 11.75$); $t(189) = -3.552$, $p = .000$). The magnitude of the differences in the means (mean difference = -6.71, 95% CI: -10.4– 3.0) was moderate ($\eta^2 = .06$).

APPENDIX 6 56 QUESTION (AMENDED) ATHLETE SATISFACTION QUESTIONNAIRE

1. Introduction Page

Dear Participant,

This survey is part of my PhD research into Athlete Satisfaction. The research is designed to help me understand 'Athlete Satisfaction' for individual sport athletes within the New Zealand sporting environment.

By completing this questionnaire you are indicating that you agree with the Information Sheet details listed below. If at any stage, you would like to clarify any aspect of the questionnaire please don't hesitate to contact myself or my Supervisor Dr. Sarah Leberman, Sport Management and Coaching group, Dept. of Management, Massey University, Palmerston North. Tel: (06) 350 5799(06) 350 5799 xt 2785 or S.I.Leberman@massey.ac.nz

Thank you for supporting my research.

Kind regards

Warren Smith

1. Information Sheet

Participant Recruitment

The method of recruitment has seen the researcher utilise the internet to access participants. Contact has been made with colleagues and national organisations who have the target group of athletes under their jurisdiction.

Project Procedures

The data collected will assist the researcher to better understand the environment in which 'Athlete Satisfaction' in New Zealand takes place.

Once the data has been obtained it will be analysed and reproduced for the Doctoral Thesis. The data may also be utilised in the presentation of papers to journals specific to the area of study.

All data will be stored in a fireproof, lockable cabinet situated on the Massey premises. The documentation is only accessible by the researcher.

If you would like to obtain a copy of the research findings please indicate this to the researcher. All participants are welcome to review their personal data. On completion of the research all participants have the opportunity to indicate their interest in obtaining a summary copy of the research findings.

Confidentiality and anonymity will be maintained throughout this research. Every participant can access their personal data upon request.

Participant involvement

It is envisaged that each participant will need to budget approximately 40 minutes of their time to complete the survey.

Participants rights

As a participant in this study you have the right to:

- decline to participate
- decline to answer any particular question
- withdraw from the study (at any time)
- ask any question about the study at any time during participation
- provide information on the understanding that your name will not be used unless you give permission to the researcher to do so.

Would you like to obtain a copy of the findings from this research upon its completion?

2. Satisfaction in Sport

13 The team's overall performance this season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14 The coach's teaching of the tactics and techniques of my position.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15 The media's support of our program.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16 My commitment to the team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17 How the team works (worked) to be the best.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18 The support from the university community.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19 The fairness with which the medical personnel treats all players	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20 The extent to which teammates play (played) as a team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21 The tutoring I receive (received).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22 The level of appreciation my coach shows (showed) when I do (did) well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23 My social status on the team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24 The improvement in my skill level.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25 The extent to which teammates provide (provided) me with instruction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26 The extent to which my role matches (matched) my potential.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27 The extent to which all team members are (were) ethical.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28 The coach's choice of strategies during games.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29 The extent to which the team is meeting (has met) its goals for the season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30 How the coach makes (made) adjustments during competitions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31 The funding provided to my team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32 The degree to which teammates share (shared) the same goal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33 The degree to which I do (did) my best for the team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34 The guidance I receive (received) from my teammates.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35 The role I play (played) in the social life of the team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36 My teammates' sense of fair play.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37 The amount of time I play (played) during competitions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38 The degree to which my abilities are (were) used.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39 The medical personnel's interest in the athletes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40 The team's win/loss record this season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41 My coach's loyalty towards me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42 The academic support services provided.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43 The supportiveness of the fans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44 Coach's game plans.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45 The extent to which the coach is (was) behind me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46 The fairness of the team's budget.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47 The degree to which my role on the team matches (matched) my preferred role.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48 My dedication during practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
49 The personnel of the academic support services (i.e., tutors, counselors).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
50 The manner in which the coach combines(combined) the available talent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

51 The coach's choice of moves/tactics during competitions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
52 The training I receive (received) from the coach during the season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
53 The recognition I receive (received) from my coach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
54 The improvement in my performance over the previous season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
55 The amount of money spent on my team.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
56 The instruction I have received from the coach this season.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Please indicate your Gender

- ☐ Male
- ☐ Female

5. Please indicate your age (in years)

6. Please indicate your ethnicity

- ☐ NZ European (Pakeha)
- ☐ NZ Maori
- ☐ Maori
- ☐ Samoan
- ☐ Cook Island Maori
- ☐ Tongan
- ☐ Niuean
- ☐ Chinese
- ☐ Indian
- ☐ Other (please specify)

7. Please indicate what you would consider your main sport

8. Do you perceive your main sport as

- a) a team sport
- b) an individual sport

Please tick one of the following definitions

- ☐ I travel and compete independently. eg: A Triathlete
- ☐ I have been selected to travel and compete as a member of a representative group but my personal results do not affect the outcome for other members of the group. eg: Member of NZ Cycling Team (up to 12 different disciplines and

both genders)

☐

I am a team athlete. My participation does influence the results for other members of the team. eg: A Rowing crew

9. Please indicate the highest level of representation you have achieved in your main sport in the last 2 years

10. Because this is an ongoing survey I would like to invite you to complete the (ASQ) two more times. The next two again will take you only 7 minutes each. I would like to contact you again in 3 months and in 6 months time to complete the questionnaires. Please add your most visited email address below so that I can contact you in the future, as well as add your name to our \$100.00 voucher draw. Thank you for your patience and support.

Addendum:

The above survey could not be retrieved in its entirety from its website base. As a consequence a single column of answers on the questionnaire (n/a, or not applicable) is not shown. Please consider this missing column in any future research.

The actual survey scale is represented here in the example provided through the presentation of question 1 of the survey instrument.

	Extremely Dissatisfied	Dissatisfied	Moderately Dissatisfied	Neither Dissatisfied nor Satisfied	Moderately Satisfied	Satisfied	Extremely Satisfied	N/A
1 Team member's dedication to work together toward team goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX 7 HIERARCHICAL PLACEMENT OF NON-DIFFERENTIATED ITEMS OF ATHLETE SATISFACTION

Prospective	β	Retrospective	β
My social status on the team	0.34	Role I play (played) in the social life of the team	0.33
Team's win/loss record this season	0.27	Coach's game plans	0.33
Extent teammates provide (provided) me with instruction	0.24	The improvement in my skill level	0.26
Coach's teaching of the tactics and techniques of my position	0.23	Amount of time I play (played) during competitions	0.25
Degree my role on the team matches (matched) my preferred role	0.22	Instruction I have received from the coach this season	0.25
Degree teammates accept(accepted) me on a social level	0.21	Improvement in my performance over the previous season	0.24
Coach's choice of strategies during games	0.20	Supportiveness of the fans	0.23
Extent the team is meeting (has met) its goals for the season	0.20	Teammates' sense of fair play	0.22
Recognition I receive (received) from my coach	0.18	Coach's teaching of the tactics and techniques of my position	0.21
Extent my role matches (matched) my potential	0.18	Coach's choice of moves/tactics during competitions	0.20
Promptness of medical attention	0.17	The level of appreciation my coach shows (showed) when I do (did) well	0.19
Coach's game plans	0.16	My social status on the team	0.16
Degree I do (did) my best for the team	0.16	Training I receive (received) from the coach during the season	0.16
The improvement in my skill level	0.15	Extent my role matches (matched) my potential	0.13
Team's overall performance this season	0.15	Degree my role on the team matches (matched) my preferred role	0.13
Extent the coach is (was) behind me	0.15	Degree I do (did) my best for the team	0.13
Fairness with which the medical personnel treats all players	0.14	Medical personnel's interest in the athletes	0.12
Guidance I receive (received) from my teammates	0.14	How the coach makes (made) adjustments during competitions	0.12
Training I receive (received) from the coach during the season	0.14	Level to which my talents are (were) employed	0.12
Amount of time I play (played) during competitions	0.14	Fairness with which the medical personnel treats all players	0.11
Constructive feedback I receive (received) from my teammates	0.14	Personnel of the academic support services (ie; tutors, counselors)	0.10
Personnel of the academic support services (ie; tutors, counselors)	0.13	My dedication during practices	0.10
Academic support services provided	0.12	How the team works (worked) to be the best	0.10
Media's support of our program	0.12	Academic support services provided	0.10
Support from the university community	0.12	Funding provided to my team	0.10
Medical personnel's interest in the athletes	0.12	Amount of money spent on my team	0.10
The level of appreciation my coach shows (showed) when I do (did) well	0.11	Degree teammates accept(accepted) me on a social level	0.09
How the coach makes (made) adjustments during competitions	0.11	Team's win/loss record this season	0.09
Team member's dedication to work together toward team goals.	0.11	Extent to which teammates play (played) as a team	0.09

Amount of money spent on my team	0.11	Degree to which I have reached my performance goals during season	0.08
Tactics used during games	0.10	Recognition I receive (received) from my coach	0.08
My commitment of the team	0.10	Support from the university community	0.08
Extent to which teammates play (played) as a team	0.10	Team's overall performance this season	0.08
Improvement in my performance over the previous season	0.10	degree teammates share (shared) the same goal	0.08
Level to which my talents are (were) employed	0.09	Extent all team members are (were) ethical	0.08
The tutoring I receive (received)	0.09	Coach's loyalty towards me	0.07
Degree my abilities are (were) used	0.08	Guidance I receive (received) from my teammates	0.07
Local community's support	0.08	Extent the coach is (was) behind me	0.07
My dedication during practices	0.08	Media's support of our program	0.06
Fairness of the team's budget	0.07	Local community's support	0.06
How the team works (worked) to be the best	0.07	My enthusiasm during comps	0.06
Supportiveness of the fans	0.07	Fairness of the team's budget	0.06
Competence of the medical personnel	0.07	Competence of the medical personnel	0.06
My enthusiasm during comps	0.06	Degree my abilities are (were) used	0.05
Instruction I have received from the coach this season	0.06	Extent teammates provide (provided) me with instruction	0.05
Teammates' sense of fair play	0.06	My teammates' sportsmanlike behaviour	0.04
degree teammates share (shared) the same goal	0.05	Team member's dedication to work together toward team goals.	0.04
Coach's loyalty towards me	0.05	My commitment of the team	0.03
Role I play (played) in the social life of the team	0.05	Tactics used during games	0.03
Degree to which I have reached my performance goals during season	0.03	Constructive feedback I receive (received) from my teammates	0.03
Funding provided to my team	0.03	The tutoring I receive (received)	0.03
Manner the coach combines (combined) the available talent	0.02	Manner the coach combines (combined) the available talent	0.03
Coach's choice of moves/tactics during competitions	0.02	Coach's choice of strategies during games	0.02
My teammates' sportsmanlike behaviour	0.02	Promptness of medical attention	0.02
Extent all team members are (were) ethical	0.01	Friendliness of the coach towards me	0.01
Friendliness of the coach towards me	0.01	Extent the team is meeting (has met) its goals for the season	0.01

APPENDIX 8 INDIVIDUAL AND TEAM SPORT HIERARCHICAL ANALYSIS OF ITEMS OF SATISFACTION (PROSPECTIVE AND RETROSPECTIVE)

Factor One			
Individual Sport			
Prospective	β	Retrospective	β
q37 Degree teammates accept(accepted) me on a social level	0.48	q34 Team member's dedication to work together toward team goals.	0.80
q39 Extent the team is meeting (has met) its goals for the season	0.33	q37 Degree teammates accept(accepted) me on a social level	0.58
q34 Team member's dedication to work together toward team goals.	0.33	q20 degree teammates share (shared) the same goal	0.31
q50 Extent to which teammates play (played) as a team	0.27	q39 Extent the team is meeting (has met) its goals for the season	0.29
q2 My social status on the team	0.26	q8 Extent all team members are (were) ethical	0.25
q9 Extent teammates provide (provided) me with instruction	0.20	q27 Role I play (played) in the social life of the team	0.21
q17 Teammates' sense of fair play	0.16	q33 My teammates' sportsmanlike behaviour	0.20
q33 My teammates' sportsmanlike behaviour	0.15	q50 Extent to which teammates play (played) as a team	0.19
q8 Extent all team members are (were) ethical	0.15	q48 My commitment of the team	0.18
q20 degree teammates share (shared) the same goal	0.10	q30 Team's overall performance this season	0.17
q54 Degree my role on the team matches (matched) my preferred role	0.09	q54 Degree my role on the team matches (matched) my preferred role	0.16
q5 degree I do (did) my best for the team	0.09	q23 Guidance I receive (received) from my teammates	0.15
q48 My commitment of the team	0.07	q2 My social status on the team	0.15
q23 Guidance I receive (received) from my teammates	0.06	q17 Teammates' sense of fair play	0.14
q30 Team's overall performance this season	0.06	q13 Team's win/loss record this season	0.13
q27 Role I play (played) in the social life of the team	0.03	q1 How the team works (worked) to be the best	0.12
q36 Constructive feedback I receive (received) from my teammates	0.02	q9 Extent teammates provide (provided) me with instruction	0.08
q1 How the team works (worked) to be the best	0.01	q36 Constructive feedback I receive (received) from my teammates	0.07
q13 Team's win/loss record this season	0.01	q5 degree I do (did) my best for the team	0.07
Team Sport			
Prospective		Retrospective	
q17 Teammates' sense of fair play	0.63	q37 Degree teammates accept(accepted) me on a social level	0.65
q33 My teammates' sportsmanlike behaviour	0.55	q54 Degree my role on the team matches (matched) my preferred role	0.58
q39 Extent the team is meeting (has met) its goals for the season	0.46	q39 Extent the team is meeting (has met) its goals for the season	0.46
q30 Team's overall performance this season	0.44	q48 My commitment of the team	0.41
q48 My commitment of the team	0.37	q27 Role I play (played) in the social life of the	0.37

team			
q36 Constructive feedback I receive (received) from my teammates	0.30	q13 Team's win/loss record this season	0.35
q1 How the team works (worked) to be the best	0.30	q1 How the team works (worked) to be the best	0.32
q27 Role I play (played) in the social life of the team	0.25	q20 degree teammates share (shared) the same goal	0.27
q23 Guidance I receive (received) from my teammates	0.24	q33 My teammates' sportsmanlike behaviour	0.26
q20 degree teammates share (shared) the same goal	0.24	q5 degree I do (did) my best for the team	0.20
q13 Team's win/loss record this season	0.21	q34 Team member's dedication to work together toward team goals.	0.17
q2 My social status on the team	0.19	q23 Guidance I receive (received) from my teammates	0.10
q5 degree I do (did) my best for the team	0.17	q8 Extent all team members are (were) ethical	0.06
q34 Team member's dedication to work together toward team goals.	0.08	q9 Extent teammates provide (provided) me with instruction	0.01
q54 Degree my role on the team matches (matched) my preferred role	0.06	q36 Constructive feedback I receive (received) from my teammates	0.00
q37 Degree teammates accept(accepted) me on a social level	0.06		
q8 Extent all team members are (were) ethical	0.05		
q50 Extent to which teammates play (played) as a team	0.04		
q9 Extent teammates provide (provided) me with instruction	0.01		

Factor 3

Individual Sport

Prospective	β	Retrospective	β
q43 Medical personnel's interest in the athletes	0.26	q43 Medical personnel's interest in the athletes	0.71
q21 Fairness with which the medical personnel treats all players	0.15	q4 Competence of the medical personnel	0.56
q52 Promptness of medical attention	0.07	q52 Promptness of medical attention	0.09
q4 Competence of the medical personnel	0.02	q21 Fairness with which the medical personnel treats all players	0.03

Team sport

Prospective		Retrospective	
q21 Fairness with which the medical personnel treats all players	0.60	q4 Competence of the medical personnel	0.73
q52 Promptness of medical attention	0.50	q21 Fairness with which the medical personnel treats all players	0.60
q43 Medical personnel's interest in the athletes	0.10	q43 Medical personnel's interest in the athletes	0.45
q4 Competence of the medical personnel	0.10	q52 Promptness of medical attention	0.42

Factor 6

Individual Sport

Prospective	β	Retrospective	β
q44 Personnel of the academic support services (i.e. tutors, counselors)	0.50	q19 Amount of money spent on my team	0.45

q18 Academic support services provided	0.37	q40 Fairness of the team's budget	0.31
q10 Funding provided to my team	0.33	q11 Media's support of our program	0.30
q51 Local community's support	0.31	q28 Support from the university community	0.29
q19 Amount of money spent on my team	0.19	q45 Supportiveness of the fans	0.19
q11 Media's support of our program	0.17	q18 Academic support services provided	0.17
q45 Supportiveness of the fans	0.14	q10 Funding provided to my team	0.16
q28 Support from the university community	0.10	q44 Personnel of the academic support services (ie; tutors, counselors)	0.09
q40 Fairness of the team's budget	0.10	q51 Local community's support	0.02
Team sport			
Prospective		Retrospective	
q11 Media's support of our program	0.72	q18 Academic support services provided	0.65
q44 Personnel of the academic support services (i.e. tutors, counselors)	0.48	q45 Supportiveness of the fans	0.65
q18 Academic support services provided	0.24	q28 Support from the university community	0.57
q10 Funding provided to my team	0.21	q44 Personnel of the academic support services (i.e. tutors, counselors)	0.40
q45 Supportiveness of the fans	0.20	q11 Media's support of our program	0.35
q28 Support from the university community	0.13	q19 Amount of money spent on my team	0.26
q51 Local community's support	0.10	q10 Funding provided to my team	0.12
q19 Amount of money spent on my team	0.06	q40 Fairness of the team's budget	0.05
q40 Fairness of the team's budget	0.04	q51 Local community's support	0.00