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# **Motivations of New Zealand Triathletes**

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## **ABSTRACT**

The studying of motivation in the sporting environment has been seen by researchers as important for reasons such as development of theories and models of motivation in sport as well as improving coaching and training techniques through better understanding of athletes' motivations. The present study aimed to examine the motivations of triathletes selected for the New Zealand team for their age group. Other objectives of the study were to compare motivations of males and females, to examine the reliability of the Sport Orientation Questionnaire (Gill & Deeter, 1988), and to examine the effects of training related variables on SOQ scores in order to expand on the nature of sport orientations. Thirty-five male and female triathletes, aged from 18 to 66 years, who had been selected as part of the national Triathlon team in their age group section, participated in the study. Participants completed self-administered questionnaires developed by the researcher as well as the Sport Orientation Questionnaire (Gill & Deeter, 1988). Four of the participants were also interviewed. Results showed that the triathletes in the sample were highly motivated and had high levels of enjoyment. They reported a number of different factors which motivated them to participate and compete in Triathlon. Although no significant gender differences were found on the three subscales of the SOQ, qualitative data were contradictory. Statistical analysis provided further support for the continued use of the SOQ as a multi-dimensional measure of sport orientations. However, it was suggested that factors which lead to a feeling of success should be examined separately from other motivating factors.

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## INTRODUCTION

### Triathlon

*"I doubt the highest paid athlete will ever be a triathlete, appear on the front of a Wheaties box, or ever become a household word"*  
(Town, 1985. p.33).

In New Zealand, the name of Erin Baker did become a household word, and although her picture may not have appeared on a Weet-bix packet, Sanitarium has sponsored a number of "Tryathlons" for children.

Today, throughout New Zealand, individuals compete in Triathlon at all levels, from recreational to elite. The reason for such enthusiasm could be that New Zealanders see Triathlon as a lifestyle choice (Klap & Paterson, 1985). Emphasis is placed not only on training but also on nutrition, stress control, determination and self motivation. The sport provides for total body fitness and less threat from overuse injuries due to the fact that as "your general level of cardiovascular fitness...[is]...improved and then maintained by all three activities, less time/mileage work will be required in each sport, so the threat of overuse injuries will be greatly reduced" (Plant, 1987. p.27). Apart from providing for total body fitness, "the three events - swim, bike, run - are within the capabilities of us all. Efficiency in each sport is associated with consistent training and with only a moderate reliance on technique" (Town, 1985. p.34). These features mean that Triathlon is a sport readily accessible to a majority of people.

Generally, Triathlons consist of the three disciplines of swimming, cycling and running, although other multisport events can include kayaking, skiing, mountain biking and cross country running. There are several lengths of races, ranging from the sprint or short distance events, to the Ironman length. Common distances are short (1000m swim, 25km bike, 5km run), Olympic (1500m swim, 40km bike, 10km run), and Ironman (3800m swim, 180km bike, 42km run), although there are other events of varied distances. Because there are events of different lengths, individuals of all ages and levels of ability can participate.

The first swim/bike/run Triathlon took place in May 1975 at Fiesta Island in

Mission Bay, near San Diego, while the first Ironman event was held in Hawaii three years later (Vaz, 1984). However, it has been suggested that Julie Moss' finish in the 1982 Hawaii Ironman, where she struggled, exhausted, to crawl across the finish line, is what really brought the sport of Triathlon to the attention of the world (Klap & Paterson, 1985). New Zealand's first Triathlon was the Les Mills Triathlon in Auckland in 1979 (Klap & Paterson, 1985). Since then, Triathlon in New Zealand has become increasingly popular, as a recreational sport. At an elite level, New Zealand has hosted the World Championships, as well as produced triathletes such as Erin Baker, Jenny Rose, Rick Wells and Hamish Carter, who have been internationally successful.

Although Triathlon is only a relatively new sport, it has become apparent that there is something intrinsically different about athletes who choose to participate in the sport. The sport involves mastering three disciplines, and because of this, it is a great equaliser. Athletes cannot rely on expertise in only one or two disciplines, but must become proficient in all three. This requires training for long hours. Sleamaker (1989) proposes that elite triathletes need to spend an average of 800 to 1400 hours in training per year, whereas elite runners need only train for an average of 500 to 700 hours a year, and elite cyclists need only train for an average of 700 to 1200 hours a year. In order to be able to train for such long hours, triathletes must be highly motivated, and according to Dr John Hellemans, this is what makes triathletes different from other athletes. Hellemans proposes that "commitment, dedication, determination and motivation are crucial elements in properly executing the often complicated and extensive training programmes of triathletes. Continuous self-motivation is needed more than in any other sport" (Hellemans, 1993. p.15). Central, then, to the difference between triathletes and other athletes, is the factor of motivation.

The present study aimed to examine the motivations of triathletes selected for the New Zealand team for their age group. Other objectives of the study were to compare motivations of males and females, and to examine the effects of training related variables on SOQ scores in order to expand on the nature of sport orientations as measured by the Sport Orientation Questionnaire (Gill & Deeter, 1988). Therefore, the rest of the introduction looks at why it is important to study motivation in sport, reviews the concept of achievement motivation, and examines the goal approach, instruments

which measure motivation in the sporting context, and gender differences. Finally, a rationale for the present study is proposed, and the research objectives are presented.

## Motivation

According to Duda (1989a), the sporting domain is a suitable environment in which to examine the psychological factors, particularly motivation, which relate to four behavioural patterns. These patterns are choice of activity, intensity of behaviour, persistence and performance. Duda suggests that the sporting environment is suitable because of the variability between different activities in terms of : “(1) the degree of competition and social evaluation involved, (2) the extrinsic reinforcements available, (3) the level and type of performance required, (4) the time commitment and energy expenditure entailed, (5) the possibility to participate as an individual or within a group, and (6) the degree of formal structure (e.g. rules and prescriptions) imposed” (Duda, 1989a. p. 83).

Apart from sport being suitable for the study of motivation, Weiss and Chaumeton (1992) have suggested that, studying motivation in sport is important “for reasons related to both theoretical development and effective and successful programming applications” (p.61). This means that examining the motivations of athletes can lead not only to the development of theories and models of motivation in sport, but also to the practical application of improving coaching and training techniques to produce ‘better’ athletes.

Hodge (1994) has also noted the importance of motivation in all aspects of sport. He has proposed that,

*There are many different types of motivation. For example, long-term motivation such as commitment to training and practising for your sport; short-term motivation such as motivation for an upcoming race or game; extrinsic motivation such as rewards, trophies, recognition, and trips away with teams; intrinsic motivation, for example, playing for fun, enjoyment, and mastering the skills of your sport; participation motivation such as the reasons for playing a particular sport; and, finally, we can look at pre-game or pre-event motivation such as the ‘psych-up’ before your game or race (p. 34).*

Of these different types of motivation, ‘pre-game or pre-event motivation’ is the most commonly associated with sport. Coaches can often be seen trying

to arouse or 'motivate' a team before a game. However, sustaining 'long term motivation' is essential but more difficult for most people. While it is relatively easy to be motivated to participate in a sport for a short time, it is more difficult to maintain motivation in the long term, when it means setting aside time for training at the expense of other things such as time with family, social life and perhaps study. It is thought that a need to achieve is what distinguishes those who are able to sustain long term motivation, and those who cannot.

## Achievement Motivation

Achievement motivation has been studied since the 1950s. In that time a great number of theories have been presented to define achievement motives and to explain the differences found between individuals. For example, McClelland and colleagues (McClelland, 1985 cited in Maehr & Braskamp, 1986) proposed that an individual's motivational patterns are formed by past experiences, and that the need to achieve can be seen as a relatively stable personality trait. According to Maehr & Braskamp (1986), McClelland and his colleagues believed, like Freud, that motivation could be accessed through dreams and fantasies. Therefore, to assess an individual's motivation, they showed them a number of pictures which were open to a variety of interpretations. Achievement themes, amongst others, were then scored for each of the pictures. It was found that those subjects who fantasised about achievement situations

*were likely to take moderate risks in competitive and gamelike situations, seemingly welcoming a challenge. They were also more likely to work on their own, with success at the task as the only reward. And, in general, they seemed willing and able to delay gratification and to work energetically and independently to live up to a standard of excellence...Above all, they could be characterised by an overall proclivity toward attaining success* (Maehr & Braskamp, 1986. p.20).

Maslow (1962, 1970 cited in Geen, Beatty & Arkin, 1984), however, postulated that the need to achieve was just one of many needs which mediate action. To Maslow, the order of needs was vitally important, and therefore he developed a hierarchy of needs, which progressed from basic physiological needs such as hunger and safety, through to the psychological needs such as needs for affiliation, achievement and self-actualisation. Although Maslow's hierarchy of needs is intuitively appealing, research examining the order of these needs has produced mixed results, with many studies indicating that the order in which the needs are met, is not fixed (see Geen, Beatty & Arkin, 1984 for a review). However, Maslow (1943) counters this, suggesting that a particular behaviour does not occur due to only one level of need being active, but "any behaviour tends to be determined by several or all of the basic needs simultaneously" (Maslow, 1943. p.375).

Other researchers studying achievement motivation have examined the motive to achieve in terms of the conflict between approach and avoidance tendencies. Atkinson (1974 cited in Weiner, 1985) is one of the theorists who posited that achievement motivation is derived from a hope of success and a fear of failure. According to Weiner (1985), Atkinson's theory posits that "Achievement-related activities elicit *positive affective anticipations* because of past successful accomplishments and experienced pride, as well as *negative affective anticipations* learned from prior failures and experienced shame" (Weiner, 1985 p.193). Atkinson's model of achievement motivation uses an expectancy-value framework and he therefore has proposed that the tendency to approach or avoid an achievement situation is a function of the strength of the tendency to approach the task minus the strength of the tendency to avoid the task. In order to assess the strength of the tendencies to avoid or approach a task, Atkinson has used the Mandler-Sarason Test Anxiety Questionnaire (TAQ) to assess anxiety, and the Thematic Apperception Test (TAT) to assess motives to succeed (see Weiner, 1985 for a review).

As well as examining individual differences in achievement motivation, many researchers (e.g. Biddle & Brooke, 1992; Harter, 1981; Plant & Ryan, 1985) have assessed the effect of intrinsic and extrinsic factors. One of the most contemporary and well known theories, which has been developed by researchers such as Elliott and Dweck (1988), Nicholls (1984) and Roberts (1984), and which takes account of factors which affect achievement motivation, is known as the goal approach.

## The Goal Approach

A recent theory of motivation, is that the need to achieve is mediated by a number of different goals which individuals pursue (Duda, 1989a; Elliott and Dweck, 1988; Nicholls, 1984; Roberts, 1984). These goals can be mastery oriented, with the individual striving for personal achievement through learning new skills or improving on a past performance, or they can be outcome oriented, with the individual aiming to complete a task to a specific standard. Within this approach, Nicholls (1984) has defined achievement motivation as "that behaviour in which the goal is to develop or demonstrate - to self or to others - high ability, or to avoid demonstrating low ability" (Nicholls, 1984. p.328).

In the literature there are several different terms used in place of mastery and outcome goals. Goals which emphasise mastery have also been called learning goals (e.g. Elliott & Dweck, 1988), task goals (e.g. Nicholls, 1984) and goal orientation (e.g. Gill & Deeter, 1988), while goals which emphasise outcomes and social comparison have been called ego goals (e.g. Nicholls, 1984), performance goals (e.g. Elliott & Dweck, 1988) and win orientation (e.g. Gill & Deeter, 1988). Although there are subtle differences in meaning between the various terms, in order to be able to make general comparisons across research, it should be recognised that these terms focus on similar concepts.

The goal approach to studying achievement motivation, developed by Nicholls and Dweck over the 1980s, is based on a number of premises. These include :

- i) the importance of perceptions of competence in achievement motivation,
- ii) predictions of the relationship between effort and ability,
- iii) the link between achievement goals and cognitive development, and
- iv) the effect of situational factors on achievement goals.

On the whole, research in the area supports these premises, within both the educational and sporting achievement domains (e.g. Duda, 1987b, 1988;

Jackson & Roberts, 1992; Spink & Roberts, 1980).

### ***Perceptions of competence***

Nicholls (1984) has proposed that an individual's perceived success or failure in an achievement situation, is based on perceptions of competence. He posits that this perception of competence can be either self-referenced or other-referenced. For example, in the first instance, if an individual's perception of competence is self-referenced, then "levels of ability and task difficulty are judged in relation to one's own perceived mastery, understanding and knowledge" (Nicholls, 1984. p.329). In the second instance, if an individual's perception of competence is other-referenced, then "task difficulty and ability are judged high or low with reference to the ability of members of a normative reference group" (Nicholls, 1984. p.329). The terms given to these two different conceptions of ability are *task orientation* and *ego orientation*, respectively. From this theoretical position come the concepts of task and ego goals; task goals being those goals that are mastery based and ego goals those that are outcome based.

Support for the existence of task and ego goals within the sporting context, and of the importance of perceived competence, comes from researchers such as Roberts (1984) and Duda (1989a). They have suggested that there is an assumption within the area of sport, that all athletes are motivated by the single desire to win. If such was the case, they propose that all athletes could be said to be ego oriented, perceiving competence and hence success and failure in terms of winning and losing. Studies by Spink and Roberts (1980) and Duda (1987a cited in Duda, 1989a) have shown that this assumption is questionable.

Spink and Roberts (1980) found that an individual's perception of success or failure was not necessarily related to winning or losing. In fact it was possible for someone who had won a game to feel unsuccessful or dissatisfied, and for someone else, who had lost a game to feel successful. Participants in the study were male and female students who volunteered to take part in a 16-week physical education activity course in racquetball. The students were required to answer a series of questions prior to playing a game, and then again after the game was finished. The questions prior to the game were

related to expectancy of success or failure in the game, while following the game attributions for skill, effort, task difficulty and luck were assessed. Following the game there were also questions on performance satisfaction, personal competence and opponent's competence. It was found that winning was attributed to internal factors more than was losing, and that causal attributions were related to perceptions of performance. As Spink and Roberts noted, "when individuals believed that outcomes clearly reflected upon their ability (a desirable personal quality), they attributed the outcomes to internal factors (regardless of outcome)" (p.243). This shows that perceived success is not necessarily related to winning the game.

Duda (1987a cited in Duda, 1989a), in a study of youth basketball players, asked subjects to answer forced choice questions about their goals, before playing a game. After the game they were asked to rate their own performance as well as that of the team, and to indicate how satisfied they were with the game itself. Results showed that, for those subjects who had the goal of winning the game, game outcome was the best predictor of perceived success or failure. For those who had as their goal, to try their best, personal performance ratings were the best predictor, and for those who had the goal of the team playing well together, team performance ratings were the best indicator. According to Duda (1989a) "[t]hese findings suggest that athletes with different goals are processing the sport experience in different ways [and this provides] ...evidence for the existence and relevance of task- and ego-involved goals in sport" (p.89).

Research by Burton (1989), has examined the relationship between perceived ability and ego and task goals. In a field study, male and female intercollegiate swimmers from one university received goal setting training emphasising the use of task goals, while swimmers from a second university did not receive the goal setting training. Results showed that those swimmers who had been trained to set task goals for themselves felt more successful following competition and had higher perceptions of their ability than did those who had not received the goal setting training.

Newsham (1989 cited in Duda, 1992) found similar results in a study of elementary school children. The children participated in either a traditional physical education programme or a programme which emphasised mastery goals as opposed to social comparison. Results indicated that the children

who had participated in the mastery goal training programme had significantly higher perceived sport competence than did children who received a traditional physical education programme.

Elliott and Dweck (1988) studied a group of children within four experimental conditions, in which mastery or performance goals were emphasised, and differential feedback was given about the children's ability on a task. It was found that children in the mastery goal conditions sought challenging tasks and opportunities to learn new skills even in the event of public errors, regardless of their perceived ability. However, those children in the performance goal condition who had been given feedback that they had low ability on the task, responded in the characteristic learned helpless manner. They showed negative affect, and made attributions indicating that they were unable to do the task because of their low ability. Those children who had been given more positive feedback responded in a similar manner to those children in the mastery goal conditions. "These children persisted in attempts to find solutions and did not make attributions for failure or express negative affect" (Elliott & Dweck, 1988. p.10).

These studies by Spink and Roberts (1980), Duda (1987a) cited in Duda (1989a), Burton (1989), Newsham (1989 cited in Duda, 1992) and Elliott and Dweck (1988) demonstrate the importance of perceptions of ability for both adults and children. Perceived competence, in addition to achievement goals, has been shown to be related to affect, attributions about success and failure, and the choice of easy or challenging tasks.

### *Predictions of the relationship between effort and ability*

A number of predictions have been made within the goal approach to achievement motivation, in relation to effort and ability (see Weiss & Chaumeton, 1992 for a review). For example, for individuals who are task oriented there is likely to be a straight forward relationship between perceived ability or competence, and effort. Individuals are likely to exert maximal effort on a task of moderate difficulty, regardless of whether they have high or low perceived competence. Demonstrating low ability is not an issue for these individuals because ability is self-referenced. However, for those who are ego oriented, a more complex relationship is predicted. Individuals who are low in

perceived ability are likely to exert the greatest effort in tasks of either extremely low or high difficulty. These individuals are likely to select very easy tasks in order to avoid demonstrating low ability, as they are likely to be successful. Otherwise, they may select a task which is very difficult, so that if they successfully complete the task, even though this is unlikely, they will have demonstrated high ability. On the other hand, it is predicted that those who are ego oriented, but high in perceived competence, will exhibit similar behaviours to those who are task oriented - select moderately difficult tasks and exert maximal effort, to demonstrate high ability (Weiss & Chaumeton, 1992).

One of the studies which supports these predictions is by Duda (1988). In a study of male and female recreational sport participants, Duda found that those who emphasised mastery or learning goals spent more time practising their sport in their spare time. Time spent practising, or what Duda calls behavioural intensity, is one method used for measuring effort. Thus, it was seen that individuals who were mastery oriented applied more effort than did those who emphasised social comparison or outcome goals. Duda reports that, according to Nicholls' predictions, "[w]hen one is task-involved, greater effort means greater skill development or mastery and consequently, greater success" (Duda, 1988. p.103). This does appear to explain the differential effort applied by individuals with mastery and outcome goals.

### ***Developmental factors***

Researchers who adhere to the goal approach to studying achievement motivation have suggested that as well as being based on perceptions of competence and effort, achievement goals are developmentally based and affected by situational factors (Duda, 1987b).

According to Duda (1987b), in a review of Nicholls' developmental theories, "a child's perception of personal competence relates to his or her understanding of task difficulty and the role of effort in determining the outcome of tasks of varying difficulty" (Duda, 1987b. p.132). For children aged up to 7 years of age, perceptions of task difficulty are based on expectations of successfully completing the task. For young children, "to have low ability means mere failure to master a task or to improve as much as one had hoped" (Nicholls,

1984, p.329). A completely differentiated conception of ability and effort, does not appear in children until ages 11 or 12. At this age children realise that ability is related to capacity, and that equal effort does not represent equal ability. "In this case, perception of low ability more clearly involves perception of inadequacy in the self - lack of capacity cannot readily be altered" (Nicholls, 1984. p. 329).

A study by Ewing, Roberts and Pemberton (1983, cited in Duda, 1987) supports the contention that achievement goals are developmentally based, in the sporting context. Results showed that 9 to 11 year olds were more likely to be task involved whereas 12 to 14 year olds were more likely to be ego involved. However, Duda (1987) notes that the goal orientation factors which emerged for the 9 to 11 year olds were not as distinct as they were for the 12 to 14 year olds. She also suggests that differences could be caused by one of several things, namely "cognitive maturity, years of involvement in the sport system, or the intensity of competitive pressure at different age levels" (p.140).

Duda, Fox, Biddle and Armstrong (1992) also found that 10 year old children were more likely to be task oriented and to believe that effort leads to achievement in sport. The participants in this study were boys and girls from middle schools in south-west England. The children were given several questionnaires to complete, examining their goal orientations, beliefs about success in sport, and satisfaction and interest in sport. Although the overall result indicated that more children were task oriented than ego oriented, there were some gender differences found. While girls tended to have lower scores on the task orientation scales, they had significantly lower scores on the ego orientation scales. They also had significantly lower scores on the beliefs about success questions, in terms of motivation/effort, ability and deception/external factors, and they showed significantly less enjoyment and interest in sport. According to Duda *et al.*, "In general, these results indicate that children's goal orientations in sport are logical expressions of their beliefs about the causes of success in sport. Moreover, the goal-belief dimensions which have been identified in studies of American youth are equally manifested in British children" (p.319).

### ***Situational factors***

As for achievement goals being situationally specific, Duda (1992) has proposed that

*in situations characterised by interpersonal competition, public evaluation, normative feedback and/or testing of valued skills, a state of ego involvement is more likely to emerge. On the other hand, environments which place an emphasis on the learning process, participation, individualised skill mastery, and/or problem solving tend to evoke task involvement* (Duda, 1992. p.59).

Research by Ames and Archer (1988) and Ames (1992) supports the notion that the situation or motivational climate affects how individuals adopt personal goals. Ames (1992) suggests that in the academic context, teachers structure the learning environment by their instructional practices, the way they group children for learning, and the way they evaluate the children. In the sport context, coaches have a similar effect on the motivational climate. They can encourage a mastery-based climate by focusing on individual improvement, or they can encourage a more competitive or outcome oriented climate by emphasising the importance of winning. Ames (1992) also posits that an individual's subjective experience of the environment is critical in determining the goal orientations that are developed.

To summarise, the goal approach developed by Nicholls and Dweck over the 1980s is said to be based on a number of premises. These are : that perceptions of competence are important in achievement motivation, that the relationship between effort and ability varies with motivational goals, that there is a link between achievement goals and cognitive development, and that situational factors have an effect on achievement goals. Each of these premises is supported by research such as that by Spink and Roberts (1980), Duda (1988b), and Ames (1992).

### ***Relationship between goals and other psychological factors***

According to Roberts (1984), "perception of ability mediates many

achievement behaviours such as persistence, effort applied, concentration, attention, and sport selection as well as achievement cognitions such as attributions, confidence, and expectancies" (p.224). Research which has examined motivation in a goal based paradigm, has found that the particular types of goals which individuals pursue are correlated with other factors such as intrinsic motivation (e.g. Plant & Ryan, 1985), flow (e.g. Jackson & Roberts, 1992), enjoyment (e.g. Seifriz, Duda & Chi, 1992), and persistence (e.g. Duda, 1988b).

### ***Flow***

Jackson and Roberts (1992) in a study of college athletes, examined the relationships between goal orientation, peak performance, flow and perceived ability. 'Flow' is a concept which has only recently been discussed in sports psychology, and can be defined as "an intrinsically enjoyable state that occurs when there is a perceived balance between one's competencies and the demands of the task" (Jackson & Roberts, 1992. p.157). Results of the study showed that both mastery goals and perceived ability were positively related to experiences of flow, while competitive goals were not related to it. This suggests that athletes high in mastery orientation experience flow leading to peak performance more often than athletes low in mastery orientation.

### ***Persistence***

Duda, in several studies during the late 1980s (e.g. Duda, 1988a cited by Duda, 1989a; Duda, 1988b,1989c), found that participation and persistence were both related to levels of task and ego involvement in high school and college sport participants. In an initial study Duda (1988a cited in Duda, 1989a) examined the relationship between task and ego goals, and persistence and intensity. College students who were members of a sports team were administered questionnaires designed to measure task and ego orientation, years of involvement in sport, and hours per week spent practising the sport. Results showed that students who were more task oriented tended to have been involved in sport for longer, than those students who placed more importance on ego goals. However, students who rated highly on both ego and task involvement were the most likely to have participated in sport for the longest time.

In a second study, Duda (1988b) again examined the links between task and ego involvement, and participation and persistence. In this second study high

school students were classified as sport participants, dropouts and nonparticipants, and sport participants were grouped as either involved in recreational or interscholastic sport. Results indicated that sport participants, especially those involved in recreational sports, were more likely to place great importance on task involvement, whereas those who had never played sports, the nonparticipants, were likely to have lower ratings for both task and ego involvement. Results also suggested, as they did in the previous study, that those "who had a high level of participation and had persisted in sport seem to have internalised both social-comparison *and* mastery-based means to goal attainment" (Duda, 1989a. p.100). Duda (1988) has suggested that for those individuals who emphasise both mastery and outcome goals, there are "two sources of success and several reasons to continue his or her participation in an activity" (p. 103).

Further research by Duda (1989c) found similar results. In this study, participants were male and female high school students. Preferences for individual and group, mastery and social comparison-based success and failure were examined. Results showed that there was a significant relationship between goal orientation and participation and persistence in sport. "Findings suggested that those adolescents who are regular participants and have persisted in organised, competitive sport emphasised social comparison- *and* mastery-based means to goal attainment more than dropouts and non-participants" (Duda, 1989c. p.50).

### *Enjoyment*

Seifriz, Duda and Chi (1992), in a study of male basketball players, investigated the variables of perceived motivational climate, intrinsic motivation, beliefs about causes of success, and task and ego goal orientations. Results from this study showed that there was a significant relationship between perceived motivational climate and intrinsic motivation. However, it was found that dispositional goal orientation, as measured by the Task and Ego Orientation in Sport Questionnaire, was the "primary predictor of enjoyment in basketball" (Seifriz *et al.*, 1992. p.387). Dispositional goal orientation was also found to be related to effort, perceived competence and attributional beliefs, whereas "[i]n contrast, perceptions of motivational climate (mainly performance oriented) were the most significant predictor of players' perceptions of the degree of tension experienced while playing basketball" (Seifriz *et al.*, 1992. p.388).

### *Intrinsic motivation*

A great number of studies have investigated the relationship between achievement goals and levels of intrinsic motivation. Studies in academic and sport settings have shown that while learning or mastery goals promote and enhance intrinsic motivation, performance or competitive goals undermine intrinsic motivation (e.g. Butler, 1987; Plant & Ryan, 1985; see Heyman & Dweck, 1992 for a review). It has also been found that motivational climate, mastery or outcome involving situations, affect levels of intrinsic motivation. As noted previously, Seifriz *et al.* (1992) found a significant relationship between perceived motivational climate and intrinsic motivation, with basketball players categorised as high in perceived mastery climate having significantly higher intrinsic motivation than players low in perceived mastery climate. However, no significant effect was found for performance climate on intrinsic motivation, suggesting that "benefits of a mastery-oriented environment can occur as easily in a high performance-focused goal structure as in a low performance-focused goal structure" (Seifriz *et al.*, 1992. p.387).

Due to the relationships between the different goals and other factors, some researchers have suggested that goals which emphasise mastery as opposed to outcomes, are more adaptive. For example, Gould (1993) cites a theory by Burton (1983 cited in Gould, 1993) that

*when athletes focus solely on outcome or winning goals, unrealistic future expectations often result; such expectations can lead to lower levels of confidence, increased cognitive anxiety, decreased effort, and poor performance. Unlike outcome goals, performance goals are both in the athlete's control and flexible. Moreover, when properly employed, performance goals assist the athlete in forming realistic expectations. This, in turn, results in optimal levels of confidence, cognitive anxiety, and motivation and, ultimately, in enhanced performance* (Gould, 1993. p.161).

However, Heyman and Dweck (1992) have suggested that optimal achievement is likely to be promoted through the use of both types of achievement goals, mastery and outcome. Accordingly, they propose that "an optimal achievement environment would be one that focuses on opportunities

for growth and development, but also allows individuals to receive recognition for what they do without having this recognition overwhelm other aspects of achievement motivation" (Heyman & Dweck, 1992. p.245).

In sport, this balance between both types of goals is critical, although it changes with the context. In a recreational context it is possible for outcome goals to be of little importance because enjoyment is the expected goal, whereas in a competitive sporting environment, competition and winning can be very important, with mastery and personal goals playing a more important role in training.

Jackson and Roberts (1992) suggest that there are several practical implications to the findings about adaptive goal orientation. These are :

- a) athletes should be told about the differences between mastery and competitive goals, and encouraged in the use of mastery goals rather than competitive goals,
- b) a focus on competitive goals prior to competition does not appear to have detrimental effects on performance, but thoughts about mastery goals actually during competition do appear to enhance performance,
- c) because perceived ability is related to performance, athletes should be exposed to confidence-building techniques, and
- d) "[a] fundamental characteristic of flow states is that there is a perceived balance between the challenges and one's skills in a situation. Therefore athletes should be placed in situations in which they can find this balance. If it is not possible to change the objective context, athletes should be encouraged to redefine the challenges of the situation (e.g., set personal goals) so that they may approach the competition with confidence" (Jackson & Roberts, 1992. p.170).

### ***Summary***

In summary, the goal approach to achievement motivation proposes that the need to achieve is mediated by a number of different goals which individuals

pursue. According to Nicholls (1984), success or failure in an achievement situation is based on an individual's self-referenced or other-referenced perceptions of competence. In turn, an individual's perceptions of competence lead to a focus on mastery-based or outcome-based goals. Studies such as those by Spink and Roberts (1980) and Duda (1987a cited in Duda, 1989a) have provided support for this proposal, indicating that perceived success is not necessarily related to winning.

Proponents of the goal approach have also made a number of predictions about the nature of the relationship between effort and ability. Individuals who have either high or low perceived ability are expected to select tasks of differing degrees of difficulty in order to demonstrate high ability to others. One study which supports these predictions is by Duda (1988b). In Duda's study, recreational sport participants who emphasised mastery goals spent more time practising their sport, therefore applying more effort, than did those who emphasised outcome goals. These results support the prediction that task oriented individuals will exert maximal effort on a task of moderate difficulty regardless of whether they have high or low perceived ability.

Researchers using the goal approach have also postulated that achievement goals are developmentally based and affected by situational factors (Duda, 1987b). Nicholls (1984) and Duda (1987b) suggest that children have a different view of the relationship between effort and ability to that of adults, and that their goals reflect this. A study by Ewing, Roberts and Pemberton (1983 cited in Duda, 1989a) offers support for this contention. Other research has also shown that situational factors can affect the goals which individuals pursue. Duda (1992) proposed that situations characterised by interpersonal competition are more likely to induce an outcome goal approach, than are situations emphasising the learning process and individual skill mastery. Ames and Archer (1988) and Ames (1992) found that this was certainly accurate in an educational context. This aspect of the goal approach is particularly pertinent to the present study, where the triathletes selected for the New Zealand team are constantly exposed to a highly competitive environment. This environment should, according to proponents of the goal approach, affect the goals which the athletes strive to achieve.

Finally, research applying the goal approach has indicated that there are obvious links between the goals which individuals pursue and other

psychological factors. Studies have found a relationship between goals and 'flow' (e.g. Jackson & Roberts, 1992), participation and persistence (e.g. Duda, 1988; 1989c), and intrinsic motivation (e.g. Seifriz *et al.*, 1992). Some researchers, such as Burton (1983 cited in Gould, 1993) have suggested that mastery goals are more adaptive in that they lead to more realistic expectations and perceptions of ability. However, others (e.g. Heyman & Dweck, 1992) propose that optimal achievement is likely to be promoted through the use of both types of achievement goals, mastery and outcome. Whichever of these options is selected, Jackson and Roberts (1992) posit that athletes need to be made aware of the implications of utilising particular types of goals.

## Instruments Which Measure Motivation in the Sporting Context

Since the mid 1980s, a number of multidimensional scales and questionnaires have been developed to measure achievement motivation specifically in the sporting context. Some of these are the Sport Orientation Questionnaire (Gill & Deeter, 1988), the Task and Ego Orientation in Sport Questionnaire (Duda & Nicholls, 1989 cited in Duda, 1992), the Competitive Orientation Inventory (Vealey, 1986), and the Perception of Success Questionnaire (Roberts & Balague, 1989). All of these scales are consistent in their use of at least a two dimensional assessment of achievement motivation, although the labels for the factors differ.

The Sport Orientation Questionnaire (SOQ, Gill & Deeter, 1988) is a 25-item scale which measures motivation on three factors, competitiveness, win orientation and goal orientation. The three factors have high internal consistency, according to initial tests carried out by Gill and Deeter (1988), and moderately high test-retest reliability ( $r = 0.89, 0.82$  and  $0.73$  for the factors competitiveness, win orientation and goal orientation). Other researchers have since used the SOQ (e.g. Swain & Jones, 1992) and found that the competitiveness factor is a particularly useful construct which enables researchers to distinguish between those athletes who are highly competitive, and those who are less competitive.

The Task and Ego Orientation in Sport Questionnaire (TEOSQ), developed by Duda and Nicholls (1989 cited in Duda, 1992), is a 13-item scale assessing achievement motivation on the two factors of task orientation and ego orientation. The first factor corresponds to mastery type goals, while the second factor corresponds to social comparison and outcome goals. According to Duda (1992), the two factors have been found to be internally consistent and have acceptable test-retest reliability for both children and adults. Respondents of the questionnaire are required to indicate their agreement or disagreement to the 13 items, reflecting how successful they feel in their sport.

The Competitive Orientation Inventory (COI, Vealey, 1986) was developed to measure an individual's achievement motivation with the factors of playing well (performance goals), and winning (outcome goals). Respondents must indicate their degree of satisfaction with 16 possible combinations of different

game outcomes and levels of performance. This method of assessing motivation forces the subject to weigh up the importance of each goal (performance and outcome) simultaneously. Results of analysis by Vealey (1986) showed that there was an acceptable level of test-retest reliability for performance orientation ( $r = 0.69$ ) and outcome orientation ( $r = 0.67$ ). Construct validity was examined by testing a number of hypotheses about the relationships between performance and outcome and other variables such as internal attributions for performance, performance rating, performance satisfaction, and perceived success. From this analysis, the questionnaire appears to be a reliable and valid measure of achievement motivation in terms of performance and outcome orientations.

The Perception of Success Questionnaire (PSQ, Roberts & Balague, 1989) is a 26-item scale developed within a social cognitive theoretical framework. Items reflect mastery and competitive goals, and respondents are requested to rate each item on a scale of 1 to 5, indicating whether they strongly agree or disagree that the item helps them feel successful in their sport. Analysis of the questionnaire, carried out by Roberts and Balague (1989), has shown the questionnaire to have high internal consistency for the two factors. Validity was measured by comparing the two scales of this questionnaire with those of the Task and Ego Orientation in Sport Questionnaire (Duda & Nicholls, 1989 cited in Duda, 1992). Correlations between the task and mastery factors, and between the ego and competitive factors were moderately high ( $r = 0.69$ ;  $r = 0.80$ ), while correlations between the task and competitive factors, and between the ego and mastery factors, were much lower ( $r = 0.39$ ;  $r = 0.29$ ). These correlations show that the concepts of mastery and competitive goals correspond to Duda and Nicholls' task and ego goals.

Of these four scales, the TEOSQ and SOQ have been the most widely used, and validated. The TEOSQ has commonly been used by Duda and colleagues in studies of motivational orientation in children and adults, while the SOQ has been used in studies comparing motivation of athletes participating in competitive and noncompetitive sport, and research examining gender differences in motivational orientation.

As one of the objectives of the present study was to examine the motivations of the triathletes for any gender differences, the SOQ was used. Previous

research by Battista (1990), Duda (1988), Gill (1986; 1988) and Gill and Deeter (1988) has found that males score higher on measures on competitiveness, and therefore, in any study of gender differences in motivation it is important to address this factor. As the SOQ measures motivational orientations in terms of competitiveness as well as mastery and outcome goals, this was the questionnaire selected for use in the present study.

## Gender Differences

### Fear of success

Researchers have been aware of gender differences in motivation since the 1950s, when it was found by McClelland and colleagues that women's need for achievement scores did not increase with strength of cue, as men's did (Heckhausen, Schmalt & Schneider, 1985). From results such as these, it was assumed that, in general, men had a higher need for achievement than women did, and therefore, according to Gill (1992), research on achievement motivation ignored women for the next twenty years. When these gender differences finally were examined more closely, Horner (1975) was one of the first researchers to try to explain why women appeared to have a lower need to achieve than men. Horner postulated that women have a fear of success. This, she proposed, was due to successful women being seen as less popular, unfeminine, and in conflict with accepted sex roles. As Horner (1975) notes, "I argued that most women have a motive to avoid success, that is, a disposition to become anxious about achieving success because they expect negative consequences (such as social rejection and/or feelings of being unfeminine) as a result of succeeding" (p.207).

One study in the sporting context by McElroy and Willis (1979) found little evidence to substantiate Horner's theory of a fear of success in women athletes. In this study, 262 female athletes on varsity sports teams such as tennis, basketball, volleyball, softball, and track and field, were required to answer yes-no statements reflecting three hypothesised orientations, success orientation, failure orientation and fear of success within sport-specific situations. Factor analysis revealed only two factors, which were named success orientation and anxiety orientation. According to McElroy and Willis, their results did not support the presence of a fear of success in female athletes. While their results were not consistent with other similar research at the time (e.g. Casher, 1977 cited in McElroy & Willis, 1979), McElroy and Willis suggest that this is because past research attempting "to link fear of success to women athletes have been observational and nonempirical accounts" (McElroy & Willis, 1979. p. 242).

## Competitiveness

Since the 1980s, gender differences in motivation have commonly been found in terms of competitiveness. Studies such as those by Battista (1990), Duda (1988), Gill (1986; 1988) and Gill and Deeter (1988), have all found that males tend to have higher scores on competitiveness than women do, whereas "females appear to concentrate more on personal goals and performance than on interpersonal comparison and winning" (Murray & Matheson, 1993. p. 225).

Gill (1986) investigated competitiveness among male and female undergraduates in physical activity classes. Participants were administered two questionnaires, the WOFO (Work and Family Orientation Questionnaire, Helmreich and Spence, 1978 cited in Gill, 1986) and the Competitiveness Inventory (forerunner to the Sport Orientation Questionnaire). This second questionnaire, developed by Gill (1986), contained 32 items which were rated on a 5 point Likert scale, with three factors - competitiveness, goal orientation and win orientation. Analysis of the results showed that there were significant gender differences on all three factors of the Competitiveness Inventory. The strongest difference was on win orientation, with males scoring significantly higher than females on this factor. However, it was also found that males scored higher than females on competitiveness, but that females scored higher than males on goal orientation. Gill suggests that "[s]ex differences on competitiveness seemed to reflect different orientations to competition, with males much more oriented to win-loss outcomes and females more oriented to personal goals and standards" (p. 245).

In a later study, Gill (1988) examined gender differences in motivational orientation, and participation in competitive and noncompetitive sports. Data was obtained from three separate samples. The first sample included 218 males and females enrolled in physical activity skills classes, the second sample included 266 high school students, and the third sample included 86 university students. Results for the first sample showed that males had significantly higher scores on competitiveness and win factors on the Sport Orientation Questionnaire, while the females had slightly, but not significantly higher scores on the goal factor. For the second sample, it was found that, again, the males had significantly higher scores for competitiveness and win orientation. However, goal orientation scores for this

group were very similar across the males and females. In the third sample, males were also found to have significantly higher scores on competitiveness and win orientation, and to have slightly higher scores on goal orientation than the females. In general, results of the study showed that while males scored consistently higher on competitiveness and win orientation there was little difference in goal orientation scores between the males and females. This could indicate that "females may well be highly achievement oriented toward sport, even competitive sport, but they seem to focus more on personal goals and standards whereas males focus more on interpersonal comparison and winning" (Gill, 1988. p.156).

Battista (1990), in a study examining the motives of adults participating in sport, found that men scored significantly higher than women on competitiveness. Participants were 48 male and 50 female racquetball club members. They were required to complete the Personal Meaning of Racquetball Participation questionnaire, which was designed for the study. Overall results indicated that the racquetball players rated enjoyment as the most important reason for participation. In order, other reasons noted were competition, challenge, health and fitness, and self-satisfaction. Reasons for participation which were rated as the least important were a loss in sense of time, beauty in movement, concern with the score, feedback, and being able to perform effortlessly. A number of t-tests were performed to compare male and female reasons for participation. These tests showed that males scored significantly higher than females on competition, while females scored significantly higher on self-satisfaction, beauty of movement and a feeling of togetherness.

Duda (1988b), as previously noted, conducted a study on the relationship among goal perspectives, persistence and behavioural intensity among male and female recreational sport participants. Results of the study showed that there were significant gender differences in terms of goal orientation among recreational sport participants. Close to three quarters (72.8%) of male subjects in the study emphasised social comparison goals, while 69.4% of female subjects were classified as low on the social comparison factor. A post hoc test was conducted to examine whether the differences in scores on the mastery and social comparison factors were a function of an interaction between gender and previous competitive sport experience. The results of this test showed that men who had previously participated in competitive sports

emphasised social comparison goals more highly than women who had participated in competitive sports.

### Other factors

Other research consistently shows that males are more outcome oriented, while females are more mastery oriented (e.g. Duda, 1989b; Gill & Deeter, 1988).

In a study by Duda (1989b), examining the relationship between an athlete's goal orientation and perceived purpose of sport, gender differences were found among high school athletes. Participants were 128 male and 193 female high school students who played various sports, including basketball, softball, tennis, and track and field. The students' goal orientations were measured on the Task and Ego Orientation in Sport Questionnaire, and their perceived purpose of sport was assessed on a 60-item questionnaire designed for the study. Results showed that females had significantly higher scores on task orientation than males, while males were significantly more ego oriented. In terms of the purpose of sport, females perceived mastery/cooperation to be more important than did males, whereas males perceived enhanced competitiveness, social status, and high status career opportunities as the most important reasons for participating in sport.

Ziegler (1991) conducted a study examining the perceived benefits of running for men and women at competitive and recreational levels. The 402 runners who responded to the questionnaire were classified by gender and competitive orientation (competitive or recreational). They answered questions on running history, general attitude to running, perceived benefits of running, and general demographic information. In terms of perceived benefits of running women noted positive self image and an enriched life as benefits, while men noted increased knowledge of physical capabilities, higher levels of energy, more better defined sense of identity, improved perseverance and a decrease in anxiety levels. Ziegler suggests that the benefits perceived by the females "reflect the traditional expressive qualities associated with 'feminine' pursuits" (p.125) while those perceived by the males "expressed qualities that would be classified as more instrumental" (p.125).

White (1993), investigated gender differences on the six PSIS subscales (Psychological Skills Inventory for Sport, 1988), in a sample of collegiate male and female skiers. Results showed that there was only a significant difference between the male and female skiers on the Team Emphasis subscale, and this she attributed to a difference in social affiliative and belongingness needs. According to White, this has implications for coaches, in that they need "to account for the different affiliative needs of the sexes" (p.56).

Duda, Fox, Biddle and Armstrong (1992), as previously noted, found gender differences in the achievement goals of children, as well as in their beliefs about success in sport. Girls were found to have significantly lower scores on ego orientation than boys, although they tended to be more task oriented than boys. It was also found that the girls had differing beliefs about success in sport. They had lower scores than the boys on motivation/effort, ability and deception/external factors, and showed significantly less enjoyment and interest in sport. This is somewhat unusual, as task orientation has been linked to greater intrinsic motivation and enjoyment in sport (e.g. Jackson & Roberts, 1992; Plant & Ryan, 1985).

One study of sport participants in which gender differences were not found is by Acevedo, Dzewaltowski, Gill and Noble (1992). Their sample was 112 male and female ultramarathoners entered in one of two races, the Western States 100-Mile Endurance Run or the Leadville Trail 100 ultramarathon. Participants were measured for achievement orientation on the Sport Orientation Questionnaire, as well as for commitment to running, and confidence in their ability. They were also asked a number of forced-choice questions about their thoughts during the run. Results showed that males and females both considered mastery goals to be of more importance than winning or competitiveness. According to Acevedo *et al.* "Our discrepant results may be due to the older age of our sample or, more likely, may reflect the unique characteristics and demands of ultramarathoning" (Acevedo *et al.*, 1992. p.250). This second option, as they suggest, does seem to be the more likely reason for the lack of gender differences found.

## **Summary**

To summarise, initial theories of gender differences posited that females had

a lower need for achievement than males did, due to a fear of success (Horner, 1975). However, studies such as one by McElroy and Willis (1979) found little evidence to substantiate this view. More recently, studies have found gender differences in terms of competitiveness. For example, Gill (1988) found that males scored consistently higher than females on the competitiveness and win factors of the Sport Orientation Questionnaire. Battista (1990) also found that men scored significantly higher than women on competitiveness.

Other factors which have been studied in terms of gender differences are mastery and outcome goals, perceived benefits of participation in a sport, the subscales of the Psychological Skills Inventory for Sport, and beliefs about success in sport.

On the whole, research has shown that there are differences in the motivations of men and women. However, one study by Acevedo *et al.* (1992) did not find gender differences in the motivations of ultramarathoners. These findings may suggest that particular types of sports are either conducive to gender differences in motivation or not. Thus, the present study aims to see whether there are any gender differences in the motivations of triathletes.

## The Present Study

### Rationale

The importance of studying motivation in sport has been noted by several researchers including Weiss and Chaumeton (1992) and Hodge (1994), for reasons such as the development of theories and models of motivation in sport, to improve coaching and training techniques, and because of its applicability in all aspects of sport. Although motivation has been recognised as being of particular importance for triathletes because of their "complicated and extensive training programmes" (Hellemans, 1993. p.15), little research has been conducted in this area. This is possibly because Triathlon has only become an internationally recognised sport in the last 10 years. Because of the paucity of research on triathletes, and the recognition of the importance of motivation in their training, the present study had as its main objective: to examine, in depth, the motivations of triathletes.

A contemporary goal approach to studying motivation was used in the study, due to the wealth of recent literature which supports the underlying definitions and predictions of the approach. The goal approach is based on the notion that an individual's need to achieve is mediated by a number of different goals which they pursue. Proponents of the approach, such as Nicholls (1984) and Duda (1989a), propose that an individual's perceptions of competence are very important in achievement motivation, that the nature of the relationship between effort and ability is affected by the individual's goals, that there is a link between these goals and cognitive development, and that various situational factors can affect these goals.

In recent years, gender differences in motivation, particularly in terms of competitiveness, have been seen as increasingly important. If research shows recurring differences between men and women in their motivational approach to competitive sport, then this could have serious implications for coaches and the training methods used. A number of studies have found such differences between men and women. Gill and colleagues (e.g. Gill, 1986; Gill and Deeter, 1988) found that men do score higher than women on measures of competitiveness, but that women focus more on personal achievement goals. Although most studies examined do indicate that there are differences in the motivations of men and women, one study which did not find any

differences is by Acevedo *et al.* (1992). These researchers suggested that their findings of no significant motivational differences between the men and women competing in ultramarathons could be due to the extreme and unique nature of ultramarathons.

As there is so little research on the motivation of triathletes, and gender differences have been seen as an increasingly important aspect to be studied, the present research also aimed to study gender differences in the motivations of triathletes. Differences are to be expected because most of the previous research conducted on athletes from other sports has found differences. However, it is possible that no differences will be found because Triathlon, and in particular the Ironman distance, could be seen as having some features, such as extreme endurance, similar to that of ultramarathon.

In the present study, quantitative data was collected in terms of demographic variables, training variables and motivational orientations to allow statistical analysis of these variables and comparison with other studies. However, a qualitative component was added through the use of open-ended questions and interviews, to add richness to the data and gain a wider perspective.

## Objectives

The present study aimed to examine, in depth, the motivations of triathletes who have been selected to represent New Zealand for their age group. Qualitative and quantitative data was obtained through a self-administered questionnaire and interviews conducted by the researcher. The questionnaire was designed to collect information on general characteristics, training methods, the priority of Triathlon in the life of the athletes, levels of enjoyment, and motivating factors. The aim of the interviews was to generate more detailed material on the athletes' motivations for participating in Triathlon.

A second objective was to examine the motivations of male and female triathletes for any gender differences. It was expected that, despite competing in a highly competitive environment, where situational factors are likely to enhance win orientation, or interpersonal comparison, that there would be differences between the motivational goals of the males and females. Motivational goals were assessed using Gill and Deeter's (1988)

Sport Orientation Questionnaire. Hypotheses leading from this objective were:

- i) That there would be a difference between male and female triathletes on the subscale of competitiveness on the SOQ.
- ii) That there would be a difference between male and female triathletes on the subscale of win orientation on the SOQ.
- iii) That there would be a difference between male and female triathletes on the subscale of goal orientation on the SOQ.

There was also the opportunity to examine the reliability of the Sport Orientation Questionnaire, in terms of internal consistency, through analysis of the participants' responses, and to perform correlational analysis among the SOQ subscales. Other analyses, examining the effects of training related variables on SOQ scores, were also planned to expand on the nature of sport orientations as measured by the SOQ.

## METHOD

### Participants

Eighty male and female triathletes, who were registered with Triathlon New Zealand, and selected as part of the national Triathlon team in their age group section, were requested to participate in the study. Approximately one third of these athletes were women, according to a spokesperson from Triathlon New Zealand. Of the 80 athletes, 35 returned questionnaires, giving a response rate of 43.75%. Of the 35 respondents, 21 were male and 14 were female. Ages of the athletes ranged from 18 to 66 years. Table 1 (p.42) shows a summary of the characteristics of the participants.

### Instruments

A questionnaire containing several sections was developed by the researcher to examine the motivations of triathletes. A copy of the complete questionnaire, showing full item wordings, is given in Appendix A.

- i) *Triathlete Profile.* This first section contained demographic questions concerning the sex, age, ethnic identity, current employment status and highest educational qualification of the respondent.
- ii) *Sport Orientation.* This section contained the Sport Orientation Questionnaire (SOQ) developed by Gill and Deeter (1988), which examines respondents' orientations to the three factors of competitiveness, win orientation and goal orientation. The questionnaire is made up of 25 statements describing reactions to sport situations, and the respondent is required to give a rating for each statement on a 5 point Likert scale, from strongly agree, to strongly disagree. Each item is scored from 1 to 5 (A=5, B=4, C=3, D=2, E=1), and then scores for each of the subscales, competitiveness, win orientation and goal orientation are summed. Preliminary analysis by Gill and Deeter (1988) has indicated that the instrument has high internal consistency and test-retest reliability.
- iii) *Motivating Factors.* The third section of the questionnaire contained nine short answer questions pertaining to why the respondent chooses to

participate in Triathlons, what they think the benefits are for them to participate, what they think motivates them to participate, and what makes them feel successful in the sport.

iv) *Self Evaluation*. In the fourth section, respondents were asked to rate their enjoyment of participating in Triathlons on a 9 point Likert scale, from 1 (little enjoyment) to 9 (great enjoyment). They were also required to place the items - family, social life, triathlons, work, study - in order of priority for them in their life.

v) *Training*. The fifth section of the questionnaire contained 16 questions on the training undertaken by the respondent. This section included questions on the average number of hours of training completed in a year, how training is planned and assessed, and the use of goals and psychological methods of training.

Finally, respondents were given the opportunity to note anything else about their motivation which they thought was important.

### **Procedure**

Initially Triathlon New Zealand was approached about the use of members as participants within the study. With permission granted, the questionnaires were then dispatched to Triathlon New Zealand for distribution to those triathletes on the national team for their age group. Participants were sent the questionnaire, which was then self administered. An information sheet about the nature of the study was included with the questionnaire, and participants were made aware that if they returned a completed questionnaire, that their consent to participate in the study was assumed. Also attached to the questionnaire, was a request for volunteers to take part in an interview, and a corresponding consent form. Questionnaires were answered anonymously, unless participants agreed to take part in an interview, in which case they were asked to supply a name and contact telephone number. All participants were informed that any information disclosed would be kept confidential. Several weeks after the questionnaires had been mailed to the triathletes, a reminder was given in a later Triathlon

NZ newsletter, to encourage a high return rate.

After the cut off date for return of the questionnaires, four triathletes who had consented to take part in an interview were contacted and then interviewed. Interviews, conducted at the respondents' homes, were semi structured so that the interview remained focused on the area of interest, but respondents were also encouraged to talk about what was of importance to them in terms of motivation to continue participating in Triathlon. Questions were asked to clarify certain responses within the Motivating Factors, Self Evaluation and Training sections of the questionnaire. More specifically, respondents were asked for more detailed explanations of how they became involved in Triathlon, whether they had been involved in a competitive sport previously, why they found Triathlon more challenging than competing in a single discipline, and why they enjoy a particular length of Triathlon over others. Responses to the SOQ were also examined for seeming inconsistencies, such as where two statements within the same subscale were rated very differently. Individuals were selected for an interview on the basis of proximity to the researcher, and on the basis of obtaining a small sample of participants, equal numbers of whom were male and female, and who ranged in age.

## RESULTS

### Motivations

The primary objective of the present study was to examine, in depth, the nature of the motivations of triathletes. Data was collected on general participant characteristics, training methods, motivating factors, levels of enjoyment and priority of Triathlon in the life of the athletes. This section covers the different factors in this order.

### General characteristics

Thirty-five male and female triathletes, who were registered with Triathlon NZ, and selected as part of the national team for their age group, participated in the study. Table 1 shows a summary of their characteristics. Ages of the triathletes ranged from 18 to 66 years with a mean of 33 years of age. All except two of the athletes identified themselves as of Pakeha or NZ European ethnicity. From the data it can also be seen that 40% of the athletes had some form of tertiary education, and that the majority of athletes (68.6%) were either working 31 hours or more a week or involved in tertiary study.

Four of the triathletes in the sample were interviewed. These four athletes, who will be called Participant A, Participant B, Participant C, and Participant D, had the following general characteristics.

Participant A : This participant was an 18 year old, female triathlete. She reported herself to be of Pakeha or New Zealand European ethnicity, was employed for between 11 and 20 hours a week, and had a higher school qualification such as University Entrance or above, as her highest educational qualification. She had been competing seriously in Triathlon for just one year, had won both local and national medals and trophies, and did an average of 20 hours training a week, over 40 weeks of the year. She reported planning her training both weekly and monthly, using a diary or log, measuring the intensity of her training by heart rate and 'how you feel', and using some form of periodisation in her training. She also reported that she did not have a coach.

Table 1. Summary of characteristics of participants.

	male	female	n	%of total sample
<b>Sex</b>				
Male			21	60.0
Female			14	40.0
<b>Age</b>				
<21	4	3	7	20.0
21-30	5	6	11	31.4
31-40	6	3	9	25.7
41-50	2	2	4	11.4
51-60	1	-	1	2.9
61-70	3	-	3	8.6
<b>Ethnic Identity</b>				
Pakeha/NZ European	21	12	33	94.3
Maori	-	-		
Pacific Islander	-	-		
Asian	-	-		
Other	-	2	2	5.7
<b>Current Employment Status</b>				
<b>Employed</b>				
(31 hours or more a week)	13	3	16	45.7
(21-30 hours)	-	1	1	2.9
(11-20 hours)	-	2	2	5.7
(10 hours or less)	-	1	1	2.9
<b>Not in paid employment</b>				
(Unemployed/Retired/On a benefit)	2	1	3	8.6
High School Student	1	1	2	5.7
Tertiary Student	4	4	8	22.9
<b>Highest Educational Qualification</b>				
No school qualification	1	-	1	2.9
School certificate passes	3	2	5	14.3
Higher school qualifications (University Entrance and above)	4	4	8	22.9
Trade certificate or Professional certificate or diploma	5	2	7	20.0
Tertiary/University degree, diploma, or certificate	8	6	14	40.0

Participant B : This participant was a 23 year old, female triathlete. She was of Pakeha or New Zealand European ethnicity, was a tertiary student, and had a higher school qualification as her highest educational qualification. She had been competing in Triathlon for two years, had won medals or trophies at a national level, and did an average of 12 hours of training a week, 48 weeks in the year. She reported planning her training daily, weekly and monthly, using a diary or log, measuring intensity by heart rate and 'how you feel', and

planning her training according to intensity levels. She also reported using some form of psychological training method, and that she had a coach who trained her in a single discipline.

Participant C : This participant was a 27 year old, male triathlete. He was of Pakeha ethnicity, was a tertiary student, and had a tertiary/university degree, diploma, or certificate as his highest educational qualification. He had been competing seriously in Triathlon for four years, had won medals or trophies at a local level, and did an average of 16 hours of training a week, 50 weeks of the year. He said that he planned his training daily and once a season, measured the intensity of his training by heart rate and 'how you feel' and planning his training by intensity levels. He also reported having a swim coach.

Participant D : This participant was a 45 year old, male triathlete who reported himself to be of New Zealand European ethnicity. He was employed for 31 hours or more a week, and had as his highest educational qualification, a trade certificate or professional certificate or diploma. He had been participating in Triathlon for one year, had won medals or trophies at both local and national levels, and trained an average of 8 hours a week for 40 weeks in the year. He reported planning his training weekly, keeping a diary or log, measuring the intensity of his training by heart rate and 'how you feel', and planning his training according to different levels of intensity. He also said that he used psychological training methods, and had a coach for swimming.

Other characteristics collected for all the athletes were the number of years that the triathletes in the sample had been competing seriously, and the number of medals won at a local, national and international level. As Figure 1 shows, the triathletes had been competing seriously in Triathlon for as many as 10 years. Although there were fewer females than males in the sample, it can be seen that there was a similar spread over the number of years of serious competition between the sexes. The same can be seen in Figure 2 for the number of medals won at a local, national and international level by the athletes.

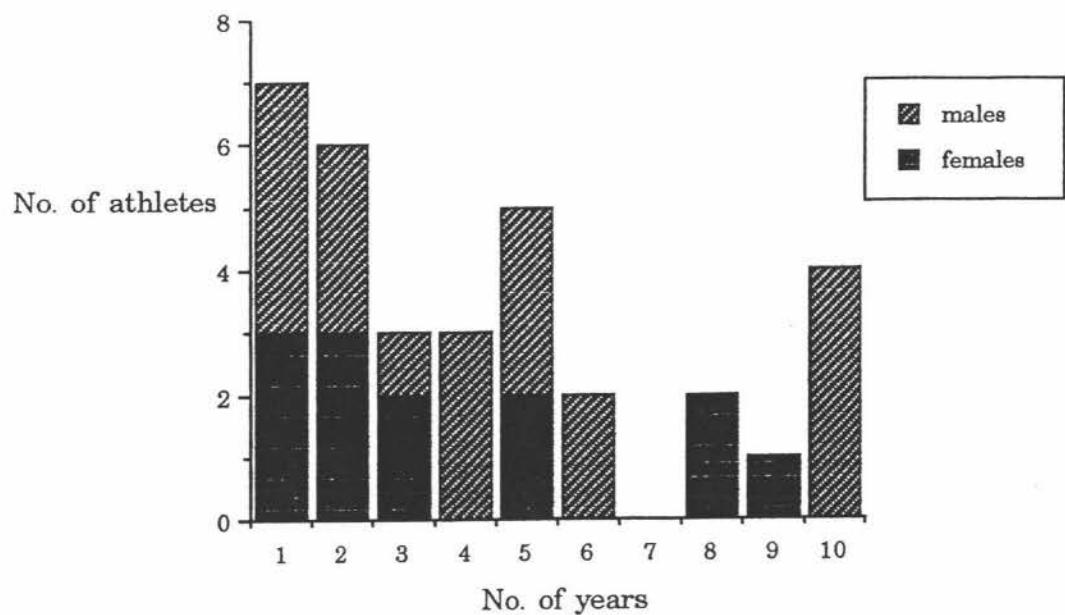


Figure 1. Number of years over which triathletes have been competing seriously.

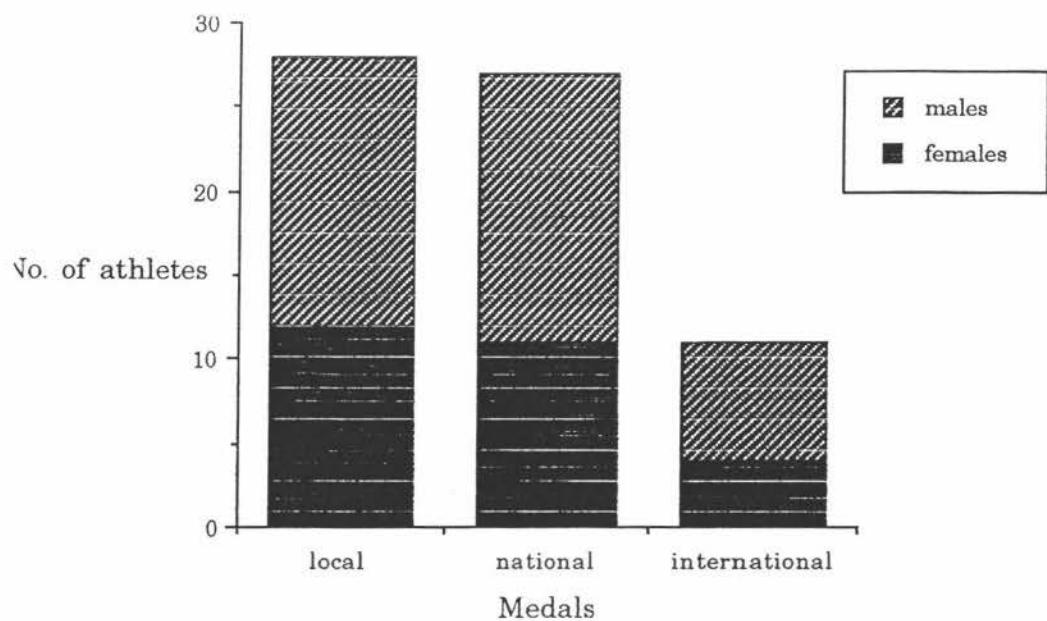


Figure 2. Number of athletes within the sample who have won medals at a local, national and international level.

## Training methods

Within the sample, all but one athlete reported that they trained specifically for Triathlon. The number of hours of training per week ranged from as little as 5 hours to as much as 30 hours in a week. The average number of hours of training per year was from 200 to 1500 hours, with a median of 757.5 hours per year. All athletes reported planning their training in some way. From Figure 3, it can be seen that the athletes tended to plan their training throughout the year. Only 2 athletes had a yearly plan of their training, while 10 athletes planned their training at least once a season. Of the 35 participants, 31 reported that they keep a log or diary of their training, and of these, 27 referred back to their log or diary when planning future training.

In terms of psychological training methods, 22 athletes reported using some method. Mostly athletes used visualisation, self talk and music to build confidence and allay anxiety. Some of the responses given were -

*I focus on achieving a goal and see myself winning it, going through the event to the finish, think like a winner.*

*Picture how a race might go and how I will react. Especially run transitions through my mind so I know exactly what to do.*

*When unmotivated I say or think to myself 'Just do it - get it out of the way'. I think of my goals and how it all adds up.*

*I visualise pre-race and race conditions, the night before a race and the morning of a race for relaxation and anxiety purposes. I use positive self talk to eliminate negative thoughts.*

Participant D said that when leading up to the World Championships :

*I started to visualise myself through my training, I started to see myself standing up on the dais, and actually going through the finish doing the time.*

Triathletes were also asked whether they preferred to train alone, or with others. As can be seen from Table 2, responses were varied. Three quarters of

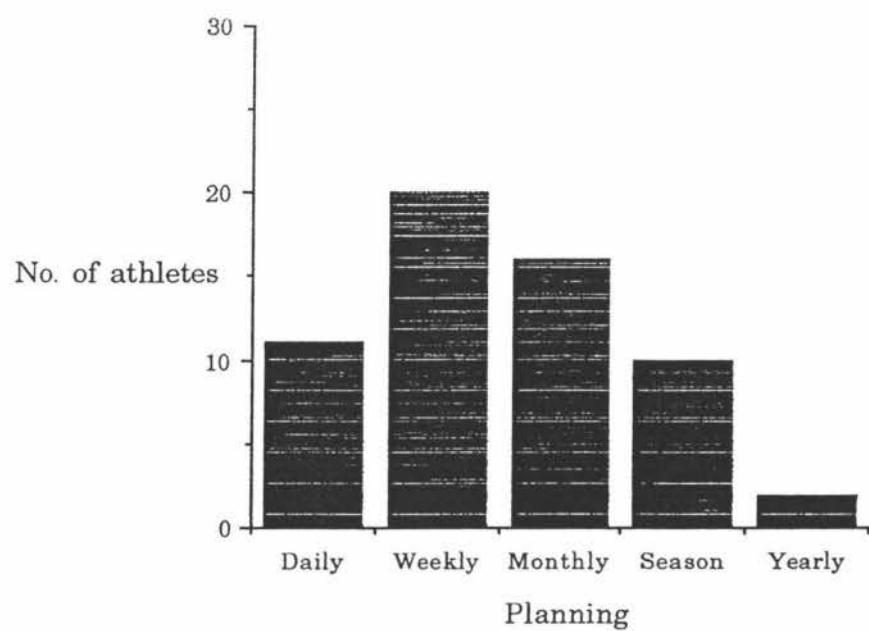


Figure 3. Planning of training throughout the year.

the athletes reported that they mostly run alone. For cycling, almost 66% said that they ride alone, but a further 23% reported that they preferred to ride with a group of others on longer training rides. Almost equal numbers of athletes reported swimming alone or in a squad or group of others. Most athletes said that they chose to train alone or with others, but several said that they trained alone due to work commitments, such as shift work, or because they live in a rural area where there is no one to train with. Of those who chose to train alone, reasons given were that it makes them "mentally tougher" or because it allows them to concentrate more on what they are doing. Athletes who chose to swim with others or in a squad said that they preferred it because they had to train harder, it was more motivating, and because they had access to a coach. Participant D noted that :

*I find groups sometimes destructive...one guy takes off and others follow him, suddenly you find yourself doing the same thing because you don't want them to think you're not up to it.*

Participant A said that she preferred to train with someone on the bike because :

*It's more enjoyable because...you're concentrating on what you're doing, but someone else is there...you're talking...you don't notice the time go.*

However, she preferred to swim alone because :

*I basically just train by myself because I can't find anyone the same pace, and...people go down at different times [to the pool] and I can't be bothered organising it...and it's good for my discipline too if I go down and do a session by myself.*

Participant C said that :

*Motivationally it's really good. You go riding, you talk about triathlon, and you talk about training...it's quite motivating.*

Table 2. Preferences for training alone or with others.

	male	female	n	% of total sample
run mostly alone	18	9	27	77.1
run with others	1	1	2	5.7
cycle mostly alone	15	8	23	65.7
long rides with a group	5	3	8	22.9
cycle with others	1	2	3	8.6
swim mostly alone	9	6	15	42.9
swim in squad	10	7	17	48.6
train with others for speed work	3	1	4	11.4
hard sessions alone	1	-	1	2.9
recovery sessions alone	1	1	2	5.7
recovery sessions with others	1	-	1	2.9
train alone and with others	1	-	1	2.9

A number of things were reported to interrupt training schedules. Table 3 shows that work, illness, injury and family commitments were the most commonly noted interruptions.

Table 3. Things which interrupt training.

	male	female	n	% of total sample
work	11	8	19	54.3
illness	9	5	14	40.0
injury	8	4	12	34.3
family commitments	7	4	11	31.4
weather	3	4	7	20.0
fatigue	3	3	6	17.1
social commitments	4	2	6	17.1
study	2	3	5	14.3
travel	1	3	4	11.4
lack of motivation	2	2	4	11.4
household activities	1	-	1	2.9
unfamiliarity with area	-	1	1	2.9
mechanical problems	1	-	1	2.9
need for balance	1	-	1	2.9

In terms of setting goals during training and competition, 32 of the athletes reported that they did use goals, and three reported that they did not. In response to a question about what types of goals they used in training,

participants reported that they used a number of different types of goals, but distance or time goals were the most commonly reported (see Table 4). Similar types of goals were also used within a race (see Table 5).

Participants A, B and D all suggested that the mastery goals and competition goals which they set for themselves were linked. Participant A said :

*If you improve your times, then most of the time your ranking goes up and up.*

Participant D said :

*It's the clock you're looking at...so I'm trying to better my time, but during that race I'm saying I'd like to be able to beat [that person]. To do that I've got to be doing that time.*

Table 4. Training goals of triathletes.

Goals	male	female	n	% of total sample
distance/time	15	9	24	68.6
technique	4	4	8	22.9
heart rate/intensity	4	2	6	17.1
"work hard"	-	3	3	8.6
motivation	1	-	1	2.9
consistency	1	-	1	2.9
sustainable speed work repetitions	1	-	1	2.9
personal bests	1	-	1	2.9
lead sets in swimming	-	1	1	2.9

Table 5. Competition goals of triathletes.

Goals	male	female	n	% of total sample
time	8	10	18	51.4
placing	6	2	8	22.9
remain focused/attitude	3	3	6	17.1
beat particular rivals	1	4	5	14.3
heart rate/intensity	4	-	4	11.4
personal bests	2	1	3	8.6
keep up with specific athlete	1	2	3	8.6
technique	1	1	2	5.7
transition times	1	1	2	5.7
make certain splits/times for each leg	-	1	1	2.9
visualise aspects of race	-	1	1	2.9

When questioned about whether they measured the intensity of their training, 32 athletes reported that they did use some method of measuring intensity. Heart rate and 'how you feel' were used by 28 and 27 athletes respectively, while only two athletes reported using another method such as achieving certain times for a particular distance. All of those who reported measuring the intensity of their training also reported trying to plan their training according to different intensity levels. 28 of these 32 also reported trying to plan their training using periodisation or cycles, so that some days/weeks are at a higher/lower level of intensity. When asked to describe these cycles, some responses were :

*4 week cycles, 3 weeks of gradual increase in distance or intensity, then 1 week transition to the next cycle.*

*Monthly cycles - easy / moderate / hard / recovery weeks. Each month the cycle steps up to a higher level. eg. moderate for one month becomes the easy level in the next month. Sessions are periodised for intensity level and duration.*

*Conditioning period. 6 months out from event all aerobic training. 3 months out, steady pace aerobic. 1 month out, time trials and limited repetition work. Never 2 hard days in a row, always follow a hard session with an easy one.*

*12 weeks minimum base where long easy miles are built, 2 weeks hard, 1 week easy (recovery), 4 weeks of strength/speed before major event (ie. track sessions - running). A weeks taper before race.*

Within the sample, only 11 of the athletes had a coach to train them in all aspects of triathlon, while 24 athletes had a coach who trained them in just one of the three disciplines. Athletes who had a coach training them in all aspects of Triathlon noted that their coach was helpful in providing guidelines for training, development of training schedules, development of training and competition goals, and for support at races. Of those who had a coach in just one discipline, this was most commonly for swimming. Swim coaches mostly helped their athletes with technique and setting up programmes with sessions of varying intensity. A few of the athletes mentioned that their coach also helped to motivate them. Two athletes noted that in one respect coaches are not always entirely useful.

*Hard to find a coach who appreciates all aspects of triathlon.*

*Is hard to convince that swimming is not the only discipline I do.*

Participants B and D both mentioned that they had tried training with a swimming coach. They both found that the coach pushed them too hard, not understanding that in Triathlon the swimming is just the first leg of the race. As Participant D noted :

*It's difficult to get coaches...the problem is, swim coaches coach you as swimmers...they can't see that you're also going to be running and biking.*

### **Priority of Triathlon**

Participants were asked to place their family, social life, triathlons, work and study into order of importance in their life.

Figure 4 shows how much importance was placed on family by the triathletes. It can be seen that about 69% of participants placed family as

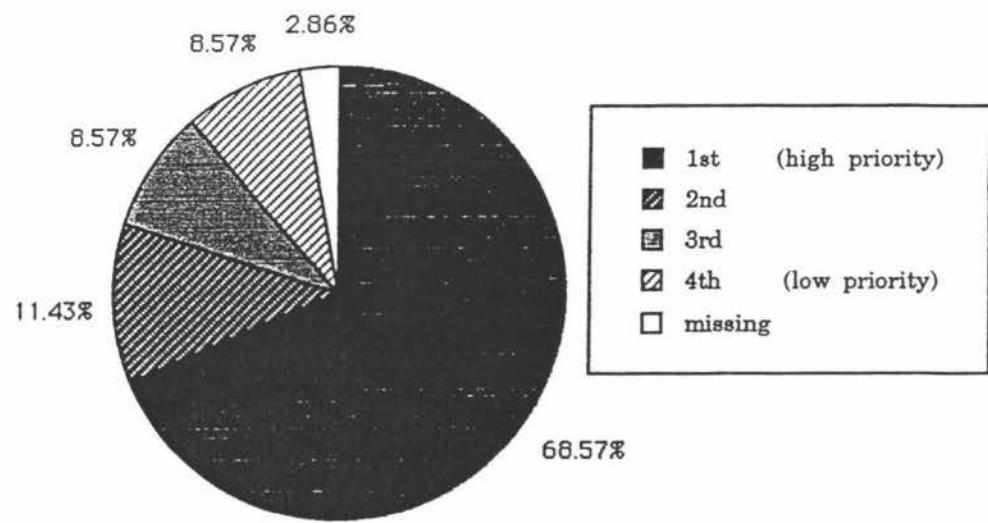


Figure 4. Prioritisation of family.

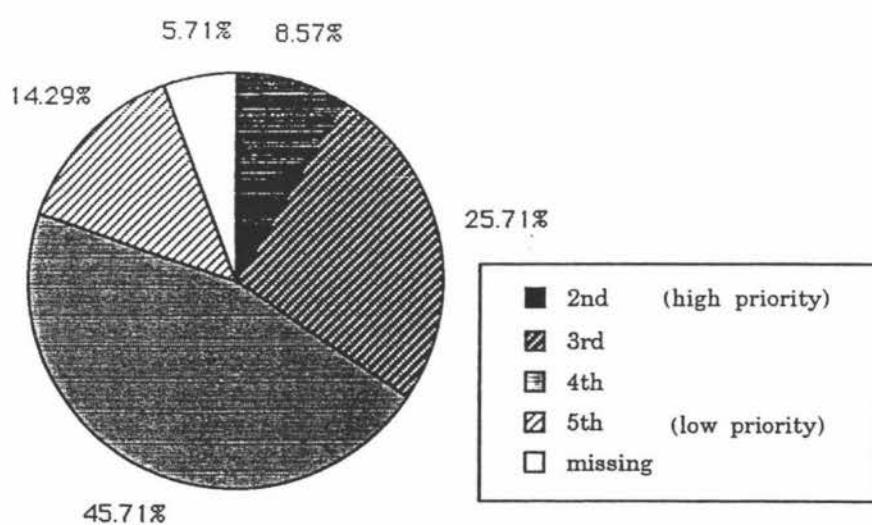


Figure 5. Prioritisation of social life.

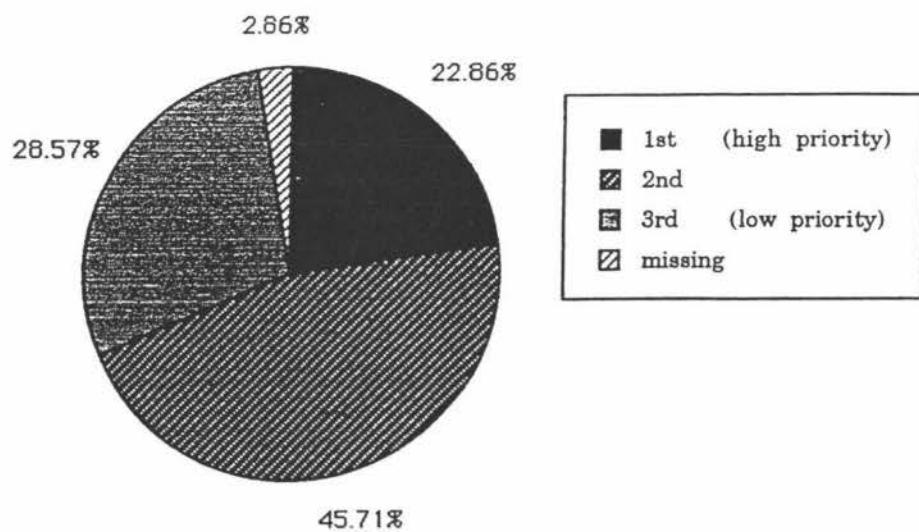


Figure 6. Prioritisation of Triathlon.

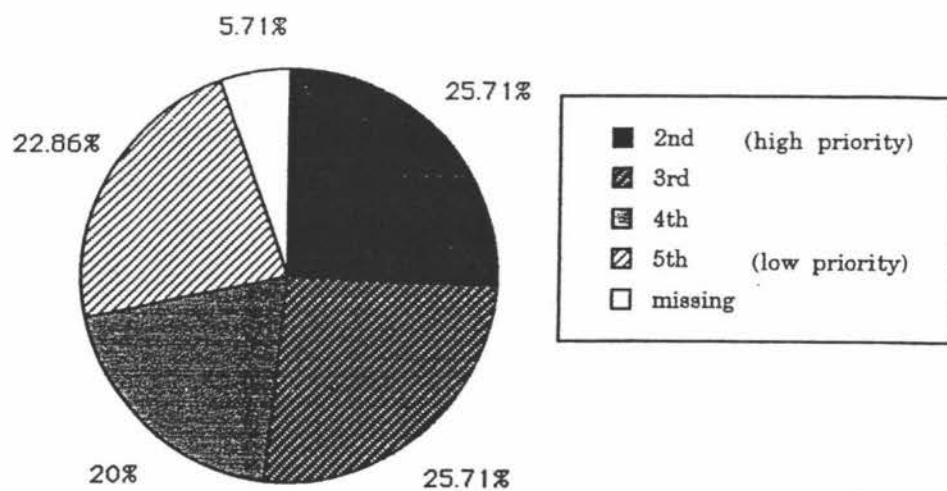


Figure 7. Prioritisation of work.

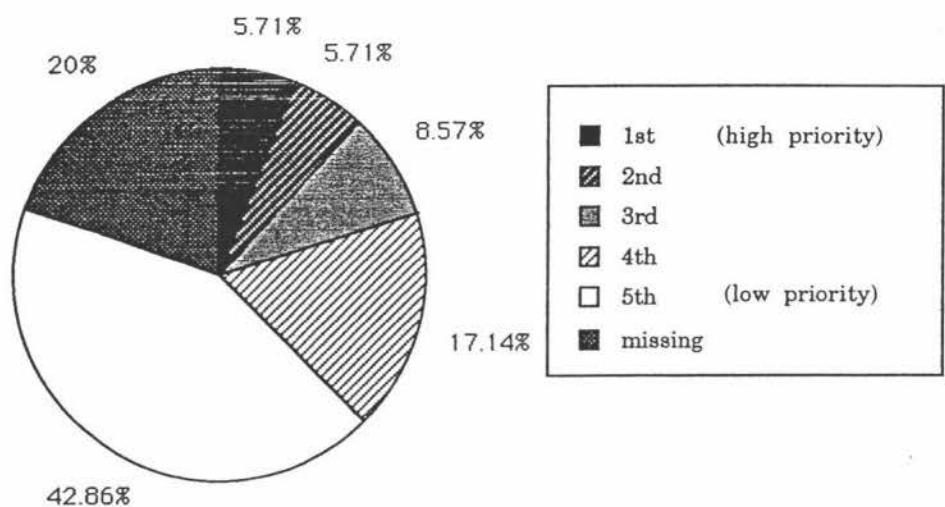


Figure 8. Prioritisation of study.

their highest priority in life, while a further 11% placed family as second in their order of priority.

Figure 5 shows that social life was considered to be of much lower priority, with most people placing it as 3rd, 4th, or 5th in importance to them.

Triathlon was seen as very important to the participants (see Figure 6). Nearly all athletes placed Triathlon as 1st, 2nd or 3rd in order of importance.

Figure 7 shows that some athletes saw work as very important in their lives, while an equal number saw it as the least important of the five aspects.

Study was seen as of low priority to most of the participants and only of great importance to a few (see Figure 8).

Overall, it can be seen from Figures 4 to 8, that family was rated as the highest priority by 68.6% of the triathletes, while triathlon was rated as the highest priority by only 22.9%. Work was the other factor which was of great importance, generally being rated as 2nd or 3rd in priority.

### **Levels of Enjoyment**

As can be seen in Figure 9, the level of enjoyment of triathletes in the sample was generally very high. Only two athletes rated their level of enjoyment of participating in Triathlon as average. When asked to explain which part of participating in Triathlons they most enjoyed and least enjoyed, respondents gave a variety of answers such as -

*Hate to travel to races. Enjoy working on my bikes.*

*I enjoy racing and the friendliness of most of the triathletes I have met. What I enjoy least is the early morning rises for training.*

*most enjoy - The atmosphere, crowd support is the best part followed by doing really well (these go hand in hand at times. least enjoy - The migraine headaches afterwards.*

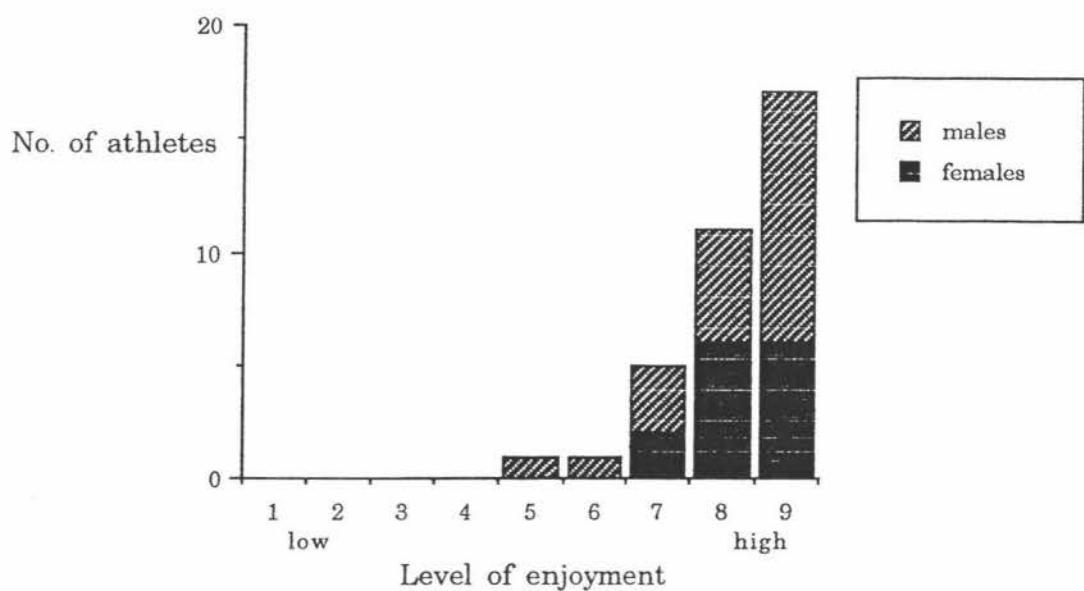


Figure 9. Level of enjoyment of the triathletes.

*Mostly enjoy company in training, people who participate have mostly the same attitudes and all have great discipline in their lives - though sometimes a little selfish! I least enjoy one minute before start of a race!*

*Most enjoy - Passing people on my bike is great. Being with friends. Getting a spot prize. Least enjoy - Getting up early. Waiting for the beginning.*

*I mostly enjoy the pain, speed and people you meet. I least enjoy the cost of competing eg. Bikes, Wheels.*

Other athletes commented on which leg of Triathlon they preferred - the swimming, cycling or running. Mostly athletes seemed to prefer the discipline at which they were the most competent.

The male and female triathletes were also compared on their ratings of enjoyment. Ratings for males ranged from 5 to 9 on the 9-point scale, while ratings for females ranged from 7 to 9 (see Figure 9). As can be seen in Table 14, mean enjoyment ratings for males and females were very similar. A *t*-test showed that there was no statistically significant difference between the two mean enjoyment ratings of the males and females,  $t$  (33) = - 0.41,  $p=0.68$ .

Table 14. Mean enjoyment ratings for males and females.

	n	M	SD
Males	21	8.14	1.15
Females	14	8.29	0.73

### **Motivating factors**

Results from this section come from the Motivating Factors section of the questionnaire and from the interviews. In the tables the percentages given do

not add up to 100% because participants often gave more than one answer to a particular question. Responses to questions were grouped according to similar general meaning.

Initially, the triathletes in the sample were asked how they first became involved in Triathlon. As can be seen in Table 6, more than half of the triathletes in the sample (57.1%) came to Triathlon from another sport, particularly from swimming, cycling or running. Another common way of becoming involved in Triathlon was through encouragement of a relative, friend or colleague.

Table 6. Reasons for initial involvement in Triathlon.

Reasons	male	female	n	% of total sample
swimming/cycling/running background	11	3	14	40.0
encouraged by relatives/friends/colleagues	5	7	12	34.3
crosstraining due to injury	5	1	6	17.1
other sporting background	5	1	6	17.1
school	2	3	5	14.3
fitness goal/challenge	1	2	3	8.6
saw other NZers doing well in Triathlon	1	1	2	5.7

The triathletes were also asked why they chose to compete in triathlons as opposed to just running, cycling, or swimming. The most common reason was for the challenge of combining three different disciplines and training for each. From Table 7 it can be seen that variety in training was also seen as an important reason for participation. It was noted that training in only one discipline could become boring. Several triathletes also noted that the crosstraining approach was convenient for reasons such as being able to alter training schedules according to the weather, injury or even mood.

Other common reasons for participation in Triathlon were the opportunity to be more competitive at a higher level, and the greater overall fitness obtainable through crosstraining. Athletes noted that while they may not be able to compete at the top level in a single discipline, that when they combine the three disciplines and are able to race in age group sections, they can reach a higher level of competition. As Participant C said :

*You don't have to be a real elite person in one of the disciplines...if you're doing all three you can just be somebody that is very very good at all three, and be an exceptional triathlete.*

Table 7. Reasons for competing in Triathlon rather than a single discipline.

Reasons	male	female	n	% of total sample
challenge	8	6	14	40.0
variety	9	4	13	37.1
competitive at a higher level	6	4	10	28.6
lifestyle	3	3	6	17.1
less prone to injury	4	1	5	14.3
convenience of crosstraining	2	1	3	8.6
overall fitness	2	-	2	5.7
possibility of being professional	-	1	1	2.9
racing in age group sections	1	-	1	2.9

The next question which the participants were asked was whether they enjoyed one length of event over the others, and why this was so. The standard length course (Olympic distance) was the most commonly preferred event with 62.9% of triathletes preferring this distance. As can be seen in Table 8 the sprint distance was the next preferred, followed by the half Ironman, and finally the Ironman.

Table 8. Preferred event lengths.

Event	male	female	n	% of total sample
standard/Olympic	12	10	22	62.9
sprint	7	2	9	25.7
1/2 Ironman	4	1	5	14.3
Ironman	2	-	2	5.7

Reasons for preferring one distance over another varied across the athletes,

but common reasons are shown in Table 9. The most common reason for preferring a particular event was that the athlete perceived themselves as being the most competitive or competent at this distance. The amount of time needed for training was also a commonly given reason. Several triathletes noted that they did not have time to train for the longer distances of half Ironman and Ironman due to work and other commitments.

Participant A said that :

*Coming from a swimming background, if I have a shorter swim I lose my advantage. If I go up a distance [to a half Ironman], I can't run that far.*

Table 9. Reasons for preferring particular lengths of event.

Reason	male	female	n	% of total sample
most competitive at this distance	6	5	11	31.4
amount of training needed	4	4	8	22.9
endurance more challenging	3	2	5	14.3
race over quickly	2	2	4	11.4
shorter races mean shorter recovery time	1	1	2	5.7
standard length offers more opportunities	1	-	1	2.9

The following question asked whether the weather or temperature affected their training or participation in a Triathlon, and in what ways. Responses to this question were all so different that it was difficult to group them. Most of the athletes reported being affected by either very hot or very cold temperatures, wind and rain. Of those who were affected by cold weather, most found that it put them at a disadvantage. They said that it is harder to train in the cold because it took longer for their bodies to warm up, they had more muscle cramps, and training on the windtrainer to avoid cycling in bad weather could become boring. A number of athletes noted that bad weather affected their mental attitude, making it more difficult to stay motivated to train. Some examples of comments made about the effect of weather on motivation were -

*I hate the cold and wet! I live in a cold place and winter really depresses me and lowers my motivation. I become blasé about*

*training when its cold, rainy, or very windy.*

*I do not like cold weather, it affects my mental attitude and my body's performance.*

Others noted that cold, wet and windy conditions also affected them on race day. One athlete said that he does not usually race in wet conditions. On the other hand, one athlete claimed that bad weather gives him an advantage in a race because he is aware how much other competitors are affected by it.

Other athletes reported that they were more affected by very hot weather. They noted that racing in hot and humid conditions was difficult because they could become dehydrated more easily.

Triathletes were asked next what they saw as the benefits in participating in Triathlon. In response to this question, participants noted a range of benefits from participating in Triathlon (see Table 10). Fitness and health, and the sense of achievement were the two most commonly perceived benefits of participation. The social aspect of friendship, camaraderie and meeting people with like interests was also considered an important benefit, as was the enjoyment of training and racing. A number of athletes also noted that being able to take part in healthy competition was important for them. Personal development factors such as the discipline needed to train, increases in self confidence, and the need for determination within the sport were also noted by several athletes.

Table 10. Benefits of participating in Triathlon.

Benefit	male	female	n	% of total sample
fitness/health	11	7	18	51.4
sense of achievement	7	9	16	45.7
social aspects	5	6	11	31.4
enjoyment	5	4	9	25.7
competition	5	3	8	22.9
recognition/respect/prestige	3	5	8	22.9
discipline/self confidence/determination	4	3	7	20.0
prize money/prizes/professionalism	2	4	6	17.1
travel	3	1	4	11.4
the challenge	-	4	4	11.4
representing NZ	3	1	4	11.4
lifestyle	1	2	3	8.6
medals/titles	-	1	1	2.9
stress reduction	1	-	1	2.9

Triathletes were also asked if they ever felt unmotivated, and how they pushed themselves to keep training. Most athletes within the sample agreed that there were times when they felt unmotivated or days when training was more difficult. A number of methods were used by the athletes to strengthen their motivation and help them to keep to their training schedules. As can be seen in Table 11, the most common method utilised was to remember personal goals or focus on an upcoming event. Other methods used were to "just do it", to ease up on training, train with others, or think of others out training. This last method seemed to be particularly important to a few athletes, who noted that just the thought of someone else gaining the advantage of an extra training session was enough to stimulate them to stick to their training schedule, or train harder. However, Participant D suggested that there needs to be a balance in training. He proposed that there is a fine line between pushing yourself and overdoing it.

Table 11. Methods of self motivation.

Method	male	female	n	% of total sample
remember goals/focus on upcoming event	8	8	16	45.7
stick to training programme ("just do it")	6	2	8	22.9
ease up on training	7	-	7	20.0
train with others	-	5	5	14.3
think of others out training	1	4	5	14.3
take time off	3	-	3	8.6
self-talk	2	-	2	5.7
talk to friends	1	1	2	5.7
motivation tapes	1	-	1	2.9
reward system	1	-	1	2.9
alter training programme	1	-	1	2.9
listen to music while training	-	1	1	2.9
visualisation	1	-	1	2.9

The following question asked about what makes the athletes feel successful in their sport. Table 12 shows the responses of athletes to a question of what makes them feel successful. The most common response was the achievement of personal goals. Other factors leading to a feeling of success were the recognition and respect of others, actually winning in an age group section, and improving times and placings. Being selected for the NZ team was also something which made the athletes feel successful.

Table 12. Factors which lead to a feeling of success.

Factor	male	female	n	% of total sample
achievement of goals	5	10	15	42.9
recognition/respect	3	6	9	25.7
winning	4	5	9	25.7
improving times	4	4	8	22.9
improving placings	3	3	6	17.1
selection for NZ team	2	2	4	11.4
beating a particular person	3	1	4	11.4
personal bests	2	-	2	5.7
finishing feeling I've done my best	1	1	2	5.7
titles/medals	-	2	2	5.7
feeling fit and healthy	1	-	1	2.9
confidence in training	1	-	1	2.9
finishing	-	1	1	2.9
enjoyment	-	1	1	2.9

The triathletes were asked a final question about what they thought motivated them to participate in Triathlon. The triathletes noted a number of factors which they considered motivated them to participate in Triathlon (Table 13). Common responses were the social aspect of participation, enjoyment, being able to fulfil their potential and the fitness and health aspects. Other motivating factors were the competition and challenge, being able to achieve personal goals, improving times, and being selected for the NZ team.

Table 13. Factors which motivate athletes to participate in Triathlon.

Factor	male	female	n	% of total sample
social aspects	4	5	9	25.7
enjoyment	4	2	6	17.1
fulfil potential	4	2	6	17.1
fitness/health	2	4	6	17.1
competition	5	-	5	14.3
challenge	2	3	5	14.3
achievement of goals	2	3	5	14.3
improving times	2	1	3	8.6
selection for NZ team	2	-	2	5.7
support people	1	1	2	5.7
travel	2	-	2	5.7
lifestyle	1	1	2	5.7
finishing/'high' feeling after event	-	2	2	5.7
discipline	-	1	1	2.9
beating others	1	-	1	2.9
being beaten	1	-	1	2.9

## Gender Differences

A second objective of the present study was to examine the motivations of triathletes for any gender differences. Initially, triathletes were asked, in the Motivating Factors section of the questionnaire, for their views on whether the males and females they know are differently motivated. Secondly, the motivational goals of the triathletes were assessed using the Sport Orientation Questionnaire, and the three hypotheses stated in the Introduction were tested, to see whether there would be any differences between the males and females on the three subscales, competitiveness, win orientation and goal orientation.

### **View of the triathletes**

Initially the triathletes themselves were asked whether they thought that there were any differences between men and women in terms of motivation. In answer to this question, a number of athletes reported that they did not know if there were any gender differences in the motivations of triathletes. Eight of the athletes, four men and four women, said that they thought there were not any differences, while fifteen thought that there were some differences. In general, the women who thought that there were some differences believed that the men were more competitive and had winning as their most important goal, whereas they thought that women were more motivated by personal goals, fitness, health, body image and enjoyment. Men tended to agree that men were more competitive on the whole, that they were competing to win, and they saw women as participating to finish, do their best and for the fun of it. Participant A said that :

*I just see guys...who would do anything to win.*

Participant B noted that :

*When you train with [guys], if there's another guy that comes up and passes them, they'll take off after them. There's just that competitiveness.*

## Hypotheses

### *Hypothesis 1*

A between subjects *t*-test was conducted to test the first hypothesis -

*That there would be a difference between male and female triathletes on the subscale of competitiveness on the SOQ.*

No significant difference was found between the mean scores of competitiveness of the males and females,  $t(31) = 0.65, p=0.52$ . Although the hypothesis must be rejected because there was no significant difference, there was a trend for the males to score higher than the females (see Table 15).

Table 15. Mean scores for males and females on the Sport Orientation Questionnaire.

Subscales	Range of scores	Males			Females			$\alpha$
		n	M	SD	n	M	SD	
Competitiveness	13-65	21	55.85	10.52	14	53.77	5.78	0.92
Win	6-30	21	18.33	6.09	14	18.23	4.05	0.82
Goal	6-30	21	27.29	4.11	14	28.64	2.02	0.89

### *Hypothesis 2*

A between subjects *t*-test was also conducted to test the second hypothesis -

*That there would be a difference between male and female triathletes on the subscale of win orientation on the SOQ.*

This hypothesis was rejected as there was no significant difference between the means of win orientation of the males and females,  $t(32) = 0.05, p=0.96$ . As Table 15 shows, there was very little difference between the males and females on the win orientation subscale.

### **Hypothesis 3**

A between subjects *t*-test was also used to test the third hypothesis -

*That there would be a difference between male and female triathletes on the subscale of goal orientation on the SOQ.*

No significant difference was found between the mean scores of goal orientation of the males and females,  $t(33) = -1.14$ ,  $p=0.26$ , so the hypothesis was rejected. However, as can be seen in Table 15, there was a trend for the females to score higher than the males on this subscale.

## Sport Orientations

### Reliability of SOQ

Analyses were conducted using the data from the Sport Orientation Questionnaire, to examine the reliability of the SOQ. Initially the three subscales of competitiveness, win orientation and goal orientation were analysed for internal consistency. As can be seen from Table 16, all three subscales showed high internal consistency.

Table 16. Internal Consistency Results.

Subscale	n of items	Alpha Coefficient
Competitiveness	13	0.92
Win	6	0.82
Goal	6	0.89

Correlations between the competitiveness, win orientation and goal orientation subscales showed that the three subscales were moderately correlated, and therefore related (see Table 17).

Table 17. Correlations among SOQ Subscales.

Subscale	Win	Goal
Competitiveness	0.60	0.80
Win	-	0.50

*Note.* All correlations are statistically significant at  $p<0.005$ .

Qualitative data collected through the interviews with participants A, B,C and D also examined the reliability of the subscales. Each of the participants were questioned about some of the responses they made on the SOQ. For

example, Participant B circled the letter A, meaning that she strongly agreed with the item "I am the most competitive when I try to achieve personal goals", but circled the letter C, meaning that she neither agreed nor disagreed with the item "Reaching personal performance goals is very important to me". When asked why she had given these answers to two similar statements, she replied, that if given the opportunity to redo the questionnaire, she would give both statements an A to indicate that she strongly agreed.

Similarly, Participant C was questioned about why he selected letter A, strongly agree, for the item "I hate to lose", but letter B, slightly agree, for the item "Losing upsets me". His response was that he had interpreted these statements to have slightly different meanings. Also, Participant C selected letter B, slightly agree, for the item "The best test of my ability is competing against others", but letter A, strongly agree, for the item "I perform my best when competing against an opponent" because he felt that these statements could be interpreted differently.

Participant D was questioned about his answers for the statements "My goal is to be the best athletes possible" for which he selected letter C, neither agree nor disagree, and "I want to be the best every time I compete" for which he selected letter A, strongly agree. He also responded that interpretation was the key. Also, he selected letter A, strongly agree, for both the statements "The best test of my ability is competing against others" and "The best way to determine my ability is to set a goal and try to reach it". In response to a question about why he had strongly agree with both of these items, he replied that one of the goals he might set for himself was to beat a particular opponent.

### **Other Analyses**

A number of other analyses were conducted in order to expand on the nature of sport orientations as measured by the SOQ. Several training related variables were examined to see whether they effected any differences on participants' scores on the subscales of competitiveness, win orientation or goal orientation.

Initially the data was analysed to examine whether there would be any differences in scores on the three subscales between those athletes who used some form of psychological training method, such as visualisation or self-talk, and those who did not. From Table 18, it can be seen that there was a trend for those using some form of psychological training method to score higher on all three subscales than those not using psychological training methods. However, *t*-tests showed that there were no statistically significant differences between those using psychological training methods and those not using psychological training methods in terms of competitiveness,  $t(31) = 0.77$ ,  $p=0.45$ , win orientation,  $t(18) = 0.46$ ,  $p=0.65$ , and goal orientation,  $t(14) = 1.34$ ,  $p=0.20$ .

Table 18. Mean SOQ scores for participants using psychological training methods.

Subscales	Range of scores	Psychological training method					
		Yes			No		
		n	M	SD	n	M	SD
Competitiveness	13-65	20	56.00	6.19	13	53.54	12.12
Win	6-30	21	18.67	4.24	13	17.69	6.90
Goal	6-30	22	28.55	1.97	13	26.62	4.96

*T*-tests were also conducted to examine whether there were any differences in scores on the three subscales between those athletes with a coach who trained them in all aspects of Triathlon, and those without such a coach. Table 19 shows that those athletes without a coach to train them in all aspects of Triathlon tended to score higher than those with such a coach. However, *t*-tests showed that there were no statistically significant differences between those with a coach and those without a coach, in terms of competitiveness,  $t(9) = -1.38$ ,  $p=0.20$ , win orientation,  $t(32) = -0.56$ ,  $p=0.58$ , or goal orientation,  $t(12) = -0.98$ ,  $p=0.35$ .

Table 19. Mean SOQ scores for participants who had a coach who trains them in all aspects of Triathlon and those who did not.

Subscales	Range of scores	Coach for all disciplines					
		Yes			No		
		n	M	SD	n	M	SD
Competitiveness	13-65	9	50.44	13.22	24	56.75	6.18
Win	6-30	11	17.55	5.43	23	18.65	5.37
Goal	6-30	11	26.73	5.26	24	28.33	2.20

Similar analyses were conducted to examine whether there were any differences in scores on the three subscales between those athletes with a coach who trained them in one discipline of Triathlon, swimming, cycling, or running, and those without such a coach (Table 20). Results of the *t*-tests showed that there were no statistically significant differences between the means of athletes with or without a coach on the subscales of competitiveness,  $t$  (11) = 1.41,  $p$ =0.19 and goal orientation,  $t$  (11) = 1.74,  $p$ =0.11. However there was a significant difference on the subscale of win orientation,  $t$  (32) = 2.03,  $p$ <0.05. Those athletes with a coach who trained them in a single discipline had significantly higher scores for win orientation than did those without a coach.

Table 20. Mean SOQ scores for participants who have a coach who trains them in a single discipline.

Subscales	Range of scores	Coach for a single discipline					
		Yes			No		
		n	M	SD	n	M	SD
Competitiveness	13-65	23	56.83	6.20	10	50.90	12.68
Win	6-30	23	19.52	4.10	11	15.73	5.29*
Goal	6-30	24	28.71	1.85	11	25.91	5.19

\* indicates  $p$ <0.05.

Finally, analyses were conducted to examine whether scores on the three subscales of competitiveness, win orientation and goal orientation, were related to the average number of hours spent training per year. As can be seen in Table 21, moderate correlations were found. This means that the greater average number of hours an athlete spent in training, the higher they scored on each of the three subscales, competitiveness, win orientation and goal orientation.

Table 21. Correlations (Pearson  $r$ ) among SOQ scores and the average number of hours spent training per year.

Subscale	Hours of training
Competitiveness	0.40
Win	0.37
Goal	0.42

*Note.* All correlations are statistically significant at  $p<0.05$ .

## DISCUSSION

With the paucity of research on the motivations of triathletes, the aim of the present study was to examine, in depth, the motivations of those triathletes selected to represent New Zealand for their age group. Because a number of studies, such as those by Gill (1986; 1988) and Gill and Deeter (1988), have found gender differences in other sports, while one study by Acevedo *et al.* (1992) has not, a second objective was to examine male and female triathletes for any differences in motivational goals. A third objective was to examine the reliability of the SOQ and to examine the effects of training related variables on SOQ scores.

Data was obtained from self-administered questionnaires sent to 80 triathletes selected to represent New Zealand in their age group, as well as from semi-structured interviews with four of the respondents. Quantitative data obtained included demographic variables, training related variables and sport orientation scores. This data allowed statistical analysis through testing of hypotheses, as well as comparisons with other research. Qualitative elements, which were accessed through open-ended questions and interviews, offered a more in depth analysis of what motivates triathletes, and aided in the interpretation of the data collected.

Important features of these results are discussed in the following sections. The first section discusses the motivations of the triathletes in terms of their general characteristics, training methods, priority of Triathlon, levels of enjoyment and motivating factors. The second section discusses gender differences, looking at where the the triathletes thought there were differences between males and females in motivation, and comparing their view with the statistical evidence. The third section discusses the reliability of the SOQ, and the effects of training related variables on the SOQ subscales of competitiveness, win orientation and goal orientation. Finally the limitations of the research are examined, conclusions drawn, and directions for further study proposed.

## Motivations

### General characteristics

Data collected on the general characteristics of the sample, namely the sex, age, ethnic identity, current employment status and highest educational qualification of each of the participants, gives an indication of the types of people involved in Triathlon in New Zealand at an international level.

Within the sample, for example, it is noticeable that most of the athletes were of Pakeha or NZ European ethnicity, and were employed for 31 hours or more a week, or were tertiary students. Also, 60% of the athletes had some post school education. This data appears to indicate that triathletes in New Zealand who reach an international level are well educated Pakeha who are either working full time or studying in a tertiary institution. This prompts a question of why this may be so. The reason for the absence of Maori, Pacific Island and Asian athletes within the sample is unknown, but does appear to reflect the numbers of athletes participating in the sport in New Zealand. One reason for low rates of participation could be economic, as Triathlon can become an expensive sport due to all the equipment and travel required.

It could also be argued that the fact that most athletes in the sample were well educated Pakeha indicates that socio economic status is a characteristic which separates those who participate in Triathlon at an international level from those who do not. In fact Yuchtman (Yaar) (1976) suggests that socio economic status affects an individual's experiences and opportunities. However, he also recognises that there are a number of variables such as motivation, expectations, attitudes and values which can mediate the experiences and opportunities afforded by socio economic status. Thus, in the present study, it could be contended that while economics may play a role in the participation or not in Triathlon, that socio economic status is mediated by motivational variables.

Apart from financial reasons, another possibility is that there are cultural aspects involved. In New Zealand there is a common refrain that Maori and Pacific Island people have a preference for team sports. While this may not explain the low participation rates of ethnic groups other than Pakeha in

Triathlon, it does highlight the possibility that there may be cultural differences in participation motives in sport in New Zealand. One study which supports this position is by Duda (1986 cited in Duda, 1989a). In her 1986 study, Duda postulated that there may be cultural differences in goal orientations. She studied the variations in goal perspectives of male and female Anglo and Navajo high school athletes. Navajo students were found to place more emphasis on mastery goals than Anglo students, and more emphasis on success in group rather than individual sports. Results of this study suggest that there are cross-cultural differences in goal orientations and participation motives.

### **Training methods**

Hellemans (1993) has suggested, specifically in relation to Triathlon, that commitment, dedication, determination and motivation are vital attributes for athletes. This is supported by evidence of the present study, in terms of the high levels of motivation and commitment shown by the athletes in the sample.

Training methods which give an indication of the motivation exhibited by the triathletes include the number of hours spent in training. Triathletes in the sample spent an average of 800 hours in training per year. As Sleamaker (1989) has suggested that elite triathletes need to spend between 800 and 1400 hours in training per year, these results shows that the athletes in the sample are as highly motivated as elite triathletes, although most would not be considered elite at an international level.

A second training factor is the planning and analysis of training. All athletes reported planning their training in some way, whether every day, once a week, once a month, once a season or once a year. Thirty-one athletes utilised a diary or log in the planning of their training. These may be used to analyse which features of training lead to improvements or to overuse injuries. Also, they can be used as a motivational tool, allowing athletes to compare their current level of fitness with previous levels. This factor emphasises the commitment required to compete at an international level.

A third method used in training, is the measuring of intensity. The results showed that 28 athletes monitored their heart rate as a measure of the intensity of their training, while 27 athletes used a more subjective measure of intensity. All of these athletes also reported trying to plan their training according to different levels of intensity using cycles or periodisation. Once again this is indicative of their dedication.

Effort or behavioural intensity, according to Duda (1992) "has always been considered a hallmark of high motivation" (p. 75). Each of the aspects of training noted previously, the number of hours of training each year, the numbers of athletes who planned their training, and the measurement of intensity in their training, pertains to the amount of effort or behavioural intensity applied by the athletes. However, analysis of these variables also suggests that they could be related to an athlete's emphasis on mastery or outcome goals (Duda, 1992). Duda, Smart and Tappe (1989 cited in Duda, 1992) found that effort exerted was positively related to task orientation or mastery goals. Although behavioural intensity was not examined per se in the present study, results from the Sport Orientation Questionnaire did show that the triathletes in the sample scored more highly on goal orientation than win orientation, which may support Duda's postulation of a relationship between mastery goal orientation and behavioural intensity.

Training methods, other than those pertaining to behavioural intensity, may also be related to motivational orientations. For example, preferences for training alone or with others seem to be based on different motivational strategies. Of the athletes in the sample, 77% reported that they mostly run alone, almost 66% said that they mostly cycle alone, and almost 43%, that they mostly swim alone. It seems likely that training alone requires a different type of motivation compared to training with others. One reason for this could be that there is no direct peer group pressure to train. When asked why they chose to train alone, athletes reported that it makes them "mentally tougher", it allows them to concentrate more on what they are doing, or it means that they can train when they feel like it. On the other hand, those who preferred to train with others gave reasons such as enjoyment, and motivation to train harder. A response from Participant A illustrates this well.

*It's more enjoyable because...you're concentrating on what you're*

*doing, but someone else is there...you're talking...you don't notice the time go.*

Because the reasons behind the preferences for training alone or with others are different, it is probable that the choices made are grounded in different motivational strategies.

Coaches may also affect an athlete's motivational goals. Within the sample, 11 athletes had a coach to train them in all aspects of Triathlon. These athletes noted that their coach was helpful in providing guidelines for training, development of training schedules, development of training and competition goals, and for support at races. Another 24 of the athletes reported having a coach to train them in a single discipline. Most commonly, this was a swim coach. This is interesting in that, of the three sports, swimming has the most reliance on technique. This is discussed in more detail in the Sport Orientations section, along with the finding that athletes who had a coach in a single discipline scored significantly higher on the win orientation subscale of the SOQ, than those who did not.

The goals which the triathletes reported to set for themselves in training and competition, are also obviously related to their motivational strategies. Analysis of these goals indicates that the athletes use both mastery and outcome oriented goals. However, training goals, such as distance and time goals, technique and intensity, appear to emphasise mastery, while competition goals, such as placings, and keeping up with or beating particular rivals, focus more on outcome. In fact, the interviews showed that many of the goals were closely linked. Participants reported that where they had training or competition goals to improve on their times and technique, or produce personal bests, these goals were linked to the goal to improve on their placings. For example, Participant D said :

*It's the clock you're looking at...so I'm trying to better my time, but during that race I'm saying I'd like to be able to beat [that person]. To do that I've got to be doing that time.*

## **Priority of Triathlon**

A final aspect of training to be discussed is interruptions to training schedules. Athletes noted a number of different factors which disrupted their training. These ranged from internal factors such as a lack of motivation and a need for balance, to external factors such as work, illness, injury, family commitments and weather.

Examining these interruptions is illuminating in itself, and again highlights the high levels of motivation exhibited by the triathletes. However, when these results are taken in conjunction with those of the next section, Priority of Triathlon, some interesting patterns emerge. For example, although the athletes report family commitments as interrupting their training schedules, when asked to prioritise aspects of their lives, family was classified as their highest priority by 69% of athletes. This shows that interruptions are not necessarily seen as negative, and that the triathletes maintain some balance between Triathlon, work and family.

## **Levels of enjoyment**

Results showed that the level of enjoyment of triathletes in the sample was generally high, and that there were no significant differences between males and females. Other studies which have investigated the relationship between achievement goals and levels of intrinsic motivation or enjoyment, have found that mastery goals promote and enhance intrinsic motivation (e.g. Butler, 1987; Plant & Ryan, 1985). In the present study, both male and female triathletes had higher scores for goal orientation than for win orientation, which could indicate some support for the studies linking high levels of enjoyment with mastery goals.

## **Motivating factors**

In order to further elucidate the motivations of the triathletes in the sample, by gaining data which was more descriptive in nature, a number of open-ended questions were asked within the questionnaire as well as within the interviews.

Participants were asked questions regarding how they initially became involved in Triathlon, why they chose to compete in Triathlon as opposed to a single discipline, whether they preferred one length of event, whether the weather or temperature affected their training, what they saw as the benefits of participating in Triathlon, how they remained motivated to train and compete, what made them feel successful, and what they saw as motivating them to participate in Triathlon. A number of these questions elicited similar responses which is appropriate given the overlapping nature of the questions.

For example, when comparing responses to questions about benefits, factors leading to a feeling of success, and motivating factors, it can be seen that a sense of achievement or the achievement of goals was noted as important to many of the athletes. Forty-six per cent saw a sense of achievement as a benefit of participation, 43% saw it as a factor leading to a feeling of success, and 14% found it to be a motivating influence. Recognition and respect were two other aspects of competing in Triathlon which were considered to be both beneficial and leading to a feeling of success, while being selected for the New Zealand team was also seen as important to continued participation.

Other benefits and motivating factors were not suggested as leading to a feeling of success by a number of athletes. One of these is the fitness or health benefit. While this factor was noted by 51% of athletes as being a benefit of participation in Triathlon, it was only mentioned as something which motivated them to compete by 17%, and seen as a factor leading to a feeling of success by one triathlete. Similarly, social aspects linked to participation were seen as a benefit by 31% and as a motivating factor by 26%. However, no athletes noted feeling successful due to friendships and socialising with other like athletes. Enjoyment was also seen as a benefit and motivating factor but not leading to a feeling of success. These elements appear to highlight the competitive nature of the athletes in the sample, as well as suggest that for many triathletes success is gauged by winning, improving times and placings, beating particular rivals and gaining recognition and respect, rather than enjoyment, social aspects and feeling fit and healthy.

Different aspects of triathletes' motivations emerged from questions relating to instances when they felt unmotivated or less motivated than usual. Specifically, in relation to the weather or temperature, athletes found that cold

weather affected their ability to warm up and lead to more muscle cramps. It also lead them to train more often on a windtrainer inside, which they found tedious. A number of athletes noted that bad weather affected their mental attitude. One comment which illustrates this is :

*I hate the cold and wet! I live in a cold place and winter really depresses me and lowers my motivation. I become blasé about training when its cold, rainy, or very windy.*

When questioned about strategies used to overcome a lack of motivation, the athletes reported thinking of personal goals, focusing on an upcoming event, easing up on training, training with others, or merely thinking of their competitors out training. This last method, in particular, emphasises the importance of competition and outcome goals to some of the athletes.

Finally, responses to questions asked about how the athletes became involved in Triathlon, and why they chose to participate in Triathlon rather than a single discipline, indicated that the triathletes were motivated by the challenge of combining three different disciplines in a competitive environment. Twenty-nine per cent of the athletes believed that they were able to compete at a higher level in Triathlon than they had been able to achieve in a single discipline. When asked which length of event they preferred, 63% preferred the standard or Olympic distance because they considered themselves to be the most competitive at this distance.

## **Summary**

Analysis of the training methods of the athletes provided support for Hellemans' (1993) statement that commitment, dedication, determination and motivation are vital attributes of triathletes. The data indicated that the athletes in the sample were highly motivated, committed and dedicated, as evidenced by the number of hours spent in training, and in planning and analysis of training.

According to Duda (1992) effort or behavioural intensity have always been seen as indicative of high levels of motivation. However, she also suggests that

investigation of these variables has shown that they could be related to an athlete's emphasis on mastery or outcome goals. The triathletes in the present study scored more highly on goal orientation than win orientation, and this may support research by Duda, Smart and Tappe (1989 cited in Duda, 1992), which found that effort was positively related to task or goal orientation.

Other training methods used, such as training alone or with others, making use of a coach, and the different types of training and competition goals set, are also likely to be related to motivational orientations. For example, the training goals used by the athletes appeared to focus mostly on mastery of technique and distances, while the competition goals focused more on placings within an event. However, the triathletes themselves postulated that the types of goals they set cannot be regarded as distinct or independent.

Levels of enjoyment were generally high within the sample, and a number of studies have found that enjoyment or intrinsic motivation is enhanced by the use of goal orientation or mastery type goals. In the present study, both male and female athletes had higher scores for goal orientation than for win orientation, which would seem to support this contention.

Motivational patterns were identified, with aspects such as a sense of achievement, recognition and respect, and selection for the New Zealand team being seen as benefits of participation, motivating factors, and as eliciting feelings of success. Other factors which were seen as benefits of participation were not found to lead to a feeling of success. Examples of these were fitness and health, social aspects and enjoyment.

Other aspects of the triathletes' motivations emerged from a number of other questions regarding times when they felt unmotivated, what strategies they used during such times, and why the athletes chose to compete in Triathlon rather than an individual discipline.

## **Gender differences**

In recent years, a number of studies have found differences in the motivations and goals of men and women in sport. Studies such as those by Battista (1990), Duda (1988), Gill (1986; 1988), and Gill and Deeter (1988) found that men scored higher than women on measures of competitiveness. They also found that men were more outcome or win oriented than women and that women were more mastery oriented.

### **View of triathletes**

In the present study, when the triathletes themselves were asked if they thought there were any gender differences in the motivations of fellow athletes, 15 of the 35 thought that there were some differences. Female triathletes who thought that there were gender differences believed that men were more competitive, while women were motivated by personal goals. Male triathletes also believed that they were more competitive than the women, and they saw women as participating to finish, do their best and for the fun of it.

These suppositions by the triathletes were supported by other qualitative data obtained. When the athletes were asked what motivated them to participate in Triathlon, proportionately more women noted social aspects, fitness and health, while more men noted factors such as competition, selection for the New Zealand team, and travel (see Table 13). Women also reported aspects such as the challenge and achievement of goals more often than men. However, without more detailed information being collected there is no way of knowing whether these factors are based on mastery or outcome goals.

In direct contradiction to these findings are the data collected from questions about benefits of participation, and factors leading to a feeling of success. Similar proportions of male and female athletes saw fitness and health, competition, travel, and representing New Zealand as benefits of competing in Triathlon (see Table 10). In terms of factors which lead to a feeling of success, as many women as men noted improving times and placings, and selection for

the New Zealand team, while more women than men noted factors such as recognition, respect, and winning. Also, twice as many women as men noted achievement of goals as leading to feeling successful.

Thus, the view of triathletes as to whether there are gender differences in motivation, varies across the sample, although 15 of the 35 did believe there are differences. Data from questions on benefits, motivations and factors leading to a feeling of success are contradictory, and therefore, cannot be offered in support of gender differences in motivation.

### Hypotheses

Empirical findings of the present study do not provide evidence of gender differences in the motivational goals of triathletes. The three hypotheses examined, which predicted differences between the men and women on the three SOQ scales of competitiveness, win orientation and goal orientation, were not supported. While there were small differences between the males and females with the males tending to score higher than females on competitiveness and the females tending to score higher than males on goal orientation, the differences were not large enough to be considered significant.

Gill (1986) found that there were significant gender differences in the motivations of undergraduates in physical activity classes, as measured by the Competitiveness Inventory. Males scored significantly higher on the factors of competitiveness and win orientation, while females scored higher on goal orientation. These results contrast sharply with those of the present study.

Gender differences were also found in terms of motivational orientation by Gill (1988). In the three samples of participants studied, the males scored significantly higher than the females on competitiveness and win orientation. Results of the goal orientation subscale, however, were not definitive. In one sample, females scored slightly but not significantly higher than males. In the second and third samples, males and females had similar scores for goal orientation, and males scored slightly higher than females. Although the overall results of this study are not supported by the present results, the

finding that there were no substantial differences on the goal orientation subscale is supported.

Results of the present study are also consistent with those of Acevedo *et al.* (1992). In this study, no gender differences were found between male and female ultramarathoners, in terms of motivational goals. Males and females both considered mastery goals to be of more importance than winning or competitiveness. In the present study, males were not found to differ significantly from females in terms of motivational orientations. Also consistent with Acevedo *et al.*'s findings, was the fact that the athletes were more focused on personal or mastery goals than win goals. The ultramarathoners in Acevedo *et al.* et al.'s sample had mean scores of 16.7 and 27.1 for win and goal orientation respectively. In the present study, male triathletes had mean scores of 18.33 and 27.29, while female triathletes had mean scores of 18.23 and 28.64. In each case, mean scores for win orientation were lower than for goal orientation, indicating that the athletes were focused more on mastery goals than outcome goals.

That the results of the Acevedo *et al.* (1992) study and the present research are consistent, but both in contrast with other research on gender differences in motivation, could indicate that Triathlon and Ultramarathon are sports with some unique characteristics which make them distinct from other sports. Both have characteristics such as the individual endurance aspect and the long hours of training need to participate.

Another difference between Triathlon and most other sports is the fact that it is still a relatively young or new sport, and women have been involved since it began. Edwards (1992) proposes that "Triathlon stands out in the history of sports; from its inception female triathletes have been accepted as bona fide competitors, not as members of a second-class sideshow" (p. 4).

## **Summary**

In summary, while many of the triathletes themselves believed that there were definite differences in the motivations of men and women, the empirical results failed to provide support for this supposition. Results showed that

there were no significant differences between the men and women on the three subscales of the SOQ, competitiveness, win orientation and goal orientation. This is in contrast to a great number of studies (e.g. Gill, 1986, 1988; Gill & Deeter, 1988) which found that men were significantly more competitive and win orientated than women, and that women were more goal oriented. However, the results of the present study are in line with those of Acevedo *et al.* (1992) who found no gender differences in the motivations of ultramarathoners.

## Sport Orientations

### Reliability of SOQ

Results of the present study do provide strong support for the continued use of the Sport Orientation Questionnaire as a measure of motivation in sport. The three subscales of competitiveness, win orientation and goal orientation all showed high internal consistency. Correlations among the subscales showed that the three factors were moderately correlated, as was found in preliminary research testing the reliability and validity of the SOQ by Gill and Deeter (1988).

However, the qualitative data indicated that the test-retest reliability may need investigation. Participant B said that there were several items on the questionnaire that she may have answered differently a second time. Also, the answers given by the four participants who were interviewed showed that there are different ways of interpreting each of the statements, which may suggest that some of the items should be reworded.

### Other analyses

A number of other analyses were conducted in order to expand on the nature of sport orientations as measured by the SOQ. Initially the SOQ scores were analysed to ascertain whether or not the use of psychological training methods had any effect on the athletes' sport orientations. T-tests showed no significant differences on each of the three subscales, indicating that athletes who use psychological training methods are not differently motivated than those who do not, in terms of competitiveness, win orientation and goal orientation.

Similarly, SOQ scores were compared for athletes who had a coach who trained them in all aspects of Triathlon, and those who did not. T-tests did not reveal any significant differences in motivational goals between the two groups. This suggests that having a coach to train them in all aspects of Triathlon does not affect the athletes' sport orientations.

SOQ scores were also analysed for athletes who had a coach for a single discipline and those who did not. Results showed that there were no significant differences between the two groups in terms of competitiveness or goal orientation. However, there was a significant difference in terms of win orientation. Those athletes with a coach who trained them in a single discipline had significantly higher scores for win orientation than did those without such a coach. This indicates that single discipline coaches may have some effect on the motivational goals of their athletes, perhaps encouraging the athletes to place more emphasis on winning and other outcome goals. Further research is needed, which examines this finding, perhaps using athletes from a different sporting domain.

Finally, analyses were conducted to examine whether scores on the three subscales of competitiveness, win orientation and goal orientation, were related to the average number of hours spent training per year. Moderate correlations were found, indicating that the greater the average number of hours an athlete spent in training, the higher they scored on each of the three subscales. This suggests that the longer the athletes spend in training, the more competitive they are, the more win oriented and the more goal oriented. However, it could be that those athletes who are more competitive, win oriented and goal oriented are more prepared to spend longer hours in training. Regardless of the direction of the relationship, these results do appear to support the earlier suggestion made, that long training hours can be used as an indication of high levels of motivation. As noted previously, although most of the triathletes in the sample would not be considered elite at an international level, they are equally highly motivated.

## **Summary**

To summarise, analysis of the SOQ data in the present study provided further evidence of the high internal consistency of the questionnaire. However, comments made by those participants who were interviewed suggest that test-retest reliability may need further testing, and the wording of particular items re-examined.

Analyses conducted in order to expand on the nature of sport orientations

measured by the SOQ indicates that the use of psychological training methods had no effect on the three SOQ subscales. Also, the use of a coach to train them in all aspects of Triathlon, was not found to have any effect on competitiveness, win orientation or goal orientation. However, the athletes who had a coach for a single discipline scored significantly higher on win orientation than those who didn't have such a coach. It is possible to infer from this that single discipline coaches may place more emphasis on winning and other outcome goals than mastery goals. Future research could examine the motivational goals of different coaches and their athletes to see what the effects are.

Moderate correlations were found among the average number of hours spent in training and the three subscales. This could either indicate that those with higher motivation train harder, or those who train harder are more highly motivated.

## Conclusion

In the present study, the triathletes who were selected to represent New Zealand in their age group section, showed high levels of motivation and commitment. This supports Hellemans' (1993) statement that "commitment, dedication, determination and motivation are crucial elements in properly executing the often complicated and extensive training programmes of triathletes" (Hellemans, 1993. p.15). The motivation of the athletes was indicated by the methods of training they used, such as spending an average of 800 hours in training a year, planning and analysing their training, and measuring the intensity of their training.

Goals which athletes reported setting appeared to be mastery goals for training and outcome oriented goals for competition. However, several of the participants proposed that their mastery and outcome goals were linked. Mastery goals relating to personal best times were linked with outcome goals of beating particular competitors who were able to compete at a similar level.

Descriptive data on factors which motivated the triathletes to participate and compete, showed that factors leading to a feeling of success were not synonymous with aspects seen as benefits or as motivating. Success was gauged by many athletes in terms of winning, improving times and placings, and beating particular rivals, whereas perceived benefits and motivating factors had elements of enjoyment, social aspects, fitness and health as well as outcome oriented factors.

Some gender differences were also noted from this descriptive data. for example, proportionately more women noted social aspects, fitness and health, while more men noted factors such as competition, selection for the New Zealand team and travel, as motivating them. However, this may have been confounded by women giving fuller answers on their questionnaires. Several of the men gave only one or two word answers to the open-ended questions, which will have affected the classification of qualitative data for summary purposes.

In general, the present study did not provide evidence of any gender differences in motivation. While a number of athletes believed that men were more

competitive and women were more motivated by personal goals, the empirical findings did not support these suppositions. Results of the Sport Orientation Questionnaire showed no significant differences between males and females on the three subscales of competitiveness, win orientation and goal orientation.

These results were consistent with research by Acevedo *et al.* (1992) which found no gender differences in the motivations of ultramarathoners. One possible reason for the discrepant results of these studies when compared to other motivation research in a sporting context, is that there are some unique features which Triathlon and Ultramarathon share, such as the individual endurance nature of the sports, and the long hours of training required. Another reason why no gender differences in motivation were found in the present study, is that Triathlon is still a relatively new sport, and women have been involved since its inception.

One unexpected finding of the other analyses conducted was that athletes who had a coach to train them in a single discipline scored significantly higher on the win orientation subscale of the SOQ than did those without a coach for one discipline. This needs to be investigated further.

A limitation to this research is that only 35 of 80 questionnaires were returned, giving a response rate of 43.75%. A higher response rate could have been achieved if follow up had been possible. However, for reasons of confidentiality, Triathlon New Zealand mailed the questionnaires to their members, and the researcher had no further access to participants. The low return rate could also be due to some athletes being out of the country for a build up to the World Championships. Nevertheless, because the sample of athletes who did respond had a similar ratio of males to females to that of the original population of 80 triathletes, as well as ranging in age and number of years of participation, it is probable that they share common motivations with those who did not return their questionnaires.

A number of directions for further research present themselves from the results of this study. Firstly, there is a need to investigate definitions of success for triathletes in New Zealand. Descriptive data about what motivated the triathletes and what they saw as benefits of participation showed that these aspects were not synonymous with factors which lead the

athletes to feel successful. Rather than examining motivation merely in terms of goal and win orientations, there is a need for more distinction to be drawn between what makes an athlete feel successful and what actually motivates them to participate in a sport.

Similarly, research is needed to further elucidate motivations of New Zealand triathletes in terms of gender differences. Although the empirical findings of the present study indicated that there were no gender differences in motivation, analysis of the descriptive data was equivocal. While questions about motivating factors produced proportionately more responses from females noting social aspects, fitness and health, other questions about benefits produced contradictory findings. One possible way of investigating this would be to list all the factors noted in the present study and ask participants to select those which are applicable to them.

A third suggestion for further research, made by one of the participants of the study, is to examine motivations of triathletes who are not selected for the New Zealand team, but nevertheless continue to participate in local triathlons year after year.

This research emphasises the complex nature of the motivations of triathletes, and highlights the importance of utilising both qualitative and quantitative components to gain the broadest understanding. It also provides evidence that there is something intrinsically different about athletes who choose to participate in Triathlon, and therefore, presents numerous opportunities for further study.

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## APPENDIX A

## ***Research Information Sheet***

## Who is the researcher?

The study is being carried out by Jenny Watson, a Masters student in Psychology, under the supervision of Dr Ross Flett, Lecturer in the Psychology Department, and Dr Gary Hermansson, Associate Professor in the Education Faculty, at Massey University.

#### **Where can they be contacted?**

Dr Gary Hermansson Human Development Studies  
Education Faculty  
Massey University  
Phone : 06 350 4537

## What is the study about?

The aim of the study is to examine what motivates serious triathletes, taking into account the dedication and commitment required for the extensive and complicated training schedules followed.

#### **What will the participant(s) have to do?**

If you agree to take part in this study you will be asked to answer the questionnaire which is included. All answers will be treated confidentially, and your name will not be recorded on the questionnaire.

### **How much time will be involved?**

The questionnaire should take less than 30 minutes to complete.

## **What can I expect from the researcher?**

If you take part in this study you have the right to :

- refuse to answer any particular question, and to withdraw from the study at any time.
- ask any further questions about the study that occur to you during your participation.
- provide information on the understanding that it is completely confidential to the researchers. All information is collected anonymously, and it will not be possible to identify you in any reports prepared from the study.
- be given access to a summary of the findings from the study when it is concluded.

If you are prepared to take part in the study please fill out the questionnaire enclosed, and then return your completed questionnaire in the envelope provided. Please keep this information sheet so that you can contact the researcher or supervisors if you wish to discuss any part of the study.

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## ***Research Consent Form***

I have read the Information Sheet for this study and understand what the research is about. I am aware that I may ask further questions at any time.

I also understand that I am free to withdraw from the study at any time, or to decline to answer any particular questions in the study. I agree to provide information to the researchers on the understanding that it is completely confidential.

I realise that if I return the completed questionnaire, that my consent to participate in this study is assumed.

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## ***Triathlete Profile***

1. Sex	<ul style="list-style-type: none"><li>• Male <input type="checkbox"/></li><li>• Female <input type="checkbox"/></li></ul>
2. Age	<input type="text"/> years
3. Ethnic Identity	<ul style="list-style-type: none"><li>• Pakeha/NZ European <input type="checkbox"/></li><li>• Maori <input type="checkbox"/></li><li>• Pacific Islander <input type="checkbox"/></li><li>• Asian <input type="checkbox"/></li><li>• Other (<i>specify</i>)..... <input type="text"/></li></ul>
4. Current Employment Status	<ul style="list-style-type: none"><li>• Employed<ul style="list-style-type: none"><li>(31 hours or more) <input type="checkbox"/></li><li>(21-30 hours) <input type="checkbox"/></li><li>(11-20 hours) <input type="checkbox"/></li><li>(10 hours or less) <input type="checkbox"/></li></ul></li><li>• Not in paid employment<ul style="list-style-type: none"><li>(Unemployed / Retired / On a benefit) <input type="checkbox"/></li></ul></li><li>• High School Student <input type="checkbox"/></li><li>• Tertiary Student <input type="checkbox"/></li></ul>
5. Highest Educational Qualification	<ul style="list-style-type: none"><li>• No school qualification <input type="checkbox"/></li><li>• School certificate passes <input type="checkbox"/></li><li>• Higher school qualifications<ul style="list-style-type: none"><li>(University Entrance and above) <input type="checkbox"/></li></ul></li><li>• Trade certificate or Professional certificate or diploma <input type="checkbox"/></li><li>• Tertiary/University degree, diploma, or certificate <input type="checkbox"/></li></ul>

## **Sport Orientation**

The following statements describe reactions to sport situations. We want to know how you usually feel about sports and competition. Read each statement and circle the letter that indicates how much you agree or disagree with each statement on the scale : A,B,C,D,E. There are no right or wrong answers; simply answer as you honestly feel. Do not spend too much time on any one statement. Remember, choose the letter which describes how you usually feel about sports and competition.

	Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree
1. I am a determined competitor.	A	B	C	D	E
2. Winning is important.	A	B	C	D	E
3. I am a competitive person.	A	B	C	D	E
4. I set goals for myself when I compete.	A	B	C	D	E
5. I try my hardest to win.	A	B	C	D	E
6. Scoring more points than my opponent is very important to me.	A	B	C	D	E
7. I look forward to competing.	A	B	C	D	E
8. I am most competitive when I try to achieve personal goals.	A	B	C	D	E
9. I enjoy competing against others.	A	B	C	D	E
10. I hate to lose.	A	B	C	D	E
11. I thrive on competition.	A	B	C	D	E
12. I try my hardest when I have a specific goal.	A	B	C	D	E
13. My goal is to be the best athlete possible.	A	B	C	D	E
14. The only time I am satisfied is when I win.	A	B	C	D	E
15. I want to be successful in sports.	A	B	C	D	E
16. Performing to the best of my ability is very important to me.	A	B	C	D	E
17. I work hard to be successful in sports.	A	B	C	D	E
18. Losing upsets me.	A	B	C	D	E
19. The best test of my ability is competing against others.	A	B	C	D	E
20. Reaching personal performance goals is very important to me.	A	B	C	D	E
21. I look forward to the opportunity to test my skills in competition.	A	B	C	D	E
22. I have the most fun when I win.	A	B	C	D	E
23. I perform my best when I am competing against an opponent.	A	B	C	D	E
24. The best way to determine my ability is to set a goal and try to reach it.	A	B	C	D	E
25. I want to be the best every time I compete.	A	B	C	D	E

## ***Motivating Factors***

1. How did you first become involved in Triathlons?

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.....  
.....  
.....  
.....

2. Why do you choose to compete in triathlons as opposed to just running, cycling, or swimming?

.....  
.....  
.....  
.....  
.....

3. Do you enjoy one length of Triathlon over the others? If so, why?

.....  
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.....  
.....  
.....

4. Does the weather or temperature affect your training or your participation in a Triathlon? In what ways?

.....

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5. What are the benefits for you when you participate in Triathlons? What do you hope to gain by participating in Triathlons?

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6. Do you ever feel unmotivated? When you feel like this, how do you push yourself to keep training?

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7. What makes you feel successful in your sport?

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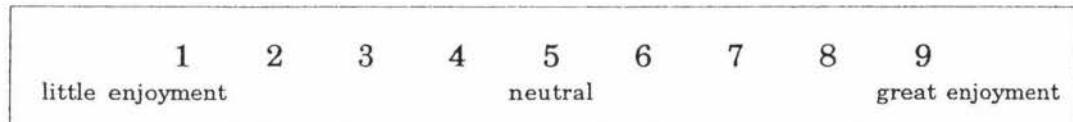
8. What do you think motivates you to participate in Triathlons?

.....  
.....  
.....  
.....

9. It has been suggested that men and women can be differently motivated to participate in sports. Of the triathletes you know, have you noticed any differences in motivation between the men and women? If yes...in what ways do you see them as being differently motivated?

## ***Self Evaluation***

- 1a. Please rate your **enjoyment** by circling the number which most closely represents how much you enjoy participating in Triathlons.



- b. Which part of participating in Triathlons do you most enjoy and least enjoy?

.....  
.....  
.....  
.....  
.....

2. Please place the following items in order of priority in your life.

**family, social life, triathlons, work, study**

- 1.....(most important)  
2.....  
3.....  
4.....  
5.....(least important)



## ***Training***

1. How many years have you been competing seriously in Triathlons?  years

2a. Have you won any medals/trophies?     •Yes   
          •No

b. If YES, at what level have you won them?     •local/regional   
          •national   
          •international

3. Do you train/practise specifically for triathlons?     •Yes   
          •No

4. How many hours a week do you train on average?  hours

5. How many weeks do you train in a year?  weeks

6a. Do you follow a plan?     •Yes   
          •No

b. How do you plan your training?     •Daily   
          •Weekly   
          •Monthly   
          •Once a season   
          •Once a year

7a. Do you keep a diary/log of your training?     •Yes   
          •No

b. Do you refer back to your diary/log when planning future training?     •Yes   
          •No

8a. Do you set goals for yourself in training?     •Yes   
          •No

b. What sorts of goals do you set? (*give examples*).....  
.....  
.....

b. What sorts of goals do you set? (*give examples*).....

11. Do you plan your training according to intensity levels?     •Yes      •No

12a. Do you use periodisation in your training? ie. training in cycles, so that some days/weeks are at a higher/lower level of intensity?

- Yes
- No

b. If YES, please describe these cycles.

13a. Do you use any psychological training methods, such as visualisation or self-talk?

•Yes

•No

b. If YES, please describe briefly.

.....  
.....  
.....

14. Do you usually train alone, with a friend, or with a group? Is this always the case? Is this important in your training?

.....  
.....  
.....

15. What sorts of things interrupt your training plan?

.....  
.....  
.....  
.....  
.....  
.....

16a. Do you have a coach who trains you in all aspects of triathlons?

•Yes

•No

b. Do you have a coach who trains you in only one discipline?

•Yes

•No

c. In what ways does your coach help you, or not help you, in your training?

.....  
.....  
.....

*Is there anything additional about your motivation which you would like to comment on?*

## ***Interview Consent Form***

A small number of participants is needed to take part in an individual interview with the researcher as a secondary part of the study. This would involve answering similar questions to those asked on the questionnaire, but in more depth. The interview should take approximately 40 minutes. If you are prepared to take part in an interview, please return this consent form with your completed questionnaire.

I am prepared to take part in an individual interview with the researcher.

**Yes** \_\_\_\_\_

**No** \_\_\_\_\_

If YES please supply your name and a contact phone number.

Name \_\_\_\_\_

std  
(      ) \_\_\_\_\_ (day)

std  
(      ) \_\_\_\_\_ (evening)

*Please note that only a small number of those who agree will actually be interviewed.*

