

## CHAPTER 7

### RESULTS

***“It’s not the winning that’s important, it’s the taking part; it’s not the victory that counts, but the struggle”. – Baron Pierre de Coubettin***

#### 7.1 INTRODUCTION

The aims of this chapter are to clearly and systematically present the results of this study. In this chapter the results will be (as far as is possible) visually presented followed by a brief discussion. The aim of qualitative research and this study is to identify and describe patterns and relationships and it is therefore important not to focus on the obvious meaning of the results, but also its relationship to the literature as well as other results. This will be done in chapter 8 as the sole aim of chapter 7 is to present the results. It might seem to be duplication to have a separate chapter where the results are presented as well as another chapter where the results are discussed. Initially the researcher presented and discussed the results in one chapter. However, due to the large amount of information the chapter and discussion became cumbersome and confusing. It was therefore, decided to split the presentation and discussion of the results to make reading of the discussion easier.

The results will be presented under the following headings or themes that emerged from the data and were accepted after careful consideration:

- Description of the respondents;
- Perceived impact of environmental factors on performance;
- Motivational strategies used during endurance events;
- Coping strategies used during endurance events;
- Attitude towards problems/challenges;
- Self-perception of own ability to cope with the challenges of endurance sport.

## 7.2 DESCRIPTION OF RESPONDENTS

The respondents for this study consisted of 53 experienced non-elite endurance athletes. The respondents' biographical background will be discussed in terms of gender, race, age, types of endurance sport disciplines participating in, number of disciplines participating in, and events participated in during the last year.

### 7.2.1 GENDER DISTRIBUTION OF RESPONDENTS

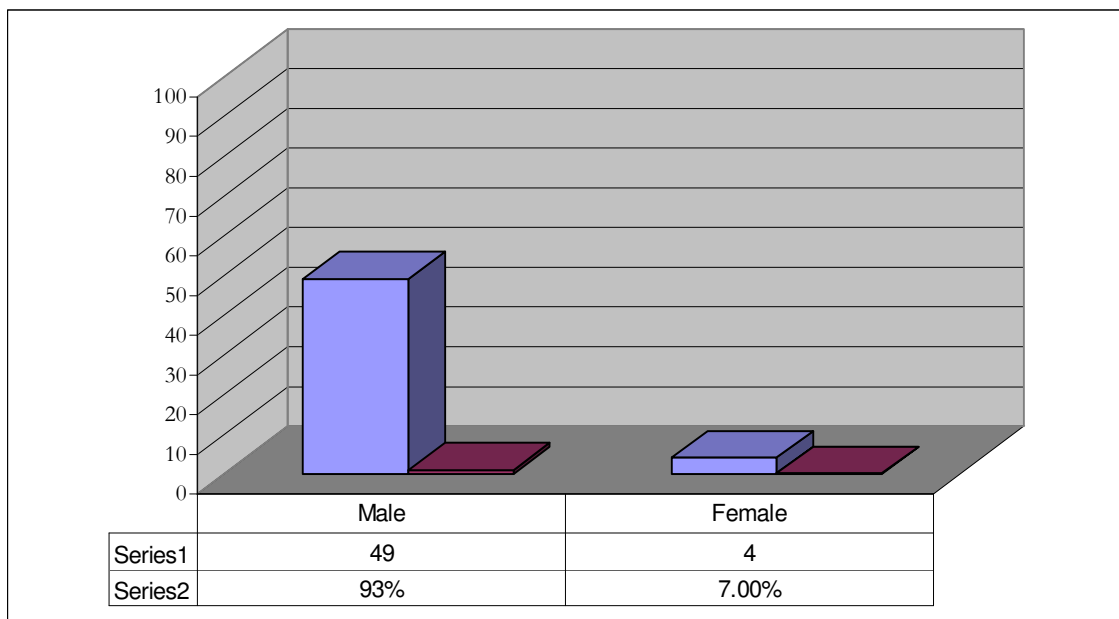


FIGURE 7.1: **GENDER DISTRIBUTION OF RESPONDENTS**

From figure 7.1 it is obvious that the greater majority of respondents are male (93%), whereas female respondents for this study number 7% of the total.

## 7.2.2 RACE DISTRIBUTION OF RESPONDENTS

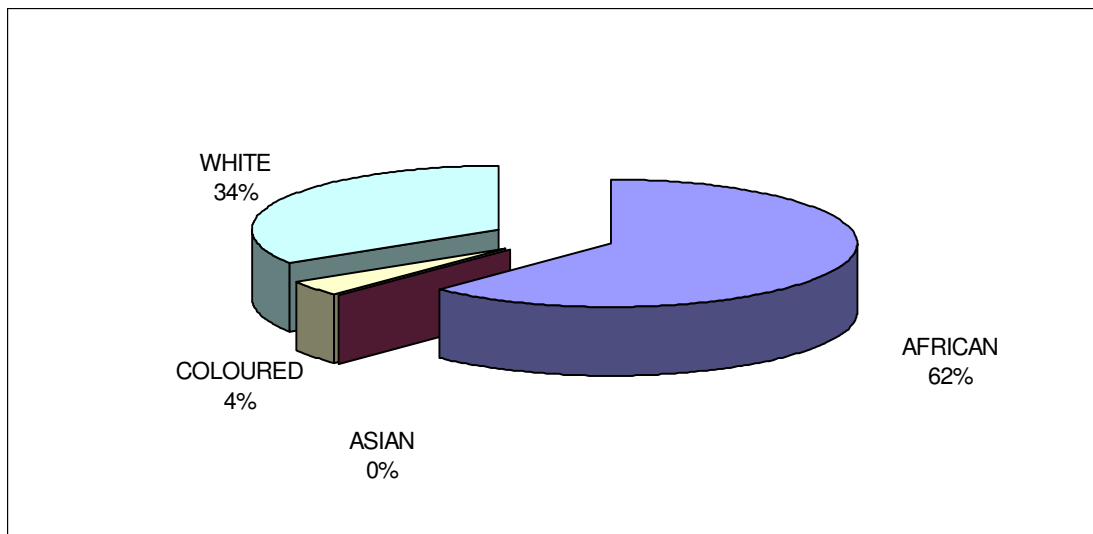


FIGURE 7.2: RACE DISTRIBUTION OF RESPONDENTS

The race distribution of respondents generally reflects the population of South Africa. Of the 53 respondents, 62% are African, 34% are White and 4% are Coloured. Unfortunately no Asian respondents were available.

## 7.2.3 AGE DISTRIBUTION OF RESPONDENTS

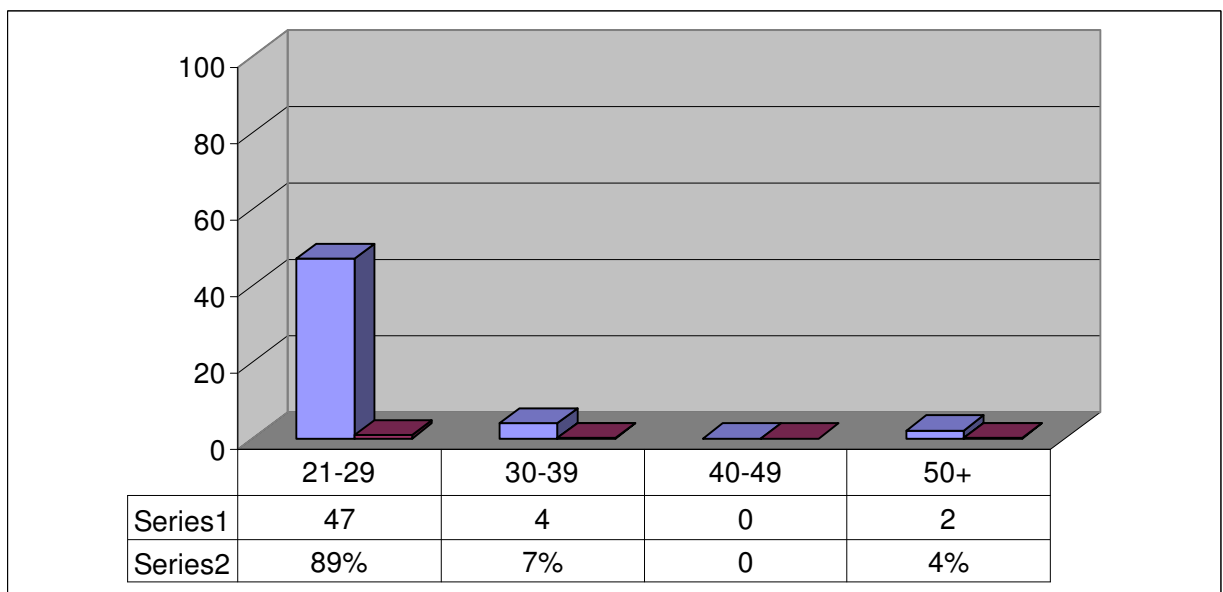


FIGURE 7.3: AGE DISTRIBUTION OF RESPONDENTS

Of the 53 respondents, 89% is between the age of 21 and 29. The next age group of 30 to 39 represents 7% of the total respondents followed by the age group 50+ representing 4% of the total. Unfortunately no respondents in the age group 40 to 49 were available or willing to participate in the study. The implication of this distribution is that the results of this study might not be applicable to endurance athletes in the age group 40 to 49. However, if one takes into account one of the basic assumptions of the Salutogenic theory that sense of coherence are basically established by the age of 30 with relatively few changes thereafter, the assumption can be made that coping and motivational strategies for the age group 40 to 49 would be similar to the groups 30 to 39 and 50+ and that with caution, the results can be generalised to this group. However, further research including this age group is essential.

## 7.2.4 DISTRIBUTION OF ENDURANCE SPORT DISCIPLINES

TABLE 7.1: DISTRIBUTION OF ENDURANCE SPORT DISCIPLINES

<b>ENDURANCE SPORT DISCIPLINE</b>	<b>%</b>	<b>ENDURANCE SPORT DISCIPLINE</b>	<b>%</b>
<b>Marathon Running</b>	<b>15.3</b>	<b>Mountaineering</b>	<b>5.1</b>
<b>Backpacking/Trekking</b>	<b>14.4</b>	<b>Endurance Swimming</b>	<b>5.1</b>
<b>Cross Country Running</b>	<b>12</b>	<b>Canoeing/Kayaking</b>	<b>3</b>
<b>Orienteering</b>	<b>11</b>	<b>Ultra distance Marathon Running</b>	<b>2</b>
<b>Road Cycling</b>	<b>10.2</b>	<b>Endurance Horse Riding</b>	<b>2</b>
<b>Ultra distance Road Cycling</b>	<b>7</b>	<b>Military Pentathlon</b>	<b>2</b>
<b>Mountain Biking</b>	<b>6</b>	<b>Ultra distance Mountain Biking</b>	<b>1</b>
<b>Adventure Racing</b>	<b>6</b>		

This table shows that the different disciplines that the respondents of this study participate in are relatively evenly distributed. However, marathon running (15.3%), backpacking/trekking (14.4%), cross country running (12%), orienteering (11%) and road cycling (10.2%) seem to be most prevalent. It would seem that the more technical and “equipment intensive” (and consequently more expensive) the discipline becomes, the less popular the discipline. A possible explanation for this phenomenon might be that 66% of the respondents fall into historically disadvantaged communities.

## 7.2.5 NUMBER OF DISCIPLINES PARTICIPATED IN

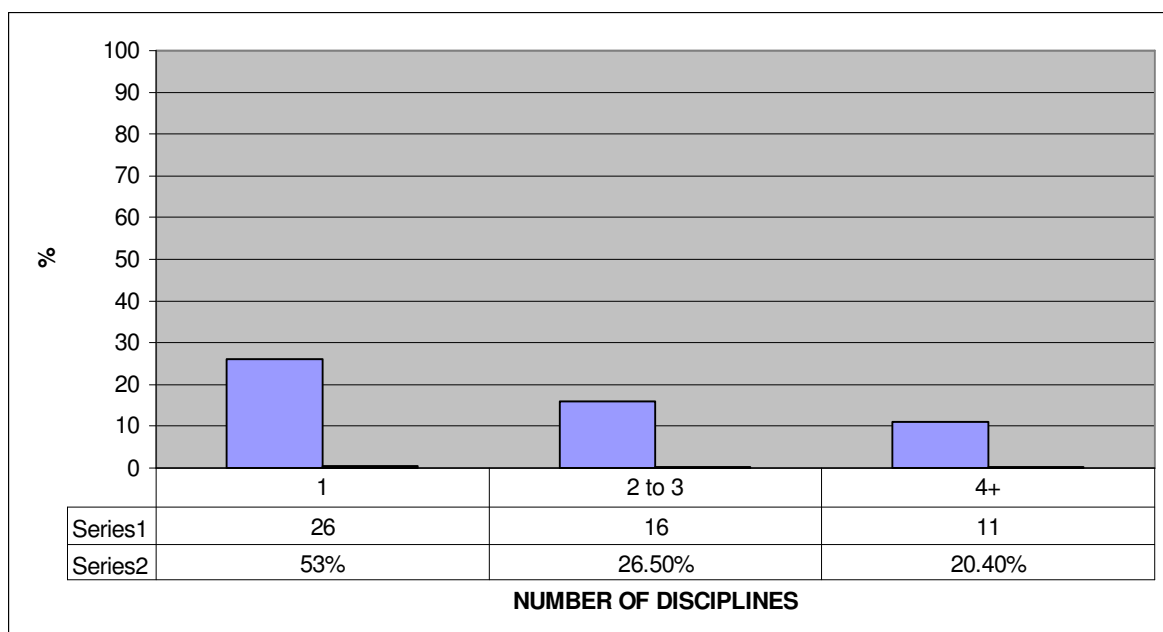


FIGURE 7.4: NUMBER OF DISCIPLINES PARTICIPATED IN BY RESPONDENTS

Figure 7.4 shows that 53% of the respondents participate in one endurance sport discipline. However, 26.5% of the respondents participate in between two and three endurance sport disciplines, whereas 20.4% participates in four or more endurance sport disciplines. Although this might seem strange, it must be remembered that several of the disciplines are related such as marathon running and ultra distance marathon running, road cycling and ultra distance road cycling as well as mountain biking and ultra distance mountain biking. Therefore, athletes might participate in one or more similar disciplines. Furthermore, a discipline such as adventure racing might include and necessitate some level of proficiency in three or more disciplines such as cross country running, orienteering, ultra distance mountain biking, trekking, mountaineering and kayaking.

## 7.2.6 ENDURANCE EVENTS PARTICIPATED IN DURING LAST YEAR

TABLE 7.2: ENDURANCE EVENTS PARTICIPATED IN DURING LAST YEAR

Comrades marathon	<b>22</b>
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Airborne Africa	<b>3</b>
Suikerbosrant Hiking trail	<b>2</b>
Ribbok Hiking trail	<b>4</b>
Liqui Fruit Adventure Race	<b>8</b>
OFM Moolmanshoek Adventure Race	<b>6</b>
Vulture Parys Adventure Race	<b>7</b>
The Lost Dash Adventure Race	<b>2</b>
Outeniqa Hiking trail	<b>4</b>
Swazi Extreme Adventure Race	<b>2</b>
Ficksburg Cherry Festival MTB Race	<b>4</b>
OFM Classic Cycle Race	<b>11</b>
Cape Argus Classic Cycle Race	<b>15</b>
Telecom Hartbeeshoek Tracking Station Cycle Challenge	<b>5</b>
Lonmin 65 Km Adventure Race	<b>2</b>
2 Oceans Marathon	<b>14</b>
Infantry School Cango Caves 42 road race	<b>3</b>
WPASS Oktoberfest Adventure Race	<b>1</b>
New Year 10 road race	<b>3</b>
ACE Half Marathon	<b>4</b>
Menlyn Park George Claasen 21 road race	<b>3</b>
McCarthy Toyota Half Marathon	<b>6</b>
Ndaba 2-in-1 road race	<b>9</b>
Bronkhorstspuit 32 km	<b>3</b>
Deloitte & Touché Pretoria 42 road race	<b>13</b>
Akasia 3-in-1 road race	<b>7</b>
BMW Summer Cycle Race	<b>5</b>
Harmony Heaven Adventure 42 road race	<b>2</b>
Fit 2000 Half Marathon	<b>3</b>
Wally Hayward 42 Marathon	<b>1</b>
Jackie Mekler 50 km Ultra marathon	<b>6</b>
Cansa Lost City Classic Cycle Tour	<b>5</b>
Telkom Midmar Mile	<b>5</b>
Roodeplaat 1000 m swimming event	<b>3</b>
Rooiwal Cycle Challenge	<b>4</b>
Bielie Mielie Festival Cycle race	<b>2</b>

As can be seen in table 7.2, the 53 respondents participated in over 200 endurance events during the previous year. This averages 3.8 events per respondent per year. A breakdown of the events shows that marathon running is the most prevalent both in number of events (15) as well as number of participants (99) followed by road cycling with 7 events and 47 participants. Close in terms of number of events is both adventure racing (with 7 events and 27 participants) and backpacking/trekking (with 3 trails and 10 participants). This is followed by endurance swimming (2 events and 8 participants), mountain biking (1 event and 4 participants) and military pentathlon (1 event and 3 participant). Some of the respondents participated in their relevant disciplines but not necessarily as part of official events or could not recall the specific events.

In the following section the results in terms of stressors involved in endurance events will be discussed.

### **7.3 PERCEIVED IMPACT OF ENVIRONMENTAL FACTORS ON PERFORMANCE DURING ENDURANCE EVENTS**

In chapter 3 certain environmental stressors that influence athletes during endurance events have been identified from the literature. The identified factors were heat, cold, altitude, hydration, nutrition, wind, rain, distance, terrain and equipment. One additional factor, uncertainty, was included in the questionnaire. In this section, the influence of these factors will be discussed as well as additional factors that increase stress during endurance events. In chapter 3, an in-depth discussion revolved around the environmental factors that increase physical and/or mental stress in athletes participating in endurance events. This discussion was based on an extensive study of available literature. However, this discussion mostly focused on the physiological effects that it would have on athletes. Very little focus was placed on the individual athlete's *perception* of these conditions and *how it is perceived to influence performance*.

In this section, the perception of the identified (in the literature) environmental conditions as well as its perceived influence on performance will be discussed. In the questionnaire the respondents had to answer the question: "What influence does.... (Extreme heat, cold, altitude, etc.) have on your performance during endurance

events?” The perception of or perceived influence of heat, for example, on the athlete could be categorized according to positive, negative and neutral influence. Furthermore, these aspects were further categorized according to their perceived physical and mental influence.

### **7.3.1 UNCERTAINTY**

Uncertainty refers specifically to four types of uncertainty; general uncertainty, uncertainty over physical ability, uncertainty over mental strength and unexpected situations.

General uncertainty refers to general feelings of anxiety over uncertain situations or where the outcome of situations is unknown. The following quotations are some examples of the responses in this category:

*“Lack of information (knowledge of the area). This makes me feel anxious”.*

*“Uncertainty of what is expected of me”.*

*“Being lost. For me this is the worst because it means that I don’t know what to do. If I go forward I might become even more lost. If I go back I might become even more lost”.*

*“Waiting is always the worst for me. I start to think of all the things that can go wrong. But all this uncertainty goes away once I start”.*

*“Unknown terrain makes it difficult for me to plan and to know what to expect. This uncertainty makes me nervous”.*

*“If I do not know what the distance is I become very anxious as it makes me uncertain and I cannot plan mentally and physically. It makes me feel out of control and vulnerable”.*

Uncertainty regarding physical ability refers to feelings of anxiety by the athlete over his/her physical ability to successfully compete or perform. These feelings of anxiety can be due to several factors, such as real physical inability or perceived physical



inability. The following quotations are some examples of the responses in this category:

*“Lack of confidence in own ability”.*

*“Fear that I will not be able to complete the event”.*

*“I’m uncertain whether I’ll finish or not”.*

*“Terrified when I think of myself falling”.*

*“Physical ability to perform well”.*

*“I’m afraid that the event will be physically too difficult/technical”.*

*“I’m worried that I will not keep up with the team”.*

Uncertainty regarding mental strength refers to feelings of anxiety by the athlete over his/her mental strength or toughness to successfully compete or perform in endurance events. These feelings of anxiety can be due to several factors such as negative thought processes, lack of motivation or perceived mental inability. The following quotations are some examples of the responses in this category:

*“I, myself are my own worst enemy. I sometimes start events or more often during preparation – I have to fight my own mind to continue”.*

*“Negative thoughts affects my performance making me uncertain if I will finish”.*

*“Mental ability to finish the race”.*

*“I don’t know if my mind will play tricks”.*

*“Being unmotivated”.*

*“Broken concentration and inability to focus makes me doubt the outcome of a race”.*

*“When I fall behind I get desperate. I wonder if I will make it and double my efforts to cycle faster”.*

*“Fear that I will not be mentally strong enough to complete the event”.*

Uncertainty regarding unexpected situations refers to feelings of anxiety by the athlete over situations during the endurance event that change unexpectedly and his/her ability to adapt to this new situation. The anxiety or stress is the result of doubt by the athlete regarding his/her ability (mentally and physically) to cope and control the situation. An inability to cope would result in poorer performance or even an inability to complete the event. This uncertainty creates a certain level of stress within the athlete. The following quotations are some examples of the responses in this category:

*“Deviations from the route by organizers”.*

*“Fear of not getting to the event on time”.*

*“Bottle necks in the route”.*

*“Surprises create uncertainty as I do not know what to expect or if I will be able to cope”.*

*“Uncertainty concerning factors that could be encountered over which I have little or no control”.*

### **7.3.2 EXTREME HEAT**

In general it would seem as if extreme heat has a negative influence on athletes both physically and mentally. The following quotations are some examples of the responses in this category:

*“Dehydration, muscle cramps, headaches”.*

*“A runner can lose a lot of fluid during the race when it is extremely hot. I cannot run at fast pace when it is hot”.*

*"Makes you tired very fast. Sunburn makes it difficult to continue. Dehydration".*

*"Sweating a lot and can cause dehydration".*

*"Heat makes you slower causing more pain. Heat increases the heat in your shoes causing more friction and blisters".*

*"Makes you more tired".*

*"Extreme heat makes you more tired causing you to rest more and therefore slowing you down".*

*"During the event my body loose moisture quickly and I start struggling and have to stop often".*

*"Shortness of breath, excessive perspiration, discomfort, dizziness, dehydration".*

*" A very bad weather condition to participate in".*

Mentally the influence is as negative as physically. The following quotations are some examples of the responses in this category:

*"This is my personal worst".*

*"Mentally it makes the day seem longer".*

*"Mentally I consider changing the pace".*

*"Mentally more concentration is needed".*

*"Before: Will I be able to compete? During: Will I be able to complete at this pace?"*

*"Irritation and fatigue as well as anger".*

*“It bothers your mind and that makes you more tired”.*

*“It takes away control. Control of breathing, control of energy, control of focus, control of urination”.*

Mentally the positive influence seems to be (as with physical) that it gives the athlete that is used to heat a competitive advantage.

*“Positive as my body is used to heat and I can push myself. Then I get to the front and feel good about myself”.*

*“Love heat. Any heat makes me sweat a lot but if you feel that heat running down the side of your head you know that you are working”.*

*“Mentally makes me determined to endure”.*

The candidates that were neutral with regarding to the influence of heat were so mainly because they did not think about it before the event or do not perceive it to be an influence mentally.

*“Before - I usually don't think about it”.*

*“None before – I am just cautious”.*

*“Mentally not an influence”.*

### 7.3.3 EXTREME COLD

In general, extreme cold is perceived as negative (both physically and mentally) although the difference between positive and negative is relatively small. Physically, cold is perceived as positive due to the fact that dehydration due to excessive sweating is not present.

*“Very comfortable weather to compete in”.*

*“During: Physically - once in motion, I tend to have extra energy”.*

*“According to me, cold is better than heat especially when there is a task to be performed. I only feel the cold when I'm done”.*

*“Very enjoyable weather because no dehydration or over sweating”.*

Mentally, cold is positively perceived due to the simple fact that some of the respondents seem to enjoy cold more than hot weather.

*“Great – cold is good”.*

*“Before – excited. During – calm”.*

*“I get happy”.*

*“It is easy to adapt and concentration is very high”.*

Physically extreme cold is perceived to have a negative influence due to the effect that the cold has on the body.

*“Nasal congestion. Freezed fingers, toes and other sensitive areas. It is not comfortable to run in cold conditions”.*

*“My hands become stiff and my back become cold”.*

*“Has to run at an even pace, sometimes even faster, to keep my body at a certain temperature. Makes me uncertain of the outcome of an event”.*

*“Shivering and frozen toes, running nose”.*

*“Hypothermia”.*

*“It tires you as your immune system fights the cold”.*

*“It slows your movement”.*

*“Body starts stiffening when you rest causing more pain”.*

*“I use a lot of energy because I can't get warm and have to increase my activity level in order to get warm. I wonder why I started when it is so cold”.*

*“Physically fairly difficult to get started”.*

Mentally, cold conditions are mostly perceived by endurance athletes to have a negative effect on mood and motivation.

*“Before – de-motivates me. Wish I could rather stay in bed. Right before - wish we could start, muscles stiff. During - don't think it's ever been so cold that it bothers me”.*

*“My performance goes down. I lose concentration and I wish I were somewhere more comfortable”.*

*“Makes me very negative mentally”.*

*“Bothers my mind because I'd rather be hot than cold”.*

*“Before: Physically fairly difficult to get started and mentally not very motivated. During: Physically - once in motion, I tend to have extra energy. Mentally it requires a lot of self-motivation to continue”.*

### 7.3.4 ALTITUDE

From the responses, it would seem as if the majority of athletes perceive altitude as a negative influence, both physically and mentally during endurance events.

*“Athletes who live inland performs better when they are running marathons in the coastal areas and runners from the coast is hard for them to perform better because of the (higher) altitude”.*

*“Before event - might not notice it or sleep more. During - more/less capacity in body and lungs depending on altitude”.*

*“At sea level breathing is easier than inland”.*

The perceived positive mental effects of altitude are related to individual preference for the type of terrain (mountains) that the individual athletes has.

*“I like it – I love mountains and love cycling in them. I am good in this type of terrain and can usually out cycle a lot of other cyclists”.*

The negative physical effects are mostly symptoms of this reduction in oxygen transportation.

*“Atmosphere is not the same - breathing is sometimes a problem”.*

*“You get tired a lot easier”.*

*“Breathing is more difficult at high altitude - performance falls”.*

*“Makes you slow and use a lot of energy”.*

*“Constantly thirsty”.*

*“Lack of breathing control due to a change of atmosphere”.*

*“Nausea and headache”.*

The perceived negative mental effects of altitude on endurance athletes are mostly related to disorientation and confusion.

*“Sickening feeling in the gut and disorientation”.*

*“Mentally you can find yourself confused”.*

*“Nervous of altitude”.*

*“Makes one less sure of one’s ability to perform and takes mind of one’s aim”.*

### **7.3.5 DEHYDRATION**

The majority of respondents perceive this factor to have a very negative effect, physically and mentally, on performance during endurance events. There were no positive responses to this factor although there were some neutral responses.

*“Terrible!! It is not only the loss of water, but also the loss of electrolytes that lead to cramps, loss of concentration”.*

*“Dizziness and blurred eyesight”.*

*“One’s performance goes down as the body loose power and one’s morale goes down and sometimes causes a no-care attitude whether you fail or not”.*

*“If you dehydrate during a race you will not be able to continue as you first have to recover”.*

*“You fall down and become unconscious”.*

*“I know I’m dehydrated when I get goose bumps despite the heat and when I dream of ice cold water (10)”.*

*“It is the loss of water from you body up to a level where even your brain shorts water and shuts down”.*

*“It makes you nauseous and weak and you will faint”.*



*“Sleepiness, raised heartbeat, doesn't speak sense”.*

*“Dizziness, dry mouth, lack of energy and terrible headaches”.*

Mentally, dehydration is perceived as having a negative influence due to the fact that it negatively affects mood and motivation as well as the ability to concentrate and focus.

*“Scared: feels like you're dizzy and can't think properly and feels like losing control of yourself”.*

*“I become very tired physically and mentally I would easily lack the will to carry on”.*

*“Makes me negative because I loose power and concentration and have to rest a lot”.*

*“One's performance goes down as the body lose power and one's morale goes down and sometimes causes a no-care attitude whether you fail or not”.*

*“I know I'm dehydrated when I get goose bumps despite the heat and when I dream of ice cold water”.*

Some of the respondents felt that dehydration or the fact that some athletes become dehydrated is their own fault as event organisers usually provide more than enough water points along the way. Therefore, if an athlete does become dehydrated, it is due to ignorance, poor planning or poor preparation on his/her side.

*“In extreme sports organisers place great emphasis on hydration and water points, the competition is to drink and fill up at each point. Dehydration is a sign of poor preparation and poor planning”.*

*“On event of a marathon there is enough water station on the road. Dehydration can occur to athletes who are ignorant”.*

### 7.3.6 NUTRITION

Physically and mentally all the respondents perceive the lack of proper nutrition as having a negative effect on their performance during endurance events. As can be seen in the following quotations, these symptoms are experienced by several of the respondents.

*"Feel weak when I haven't eaten".*

*"Makes your body and mind tired".*

*"Tiredness and nausea".*

*"Become more tired, restless and lose concentration".*

*"Energy levels go down".*

*"Makes you slow sometimes".*

*"A runner cannot perform without energy. Without nutrition long distance runner cannot run".*

*"Constant hunger during the race despite eating. "Hit the wall" (niks krag nie) worst factor of all for me".*

*"Have no power or energy - get tired very quickly. Feel physically ill (I didn't know the 1st time it happened that I didn't eat enough). Was depressed because I couldn't get going".*

The negative effects to cognitive processes were also experienced by several of the respondents as well as negative effects to mood and motivation.

*"Get tired easier and tend to think of my stomach".*

*"Think of food the whole time".*

*"Become more tired, restless and lose concentration".*

Several of the respondents experienced general tiredness and difficulty with their cognitive processes.

*“Makes your body and mind tired”.*

*“If you don't eat you will be unhealthy loss weight, your mind cannot function properly if you don't eat healthy”.*

However, it does seem that some of the respondents are willing to undergo a certain level of nutrition deprivation as long as it is a “normal” or “acceptable” part of endurance events. However, if this is due to other reasons, for example poor planning, it becomes unacceptable.

*“I would not participate if this factor (nutrition deprivation) were present”.*

*“Have no power or energy - get tired very quickly. Feel physically ill (I didn't know the first time it happened that I didn't eat enough). Was depressed because I couldn't get going”.*

*“Get upset if I can't get anything to eat without reason”.*

*“Feel weak when I haven't eaten and get negative”.*

*“I don't like it a lot”.*

No positive (physical or mental) responses were made in terms of the effect of nutrition and specifically nutrition deprivation.

### **7.3.7 SLEEP DEPRIVATION**

As seen in chapter 3, most healthy adults need between 6 and 8 hours sleep per 24 hours to function effectively the following day. However, the amount of sleep per day needed differs between individuals. Regardless of the inter-individual differences of sleep duration needs, the fact remains that when an individual sleeps less than what is needed, he or she is said to be sleep deprived (O'Neil, 2004). The respondents also identified the symptoms identified in the literature, both physical and mental. No

positive effects were identified. Physically the most important effect is not necessarily the symptoms itself but rather the negative effect that it has on performance during the endurance event.

*“A runner who does not get enough sleep will get tired very early during the race”.*

*“I become bored and tired. Eyes become heavy”.*

*“One's body feel exhausted and this informs the body and mind to be weak”.*

*“It is difficult to perform without sleeping because you always get tired or fall asleep when you are doing nothing”.*

*“Difficult to wake up and get going”.*

*“Headache”.*

Sleep deprivation has a larger negative impact on the mental functioning of the individual than on physical functioning.

*“It is difficult for concentration”.*

*“Lose focus”.*

*“Don't think clearly”.*

*“This is especially bad on the second or third day of a race where you have to concentrate and navigate. Not only the map work but the concentration not to miss an important waypoint”.*

*“Everything takes longer - thinking, solving problems, waking up, concentrating. I sometimes have to read the same instructions 3 - 4 times before I understand”.*

*“Not thinking clearly and not concentrating”.*

*“Slows reaction time”.*

*“Hallucinations - I start to see and hear things”.*

Disturbances to emotional functioning were also identified.

*“You get irritated”.*

*“Not sleeping makes me impatient, grouchy and carefree”.*

*“Takes away motivation”.*

*“One's body feel exhausted and this informs the body and mind to be weak”.*

*“The one thing that really takes strain during (adventure) races is team work. Especially when the team have had little or no sleep for two or three days people get irritated with each other. When they fight with each other the team is not working for each other and gets slower”.*

### **7.3.8 TERRAIN**

As seen in the literature (chapter 3), terrain is a major determinant of performance during endurance events. Terrain could include other environmental factors such as altitude, heat, cold, rain, wind and dehydration as well as additional factors such as navigational difficulties due to dense growth or flat terrain. Furthermore, muddy conditions, gravel or sand as well as dense bush etc. can severely slow down an individual or team's performance. The type of terrain will also influence the energy- and-hydration needs of the endurance athletes. However, as is seen from the responses, terrain has both positive and negative influences. Terrain can enhance performance or can be detrimental to performance and is perceived as such.

An important trend that is identified from the responses is that terrain is often seen as the major challenge that has to be overcome. Terrain can be and is often perceived to be a stressor – however, it is an “acceptable” stressor, an integral part of endurance sport and is accepted as such.

*“Flat terrain is not a problem but mountainous terrain is sometimes a problem”.*

*“Not a factor”.*

*“Mountains are more strenuous and can slow you down but flat terrain is difficult to navigate - I prefer mountains”.*

*“It will only effect the runner if it is rocky, muddy or icy terrain because runners wear shoes not boots and this terrain will slow you down. Tared roads are the best for marathon runners”.*

*“No effect”.*

*“Terrain can make you positive or negative depending on the terrain. Because you can get lost or be the king on that type of terrain or I can get injured in rough terrains and that makes you negative”.*

Physically, terrain is perceived to have a negative influence.

*“Difficult terrain can be hard on your feet as it causes blisters and makes your feet very more tired”.*

*“They cause injuries”.*

*“Rocky terrain is a nightmare - blisters”.*

*“When terrain is rocky or causes blisters the pain causes your mind to think wrong things like quitting”.*

*“Can put more strain on the body”.*

*“Grassy terrain hinders movement and slows you down while sandy terrain leads to heavy steps and staggering”.*

*“Uphill and stony paths are worst”.*

*"If the terrain is mountainous or rocky it will have a negative effect on performance".*

*"Slows movement. It's a frustration".*

*"Sandy terrain causes slow walking".*

Terrain also has positive mental effects on the athlete.

*"An important part of preparation is to expose myself physically to any kind of terrain that could be encountered, prior to the event. Should the unexpected be encountered as far as terrain is concerned I would both physically and mentally be prepared to face the problem".*

*"I struggle with up-hills and get highly aggressive".*

*"A brief moment of despair and then seeing it as this huge challenge and working on overcoming it".*

*"When the going gets tough – the tough gets going. Up-hills and difficult terrain motivates me to work harder".*

The negative mental impact that terrain has on endurance athletes is mostly related to mood and motivation.

*"Terrain can make you positive or negative depending on the terrain. Because you can get lost or be the king on that type of terrain or I can get injured in rough terrains and that makes you negative".*

*"With very difficult terrain, especially if I haven't prepared well, I struggle - I wonder why I started - but I WANT to finish".*

*"Uphill and overgrown terrain is the worst. Water - fear of swimming - worry about it beforehand".*

*"De-motivation".*

*“When terrain is rocky or causes blisters the pain causes your mind to think wrong things like quitting”.*

*“A brief moment of despair and then seeing it as this huge challenge and working on overcoming it”.*

*“Slows movement. It's a frustration”.*

### **7.3.9 EQUIPMENT**

Strictly speaking, equipment is not an environmental factor such as heat, cold or terrain. However, for most types of endurance disciplines, equipment is an integral part of the sport that can either enhance or encumber performance.

*“They break sometimes and can sometimes be heavy”.*

*“By using wrong running shoes, injury develops”.*

*“Is really a problem if it breaks/doesn't work properly during an event - frustrates me - anger and feel hopeless if it breaks”.*

*“Starting with bad equipment makes me negative”.*

*“If it is unprepared - nuisance and irritating and heavy equipment can be tiring”.*

*“Poor handled and damaged equipment cause for unpleasant training and races and even lead to injuries”.*

*“Heavy and unnecessary equipment can slow you down”.*

*“If equipment doesn't fit properly it will cause rash or blisters and it will irritate you”.*

*“Unprepared equipment causes delay on road and time lost because you have to stop frequently to adjust it”.*



*“Carrying something on your back such as a 15 kg daypack or a 25 kg backpack place a lot of pain and strain on your shoulders, lower back and legs. Mentally it is also strain because you keep on thinking of the pain”.*

*“It is only irritating if not packed correctly”.*

However, equipment is also perceived to enhance performance during an endurance event.

*“Correct equipment makes life easier and more bearable - shoes most important”.*

*“It is an investment in yourself to buy proper equipment”.*

*“The better the equipment - the better your performance will be”.*

*“I believe that proper equipment (not necessarily the most expensive) to suit my particular needs and performance constitutes at least 50% of the success of any endurance event”.*

*“Love working with any type of equipment”.*

*“If I have good and new equipment I'm happy but if it is old and broken I'm sad”.*

### **7.3.10 DISTANCE**

Terrain and the distance covered by endurance events are two of the main factors that distinguish it from “normal” track and field events. As seen in the definition of endurance sports, distance is one of the factors used to define endurance events.

An obvious deduction that can be made is that the further the distance, the longer the time required to finish the endurance event. As seen previously, the longer an individual is participating in an event, the more factors such as heat, cold, altitude, terrain, hydration and nutrition can negatively affect the individual physiologically and psychologically.

Not only does the person's physiological demands increase, but pain and discomfort also increases as the duration of an endurance event increases thereby contributing to the physical and mental/emotional difficulty of the endurance event.

This is reflected by the responses of the athletes that participated in this study. Some of the respondents indicated that distance has a positive mental effect on their performance.

*"Distance can become a problem if factors arise during an event not contemplated beforehand e.g. extreme heat, cold, wind, rain".*

*"Endurance is all about the distance itself".*

*"Once again, distance is a factor that can be controlled in the preparation phase. A sound knowledge of this and other factors is absolutely essential prior to the participation of any event".*

*"Cover ASAP as pain is bad if you go fast or slow – therefore do it as soon as possible".*

*"I'm used to long distances because I train for it".*

The negative physical impact of distance is perceived to be that the longer the distance the more energy is being used and the more tired the athlete becomes. This can be seen by the following responses:

*"Tiredness. The longer the event or the distance the greater is its' effect on my strength. If the distance is very long I become more tired, need to rest more and my performance goes down".*

*"Limited time. If time is limited and the distance is very long I become more tired as I need to work harder to finish in time".*

*"It makes the time like it's going slow. When you are walking, a long distance takes a lot of time and it feels as if you are never going to get there. You become more aware of how far it is and this feels as if it takes a lot of energy".*

*"Takes a lot of time".*

*"Long distance takes a lot of energy out of you as you need more power and endurance to finish than a shorter distance".*

*"The longer the distance one becomes tired and leaves one uncertain about finishing the race".*

Mentally, long distances seem to have quite a negative impact on the mood and motivation and consequently performance of endurance athletes.

*"I sometimes mentally think of sitting down. The long distance just lets you feel tired and wanting to stop and rest".*

*"It can break one's mind. When you are in an event and you see or know how far it is still to go you can get really de-motivated".*

*"If you have to race for a long distance it will be difficult as it will increase that pain and tiredness".*

*"Can de-motivate you".*

*"When I'm tired and get behind - I start to worry that I'm not going to finish especially if I know that the distance to go is still great".*

*"Causes negative thoughts especially if you are tired and hungry. You start to wonder why you started and if there is any possible way that you can quit without feeling like a loser".*

*"Distance can also bother you in the mind thinking about how long it is".*

*"Psychological stress - the longer the distance the greater is the stress".*

*"It is just boring sometimes because you just walk the same thing but every step you take brings you closer to the end".*

*“Long distance breaks the morale”.*

*“Different mental preparation for different races (distances). Also influence the speed of the race”.*

### **7.3.11 WIND**

Wind has a dual effect on the individual's environment. Firstly, wind has a marked effect on the temperature level. Secondly, wind increases the level of discomfort that the individual experiences. These facts are also reflected by the responses of the participating athletes. Some perceive wind to have both positive and negative influences on their performance. This can be seen from the following responses:

*“It can be a disadvantage or an advantage”.*

*“Not against you - it can make you go faster - but can also raise dust”.*

*“On a hot day the wind can cool you down”.*

However, physically wind is perceived by most of the respondents as a very debilitating factor in terms of performance as well as overall discomfort.

*“Can reduce runner's speed that results in reducing runner's best time”.*

*“Worst if it is cold. Makes all more difficult - especially cycling”.*

*“Wind is a problem especially when from the front”.*

*“Causes you to use more energy or power if it is facing you”.*

*“I can't perform properly because the blows me back”.*

*“A strong wind can blow sand in your face and that can frustrate you”.*

*“I can't see because of dust”.*

*“Lose pace and direction”.*

*"It can slow you down a lot".*

*"I get very cold".*

Mentally, wind seems to be, together with heat and dehydration, the environmental factor that has the most de-motivating effect on endurance athletes.

*"Bummer! I hate wind, especially from the front. Actually any wind except from behind is bad. I prefer a day where there is no wind, even from behind, for that wind or the road can turn and then it is from the front".*

*"I watch the weather report as part of my preparation and if strong wind is predicted I become de-motivated even before the race".*

*"If against you - it is a pain in the backside".*

*"You become dry and if it is from the front it can make you lose concentration".*

*"When I'm waiting for the race to start and I see that the wind is blowing strongly against me – I become dejected".*

*"To me personally, wind (especially from the front) is one of the most unpleasant - if not the most - factors to control - both physically and mentally. Obviously it doubles the effort and requires extreme motivation to complete an event".*

*"Makes me de-motivated and annoyed".*

### **7.3.12 RAIN**

Rain, as with wind can change the environment in which the endurance event will take place. However, rain is also perceived to have positive effects, both physically and mentally, during an endurance event.

*"It cools me down".*

*"It is nice in the rain if it is hot".*

*"Depending on the temperature it is not so bad".*

*"Rain, although unpleasant, is not such a bad factor on its own. It stops you from sweating too much and dehydrating".*

*"Most of the time rain is good".*

The majority of the respondents regard the physical effects of rain on their performance as negative.

*"Can make terrain very slippery..."*

*"It slows the pace down".*

*"Cold and discomfort makes me depressed and makes me slower".*

*"Rain, although unpleasant, is not such a bad factor on its own. If accompanied by wind or even hail and lightning, it can be most unpleasant and even dangerous".*

*"Makes cycling and mountain biking more difficult due to slippery and muddy conditions".*

*"Awful to be wet. Makes me cold and stiff..."*

*"You become wet - mentally it is a drag - depending on what you are doing".*

*"Physically my kit becomes heavier and mentally I think how heavy it is going to get".*

*"I get wet and it makes all things seem impossible".*

*"If my clothes get wet I get rash and that is very painful".*

*“The ground is wet and you don't have a place where to rest”.*

*“It makes everything uncomfortable...”*

*“...and create very cold conditions”.*

*“Depending on the temperature it is not so bad”.*

*“It can frustrate you and you get very cold”.*

*“...and hinders ability to see”.*

*“Rain can restrict sight and make equipment heavier”.*

*“My visibility is reduced and I feel insecure”.*

The respondents indicated that mentally, rain has a negative impact on performance during endurance events in two ways; mood and motivation and ability to focus.

*“Makes me wish the end will come”.*

*“Feels like I don't want to do this anymore. Irritated”.*

*“Awful to be wet”.*

*“I get wet and it makes all things seem impossible”.*

*“It can frustrate you and you get very cold”.*

*“It makes everything uncomfortable, makes me negative and de-motivates me”.*

*“Cold and discomfort makes me depressed and makes me slower”.*

*“Disturbs me”.*

*“Physically my kit becomes heavier and mentally I think how heavy it is going to get”.*

*“Rain will disturb all the plans that I have planned”.*

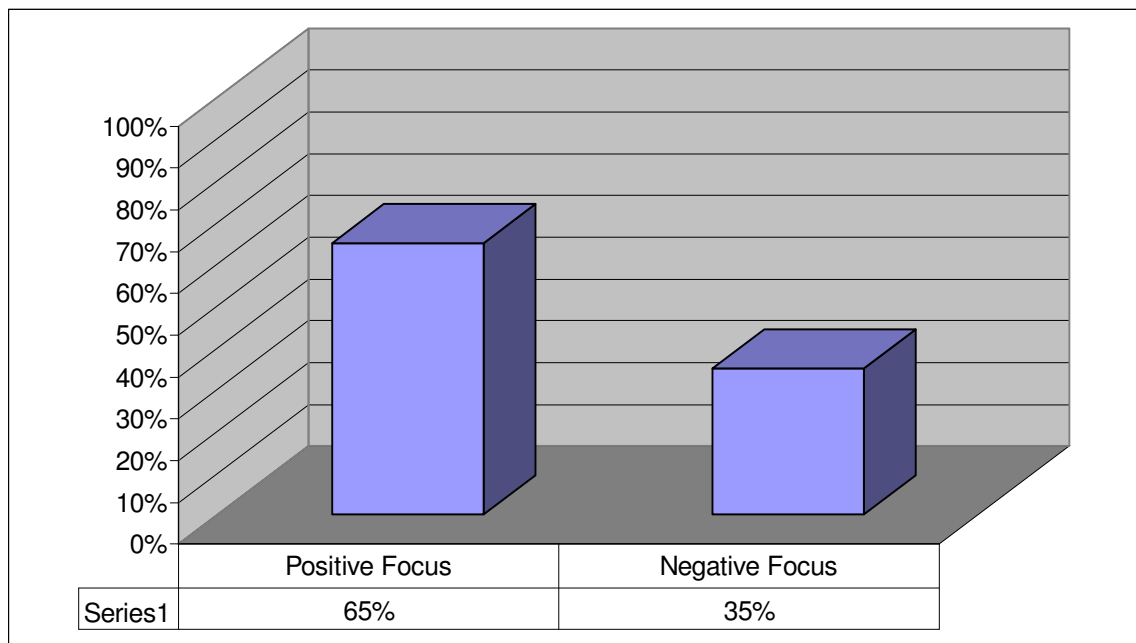
In the next section the motivational strategies used by athletes during endurance events will be discussed.

## 7.4 MOTIVATIONAL STRATEGIES USED DURING ENDURANCE EVENTS

Motivational strategies are those methods and techniques that athletes use before and during endurance races to motivate them to achieve their own objectives. Two broad themes and four sub-themes that emerged from the data showed that endurance athletes used two factors that the researcher labeled as focus and source as strategies to motivate themselves. Four additional sub-themes; positive focus, negative focus, external source and internal source were also identified.

### 7.4.1 POSITIVE AND NEGATIVE FOCUS

Positive and negative refer to the focus of the strategies. In other words the basic reference point that motivates the athlete as well as the end state or outcome that the athlete is motivated to achieve or avoid.





## FIGURE 7.5: DISTRIBUTION OF FOCUS OF MOTIVATION

As can be seen in figure 7.5, 65% of the athletes in this study prefer to focus on the positive outcomes of the endurance event to motivate them whereas 35% of the athletes focus on the negative outcomes to motivate themselves. Therefore, the majority of the athletes seem to prefer to focus on the positive outcomes of performance to motivate them during an endurance event.

### 7.4.1.1 POSITIVE FOCUS

When individuals focus on the positive outcomes of the sport, either internal or external, or use positive thoughts and self-talk to motivate themselves they are using positive strategies.

In other words, the athlete employs motivational techniques and methods in a strategy that is designed to achieve a positive result. This can clearly be seen by the following statements by the respondents.

*“Talk to myself. Strategise to complete the whole race. Tell myself that it is not that bad, I can go further”.*

*“I try to get halfway because then I tell myself there is less left than what I've done so far”.*

*“Pain will come and go. The event started and will have an end”.*

*“Tell myself that I'm not the first to do it and that I have to accomplish what I came to do”.*

*“Tell myself that I have to finish”.*

*“I see myself finishing at the end”.*

*“I think of what I'm going to do after the event and pray to God”.*

*“Satisfaction one feels once you have completed”.*

*“Think of the end and the rewards”.*

*“Think of the rewards, e.g. what it will feel like and what you will be able to do/see once you complete it”.*

### **7.4.1.2 NEGATIVE FOCUS**

When individuals focus on the negative outcomes or consequences, internal or external, or use visualisation and self-talk that reminds them of the negative consequences of quitting during or before endurance events to motivate themselves, they are using negative motivational strategies.

The strategy is therefore to use motivating factors such as fear or disappointment to motivate themselves to avoid the negative outcome. This negative focus as motivational strategy can be clearly seen in the following statements.

*“By telling myself that although it is not nice it is part of me and by quitting I am letting myself down”.*

*“I started and WANT and HAVE to finish. For me quitting is a personal defeat - nobody is going to do it for me, I must do it myself”.*

*“Imagine failure - a half job is a job not done”.*

*“Pain is temporarily - finishing last forever”.*

*“I believe in the slogan: ‘Pain is temporarily while quitting is forever”.*

### **7.4.2 INTERNAL AND EXTERNAL SOURCES**

Incentives refer to the reward that the successful endurance athlete receives for participation in endurance events. These incentives are what motivate the athlete to participate in endurance events.

Internal and external refer to the source or origin of the incentives that motivate athletes to achieve their goals and objectives. These incentives might be external to the individual or internal (in other words, the reward comes from within the athlete when some need or desire is met). As can be seen in figure 7.6 the majority (69%) of

the athletes are motivated by internal incentives to perform in endurance events. A relatively small percentage (31%) are motivated by external rewards. Therefore, it would seem as if the majority of these athletes are motivated by the internal rewards of performance in endurance events.

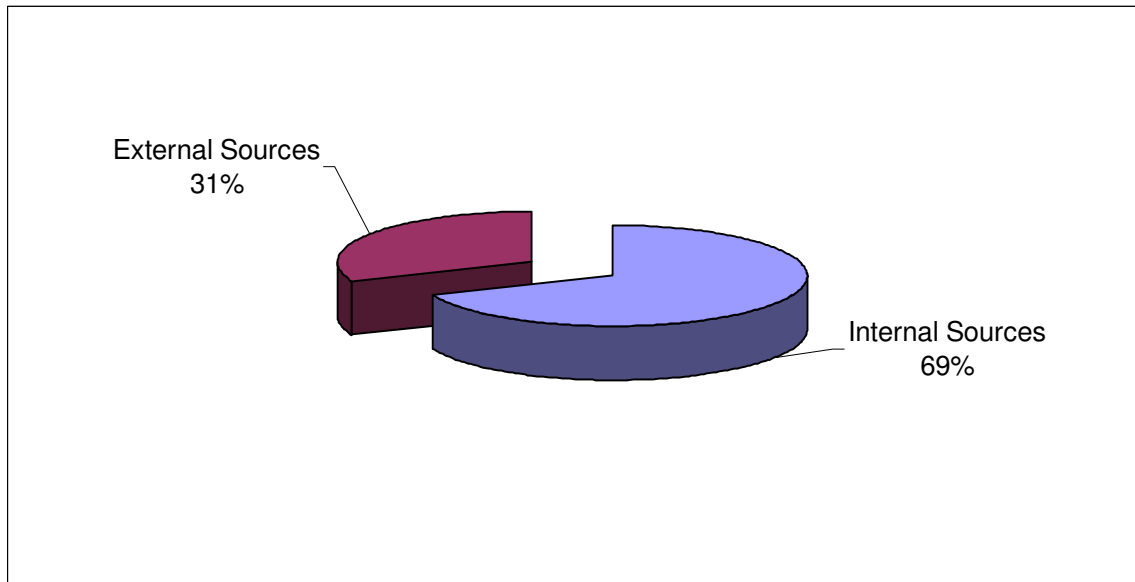


FIGURE 7.6: DISTRIBUTION OF SOURCE OF MOTIVATION

### 7.4.2.1 INTERNAL SOURCES

Internal rewards refer to those incentives related to self-image, internal standards of achievement, values, sense of achievement, attitudes, enjoyment etc. that motivates endurance athletes to overcome physical and mental challenges to achieve their goals.

These incentives are therefore desires or needs that are internal to the individual and the fulfillment of these internal desires or needs is what motivate the endurance athlete. The following statements by the respondents illustrate this point.

*“Satisfaction one feels once you have completed”.*

*“Tell myself that I’m not the first to do it and that I have to accomplish what I came to do”.*

*“I believe in the slogan: ‘Pain is temporarily while quitting is forever”.*

*“My motivation lies in completing what I have started”.*

*“By telling myself that although it is not nice it is part of me and by quitting I am letting myself down”.*

*“I see myself finishing at the end”.*

*“Think of the rewards, e.g. what it will feel like and what you will be able to do/see once you complete it, or part of it”.*

*“Pain is temporarily - finishing last forever”.*

*“Up until a point it stays a challenge to overcome”.*

#### **7.4.2.2 EXTERNAL SOURCES**

As seen previously in the literature, external rewards such as money, titles, approval, status, medals, other people’s perceived image of the athlete etc. are all incentives that can and do motivate endurance athletes.

In other words, it includes all those factors or incentives outside the individual that motivate the athlete to complete the event or perform during the event. The following statements by the respondents are examples of external incentives:

*“I tell myself that I will reward myself afterwards”.*

*“I think of what I’m going to do after the event and pray to God”.*

*“Think of the end and the rewards”.*

*“The group with whom I’m running motivates me because I also know that they feel the same as I do”.*

#### **7.4.3 COMBINATIONS OF FOCUS AND SOURCE**

Figure 7.7 illustrates the distribution of the motivational strategies that are used by athletes during endurance events. The strategy used most often is positive-internal (37%) followed by negative-internal (26%), positive-external (21%) and negative-external (16%).

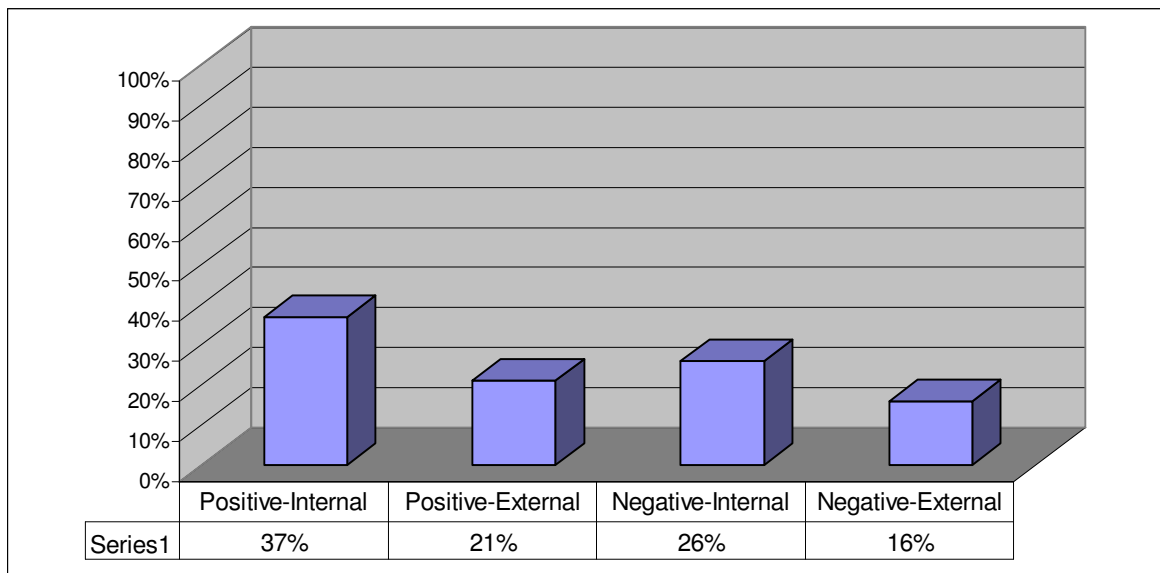


FIGURE 7.7: DISTRIBUTION OF MOTIVATIONAL STRATEGIES

### 7.4.3.1 POSITIVE-INTERNAL

Positive-internal strategies are used when the athlete motivates himself by focusing on the positive outcome or consequences of successfully completing an endurance event. The positive outcome of successfully achieving his goals would be internal rewards such as feelings of achievement, enjoyment or a reinforcement of a positive self-perception.

Therefore, by focusing on the positive internal rewards of achieving his own goals (using various techniques) the athlete motivates himself to overcome challenges and obstacles to reach his goals.

Some of the techniques that can be used are positive self-talk, positive visualisation, goal-setting. The following responses illustrates this strategy:

*“Talk to myself. Strategise to complete the whole race. Tell myself that it is not that bad, I can go further”.*

*“Keeping initial aim in mind”.*

*“I try to get halfway because then I tell myself there is less left than what I've done so far”.*

*“Tell myself that I’m not the first to do it and that I have to accomplish what I came to do”.*

*“My motivation lies in completing what I have started”.*

*“I see myself finishing at the end”.*

*“Think of the rewards, e.g. what it will feel like and what you will be able to do/see once you complete it, or part of it”.*

### **7.4.3.2 POSITIVE-EXTERNAL**

Positive-external strategies are used when the athlete motivates himself by focusing on the positive outcome or consequences of successfully completing an endurance event. The positive outcome of successfully achieving his goals would be gaining external rewards such as prizes, medals, approval, titles etc.

Therefore, by focusing on the positive-external rewards of achieving his own goals (using various techniques) the athlete motivates himself to overcome challenges and obstacles to reach his goals.

Some of the techniques that can be used are positive self-talk, positive visualisation, goal-setting. This is illustrated by the following responses:

*“Think of the end and the rewards”.*

*“I tell myself that I will reward myself afterwards”.*

*“The group with whom I’m running motivates me because I also know that they feel the same as I do”.*

*“I think of what I’m going to do after the event and pray to God”.*

### **7.4.3.3 NEGATIVE-INTERNAL**

Negative-internal strategies are used when the athlete motivates himself by focusing on the negative outcome or consequences of failing to achieve his/her goals and

objectives. The outcome of failing to achieve his goals would be internal “punishment” such as feelings of failure, disappointment, regret, and self-blame.

Therefore, by focusing on the negative-internal consequences of failing to achieve his own goals (using various techniques) the athlete motivates himself to avoid these negative outcomes by overcoming challenges and obstacles to reach his goals.

Some of the techniques that can be used are negative self-talk, visualising failure, goal-setting. The following responses are examples of this strategy:

*“I believe in the slogan: ‘Pain is temporarily while quitting is forever”.*

*“By telling myself that I’m a man and thus I will never give up as long as I’m still moving forward”.*

*“I started and WANT and HAVE to finish. For me quitting is a personal defeat - nobody is going to do it for me, I must do it myself”.*

*“By telling myself that although it is not nice it is part of me and by quitting I am letting myself down”.*

*“Imagine failure - a half job is a job not done”.*

#### **7.4.3.4 NEGATIVE-EXTERNAL**

Negative-external strategies are used when the athlete motivates himself by focusing on the negative outcome or consequences of failing to achieve his/her goals and objectives. The outcome of failing to achieve his goals would be external “punishment” such as where the athlete perceives that “important others” such as family, friends and coaches would have feelings of failure, disappointment, regret and disapproval about the athlete.

Therefore, by focusing on the negative-external consequences of failing to achieve his own goals (using various techniques) the athlete motivates himself to avoid these negative outcomes by overcoming challenges and obstacles to reach his goals.

Some of the techniques that can be used are negative self-talk, visualising failure, goal-setting.

*“Tell myself that I’m not the first to do it and that I have to accomplish what I came to do”.*

*“I only started with the sport at a late age (56) and have to train very hard to be and stay fit. I always wonder what “good” cyclists/hikers will think of old people doing it - that thought motivates me”.*

*“I think of the people who believe in me and I talk to myself not to disappoint them”.*

For the sake of clarity a clear distinction is made here between the strategies. However, it would appear that athletes probably use more than one strategy at different times during an endurance event and training. Unfortunately the distribution of these combinations was not determined. The techniques or combination of techniques will depend on the athlete’s previous experience and mastery of the technique.

#### **7.4.4 MOTIVATIONAL TECHNIQUES**

Motivational techniques refer to those sport-psychological techniques that are used for motivation. These are not motivational strategies but could fall under one or more strategy that is being used by the athlete to motivate him during endurance events. Examples of these techniques are positive self-talk, visualisation and goal setting. These techniques can and are used to reach different objectives such as arousal management, training and coping to name a few. However, the techniques that are discussed here are solely used for motivational purposes.



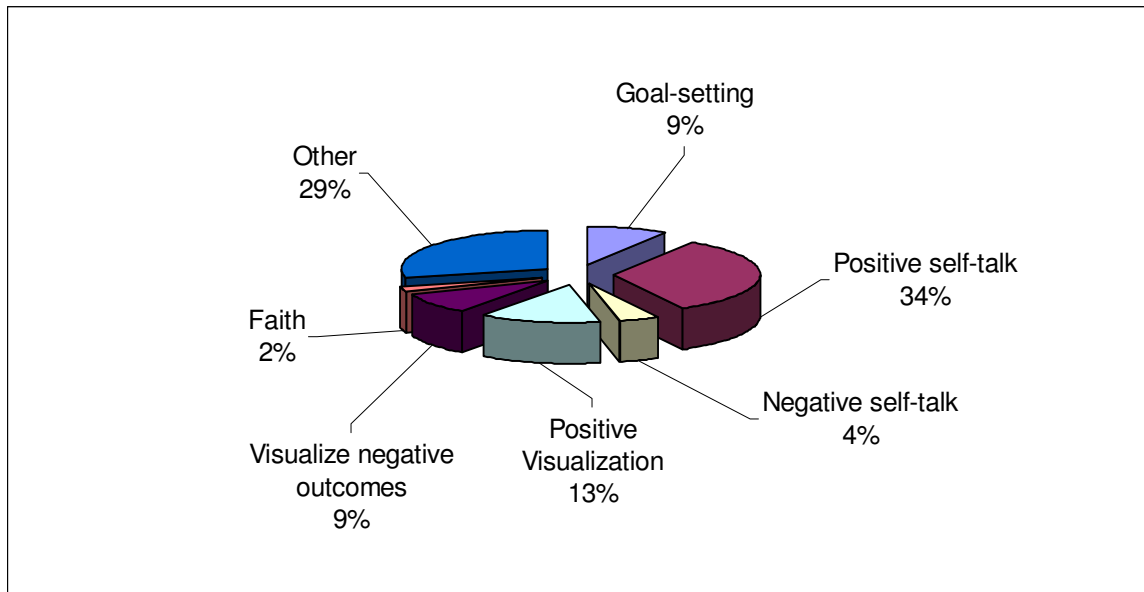


FIGURE 7.8: **MOTIVATIONAL TECHNIQUES**

Figure 7.8 illustrates the techniques employed by the respondents in this study to motivate themselves during endurance events. These techniques are positive self-talk (34%), other (29%), positive visualization (13%), goal-setting (9%), visualisation of negative outcomes (9%), negative self-talk (4%) and faith (2%). As can be seen, positive self-talk is employed by the majority of the respondents. This is followed by “other” techniques, positive visualisation, goal setting, visualisation of negative outcomes, negative self-talk and faith. Each of these techniques will be briefly discussed as it relates to this study.

#### 7.4.4.1 POSITIVE SELF-TALK

Positive self-talk is a technique where the athlete encourages or motivates himself by repeating phrases or words that has a positive outcome. Examples of this are the following:

*“I tell myself that pain will come and go. The event started and will have an end and I will finish”.*

*“Tell myself that it is not that bad, I can go further”.*

*“Tell myself that I have to finish”.*

*"I tell myself that it will end and that I will be there when it does".*

*"Tell myself that I'm not the first to do it and that I have to accomplish what I came to do".*

*"Pain is temporarily while quitting is forever".*

*"By telling myself that I'm a man and thus I will never give up as long as I'm still moving forward".*

*"I tell myself that I started and WANT and HAVE to finish".*

#### **7.4.4.2 OTHER**

Under this category fall all the responses that cannot be categorised under the headings that were identified. Three groupings of responses or techniques are identified, anchoring, association and dissociation.

**A. Anchoring:** This refers to a technique where the athlete links his performance or motivation in some form of association with or conditioning with an object, idea, song, phrase etc. Once the associated or conditioned object is heard or visualised it motivates the athlete to perform better. The following responses are examples of this:

*"I use my anchor - I sing motivational songs".*

*"I think of Infantry School – if I could make that I can make anything".*

**B. Association:** This refers to a technique where the athlete is aware of the pain and discomfort and adjusts his performance accordingly. Instead of ignoring the feedback that is received via back pain, aching muscles, dry mouth and throat etc. the athlete uses these cues to identify areas of his/her performance that require rectification. Therefore, the athlete is aware of problem areas via physical feedback and adjustments of physical performance are usually accompanied by positive self-statements to ensure mental adjustment or motivation of performance.

*"You have to finish - stopping is not an option".*

*"I think of the positive side of everything".*

*"I believe in the slogan: 'Pain is temporarily while quitting is forever".*

*"Up until a point it stays a challenge to overcome".*

*"I just push and push myself as it cannot last forever".*

*"I breathe in and out (deeply) and try to deal with the frustration".*

*"I just carry on slowly until I'm finished".*

**C. Dissociation:** This refers to a technique where the athlete is aware of the pain and discomfort but attempts to ignore the pain or shift his/her focus to areas or ideas other than the physical or mental pain and discomfort. The thoughts or ideas that the athlete focuses on are usually motivating the athlete to continue. Examples of this technique are the following:

*"I try not to think of the pain and discomfort. I know it has to end".*

*"Pain is temporarily - finishing last forever".*

*"I tell myself that pain is just one of the senses of the mind - you don't have to listen to the words".*

*"I just forget about it and carry on".*

*"Just go. There is nothing that you can do".*

*"Don't think about it - just go".*

*"I switch off my mind and just keep on going".*

*"I look around at the scenery to take my mind of the pain".*

### **7.4.4.3 POSITIVE VISUALISATION**

Visualisation or imagery is a technique where the individual uses some or as many of his/her senses as possible to create or recreate a specific experience in his/her mind. It is basically the recreation or practice of a real-life situation at a mental level.

Therefore, positive visualisation is where the athlete mentally visualises or “sees” the event or outcome of an event in his mind. By visualising a positive outcome the athlete motivates himself during an endurance event. Examples of this technique are the following:

*“I think of what I’m going to do after the event and pray to God”.*

*“I see myself finishing at the end”.*

*“Think of the end and the rewards”.*

*“Think of the rewards, e.g. what it will feel like and what you will be able to do/see once you complete it, or part of it”.*

*“Strategise how to complete the whole race”.*

### **7.4.4.4 GOAL-SETTING**

Goal-setting has been described as one of the most effective performance enhancement techniques in the behavioural sciences (Potgieter, 2003). Goal setting is a technique where the individual sets short, medium and long-term objectives for himself. These objectives, if they are effective, are usually linked to time and are measurable.

The motivational value of goals lie in the fact that, if they are challenging, their achievement leads to emotional well-being (sense of achievement) as well as giving the athlete feedback with regards to his progress and performance.

Goals might be process goals or outcome goals. Process goals are goals where progress or success are measured in terms of individual subjective terms such as

completion of a challenging event or a 10% improvement in performance on a standard marathon.

Outcome goals are objectives that focus on the outcome of an event such as winning or being in the top ten finishers of an event. The majority of respondents seem to set process goals. This is not surprising as the respondents are all non-elite athletes. They therefore do not have the resources such as time and financial backing to participate in the same league as professional athletes and for the majority would outcome goals lead to unnecessary stress and frustration. Examples of this technique are the following:

*“Keeping initial aim in mind”.*

*“I try to get halfway because then I tell myself there is less left than what I’ve done so far”.*

*“Break the race up in shorter distances and focus on completing one section at a time”.*

*“Break it up in short manageable sections”.*

*“I make shorter distances and smaller points, goals to reach”.*

#### **7.4.4.5 NEGATIVE SELF-TALK**

As with positive self-talk, this is a technique where the athlete encourages or motivates himself by repeating phrases or words. However, instead of focusing on positive outcomes as with positive self-talk, the athlete focuses on the negative consequences of poor performance. This usually leads to a negative emotional reaction. In order to avoid the negative consequence and resultant negative emotional experience, the athlete is motivated to increase his/her effort or just to continue with the present level of performance. However, it should be noted that relatively few participants employ this technique. Examples of this technique are the following:

*“By telling myself that although it is not nice it is part of me and by quitting I am letting myself down”.*

*"I started and WANT and HAVE to finish. For me quitting is a personal defeat - nobody is going to do it for me, I must do it myself".*

#### **7.4.4.6 NEGATIVE VISUALISATION**

Visualisation or imagery is a technique where the individual uses some or as many of their senses as possible to create or recreate a specific experience in his mind. It is basically the recreation or practice of a real-life situation on a mental level. As with positive visualisation, this is a technique where the athlete encourages or motivates himself by visualising the outcome of an endurance event. However, instead of focusing on positive outcomes as with positive visualisation, the athlete focuses on the negative consequences of poor performance or visualises him/herself being unsuccessful. This usually leads to a negative emotional reaction. In order to avoid the negative consequence and resultant negative emotional experience, the athlete is motivated to increase his/her effort or just to continue with the present level of performance. However, it should be noted that relatively few participants employ this technique. Examples of this technique are the following:

*"Imagine failure - a half job is a job not done".*

*"I believe in the slogan: 'Pain is temporarily while quitting is forever".*

#### **7.4.4.7 FAITH**

Faith is not a technique as such but rather a belief that God or some supernatural force would provide the athlete with the necessary motivation, power and endurance to complete the event successfully. However, the action of praying can be seen as a technique that is used by the athlete to motivate himself by believing that God would provide the necessary motivation. Examples of this technique are the following:

*"I think of what I'm going to do after the event and pray to God".*

*"God and my dreams".*

*"Pray to God to help me and He has".*

In the next section the coping strategies that are employed by athletes to cope with extreme conditions during endurance events will be discussed.

## **7.5 COPING STRATEGIES USED DURING ENDURANCE EVENTS**

Coping strategies (as defined in chapter 4) refer to *the psychological strategies (cognitive, emotional, behavioural and social) that individuals use to successfully adapt to stressors or adversity in their present or future situations and thereby continue to function at the same or better level of functioning/performance than before the adverse or stressful situation.*

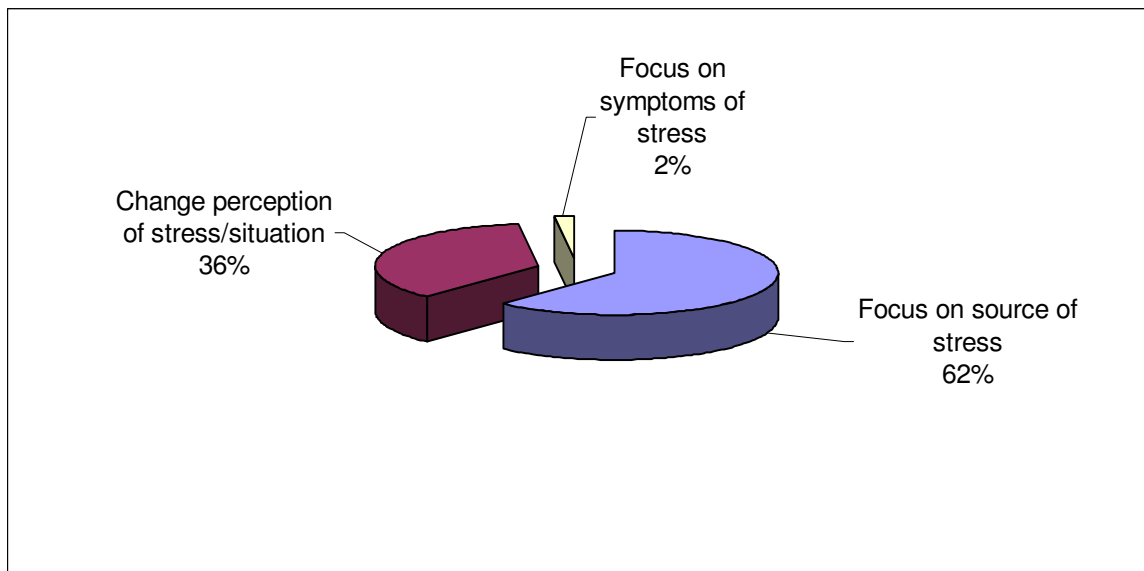
This study focused specifically on the active coping strategies that athletes use during endurance sport. Although avoidant coping strategies are also coping strategies – they are strategies that enable the individual to cope and protect the ego from anxiety. Active coping strategies focus on problems related to the external environment – the focus of this study.

### **7.5.1 ACTIVE COPING STRATEGIES**

As seen previously, active coping strategies are those strategies that actively “seek out” and confront the problem or obstacle or stressor and devise ways in which the individual can solve the problem. In the literature the following three strategies that are used to cope with stressors are identified:

- Responses that change the source of the stress or the situation out of which the stressful experience arises;
- Responses that change the individual’s perception of the stressor or that control the meaning of the stressful experience after it happened but before the emergence of stress;
- Responses that control the symptoms of stress itself after it has emerged.

This can be seen in figure 7.9 that displays the distribution of these coping strategies.



**FIGURE 7.9: DISTRIBUTION OF COPING STRATEGIES**

As can be seen from figure 7.9, that the majority (62%) of respondents use the coping strategy that changes the source or situation that creates stress. The strategy that changes the perception of the athlete in terms of the situation or stressor is employed by 36% of the respondents. Only 2% of the respondents use the strategy that focuses on the symptoms of stress itself to cope with the situation. However, several (8.2%) of the respondents employ a combination of all three coping strategies in the same situation. This can clearly be seen in figure 7.10 that depicts the distribution of coping strategies per environmental stressor.



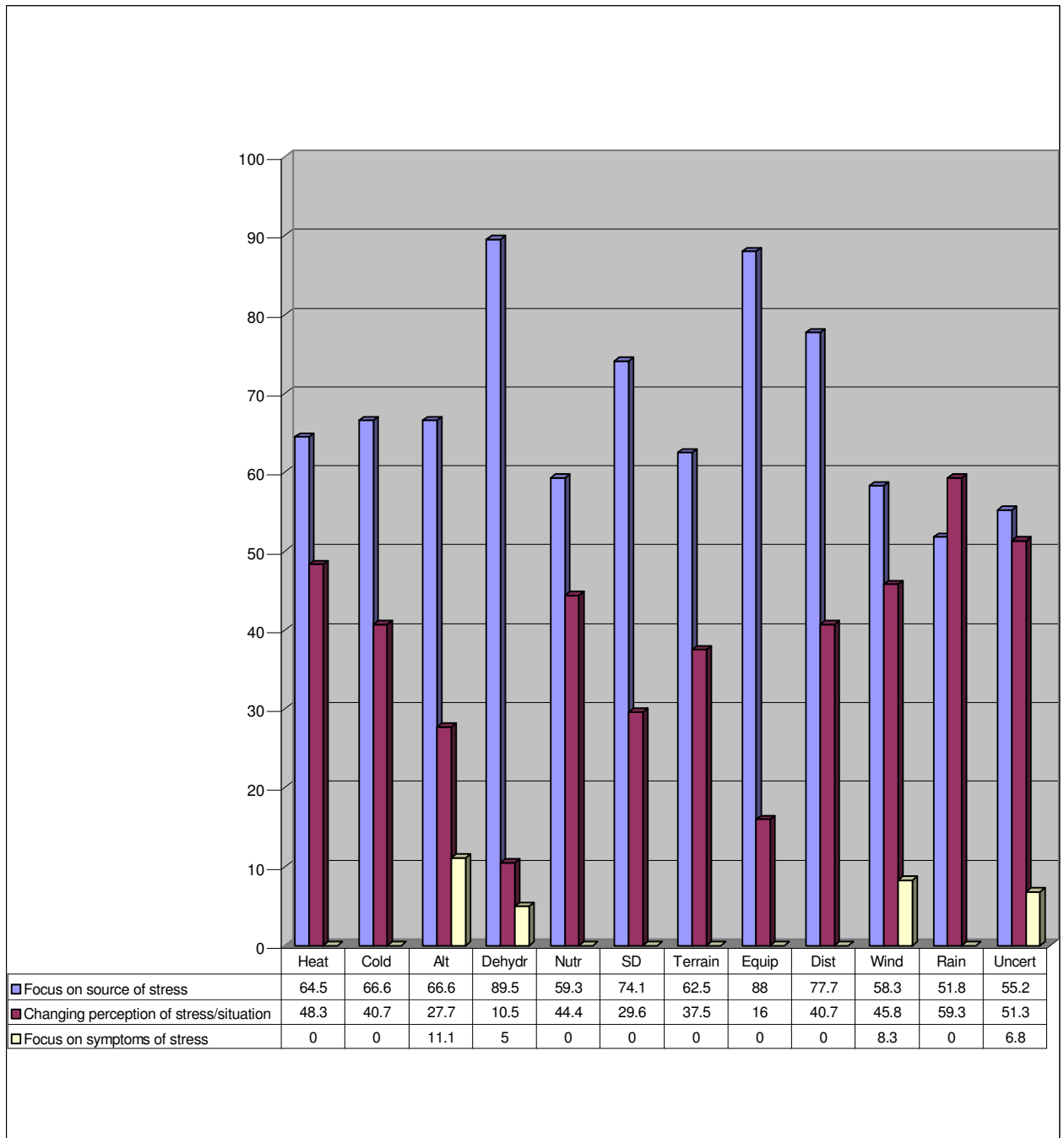


FIGURE 7.10: COPING STRATEGY DISTRIBUTION PER ENVIRONMENTAL STRESSOR

### 7.5.1.1 RESPONSES THAT CHANGE THE SOURCE OF THE STRESS OR THE SITUATION OUT OF WHICH THE STRESSFUL EXPERIENCE ARISES

Individuals that employ this strategy are able to correctly identify the source of their stress. They are then able to take action to remove the factor that causes the stress. The following responses illustrate the use of this strategy. The respondents had to answer the question: "Explain what you do to counter the physical and mental effects of *stressor* (heat, cold, dehydration) during an endurance event."

#### 7.5.1.1 Heat:

*"Fitness from training under the same conditions is a bonus. Use knowledge to avoid dehydration".*

*"Drink a lot of fluids".*

*"Reduce the running pace".*

*"Suntan lotion and sunglasses".*

*"Train in hot climate before the race, turn my weakness into a strength by focusing on it during training".*

*"During the race drink a lot of fluids, keep on going and ensure that no mistakes are made".*

#### 7.5.1.1 Cold:

*"I try to get my body into motion. If not, I get more warm clothes".*

*"You know your body and when something is going to happen. When you know you can prevent it as soon as possible".*

*"Wipe my face and always put on my hat. I warm my hands with gloves".*

*"I do something like jogging, put on warm clothes, switch of my mind and carry on with what I'm doing".*

*"Do lots of stretch exercises".*

*"When I rest it is for short periods so that your muscles don't get painful".*

#### 7.5.1.1 Altitude:

*"Wait for natural acclimatization, take in enough fluids and do light exercise".*

*"Try to slow down, acclimatize and motivate myself".*

*"Look down, choose a suitable pace and overcome it".*

*"I relax and try to control my breathing".*

*"Breathe deeper".*

*"I try to pace myself with short people because their legs are short and their pace is fast and short. Always I tell myself that I will rest after every hour and not every time I feel like resting".*

*"Acclimatize by moving to the area two to three weeks prior to the event".*

*"Training in different altitude is a solution - South Africa luckily has different altitudes with different temperatures".*

#### 7.5.1.1 Dehydration:

*"Loads of water, try to take in salt beforehand. Rest in the shade".*

*"Get in shade, take of heavy equipment, try to relax and drink a lot of water".*

*"Whenever your body needs water your mouth feels dry so immediately I drink water and wipe my face and carry on".*

*"Sit down and get water and rest till strength is back".*

#### 7.5.1.1 Nutrition:

*“Eat high calorie food up to two hours before the race”.*

*“Take enough food”.*

*“Food deprivation is not a factor - having no appetite is - force yourself to eat”.*

*“Try to go slower when I really feel bad. As soon as I have a bit of energy I try to use it effectively because it doesn't last long”.*

*“Balance food before or during. Preparation is very important”.*

*“Eat at regular intervals - preserve food”.*

#### 7.5.1.1 Sleep deprivation:

*“Sleep as much as you can when you get a chance”.*

*“I keep myself busy with something because if you sit down and do nothing you will fall asleep”.*

*“As long as I am physically busy and not sitting down doing nothing - I can go for days without sleep”.*

*“When I'm busy I don't rest for too long and I don't take of my equipment”.*

*“When I rest I do so for short periods and make myself as uncomfortable as possible so that I will not fall asleep”.*

*“Try to plan for short sleep periods”.*

*“Know your own body, plan for sleeping periods and when sleeping try to sleep as comfortable as possible”.*

*“Sleep enough, especially two days before the event”.*

*“Practice before the event while you are sleep deprived to learn how to cope with lack of sleep”.*

*“Be aware of your levels of concentration - mistakes due to lapses in concentration can cost you a lot of time (and more sleep)”.*

#### 7.5.1.1 Terrain:

*“Reduce the speed if rocky, muddy or icy terrain”.*

*“Seek the easiest route - try not to loose altitude”.*

*“Training in all types of terrain helps a lot”.*

*“Keep fit and try to look for easier surface to walk on”.*

*“You must read it and understand it”.*

*“Read the terrain and follow the easiest route”.*

*“When I walk in mountains I take good care because of the effect on the ankles”.*

*“Rocky terrain you must walk with care and look down most of the time. On sandy terrain try to walk on hard surface because sandy terrain uses too much energy”.*

*“Plan the route, understand the terrain and follow the easiest route”.*

#### 7.5.1.1 Equipment:

*“I look after my equipment”.*

*“Just keep on going as far as possible if it is broken. Will try to fix it if it is too bad to bear”.*

*“Stop and fix it ASAP - though proper planning and preparation will minimise breakages to a great extent”.*

*“Carry the lightest equipment. Extra socks and spare shoes to keep feet dry”.*

*“Wear running shoes that are designed for running, socks for running as well as running vest”.*

*“Along the route during a break you must fix the faulty equipment”.*

*“Pack your equipment logically and as comfortable as possible”.*

#### 7.5.1.1 Distance:

*“Break the race up in shorter distances and focus on completing one section at a time”.*

*“Break it up in short manageable sections”.*

*“Break the distance into smaller pieces. Just focus on smaller piece until it is completed. Otherwise there is not much that can be done but finish and get it over with”.*

*“Plan the distance for breaks”.*

*“I give myself points which are far from each other, those points it where I will rest”.*

*“I don't think of a distance. I just walk cause I know there is the end point somewhere”.*

*“Before - train as for race. Mentally - Go through the race in my mind (imagery)”.*

#### 7.5.1.1 Wind:

*“You must try to avoid high places such as mountains and hills. You must think of cover”.*

*“When I'm very cold I mentally consider a faster pace”.*

*“Train to ride in a group (in the slipstream) and try to stay as low as possible on the bike during the race”.*

*“Open my eyes as small as possible to keep the dust out or wear sunglasses”.*

*“If possible try to move with the wind behind you”.*

*“Try to evade the wind by hiding behind an obstacle”.*

*“Correct clothing”.*

#### 7.5.1.1 Rain:

*“Keep yourself and equipment dry”.*

*“Have the right equipment and concentrate on navigation”.*

*“I cover myself to keep dry”.*

*“Protective clothing and stay out of the rain as far as possible”.*

*“I make sure that I run in the middle of the road to avoid injuries from slipping”.*

*“Make sure that you have waterproof equipment”.*

*“Walk slower and when it stops raining I change into dry clothing”.*

*“Before I start with a race I make sure that I have extra dry clothing and waterproof kit”.*

#### 7.5.1.1 Uncertainty:

*“I ask other people if unsure”.*

*“I just go and see what happens and make a plan”.*

*“Stop immediately and ask or confirm”.*

*“Make an effort to find out”.*

*“Expand my knowledge”.*

*“Just try to solve the problem and make a decision - it is better than doing nothing”.*

*“Trust your equipment and re-orientate yourself on the map”.*

*“The 7 x P's - Proper prior planning prevent uncertainty”.*

*“Make a decision and continue until I know it was right”.*

*“Sit down, relax, start at the beginning when it was still ok and fix problem”.*

*“I try to gather as much information as possible”.*

### **7.5.1.2      RESPONSES THAT CHANGE THE INDIVIDUAL’S PERCEPTION OF THE STRESSOR OR THAT CONTROL THE MEANING OF THE STRESSFUL EXPERIENCE AFTER IT HAPPENED BUT BEFORE THE EMERGENCE OF STRESS**

This coping style can entail paying selective attention to relevant stimuli and thereby concentrating on the less stressful aspects of the situation, positive comparisons that reduce the perceived severity of the stressful situation and to reduce the perceived importance of the stressful situation or the outcome of the situation in relation to one’s overall life situation. Examples of this strategy are illustrated by the following quotations:

#### **7.5.1.2 Heat:**

*“Keep on going - know it will soon end”.*

*“Tell myself I’ve been through worse or down the same road”.*

*“Focus on goals and positive things”.*



*“Stick by the pace even if it's hard. If your body is tired it is your mind causing it. It is your mind that says ‘You can carry on a little’ - it makes a difference”.*

*“Mentally the mind is in control”.*

*“No physical or mental effects because you endure. It's like sacrificing something for the benefit of something you'll do anything to get”.*

*“I just switch off my mind and drink a lot of water, and just keep on going”.*

*“I just free my mind and think of the things that lead me here”.*

#### 7.5.1.2 Cold:

*“I try to encourage my team mates through words and by showing an example”.*

*“Try to focus on something else. When possible - I try to keep warm by means of body heat or clothes”.*

*“Focus on my task not my body”.*

*“I motivate myself saying it is my imagination - it's not real”.*

*“Do something so that you don't think of the cold”.*

*“I do something like jogging, put on warm clothes, switch of my mind and carry on with what I'm doing”.*

#### 7.5.1.2 Altitude:

*"I just tell myself mentally that I can walk everywhere that other people can walk".*

*"I think of positive things".*

*"Physically you may be beaten but focus on your goal".*

#### 7.5.1.2 Dehydration:

*"I think of positive things".*

#### 7.5.1.2 Nutrition:

*"Try to go slower when I really feel bad. As soon as I have a bit of energy I try to use it effectively because it doesn't last long. Concentrate on other things than how I feel. It is extremely bad, just go - no thinking".*

*"I just forget about food and concentrate to what I am doing".*

*"Try to stay busy then it doesn't bother so much".*

*"I try not to think of food and drink a lot of water".*

*"Tell yourself that you don't need it and sleep when I can because then you're not feeling hunger".*

*"Mentally I tell myself that it will soon be over".*

*"Chewing a grass (stem) helps me! Think of other things not to get hungry".*

#### 7.5.1.2 Sleep deprivation:

*"Nothing physical - but mentally you have to force yourself not to sleep. Nothing will happen to your body physically but it is a mental obstacle".*

*"Sleep as much as you can when you get a chance. Tell yourself that you will get time to sleep".*

*"I keep on thinking if there is thinking to be done, otherwise I just talk to my team mates (any crap that you can think of) or I will fantasize and think of good things or good times".*

*"Tell yourself that it is not time for sleeping".*

*"Be prepared for less sleep".*

*"Keep on thinking of finishing the event".*

*"Try not to think of sleep too much".*

#### 7.5.1.2 Terrain:

*"See beauty in terrain and consider privilege of being there at that point".*

*"Worrying before - cope by conditioning myself to get used to the idea and visualise how I'm going to cope with it. Expect the worst - then the reality is not so tough. If there I do it and get it over with. If it's bad I convince myself that it is not so bad. If this doesn't work I just do it and get it over and done".*

*"I make sure that I am as comfortable as possible and tell myself that I will overcome this terrain".*

*"I mentally see myself on top of the hill".*

*"Take it as one more obstacle to overcome".*

*"See it as a huge challenge and work on overcoming it".*

*"Admire the view/ think of how it will look like when you get there".*

*"I understand that things such as cramps can keep me from finishing a race but I still feel like a failure and have difficulty to reconcile myself with that. I force myself to go as far as I can".*

#### 7.5.1.2 Equipment:

*“If equipment breaks - improvise and fix it or just forget about it”.*

*“I’ll tell myself the worst case scenario and make myself believe there have been worse cases and make the best of the situation”.*

*“I just tell myself that the pain in my back and shoulders won’t kill me and continue”.*

*“Just tell myself that I will get to the finish point eventually”.*

#### 7.5.1.2 Distance:

*“Concentrate on something else and just continue”.*

*“Running and silent singing or talking, running in a group at an affordable pace, re-hydrating when necessary”.*

*“Me, I do simple things, I like winning so I visualise or picture myself after finishing the event, that makes me carry on”.*

*“I motivate the participants and endure the pain”.*

*“I look around at the scenery to take my mind of the pain”.*

*“I count the distance and tell myself that others have done it so it is humanly possible”.*

#### 7.5.1.2 Wind:

*“Accept the situation as natural”.*

*“I just forget about it and carry on”.*

*“I just take off my hat and enjoy the cool”.*

*“Tell myself that the wind is cooling me down”.*

*“Wonder why I started this but then I re-focus by telling me nobody is going to finish this for me”.*

#### 7.5.1.2 Rain:

*“Convince myself that I'm getting warmer if I paddle faster”.*

*“Prepare for it and try to enjoy it”.*

*“Nothing - just endure and carry on”.*

*“You just adjust and adapt mentally”.*

*“I don't let myself give up easily - I just forget it and carry on”.*

*“I enjoy myself”.*

*“I learn to enjoy the wetness”.*

*“You have to keep on thinking that the rain keeps you from dehydration and is therefore helping you”.*

*“It's only my clothes and body not me that gets wet”.*

#### 7.5.1.2 Uncertainty:

*“I just carry on with what I'm doing”.*

*“Practice, exercise, keep pace, stay calm and block uncertainty and think positive thoughts”.*

*“Stay calm and have confidence in your decisions and control your weak points”.*

*“Know your work and be self-assured”.*

*“I did tell myself that anything that a normal human being can do - I can do as well. I will do it and it will be an extra experience for me”.*

*“Tell myself that what is ahead can’t be that bad”.*

### **7.5.1.3 STRATEGIES THAT CONTROL THE SYMPTOMS OF STRESS ITSELF AFTER IT HAS EMERGED**

This coping style does not focus on the situation itself, either directly or by changing the meaning or perception. The focus is rather on the resultant stress itself and entails basic stress management techniques. As seen in figure 7.10 and figure 7.11, only a small number of respondents (2%) used this strategy at all. The following quotations are examples of this coping strategy:

#### **7.5.1.3 Altitude:**

*“I relax and try to control my breathing”.*

*“You must just stay calm so that you do not make mistakes before any action”.*

#### **7.5.1.3 Dehydration:**

*“Relax myself and think of the facts”.*

#### **7.5.1.3 Wind:**

*“I just relax and let the wind cool me down”.*

*“I breathe in and out (deeply) and try to deal with the frustration”.*

#### **7.5.1.3 Uncertainty:**

*“Self motivation, rest and calm down”.*

*“Sit down, relax, start at the beginning when it was still ok and fix problem”.*

An important element of motivation and coping, specifically from the Salutogenic perspective, is the attitude that individual athletes have towards problems and difficulties. This philosophy will be discussed in the next section.

## 7.6 ATTITUDE TOWARDS PROBLEMS

An important element that is common to all five theories of coping is the presence of a generalised approach/orientation, attitude or belief towards life and difficult situations experienced in life that enables the individual to cope with challenges. This section will focus on the way that respondents approach problems and difficulties. The participants in this study had to answer the question: “How do you see problems and difficulties?” The responses to this question can be seen in figure 7.12.

### 7.6.1 GENERAL PERCEPTION OF DIFFICULTIES

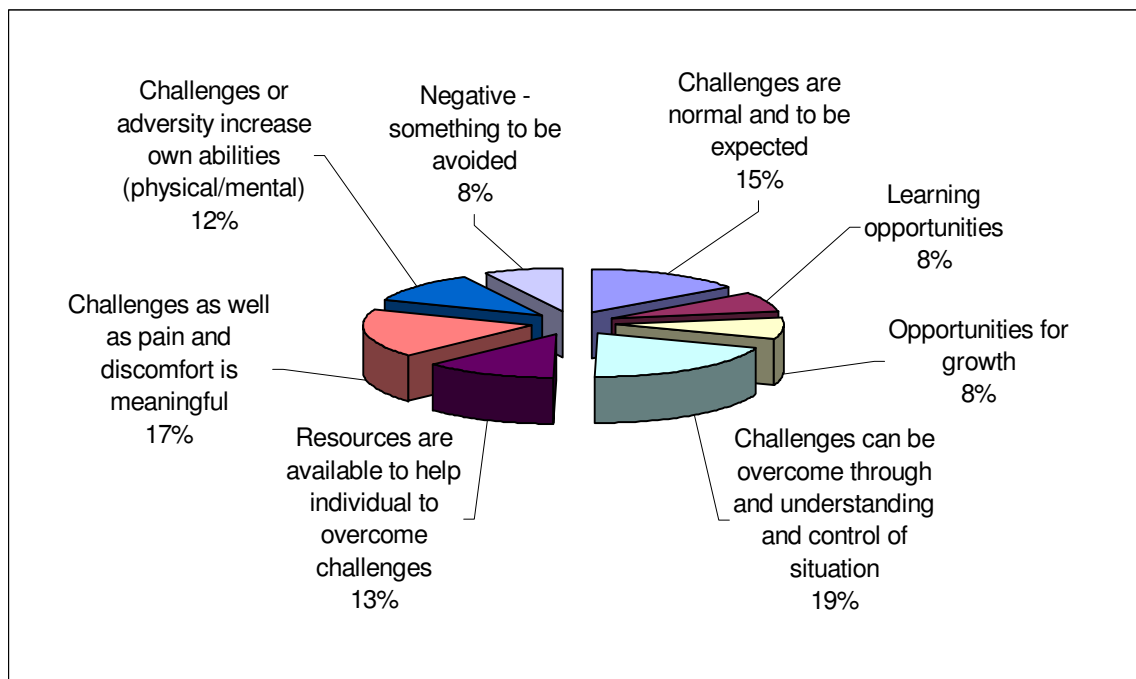


FIGURE 7.12: VIEW OF PROBLEMS/DIFFICULTIES

From figure 7.12 it is clear that the majority of respondents view problems and difficulties as something positive. Only 8% of the respondents view problems as something that is negative and that should be avoided. Those who view problems as positive believe that challenges are normal and to be expected (15%), believe that challenges can be overcome through an understanding and control of the situation (19%), believe that the resources needed to overcome these challenges are available to the individual (13%), believe that challenges as well as the pain and discomfort associated with endurance sport are meaningful (17%), believe that challenges are learning opportunities (8%) and believe challenges to be opportunities for personal growth (8%).

## 7.7 SELF-PERCEPTION OF ENDURANCE ATHLETES

Another theme that is found in all the theories of coping is that of a positive self-perception by the individual that he has the ability to cope with challenges. In actual fact, in the same manner that a positive attitude or approach to challenges is essential to cope with these challenges so is a positive self-perception of own abilities essential to cope with challenges. In this study, the respondents seem to have a perception that they are able to understand and control the outcome of most situations – specifically in endurance sport. Their own self-perception is that they can cope with the majority of stressors. This positive self-perception can be seen in figure 7.13.

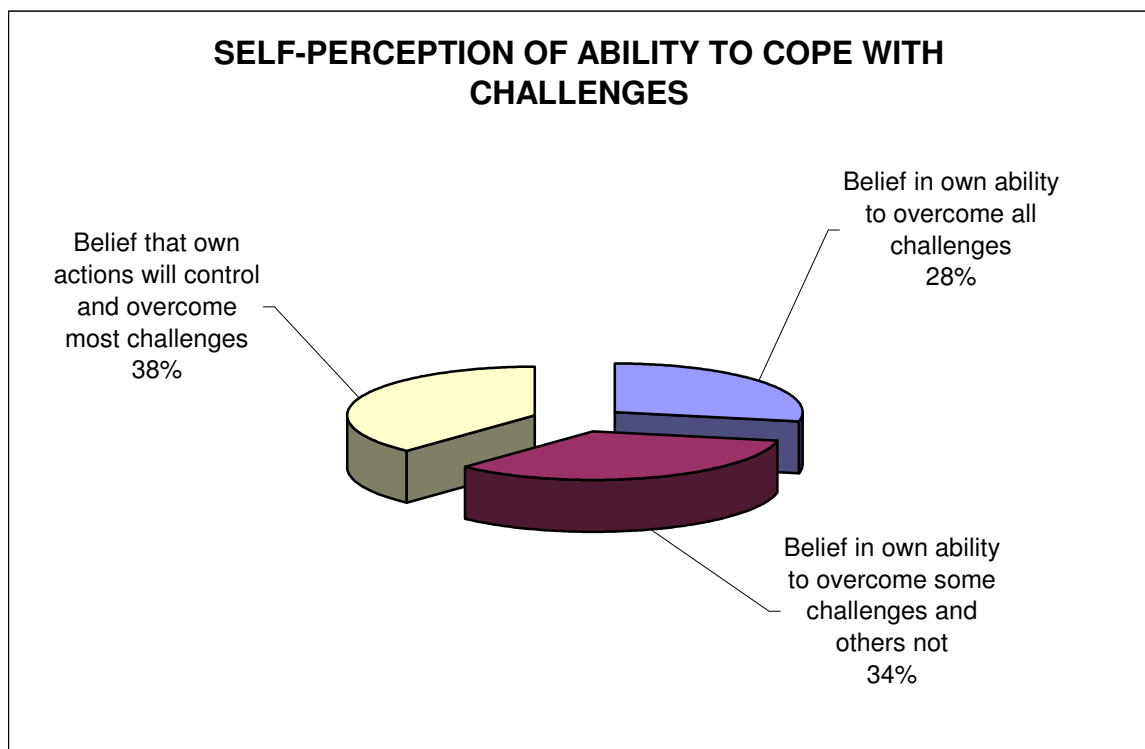


FIGURE 7.13: **SELF-PERCEPTION OF ABILITY TO COPE WITH CHALLENGES**

As seen in figure 7.13, all the athletes that participated in this study believe that they have the ability to overcome most or all challenges in endurance sport. Of these athletes, 28% believe that they have the ability to overcome all challenges in endurance sport. This is illustrated by the following responses of the athletes:

*"I tell myself that this is not yet difficult".*



*“All challenges and obstacles that must be met and overcome”.*

*“No matter what the problem is or how difficult, it can be overcome and will pass”.*

*“Everything is difficult but the mind is the deciding factor. If the body is in serious pain, the mind can decide whether to listen to the body or mind”.*

*“Problems are things that are not easy to overcome but is very much possible to overcome”.*

*“I will work it out - take it as it comes”.*

*“Just expect the worst that can happen, be prepared for it, and then it is not difficult”.*

Of the athletes that participated in the study, 38% believe that they will be able to overcome most challenges. This is illustrated by the following responses of the athletes:

*“It is part of it and unavoidable. Have to handle and overcome as it happens and make peace with it”.*

*“That if I exercise more I will be able to overcome the challenges. That I want and are going to finish what I have started - nobody else is going to finish it for me”.*

*“Mentally the mind is in control and can overcome most challenges”.*

*“Challenges can mostly be overcome”.*

*“Some problems such as wind or cold are very difficult to overcome but one can try”.*

Quite a significant part of the group (34%) believes that they have the ability to overcome some of the challenges of endurance sport. This is illustrated by the following responses of the athletes:

*“My motivation lies in completing what I have started. I'm honest enough with myself to never start with something that I know beforehand I cannot complete”.*

*“I sometimes wonder if I'm good enough to finish”.*

*“I'm sometimes uncertain whether I should go on or stop”.*

*“You will get unsure if your subject knowledge is poor or if there is a lack of control”.*

*“If I have not prepared enough I sometimes wonder if I will finish”.*

*“If I'm uncertain of the distance I get afraid and even panicky - I think it is because of my age and due to the fact that I'm not always fit enough”.*

It is probable that the 28% that believes that they will be able to overcome all challenges in endurance sport are not realistic about their ability. The remaining 72% seem to be more realistic in the self-perception.

## **7.8 SUMMARY**

In this chapter the results of the study were presented based on the qualitative analysis process as discussed in chapter 6. Focusing on the manifest themes as they emerged from the data as well as the latent themes that emerged from both the data and latent themes achieved this objective.

The results were presented under the following headings or themes that emerged from the data and were accepted after careful consideration:

- Description of the respondents;
- Perceived impact of environmental factors on performance;
- Motivational strategies used during endurance events;

- Coping strategies used during endurance events;
- Attitude towards problems/challenges;
- Self-perception of own ability to cope with the challenges of endurance sport.

In the next chapter the results as presented as well as their implications will be discussed.