ATTITUDES TOWARDS HUNTING AMONGST THE ECONOMICALLY ACTIVE PUBLIC IN PORT ELIZABETH

By

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Submitted in complete fulfilment of the requirements for the degree of Masters Technologiae in the Faculty of Science at the Nelson Mandela Metropolitan University

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DECLARATION

I, Wentzel Christoffel Coetzer (Student number: 20411675), hereby declare that:

- the content of this dissertation for my Masters in Technologiae is my own original work;

- this dissertation has not previously been submitted for assessment to another University or for another qualification; and

- all sources used or referenced have been documented and recognized.

Signature: ................................. Date: .................................

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

Wentzel Christoffel Coetzer
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SUMMARY

Wildlife ranching is recognized as one of the important agricultural industries in South Africa, with hunting being the primary segment of the game industry. Hunting is an essential part of wildlife management and it contributes significantly to the conservation of biodiversity and to the economy. Despite this, the social acceptability of hunting is often questioned and negative attitudes towards hunting within the larger society may become a potential threat to the hunting industry. This may jeopardize the effective management of game and have a negative impact on conservation and the economy.

This study is an empirical investigation of the attitudes of the economically active public in Port Elizabeth towards hunting. The objectives of this study are to investigate the nature and extent of the public’s attitudes towards hunting, as well as to identify factors influencing the public’s attitudes towards hunting. The study commenced with the establishment of a theoretical framework, based on a literature study on the psychology of human perceptions and attitudes towards hunting. The theoretical framework was then used to develop the empirical component of the study. A survey was conducted amongst a statistically representative sample of the economically active public in Port Elizabeth during 2009. The data was collected by means of personal interviews and self-administered questionnaires were used as the survey instrument.
The study found that the economically active public in Port Elizabeth generally holds favourable attitudes towards hunting, with only a small proportion of the population wanting to ban hunting. The belief that hunting endangers wildlife was the most prominent reason for opposing hunting. Negative attitudes towards hunting were largely based on incorrect beliefs regarding hunting. The extent of a person's knowledge of hunting and exposure to hunting, as well as a person's social ties had a significant influence on their attitudes towards hunting.

**Key words:** hunting industry; public; attitudes; perceptions; opinion; hunting; wildlife management.
CHAPTER 1

INTRODUCTION TO THE STUDY

1.1 INTRODUCTION

Conventional hunting, as we knew it, has been transformed completely over the years. By the end of the 20th Century, game farming and hunting were commercialized and is currently considered to be one of the important agricultural industries in South Africa (Van Niekerk, 2002, p.1 & pp.98-105). Today, hunting not only contributes significantly to the South African economy but also contributes significantly to the conservation of South Africa’s natural resources through sustainable utilization practices.

The income generated by the hunting industry could be seen as an indication of the importance of the industry to the economy of South Africa. According to Eloff (2001, p.83) the gross income for trophy and biltong hunting in South Africa was estimated to amount to R603 million in the year 2000. Since then the industry has grown even larger and currently the local hunting sector alone is worth around R2.9 billion (Bothma, Suich & Spenceley, 2009, p.154). Furthermore, hunting is by far the most important income-generating activity in the game industry (Van Niekerk, 2002, p.104). Bothma et al. (2009, p.151) estimated that 54% of the direct
gross income of wildlife ranchers was derived from local hunters and 18% from foreign trophy hunters, whereas the remaining 28% were derived from live animal sales, ecotourism and wildlife meat production. In addition to the latter, an estimated 6000 jobs are provided directly by the hunting industry in South Africa while a further 60 000 jobs are provided by secondary industries such as taxidermy, professional hunters and skinners (Bothma et al., 2009, p.154).

The impact of wildlife ranching activities on private land on biodiversity has been broadly positive (Aylward & Lutz as cited in Bothma et al., 2009, p.150). As a result of sustainable hunting practices, game numbers have increased to the point that a market had to be found for 425 000 excess game animals during 2001 (Landbouweekblad, 2001). Not only have game numbers increased dramatically, but also the total land area used for wildlife utilization. In 2007 wildlife ranches were estimated to cover 16.8% of South Africa, compared to a mere 6.1% for officially declared provincial and national protected areas (Bothma & Von Bach as cited in Bothma et al., 2009, p.149). It is thus undeniable that the game industry – of which the hunting industry is a considerable part – contributes significantly to the conservation of wildlife, natural habitats and genetic diversity, and thereby ensures a future for wildlife in South Africa.
Even though the hunting industry contributes significantly to the country’s economy and to conservation, hunting seems to have become a controversial issue that is increasingly scrutinized and challenged by various interest groups who question its morality and social acceptability (Muth & Jamison, 2000, p.21; Campbell & Mackay, 2009, p.21). Hunting as a wildlife management tool has come under increasing attack by anti-hunting organizations (Campbell & Mackay, 2003, p.181) and to date no research has been done on the public attitudes towards hunting in South Africa and, consequently, no empirical data regarding this issue is available. This lack of information leaves the hunting industry almost defenceless against the anti-hunting lobby, which may potentially jeopardize the effective management of wildlife on game ranches. As the debate over hunting continues, an objective analysis of the public’s perceptions of and attitudes towards legal hunting will provide a fundamental context for any discourse on the controversy.

This chapter will firstly identify the main research problem and sub-problems of the study, followed by a discussion on the objectives of the study. The study is then delimited to ensure that the focus of the study is clearly defined and that the limitations of the study are understood. This chapter will then discuss the significance of the research. The concepts and terminology that appear in the study are then defined, followed by a summary of the chapter.
1.2 PROBLEM STATEMENT

The conservational and economical value of the hunting industry emphasizes the importance of hunting to South Africa. Thus, people or organizations who oppose hunting are not only a threat to the future of wildlife in South Africa, but their attitudes and actions may also impact negatively on the country's economy. It is thus important to understand people's attitudes towards hunting and the factors affecting their attitudes in order to eliminate social threats which may hinder the growth and development of the hunting industry. Therefore, taking into account the strategic importance of such information to the hunting industry, as well as the lack of information on the public attitudes towards hunting, the main research question is:

**What are the attitudes of the economically active public in Port Elizabeth towards hunting?**

1.3 SUB-PROBLEMS

The research will be aimed at solving the following sub-problems, which will jointly solve the main research problem:
1.3.1 Is there any correlation between people’s attitudes towards hunting and their level of education?

1.3.2 How does age affect people’s support for or opposition to hunting?

1.3.3 How does gender affect people’s attitudes towards hunting?

1.3.4 How do attitudes towards hunting differ amongst the various ethnological groups in the study area?

1.3.5 What factors, characteristics and motivations are associated with the support for hunting and the opposition to hunting?

1.4 OBJECTIVES OF THE RESEARCH

This study aims to contribute towards the body of knowledge of the game industry, and more specifically the hunting industry. It is believed that this study will be of strategic importance to the hunting industry in South Africa. It is also hoped that this study will be a pioneer study in terms of human dimensions of wildlife in South Africa, and that it will provoke similar studies in the future.
The main objective of this study is to obtain statistical information on the perceptions of and attitudes towards hunting amongst the economically active public in Port Elizabeth. This main objective can be divided into the following specific objectives, namely:

- Determine the support for and opposition to hunting by obtaining statistical information on the rates of approval and disapproval of hunting amongst the economically active public in Port Elizabeth.

- Investigate the demographical characteristics of those who approve of hunting and those who disapprove of hunting.

- Establish what people’s motivations are for either supporting or opposing hunting.

- Identify and investigate characteristics associated with support for hunting and those associated with opposition to hunting.

- Obtain data which can be used to describe and explain attitudes toward hunting based on a number of variables.
1.5 ASSUMPTIONS

Firstly, the study will assume that different people will generally have different attitudes towards hunting. *What one perceives is a result of interplays between past experiences, one’s culture and the interpretation of the perceived* (Perception, 2008). Since people from different demographical backgrounds are very likely to have different cultures and different past experiences, it could therefore be assumed that different people will most likely perceive hunting differently. Secondly, the assumption was made that different people will have different motivations for either approving of hunting or disapproving of hunting, and that those motivations can be interpreted to understand people’s feelings towards hunting. The third and final assumption in this study was that people’s attitudes towards hunting will hold some value or importance to the hunting industry.

1.6 DELIMITATION OF THE RESEARCH

The study attempted to obtain statistically accurate figures on the attitudes of the economically active public in Port Elizabeth towards hunting. This study was also aimed at identifying and investigating characteristics associated with support for and opposition to hunting, how people’s perceptions regarding hunting differ across demographic categories, as
well as identifying people’s motivations for either supporting or opposing hunting. The delimitation of the research will now be discussed.

Firstly, the study was limited to specific geographical boundaries. The study was limited to Port Elizabeth. The study did not attempt to measure perceptions of and attitudes towards hunting for people outside of the study area. The study was subject to this geographical limitation for various reasons. The researcher had to be realistic in terms of the practicality and financial implications of the study. The researcher did not have the necessary resources and technical support at his disposal to conduct a survey over a large geographical area. Conducting public surveys over large geographical areas are extremely expensive, very time consuming, and almost an impossible task to manage without the necessary resources and support.

Secondly, after careful consideration it was decided to limit the scope of the study to a specific sub-population within Port Elizabeth. The practical aspects of conducting a statistically correct and representative public survey proved to be extremely difficult without the necessary technical support, even over a relatively small geographical area such as Port Elizabeth. The study was therefore limited to the economically active (employed) public within Port Elizabeth. It was argued that the economically active public would be the most suitable and relevant sub-
population for the purpose of this study. This is because the economically active public would most likely have a considered opinion about hunting, since this segment of the population would be able to afford recreational activities, such as photographic or hunting safaris, hiking, camping, fishing or any other form of exposure to the natural environment. Also, it is argued that the economically active public would probably be relatively informed about wildlife issues since they are more exposed to propaganda and the press. Furthermore, the economically active public covers a wide range of demographical characteristics, and thus gender, people with various levels of education, and people of different ages and ethnic groups could be included in the study.

Thirdly, the study was limited to four demographical factors, namely gender, age, ethnic groups and different levels of education. After reviewing the literature of various similar research studies (see chapter 3) it was established that these demographical characteristics were most likely to have an influence on people’s perceptions of and attitudes towards hunting. Therefore, it seemed logical to focus on the demographical characteristics which were most relevant to this study. The boundaries of these demographical characteristics that were included in the study will now be explained briefly.
Since the study was limited to the economically active public, people younger than 15 years of age were automatically excluded from the study. However, the study does include employed people of 15 years of age and older. Both genders and people of all educational levels were included in the study. The five main ethnic groups, namely whites, coloureds, blacks, Indians and Asians were included in the study.

Fourthly, this study is only a snapshot of the present situation. Research in the United States indicated that although people’s attitudes towards hunting do not change rapidly, it is subject to very slow, gradual and constant change over time (see chapter 3). Thus, the results from the research are limited to the time when the research was conducted, and it must be kept in mind that it is subjected to change over time.

Finally, this research study was specifically aimed at collecting information that would be of value to the hunting industry alone. The study was not meant to be of importance to any other segments of the game industry, for example capture and live sales of game, tourism-related activities, cropping of game (culling) etc.
1.7 SIGNIFICANCE OF THE RESEARCH

It is believed that this research could be significant in four main areas. Firstly it will give the hunting industry an indication – based on scientific research – of the social acceptability of hunting. It will thus contribute towards the existing knowledge of the game and hunting industry. Secondly, it is argued that this research can contribute towards the growth and development of the hunting industry by gaining information that will assist the industry in developing strategies to deal with social threats such as the animal rightist organizations. Also, understanding the dynamics of attitudes towards hunting can enable the hunting industry to develop strategies to promote hunting amongst the general public, and thereby improving the public’s perception of hunting over time. More importantly, this research could even assist hunting and game management associations in developing effective strategies to influence government policies and regulations to benefit the hunting industry, thereby contributing to the growth and development of the industry. Thirdly, this study will hopefully highlight the shortcomings of the existing knowledge in this regard, identify the areas where future research is necessary and serve as a starting point for similar research projects in the future within South Africa. Fourthly, this research will produce statistical figures of the current situation that can be used for comparison purposes with similar research in the future.
1.8 DEFINITION OF CONCEPTS

1.8.1 Hunting

Van Niekerk (2002, p.14) explains that hunting does not merely refer to the shooting of game animals. The hunter acquires not only the opportunity to shoot game animals, but also other tangible and intangible benefits like being in nature, socializing with friends, and the opportunity to view game. From the perspective of the hunter, the total experience associated with hunting is important (Van Niekerk, 2002, pp.14-15). However, this study does not focus on hunting from the perspective of the hunter, but rather from the perspective of the general public.

According to Heberlein and Willebrand (1998, p.1071), hunting alone is too broad an object to define, and needs to be more precisely defined. For this reason they divide hunting into three broad segments based on the motivation for hunting, namely traditional/subsistence hunting (people who are dependent on hunting for food), hunting for recreation and meat (most local hunters and biltong hunters) and hunting for recreation or sport (trophy hunting).

For the purpose of this study hunting does not only refer to the killing of wild game animals, but also to be in nature and enjoying the whole
experience while pursuing wild game animals with the intent to kill. This definition includes all types of hunting (bow hunting, rifle hunting etc.), as well as recreational hunting, hunting for meat (biltong hunting) and trophy hunting. However, it should be noted that for the purpose of this study the definition does not include traditional or subsistence hunting, professional cropping of game – otherwise known as culling – or any illegal hunting practices, such as poaching.

1.8.2 Perception

Perception is the process of attaining awareness or understanding information and to interpret this information based on one’s past experiences, knowledge and culture (Perception, 2008). In other words, perception can also be seen as the process of interpreting or understanding of information - based on one’s past experiences, knowledge and culture - which forms the basis for one’s opinions, feelings and attitudes toward the percept.

1.8.3 Attitudes towards hunting

Edward (1957, p.2) defines an attitude as the degree of positive or negative affect associated with some psychological object. Thus, attitudes towards hunting refer to the degree of positive or negative affect people
associate with hunting. Therefore, attitudes towards hunting in this study do not only refer to people’s support for or opposition to hunting, but it also refers to people’s feelings towards hunting and their motivations for approving or disapproving of it.

1.8.4 Hunting industry

According to Van Niekerk (2002, p.15), “the hunting industry does not only refer to hunting of animals, but also to related activities like accommodation of hunters, products on offer for non-hunting companions, taxidermy, products sold to hunting parties, professional hunting services (guides, trackers, professional hunters), and other activities directly related to the hunting experience”. For the purpose of this study the hunting industry is defined as all activities directly related to offering clients the opportunity to shoot game animals.

1.8.5 Game industry

The game industry covers a wider field than only the hunting industry. The game industry includes the hunting industry and all activities related to the management and utilization of game. It includes activities such as management of game herds, capture and live sales of game, tourist-related activities, cropping of game, hunting and venison sales (Van
Niekerk, 2002, p.15). For the purpose of this study the game industry will be defined as by Van Niekerk (2002, p.15), as “all activities associated with the management and utilization of game”.

1.8.6 Economically active public

For the purpose of this study the economically active public is defined as the specific section of the general public that is employed by any registered business, irrespective of the size of the business or the number of people employed.

1.9 SUMMARY

Chapter one commenced with a brief introduction to the study, in which the conservational and economical importance of the hunting industry was pointed out. This was followed by identifying the main research problem, the sub-problems and the objectives of the study. The assumptions made in the study were then discussed. This was followed by a delimitation of the research. The significance of the research was then discussed and it was pointed out that the research could be of strategic importance to the leaders in the hunting industry, and thereby contribute to the growth and development of the hunting and game industry. This was followed by definitions of concepts and important terms used in the study.
CHAPTER 2

RESEARCH METHODOLOGY

2.1 INTRODUCTION

The study was aimed at obtaining a statistically representative sample with respect to attitudes towards hunting amongst the economically active public in Port Elizabeth. When attempting to obtain a statistically representative sample of a large population, as in the case of this study, the research methodology used is of utmost importance. This is because the methodology employed will reflect just how representative and statistically correct such a sample would be. Therefore, in order to inspire confidence in the representativeness and statistical correctness of this study, a detailed discussion of the research methodology used in this study is absolutely essential. Therefore, this entire chapter is devoted to discussing the research methodology that was used in the study. This chapter commences with a brief explanation of the approaches that were followed to obtain the answers to the research question. Thereafter, the nature of the data that was required for the study is discussed, followed by the identification and discussion of the congruous research methods.
2.2 RESEARCH METHODOLOGY

By now it should be clear that this study investigated the attitudes of the economically active public in Port Elizabeth towards hunting. In order to do so, it was necessary to develop a conceptual base for this study on the psychology of human perceptions and attitudes, and also on any factors associated with the support for or opposition to hunting. Therefore, this study commenced with a literature study in order to develop the necessary theoretical base. A number of sources dealing with the psychology of human perceptions and attitudes were studied. Furthermore, a search of computerized databases was carried out to locate existing sources of information on people’s attitudes towards hunting. A number of publications and other research findings on this topic were located, which provided useful information on people’s attitudes towards hunting, as well as factors associated with the support for or opposition to hunting. The relevant information obtained from the literature is discussed in chapter 3. The next step was to collect data directly from the economically active public in Port Elizabeth concerning their attitudes towards hunting. The latter was addressed as the empirical component of the study, and is discussed in chapter 4.

Details on the methodology used to address the empirical component of this study are explained in more detail later in this chapter. It was
important to identify suitable research methodologies for collecting the required data. Leedy and Ormrod (2005, p.93) explain that when selecting a methodology, the data to be collected must first be considered, because data and methodology are inextricably interdependent. The nature of the data to be collected dictates the suitability of the various research methods (Leedy & Ormrod, 2005, p.94). The nature of the data to be collected in this study will now be investigated with a view to selecting the most suitable research methodology for the specific circumstances of this study.

2.2.1 Nature of the data

As pointed out earlier in section 2.2 above, data was required to solve the sub-problems, and hence, the research problem. After examining the nature of the data to be collected in this study, it was found that data of a primary nature was needed. Primary data could be collected from the economically active public in Port Elizabeth on their attitudes towards hunting. The primary data had to be obtained directly from the research population. To accomplish this it was necessary to obtain a statistically representative sample from the economically active public in Port Elizabeth concerning their attitudes towards hunting. This called for a quantitative research method. Furthermore, Viljoen, Van Deventer, Van Staden & Grieve (1987, p.20) distinguish between three major research
methods used by environmental psychologists, namely the experimental methods, the correlation methods, and the descriptive methods. Since the data required in this study is descriptive in nature and since experimental methods or correlation methods would not suit the nature of the required data, it was decided that descriptive research methods was suitable. To conclude this section, after considering the nature of the data it was established that descriptive quantitative research methods will best suit the nature of the data that was required.

2.3 QUANTITATIVE RESEARCH METHODOLOGY

According to Leedy and Ormrod (2005, p.107), once the nature of the required data has been considered and a decision has been taken as to whether the research should follow a quantitative or qualitative approach, the research method needs to be pinned down more precisely.

2.3.1 Selection of a suitable quantitative research method

As mentioned earlier, the collection of the primary data required a descriptive quantitative research method. Leedy and Ormrod (2005, pp. 179-185) describe observation studies, correlation research, developmental designs and survey research as possible approaches that would yield quantitative information. Mitchell and Jolley (1992, p.451)
claim that survey research is the most common quantitative method of obtaining descriptive data on people’s attitudes, values, beliefs, experiences and intentions. Furthermore, Dane (1990, p.120) states that survey research methods obtain information directly from the research population and are most appropriate for description purposes. After all the possibilities for collecting the primary data were considered, it was decided that survey methods will be the most suitable method for obtaining the primary information directly from the research population.

2.3.2 Selection of a suitable survey research method

Chambliss and Schutt (2010, p.163) describes survey research as the process of collecting information from a sample of individuals through their responses to a set of standardized questions. Leedy and Ormrod (2005, p.183) describes survey research as a method of obtaining information about a large population by surveying a representative sample of the relevant population. It involves obtaining information directly from participants by posing questions to them. The researcher surveys a population sample through structured questioning of participants, summarize their responses with percentages, frequency counts, or more sophisticated statistical indexes, and then draw inferences about a particular population from the responses of the sample (Leedy & Ormrod, 2005, pp.183-184).
A number of factors had to be considered in selecting the most appropriate survey method. To begin with, the survey sample needed to be representative of the particular population, and a means had to be found not only to involve a statistically acceptable number of respondents, but also to select the sample population correctly. In selecting a survey method, the socio-economic-demographic characteristics and diversity of the study population had to be carefully considered. Furthermore, it was necessary to inform participants about the objectives of the study and to answer any questions related to the study or the questionnaire. The latter was necessary in order to ensure accurate responses. This need, therefore, required some form of verbal interaction between the researcher and respondents. Another important consideration was the financial implications of the various survey methods, as well as the scope of the survey. The practicability of the possible survey methods also played a major role in the selection of a suitable survey method. The most limiting factors in this regard were the lack of infrastructure, finances and personnel to conduct large scale surveys. With the above in mind, one of the biggest considerations in the selection of a suitable survey method was that it should be suitable under the above mentioned circumstances and limitations.

Dane (1990, pp.128-135) and Malhotra and Birks (1999, p.225) are in agreement that survey research methods may be classified by mode of
administration into telephone interview, personal interview and mail surveys (see Figure 2.1). After comparing all three of these survey methods with reference to the criteria discussed above, it was decided that a personal interview method, otherwise known as face-to-face surveys, was the most suitable survey method.

Figure 2.1. CLASSIFICATION OF SURVEY METHODS

CAPI = Computer Assisted Personal Interview
CATI = Computer Assisted Telephone Interview


Personal interviews are a structured conversation used to conduct a survey (Dane, 1990, p.128). Personal interviews as a survey method are
classified by Malhotra and Birks (1999, p.225 & p.228) as in-home or in-office interviewing, street interviewing and computer-assisted personal interviewing. After all three possibilities were carefully considered, it was decided that personal in-office interviews will be the most suitable. Malhotra and Birks (1999, p.228) states that with personal in-office interviews, respondents are interviewed face-to-face in their workplace. This method, therefore, involves that every person who participate in the study must be personally visited by the researcher, during which the participant is posed with questions. For the researcher, the big benefit of using personal in-office interviewing is that the respondents will have the comfort and security of their office or workplace (Malhotra & Birks, 1999, p.228). Dane (1990, p.129), Leedy and Ormrod (2005, p.185) and McBurney and White (2007, p.244) all indicate that this will probably lead to better participation in the survey, as the workplace of respondents is a secure environment. If respondents are more willing to participate it leads to a better response rate and hence to more reliable and representative data.

Personal interviews as a survey research method can take on three forms, namely structured, semi-structured and unstructured interviews. In structured interviews, all respondents are asked a standard list of questions in a standard order and have the same response options. Semi-structured interviews are constructed around a core of standard
questions, but the interviewer may expand on any question in order to explore a given response in greater depth. With unstructured interviews, there is no set of standard questions and the interviewer is free to ask any questions (Mitchell & Jolley, 1992, pp.466-467).

Dane (1990, p.128) explains that the amount of structure in an interview depends on the amount of structure in the survey instrument. Leedy and Ormrod (2005, p.188) claims that quantitative studies, such as this study, typically require more structured interviews than qualitative studies. With the latter in mind, Dane (1990, p.128) explains that survey instruments such as questionnaires will impose a high degree of structure on the personal interviews. Furthermore, Leedy and Ormrod (2005, p.185) states that survey research frequently use questionnaires to learn about people’s attitudes, opinions, characteristics and behaviours. Nardi (2006, pp.71-74) indicates that three main components can usually be investigated through a questionnaire, namely behaviours, attitudes and opinions, and demographics. With the latter in mind, questionnaires seem to be compatible with the goals of this study, which is to investigate perceptions, opinions and attitudes with the purpose of describing, explaining and comparing attitudes towards hunting based on a number of variables and characteristics. Nardi (2006, p.73) claims that questionnaires are ideally suited to assess what people believe, because feelings and opinions are not readily observed and easily measured with other research instruments.
It, therefore, seemed appropriate to use questionnaires as a survey instrument during the personal interview. The questionnaire design is discussed under section 2.3.6 of this chapter.

A questionnaire will not only give structure to the personal in-office interviews, but will also ensure that each interview is identically handled. Nardi (2006, p.68) claims that questionnaires will allow for standardization of the questions, thereby increasing the reliability of the participants’ responses. According to Alreck and Settle (1985, p.220) this is a very important consideration, as the validity of a personal interview will depend, to a large extent, on the consistency and control of the interview process and questions asked.

2.3.3 Selection of a suitable research population and sample

One of the biggest challenges in this study was to select a sample that was representative of the economically active public of Port Elizabeth, and at the same time was practicable in terms of collecting the data from the sample.

Leedy and Ormrod (2005, p.145) states that a sampling method must be based on the research questions you want answered. It was already made clear that the quantitative research in this study needed to answer
the research question: What are the attitudes of the economically active public in Port Elizabeth towards hunting? Thus, the sample had to meet two important criteria. In the first place, the sample needed to be representative of the entire population of economically active people within Port Elizabeth. Secondly, the sample needed to reflect the appropriate proportions of each demographical sub-group (age, gender, ethnography, and educational levels) within the overall economically active population of Port Elizabeth. The sampling techniques and procedures that were used in this study are now discussed below.

To comply with the first requirement mentioned above, it was necessary to limit the sampling procedure to the geographical boundaries of this study – namely Port Elizabeth – and to find a way of including only the economically active public in the sample and excluding the unemployed public from the sample. To achieve this, a complete list of addresses of all the active, registered businesses in Port Elizabeth was purchased from the National Department of Trade and Industry. It is argued that by selecting the sample from such a list would automatically include only the public who is employed within Port Elizabeth and who is economically active, and exclude the unemployed public from the sample. The list consisted of a total of 31 691 addresses of registered businesses in Port Elizabeth, and it can be argued that such a comprehensive list was as complete as one can possibly get hold of. The suitability of the address
list was also discussed with a statistician, who was confident that it would produce a representative sample. Business addresses were then randomly selected from the list by using a probability sampling technique, named simple random sampling. Simple random sampling means that the sample is selected in such a way that all the possible candidates have an exactly equal chance of been selected (Leedy & Ormrod, 2005, p.199). The Microsoft Office Excel 2007 software package was used for the simple random sampling procedure. The businesses at the randomly selected addresses were then approached in person by the researcher, who then conducted the personal in-office interviews amongst their employees.

The second criteria which the sample had to meet, was that it needed to reflect the appropriate proportions of each demographical sub-group (age, gender, ethnicity, and educational levels) within the overall economically active population of Port Elizabeth. A sample is said to be biased if it represents only a specific sub-group of the studied population, or if a particular sub-group are over- or under-represented in it (Goddard & Melville, 2001, p.36). According to Leedy and Ormrod (2005, p.203) and Mitchell and Jolley (1992, p.473) proportional stratified sampling enables a researcher to select a sample in accordance with the proportions of each sub-group within the studied population. Proportional stratified sampling was thus used to select a sample amongst the employees from the
randomly selected businesses in such a way that it is in accordance with the proportions of each sub-group within the studied population. The latter is discussed further in section 2.3.4. The proportions according to which the sample had to be selected, were determined by obtaining statistical information from Statistics South Africa on the number of economically active (employed) people within Port Elizabeth (see Table 2.1), as well as on the demographical composition (gender, age distribution, levels of education and ethnicity) of the economically active population in Port Elizabeth (see Table 2.2). This statistical information was then converted into percentages to reflect the demographical proportions of the sub-groups of the economically active population in Port Elizabeth and the sample was selected accordingly. Table 2.2 represents the demographical composition of the economically active population in Port Elizabeth, as obtained from Statistics South Africa.

Table 2.1 NUMBER OF ECONOMICALLY ACTIVE (EMPLOYED) PEOPLE WITHIN PORT ELIZABETH.

<table>
<thead>
<tr>
<th>Employment status</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>226 625</td>
<td>53.61%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>196 074</td>
<td>46.39%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>422 699</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Table 2.2. DEMOGRAPHICAL COMPOSITION OF THE ECONOMICALLY ACTIVE POPULATION IN PORT ELIZABETH

<table>
<thead>
<tr>
<th>Demographical category</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>127 177</td>
<td>56.12%</td>
</tr>
<tr>
<td>Female</td>
<td>99 448</td>
<td>43.88%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>226 625</td>
<td>100%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 to 24</td>
<td>23 366</td>
<td>10.31%</td>
</tr>
<tr>
<td>25 to 34</td>
<td>69 958</td>
<td>30.87%</td>
</tr>
<tr>
<td>35 to 44</td>
<td>70 713</td>
<td>31.20%</td>
</tr>
<tr>
<td>45 to 54</td>
<td>46 390</td>
<td>20.47%</td>
</tr>
<tr>
<td>55 and older</td>
<td>16 198</td>
<td>7.15%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>226 625</td>
<td>100%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black African</td>
<td>98 016</td>
<td>43.25%</td>
</tr>
<tr>
<td>White</td>
<td>67 864</td>
<td>29.95%</td>
</tr>
<tr>
<td>Coloured</td>
<td>56 690</td>
<td>25.01%</td>
</tr>
<tr>
<td>Indian or Asian</td>
<td>4 055</td>
<td>1.79%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>226 625</td>
<td>100%</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than grade 12</td>
<td>115 019</td>
<td>50.75%</td>
</tr>
<tr>
<td>Grade 12 certificate</td>
<td>80 292</td>
<td>35.43%</td>
</tr>
<tr>
<td>National diploma</td>
<td>17 595</td>
<td>7.76%</td>
</tr>
<tr>
<td>Degree</td>
<td>11 483</td>
<td>5.07%</td>
</tr>
<tr>
<td>Post-graduate qualification</td>
<td>2 236</td>
<td>0.99%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>226 625</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sample size is a key feature of probability sampling which determines how representative a sample would be of a particular population (Goddard & Melville, 2001, p.35; Leedy & Ormrod, 2005, p.207). Therefore, in order to obtain a representative sample of the economically active population in Port Elizabeth, a statistically acceptable number of respondents were needed. The sample size had to be large enough to correctly represent a particular population (Goddard & Melville, 2001, p.35) and to ensure that an adequate sample size for each sub-division of the sample would be obtained (Bailey, 1987, p.96; Alreck & Settle, 1985, pp.89-90). The latter was an important consideration in determining an adequate sample size, although practical considerations were a limiting factor in this regard. Contrary to popular belief, the maximum practical size of a sample has absolutely nothing to do with the size of the population, provided that the population is many times greater than the sample (Alreck & Settle, 1985, p.89). The identification of a sufficient sample size will now be discussed, followed by the proportional stratified sampling procedure.

Sample size is dependent upon the degree of precision with which the researcher wishes to draw conclusions or make predictions about the population under study (Leedy & Ormrod, 2005, p.207). According to Alreck and Settle (1985, p.87), the researcher must identify a few key
variables in the survey that are most important and constitute the major reason for the study. The primary objective of this study was to measure the rate of approval and disapproval towards hunting and this was therefore considered as the key variables in the survey. Alreck and Settle (1985, p.87) continue and explain that the researcher must obtain a sense of the level of confidence desired for these key variables. The researcher consulted his promoter – who was chairman of CHASA (Confederation of Hunting Associations of South Africa) at the time of the study – in order to obtain a sense of the level of confidence which was desired. It was argued that, as a strategic leader in the hunting industry, he would have a good sense of the level of confidence desired in order to ensure that the information would be of strategic value to the hunting industry. The simplest way to define the required accuracy is to define the size of the confidence interval and the confidence level (Litvine, 2009, pers. comm.). It was decided that the confidence interval for the key variable in this study should not exceed 0.1 and the confidence probability should be 0.95. In fact this will mean that there is a 95% chance that the sample estimates will deviate from the true value of the population by no more than $0.1/2 = 0.05 = 5\%$. The above estimates of the desired confidence interval and confidence probability served as target values during sample size determination, which are discussed later in this section.
Sample size is also dependent on the nature of the population (Bailey, 1978, p.84). The variance in the population is an important consideration in this regard, and it refers to the degree to which respondents are likely to differ on the key items of the survey. Therefore, the researcher must make an estimate of the amount of variance that is likely to exist in the population towards the key variables that will be measured, before the sample size can be determined (Alreck & Settle, 1985, p.88). This variance that exists in the population towards the key survey variables is known as the probability \( p \). The probability was estimated by conducting a pilot study (see section 2.3.7) during which a sample of 50 respondents were interviewed. The major reason for this study was to measure the rate of approval and disapproval towards hunting and this was therefore considered as the key variable in the survey. The pilot study revealed that probabilities of approximately 58 percent in favour of hunting, 20 percent neutral and 22 percent opposed to hunting existed in the research population. Alreck and Settle (1985, p.88) state that the more divergent the views of respondents are regarding the key variables of the survey, the larger the sample must be in order to reach a given level of confidence. In fact this means that when the confidence interval size are important, probabilities close to \( 0.5 = 50\% \) would require the biggest sample size, whereas probabilities close to either \( 0\% \) or \( 1 = 100\% \) would require the least observations (Litvine, 2009, pers. comm.). The statistician recommended that a probability of \( 0.5 = 50\% \) be used when
calculating the sample size, irrespective of the probabilities that were estimated from the pilot study as mentioned above. When calculating sample size, using a probability of 50% would produce the highest possible number of required observations for the given confidence intervals. A larger sample size will not only decrease the effect of possible sampling bias and increase accuracy, but it will also help to maintain the size of the sub-samples. Bailey (1987, p.96) and Alreck and Settle (1985, pp.88-89) claim that when determining sample size, it is important to ensure that an adequate sample size for each sub-division of the sample will be obtained. The latter was an important consideration in determining an adequate sample size.

The statistical calculations used to estimate the sample size will now be discussed, as stipulated by Litvine (2009, pers. comm.). As specified earlier in this section, it was decided that the length of the confidence interval (\(l\)) should not exceed 0.1 and the confidence probability (\(\alpha\)) should be 0.05. The probability (\(p\)) of the key variable in the survey was set at 0.5, as discussed earlier in this section. If the number of trails \(n\) is large, then \(\hat{p}\) has a normal distribution \(N(p, \sigma^2)\), where \(p\) is the true probability and \(\sigma^2 = p(1 - p)/n\). The length of the \(\alpha\)-confidence interval may be calculated as follows:
\[ l = 2 \sigma z_{\alpha/2} = 2 z_{\alpha/2} \sqrt{\frac{p(1-p)}{n}} \]

where \( \alpha/2 = \Phi(z_{\alpha/2}) \), \( \Phi(.) \) - CDF of the Standard Normal distribution.

Solving the above for \( n \) we get:

\[ n = p(1-p) \left( \frac{2z_{\alpha/2}}{l} \right)^2 \]

The above formula was then used to calculate the required number of observations. Let \( \alpha = 0.05, l = 0.1 \) and \( p = 0.5 \), as discussed earlier in this section:

\[ n = (0.5)^2 \left( \frac{2 \times 1.96}{0.1} \right)^2 = 384.16 \]

Since \( n \) should be an integer, 384 respondents would be needed.

After it was determined that a total sample size of 384 samples was required, it was then necessary to calculate the exact number of samples that were required during the survey for each demographical sub-group in order to ensure that the sample was proportionally similar to the demographical composition of the study population. In section 2.3.3 above, the selection of a suitable research population and sample was discussed, and it was established that a proportional stratified sampling procedure was required in order to obtain a sample that would be representative of the economically active population of Port Elizabeth. Table 2.2 in section 2.3.3 represented the demographical composition of the economically active population in Port Elizabeth, as obtained from
Statistics South Africa. This statistical information was then converted into percentages to reflect the demographical proportions in each sub-group of the economically active population in Port Elizabeth. These percentages were then multiplied by the number of total samples required - namely 384 samples - in order to obtain the number of samples required in each demographical sub-group. Table 2.3 represents the number of samples required for each demographical sub-group, in order to ensure that the sample is proportionally similar to the demographical composition of the economically active population in Port Elizabeth.
Table 2.3. PROPORTIONAL STRATIFIED SAMPLING: NUMBER OF SAMPLES REQUIRED FOR EACH DEMOGRAPHICAL SUB-GROUP

<table>
<thead>
<tr>
<th>Demographical category</th>
<th>Number</th>
<th>Required percentage</th>
<th>Required sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>127 177</td>
<td>56.12%</td>
<td>216</td>
</tr>
<tr>
<td>Female</td>
<td>99 448</td>
<td>43.88%</td>
<td>168</td>
</tr>
<tr>
<td>TOTAL</td>
<td>226 625</td>
<td>100%</td>
<td>384</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 to 24</td>
<td>23 366</td>
<td>10.31%</td>
<td>40</td>
</tr>
<tr>
<td>25 to 34</td>
<td>69 958</td>
<td>30.87%</td>
<td>118</td>
</tr>
<tr>
<td>35 to 44</td>
<td>70 713</td>
<td>31.20%</td>
<td>120</td>
</tr>
<tr>
<td>45 to 54</td>
<td>46 390</td>
<td>20.47%</td>
<td>79</td>
</tr>
<tr>
<td>55 and older</td>
<td>16 198</td>
<td>7.15%</td>
<td>27</td>
</tr>
<tr>
<td>TOTAL</td>
<td>226 625</td>
<td>100%</td>
<td>384</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black African</td>
<td>98 016</td>
<td>43.25%</td>
<td>166</td>
</tr>
<tr>
<td>White</td>
<td>67 864</td>
<td>29.95%</td>
<td>115</td>
</tr>
<tr>
<td>Coloured</td>
<td>56 690</td>
<td>25.01%</td>
<td>96</td>
</tr>
<tr>
<td>Indian or Asian</td>
<td>4 055</td>
<td>1.79%</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>226 625</td>
<td>100%</td>
<td>384</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than grade 12</td>
<td>115 019</td>
<td>50.75%</td>
<td>195</td>
</tr>
<tr>
<td>Grade 12 certificate</td>
<td>80 292</td>
<td>35.43%</td>
<td>136</td>
</tr>
<tr>
<td>National diploma</td>
<td>17 595</td>
<td>7.76%</td>
<td>30</td>
</tr>
<tr>
<td>Degree</td>
<td>11 483</td>
<td>5.07%</td>
<td>19</td>
</tr>
<tr>
<td>Post-graduate qualification</td>
<td>2 236</td>
<td>0.99%</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>226 625</td>
<td>100%</td>
<td>384</td>
</tr>
</tbody>
</table>
2.3.5 Sampling error

The results from the survey are discussed in chapter 4 of this study. Throughout this study all sample estimates from the survey are reported with 95% confidence that the true value for the population lies within a specified margin of error, namely the confidence intervals. The statistical procedure that was used to calculate the 95% confidence intervals for the various sample estimates in this survey will now be discussed below, as stipulated by Litvine (2009, pers. comm.).

In order to calculate the 95% confidence intervals for the sample estimates the confidence probability ($\alpha$) should be set at $1 - 0.95 = 0.05$. The probability ($p$) of the sample estimate in the survey should be set according to the probabilities that was obtained for the specific variable during the survey. The length of the $\alpha$-confidence interval may be calculated as follows:

$$l = 2\sigma_{\alpha/2} = 2z_{\alpha/2} \sqrt{\frac{p(1-p)}{n}}$$

Where: $\alpha/2 = \Phi(z_{\alpha/2})$, $\Phi(.)$ - CDF of the Standard Normal distribution

$$\sigma^2 = p(1-p)/n$$

$p =$ probability

$n =$ sample size
For explanatory purposes an example of the above procedure will now be given using a sample estimate that was obtained from the actual survey. It was found that 59 respondents out of a sample of 384 respondents felt that nobody should be allowed to hunt, thus giving a probability of $59 \div 384 = 0.15$. The formula discussed above was then used to calculate the 95% confidence interval for the sample estimate. Therefore, let $n = 384$, $p = 0.15$, and for a 95% confidence probability $\alpha = 1 - 0.95 = 0.05$:

$$ l = 2 \times 1.96 \sqrt{\frac{0.15(1 - 0.15)}{384}} = 0.071 $$

This indicates that there is a 95% certainty that this specific sample estimate from the survey deviates from the true value for the population with no more than $0.071 \div 2 = 0.036 = 3.6\%$. In other words there is a 95% statistical probability that the true value for the population lies in the range $15\% \pm 3.6\%$ (between 11.4% and 18.6%).

According to Dillman (2000, p.206) the 95% confidence intervals for some key variables can also be calculated using the formula below. However it should be noted that this is a simplified version of the formula and is limited to calculating the maximum sampling error only in the case of a probability split of 50:50. This calculation is therefore most conservative, because a probability of 50% would produce the highest possible number of required observations for the given confidence intervals. With a sample
size of 384 and a population size of 226,625 economically active people in Port Elizabeth (see table 2.1 and table 2.2), this simplified formula produce a sampling error of ± 5 at a 95% statistical probability. This means that if the survey were conducted 100 times on different samples that were selected in the same way, the findings of 95 out of the 100 surveys would fall within plus or minus 5 percentage points of each other. This was established to be an acceptable level of confidence earlier in section 2.3.4. Because of the limitations of this formula it was not used to calculate the 95% confidence intervals for the sample estimates of this survey, and it is merely mentioned as additional information in support of the discussion in section 2.3.4.

\[
B = \left( \sqrt{N_p \left( \frac{0.25}{N_s} - 0.25 \right)} \right) \frac{1}{\sqrt{N_p - 1}} \quad (1.96)
\]

Where: \( B \) = maximum sampling error (as decimal)

\( N_p \) = total population size (population size of 226,625)

\( N_s \) = sample size (384 respondents surveyed)


2.3.6 Questionnaire construction

Schnetler, Stoker, Dixon, Herbst & Geldenhuyys (1989, p.44) emphasizes the importance of a well designed questionnaire, and state that it will
increase the reliability and validity of the research results, but a poorly designed questionnaire can invalidate the research results.

It was already established earlier in this chapter that this survey will be conducted as personal in-office interviews (face-to-face interviews), and that questionnaires will be used as a survey instrument. The questionnaire is the data collection tool, and it must be guided by the goals of the research questions of the study (Punch, 2003, p.30). The goals of the research questions must ultimately determine the ideal design of the questions and the construction of the questionnaire (Nardi, 2006, p.73). The design of the questions in the questionnaire will firstly be discussed with specific reference to question content, question format, question types and wording of the questions. Thereafter, the design of the questionnaire will be discussed with specific reference to the question order, questionnaire length and questionnaire format.

2.3.6.1 Question content

Chambliss and Schutt (2010, p.164) claim that the selection of good questions are the single most important concern for survey researchers. The primary purpose of the questions is to meet the objectives of the survey (Oishi, 2003, p.22). It is essential to ensure that the content of every question is in line with the goals of the study and is aimed at
addressing the research problem (Leedy & Ormrod, 2005, p.192). The researcher established what the content of the questions should be by conducting a literature study, which is discussed in chapter 3. The researcher studied a number of relevant publications and similar research projects which provided very useful information on people’s attitudes towards hunting as well as factors associated with the support for or opposition to hunting. The literature, thus, revealed to the researcher what questions would be of importance and the content of the questions were developed accordingly. Therefore, in designing the question content, the researcher was guided by the knowledge that was obtained through studying other similar research studies (see chapter 3). Chambliss and Schutt (2010, p.164) agree with the latter approach and state that question writing for a survey may begin with a review of similar studies that was previously conducted and that surveys may contain questions that were previously used in similar studies.

All the questions for this study were checked for relevance in terms of the information sought, namely details of attitudes towards hunting. The question content will also make it possible to establish what people’s motivations are for either supporting or opposing hunting. Furthermore, the question content was designed to also produce important information which could be used to identify characteristics associated with support for hunting and characteristics associated with opposition to hunting. Lastly,
the question content was designed to obtain data which could be used to explain attitudes towards hunting based on a number of variables.

Schnetler et al. (1989, pp.45-46) distinguished between four types of questions with regard to question content. These four types of questions, which were used in designing the question content of the questionnaire, are discussed below.

Firstly, there are factual questions, which can provide the researcher with factual information. Factual questions are generally used to obtain demographical information and personal information of respondents (Schnetler et al., 1989, p.45). Factual questions were asked in section A of the questionnaire to obtain the demographical information of respondents. This demographical information was used to identify demographical characteristics associated with the support for and opposition to hunting and also to explain perceptions of and attitudes towards hunting across a number of demographical variables.

Secondly, there are questions on opinions and attitudes, which produce information regarding the feelings, convictions, ideas, presuppositions and values related to the subject being researched (Chambliss & Schutt, 2010, p.165; Schnetler et al., 1989, p.45). Questions on opinions and attitudes were also asked in the questionnaire and were considered to be very
important to solve the main research question. These questions were designed to establish attitudes and feelings towards hunting, perceptions of and preconceived ideas about hunting, as well as reasons for either supporting or opposing hunting.

Thirdly, there are so called information questions, which are designed to discover what respondents know about certain events, how much they know about it and the source of their information. Knowledge of, and exposure to a particular matter is related to particular beliefs, which in turn is related to attitudes towards it (Schnetler et al., 1989, p.46). The content of the information questions in the questionnaire were aimed at determining how much respondents knew about hunting and whether respondents have been exposed to hunting. This information was necessary to identify characteristics (such as exposure to hunting and people’s knowledge of hunting) associated with the support for and opposition to hunting.

Fourthly, there are behavioural questions, which enable the researcher to learn more about a specific behaviour (Schnetler et al., 1989, p.46). Behavioural questions focus on what people do (Chambliss & Schutt, 2010, p.165). Behavioural questions were used to determine whether or not a person participates in hunting activities and whether or not they belong to a hunting organization or an anti-hunting organization. This
information was used to compare behavioural characteristics of those who support and those who oppose hunting across a number of variables.

2.3.6.2 Question format

Two basic question formats can be used in survey research, namely open-ended questions or closed-ended questions (Bailey, 1987, pp.117-118; Saris & Gallhofer, 2007, p.125). Open-ended questions, also known as unstructured questions, require respondents to express their responses using their own words and ideas. Open-ended questions are used for complex questions that cannot be answered in a few simple categories but require more detail and discussion. Closed-ended questions, also known as structured questions, give respondents standardized answers to select from. Closed-ended questions should be used when the answer categories are discreet and relatively few in number (Nardi, 2006, pp.73-74).

After considering the possible question formats, it was decided to make use of closed-ended questions, otherwise known as structured questions. Dane (1990, p.129) supports this decision and agree that when conducting personal interviews as a survey method, structured questions is the most effective means for ensuring responses based on an accurate understanding of the question. He continues by claiming that structured
interviews are also very effective when particular members, such as employed individuals (as in the case of this study), comprise the sample. Furthermore, he states that the primary emphasis of a structured personal interview is gaining information about the subjective perceptions of respondents (as in the case of this study).

2.3.6.3 Question types

According to Schnetler et al. (1989, pp.51-56) there are various types of questions that would meet the needs of this study. The different types of questions which were used in the questionnaire will now be discussed briefly.

According to Leedy and Ormrod (2005, p.185) attitudes and opinions are often quite complex and not easily evaluated or quantified, but they argue that these obstacles can be overcome by incorporating Likert scales into the questionnaires. Furthermore, a Likert scale is useful to evaluate people’s behaviour, attitude, or other phenomenon of interest (Schnetler et al., 1989, p.68). For this reason, it seemed appropriate to make use of Likert scale type questions. The Likert scale requires that respondents choose between a number of categories of response, giving an indication of the degree of agreement or disagreement with the statement or attitude measured. Question 8 in the questionnaire is based on the Likert scale
type questions, and it evaluates various aspects of the economically active public’s attitudes towards hunting on a continuum of “strongly approve” to “strongly disapprove”.

Dichotomous questions were the most frequently used type of questions in the questionnaire and are found in questions 1, 5, 6, 7, 11, 12 and 15. A dichotomous question allows for only two response options, and these types of questions are generally used to obtain factual information or to obtain a point of view on some subjects (Schnetler et al., 1989, p.51).

A multiple-choice question provides three or more possible response categories from which the respondent must choose. The advantage of such a question is that more alternatives allow for finer distinctions between viewpoints. This type of question is commonly used to obtain information which can logically be grouped into reasonably fixed categories. (Schnetler et al., 1989, pp.51-53). The questionnaire contains three multiple-choice questions, namely questions 2, 3, 4 and 13. Multiple-choice questions were primarily used in the questionnaire for collecting demographical information of the respondents.

A filtering question is used in situations where too many possible answers exist to classify them into different response categories. A filter question is then used to divide the test sample population into sub-classes relevant
to the subject under investigation. After sub-classification has taken place, further information is obtained through follow-up questions (Chambliss & Schutt, 2010, p.166; Schnetler et al., 1989, p.54). Question 9 in the questionnaire was a scaled question type and acted as a filtering question. After question 9, instructions were given to answer specific follow-up questions, depending on the answer that was given to question 9. The question divided the test sample population into three sub-classes, namely respondents who disapprove or strongly disapprove of hunting, respondents who feel neutral towards hunting and respondents who approve or strongly approve of hunting. Respondents who felt neutral were instructed not to complete the rest of the questionnaire. Each one of the two remaining sub-classes was required to complete follow-up questions. Respondents who disapproved or strongly disapproved of hunting were instructed to complete questions 10 to 12, whereas respondents who approved or strongly disapproved of hunting were instructed to complete questions 13 to 15.

Rank order questions are a type of question where the respondent is asked to rank items, for example in terms of importance or preferences by allocating a relative value to it. Such questions are normally used to establish only the one, two or three most important aspects or characteristics (Schnetler et al., 1989, pp.54-55). Since the data obtained through a rank order question is extremely difficult to analyze, it was
decided to ask respondents to simply select one, two or three of the possible responses they feel strongest about, without ranking them in order of importance. Questions 10 and 14 in the questionnaire are rank order question types.

2.3.6.4 Wording of the questions

Schnetler et al., (1989, p.56) warns that the manner in which questions are formulated can often lead to misrepresentation of results. Guidelines provided by Kumar (1999, pp.119-121), Nardi (2006, pp.78-80), Oishi (2003, pp.25-28) and Schnetler et al. (1989, pp.56-64) were used to select the wording of the questions in the questionnaire. The relevant aspects that were taken into account with the wording of the questions will now be discussed briefly.

In wording questions it is necessary to take into account the language proficiency and educational level of the respondents. The respondents in this study consisted of employed people in Port Elizabeth with different educational levels and a number of different language groups. For this reason, extra care was taken to simplify the wording of questions, as well as the instructions for completing the questionnaire.
Questions were worded in such a way that they were short, simple and specific. The use of technical terms was avoided and words that are easy to understand were used. Ambiguous and vague questions were also avoided at all cost, because it would lead to incorrect or obscure answers. Furthermore, general questions were avoided where specific answers were required. Care was also taken not to ask double-barrelled questions, which attempt to measure two things at the same time.

Extra care was taken to avoid leading and loaded questions. Leading and loaded questions are generally not neutral. Leading questions direct respondents’ attention to a specific type of response. Loaded questions are worded in such a way that they unconsciously lead respondents towards a specific response. Finally, questions were also worded carefully to avoid presumptions as far as possible.

2.3.6.5 Question order

Once the design of the questions in the questionnaire is complete, the order of the questions must be planned. The order of questions in a questionnaire is important because it may influence how respondents react to the questionnaire as a whole and how some questions are answered, consequently affecting the quality of the responses obtained (Schutt, 2004, p.244). Oishi (2003, p.49) explains that the researcher
must consider the possibility of question-order effects, where respondents’ exposure to one question might influence how subsequent questions are answered. The guidelines of Bailey (1987, pp.131-135), Oishi (2003, pp.39-49), Schnetler et al. (1989, pp.82-84) and Schutt (2004, pp.244-245) that were taken into account in this regard are briefly discussed below.

The questionnaire must begin with easy, non-threatening questions which will put the respondent at ease. General questions can be asked first, followed by more specific ones. Demographical questions were asked first, followed by general questions regarding hunting. The more specific questions regarding hunting were asked later in the interview. This approach has the advantage of the respondents becoming accustomed to the interview situation, but it also gives information regarding variables influencing refusals, should the respondent not wish to complete the questionnaire any further for some reason.

The invert funnel method was incorporated into the questionnaire. This method is useful if the researcher is uncertain whether or not all of the respondents already have established views on the subject. The researcher suspected that although there are people who already have strong views in support for and opposition to hunting, many people may not have established views regarding hunting. For this reason the
introductory questions in the questionnaire must be directed at obtaining systematic opinions with regard to the spectrum of specific aspects concerning the broad themes. By doing so the respondent is thus led to the formation of a considered opinion on the broader subject that the researcher requires information about.

Questions must be grouped according to subject and must be arranged logically. This will enable the respondent to understand the relationship between the questions. It is important that questions be asked in a chronological order.

When changing from one subject to another, introductory remarks should be made explaining what the following set of questions embrace. Introductory remarks and explanations were made verbally by the researcher during the personal in-office interview, as well as by instructions on the questionnaire itself.

Questions that require similar responses must be grouped together. However, at the same time care must be taken to ensure that questions and response choices do not become monotonous and tiring.
2.3.6.6 Questionnaire length

The length of the questionnaire is determined by what the researcher needs to know, the number of questions required, the type of survey and the type of respondent (Schnetler et al., 1989, p.85). Gillham (2007, pp.39-41) emphasizes that the overall length of a questionnaire is critical and therefore the researcher needs to ensure that there are not too many questions on the questionnaire and that every question deserves its place. It is generally suggested that a questionnaire should be as short and simple as possible. The questionnaire in the study was limited to only 5 pages. According to Gillham (2007, p.39) four to six pages can generally be considered as the tolerable maximum length of a questionnaire. Care was taken to ensure that the questionnaire was not crowded by allowing sufficient blank spaces between questions.

2.3.6.7 Questionnaire format

Schnetler et al. (1989, p.86) gives guidelines for creating a questionnaire with an effective format and layout. They recommend that the questionnaire should be attractive. The layout must be logical and the physical layout must be consistent to avoid confusion. The questionnaire format must be designed to be as respondent friendly as possible. Care must also be taken to allow for adequate spacing between items to ensure
that all of the questions or instructions on the questionnaire are noted by the respondent. Large bold lettering is preferable in the case of directions and instructions to the respondent. Instructions must be clear, and not lead to any confusion. Lastly, the questionnaire should also consist of a realistic number of items.

2.3.7 Pre-testing

Bailey (1987, p.141) regards pre-testing as the final stage in the questionnaire design. Litwin (2003, p.66) emphasizes the importance of pre-testing in the development of a survey instrument and explains that pre-testing is a critical step in assessing the practical application of the survey instrument. Nardi (2006, pp.95-96) explains that pre-testing is the best way of assessing whether the questionnaire has any flaws, the instructions are adequate, the wording of the questions and format are clear, the questionnaire takes a reasonable time to complete, and to ensure that the questionnaire produces the required information.

According to Schnetler et al. (1989, p.87) pre-testing may be done in two steps. Firstly, the questionnaire can be informally tested by subjecting it to the criticism, comments and inputs of people who are familiar with the study and people who are familiar with the principles of question construction. Secondly, the questionnaire can be tested formally by
asking a small sample of persons who represent the study population, to complete the questionnaire.

The questionnaire was informally tested firstly by presenting it to the promoter for comments. Secondly, the statistician who was involved in this study was also asked to comment on the final questionnaire. Based on a few comments and recommendations from the promoter and statistician, a number of changes were made as part of the final refinements before testing the questionnaire formally.

The questionnaire was formally tested by interviewing a number of respondents who represented the study population. The researcher approached 16 businesses from the list of addresses which was randomly selected earlier in the study (see section 2.3.3), and 50 personal in-office interviews were conducted among their employees, during which respondents were asked to complete a questionnaire. The formal testing confirmed that the questionnaire satisfied all the necessary requirements, and that the questionnaire was able to produce the required information.

2.3.8 Administering the personal in-office interviews and questionnaires

As discussed earlier, it was concluded that a personal interview method – otherwise known as face-to-face surveys – was a suitable survey method.
This implied that every person who participated in the study had to be personally visited by the researcher. Questionnaires were used as a survey instrument during the personal interviews. Nardi (2006, p.67) states that when questionnaires are used as a survey instrument for the personal interviews, the researcher has two basic options, namely self-administered and interviewing. Nardi (2006, p.67) claims that self-administered questionnaires are best designed for investigating attitudes and opinions that are not usually observable, and for describing characteristics of a large population. Oppenheim (1992, p.103) states that self-administered questionnaire is usually presented to the respondents by an interviewer, as in the case of this study. Personal interviews have the advantage that the interviewer can establish rapport with the people being interviewed (McBurney & White, 2007, p.244). The interviewer explains the purpose of the inquiry to the respondent, where after the respondent is left alone to complete the questionnaire. This method of data collection ensures a high response rate, accurate sampling and a minimum of interviewer bias, while permitting interviewer assessments, providing necessary explanations and giving the benefit of a degree of personal contact (Oppenheim, 1992, p.103). Dane (1990, pp.128-129) agrees that the presence of the researcher is important for establishing rapport, providing instructions and answering questions that the respondent may have.
The businesses on the list of randomly selected addresses (see section 2.3.3) were approached by the researcher. The researcher introduced himself, explained the purpose and nature of the study, and requested their assistance. In most cases, businesses were very cooperative and willing to assist and consequently a high response rate was obtained during the survey (see section 2.3.9). However, in the case where a business was not willing to allow their employees to participate in the survey, the researcher took note of the reason for their unwillingness (see section 2.3.9) and simply moved on to the next address on the randomly selected list.

Written directions were provided on the questionnaires to guide respondents. Participants were also orally given clear instructions by the researcher on how to complete the questionnaire. The researcher answered all questions that the respondents had. McBurney and White (2007, p.244) express concern that the presence of the interviewer may create an atmosphere where respondents say what they think the interviewer wants to hear. For this reason the researcher tried not to reveal his personal opinion on the subject at hand. As a further measure to prevent interviewer bias, participants were then left on their own to complete the questionnaire. This was done in order to ensure accurate sampling and minimize interviewer bias (Oppenheim, 1992, p.103).
The survey took place over a relatively long period of time, commencing at the beginning of August 2009 and continuing into the first week of December 2009. The researcher had limited time, finances and assistance, which made it difficult to conduct the survey over a shorter period of time. It was established from similar research done in the United States that people’s attitudes towards hunting does not change rapidly, but instead it changes relatively slowly over a long period of time (see chapter 3). Research conducted between 1974 and 1984 in the United States concluded that relatively little change in the attitudes towards deer hunting has occurred over the 10 year period (Heberlein & Willebrand, 1998, pp.1072-1073). For this reason it can be argued that there is no need to feel concerned that the research results would be influenced by the relatively long period over which the survey took place.

2.3.9 The response

Response rate in survey research refers to the percentage of individuals in the sample who was willing to participate and completed the survey (McBurney & White, 2007, p.245). Response rate is simply the number of people who completed the survey divided by the number of people sampled (Fowler, 2009, p.50). A high response rate is extremely important, as low response rates may invalidate the research results because of differences between individuals who respond and those who
don’t (McBurney & White, 2007, p.245). The quality of the data is thus a direct function of the response rate (McBurney & White, 2007, p.247). The response rate varies significantly among methods of administration (McBurney & White, 2007, p.246). As was discussed earlier, the survey for this study was administered through personal interviews – otherwise known as face-to-face surveys. Oppenheim (1992, p.103) states that this method of data collection ensures a high response rate. Of the 139 businesses that was approached for this research project, a total of 128 agreed to participate in the survey, representing a response rate of 92.1%. Fowler (2009, p.51) argues that – although there is no scientific standard for a minimum acceptable response rate – a response rate as high as was obtained in this survey will ensure that the sample estimates are still representative of the studied population as a whole.

It was discussed earlier in section 2.3.3 that proportional stratified sampling was used to select a sample from the employees of the randomly selected businesses. In section 2.3.4 the exact number of samples that were required for each demographical sub-group was determined in order for the sample to be proportionally similar to the demographical composition of the study population. The researcher experienced some difficulty in obtaining a sample that reflected the exact same proportions of the required samples, as determined in section 2.3.4. Table 2.4 shows the number of samples and proportional percentage that
was required, versus the number of samples and the proportional percentage that was obtained during the survey. Although the researcher was able to obtain the exact number of samples that were required in most of the demographical sub-groups, there were some exceptions where the number of samples obtained deviated from that of the number of samples that were required. As can be seen in Table 2.4 these deviations were very small in most instances and will now be discussed with respect to potential bias on the survey results. In the ethnic sub-group of black African, 161 samples were obtained instead of 166 samples, which is a mere \((166 - 161) \div 166 = 3\%\) difference in the proportional percentage that was required for the specific sub-group, and a mere \((166 \div 384) - (161 \div 384) = 1.3\%\) difference in the proportional percentage that was required for the total sample. In the ethnic sub-group of Indian or Asian, 12 samples were obtained instead of 7 samples, which is a difference of \((12 - 7) \div 12 = 41.7\%\) in the proportional percentage that was required for the specific sub-group, but a mere \((12 \div 384) - (7 \div 384) = 1.3\%\) difference in the proportional percentage that was required for the total sample. Since this sub-group made out an extremely small proportion of the total sample population the statistician did not express any concerns that this will bias the survey results significantly. If, however, this small difference might have had an influence on the survey results, it can be argued that the results would be influenced in such a way that it would increase the percentage of opposition towards hunting. In
other words, if the small difference in the proportional percentage of the ethnic sub-group of Indian or Asian had an influence on the survey results, the respondents’ attitudes towards hunting would appear to be more negative than it actually is. The reason for the latter argument is because the survey results found that the ethnic group of Indians or Asians is much more likely to disapprove of hunting than any of the other ethnic groups in the study (see chapter 4). In all the sub-groups of educational levels, the number of samples that were obtained was different from the number of samples that were required. At first, the researcher was concerned that this would bias the survey results. However, a statistical test, namely Pearson Chi-square ($\chi^2$) test, revealed that there is no significant difference ($p = 0.2129$) in the rate of approval or disapproval towards hunting between the various educational levels of the sample (see chapter 4). Therefore, the researcher can confidently argue that although the number of samples obtained for the various educational levels were different from the number of samples that were required, the survey results will not be biased by it in any significant way.
Table 2.4. PROPORTIONAL STRATIFIED SAMPLING RESPONSE:
SAMPLE REQUIRED FOR EACH DEMOGRAPHICAL SUB-GROUP AND SAMPLE OBTAINED

<table>
<thead>
<tr>
<th>Demographical category</th>
<th>Required number</th>
<th>Required percentage</th>
<th>Obtained sample</th>
<th>Obtained percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>216</td>
<td>56.25%</td>
<td>216</td>
<td>56.25%</td>
</tr>
<tr>
<td>Female</td>
<td>168</td>
<td>43.75%</td>
<td>168</td>
<td>43.75%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>384</td>
<td>100%</td>
<td>384</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 to 24</td>
<td>40</td>
<td>10.42%</td>
<td>40</td>
<td>10.42%</td>
</tr>
<tr>
<td>25 to 34</td>
<td>118</td>
<td>30.73%</td>
<td>118</td>
<td>30.73%</td>
</tr>
<tr>
<td>35 to 44</td>
<td>120</td>
<td>31.25%</td>
<td>120</td>
<td>31.25%</td>
</tr>
<tr>
<td>45 to 54</td>
<td>79</td>
<td>20.57%</td>
<td>79</td>
<td>20.57%</td>
</tr>
<tr>
<td>55 and older</td>
<td>27</td>
<td>7.03%</td>
<td>27</td>
<td>7.03%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>384</td>
<td>100%</td>
<td>384</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black African</td>
<td>166</td>
<td>43.23%</td>
<td>161</td>
<td>41.93%</td>
</tr>
<tr>
<td>White</td>
<td>115</td>
<td>29.95%</td>
<td>115</td>
<td>29.95%</td>
</tr>
<tr>
<td>Coloured</td>
<td>96</td>
<td>25.00%</td>
<td>96</td>
<td>25.00%</td>
</tr>
<tr>
<td>Indian or Asian</td>
<td>7</td>
<td>1.82%</td>
<td>12</td>
<td>3.13%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>384</td>
<td>100%</td>
<td>384</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than grade 12</td>
<td>195</td>
<td>50.78%</td>
<td>142</td>
<td>36.98%</td>
</tr>
<tr>
<td>Grade 12 certificate</td>
<td>136</td>
<td>35.42%</td>
<td>175</td>
<td>45.57%</td>
</tr>
<tr>
<td>National diploma</td>
<td>30</td>
<td>7.81%</td>
<td>35</td>
<td>9.11%</td>
</tr>
<tr>
<td>Degree</td>
<td>19</td>
<td>4.95%</td>
<td>23</td>
<td>5.99%</td>
</tr>
<tr>
<td>Post-graduate qualification</td>
<td>4</td>
<td>1.04%</td>
<td>9</td>
<td>2.34%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>384</td>
<td>100%</td>
<td>384</td>
<td>100%</td>
</tr>
</tbody>
</table>
McBurney and White (2007, p.247) deem it necessary to record all refusals to participate in a survey and to note the reasons for their refusal. This is important because people's reasons for refusing to participate will indicate to what extent refusals to cooperate may have influenced the research results. In this study all of those who refused seemed to have had the same reason for not being willing to participate in the survey. They claimed that they were too busy, or didn't have the time to complete the questionnaire. The researcher regarded this as a reasonable excuse, since the survey was conducted amongst employed people during working hours. The reasons for refusing to participate had nothing to do with the subject under investigation, namely attitudes towards hunting. Therefore, the researcher argues that the refusals had very little effect – if any – on the survey results.

2.3.10 Capturing and Processing of the data

The Microsoft Office Excel 2007 software package was used for capturing the data. The Institute for Statistical Consultation at Nelson Mandela Metropolitan University undertook the processing of the data. The software package Statistica version 9.0 was used for the statistical analysis.
Two statistical tests were frequently used to process and analyze the data, namely the Pearson Chi-squared ($\chi^2$) test and Cramer’s V test. Pearson Chi-squared ($\chi^2$) test was used to determine whether or not there were a significant relationship between various variables. Pearson Chi-squared ($\chi^2$) tests were conducted using the following formula:

$$ \chi^2 = \sum \frac{(f_0 - f_e)^2}{f_e} $$

Where:  

- $f_0$ = observed frequencies  
- $f_e$ = expected frequencies

Although Pearson Chi-squared ($\chi^2$) test can determine whether there is a significant relationship between variables, it does not say just how significant and important the relationship is. For this reason a post-test, called the Cramer’s V test were used to give this additional information. Cramer’s V tests were conducted using the following formula:

$$ Cramer's \ V = \frac{\chi^2}{\sqrt{n(k-1)}} $$

Where:  

- $k$ = the smaller of the number of rows or columns  
- $n$ = sample size  
- $\chi^2$ = Chi-squared value
2.4 SUMMARY

In this chapter it was pointed out that the study attempted to investigate the attitudes of the economically active public in Port Elizabeth towards hunting. This was done in two distinct steps. Firstly, a literature study was conducted in order to develop a theoretical basis for the study on the psychology of human perceptions and also on characteristics or factors associated with attitudes towards hunting. Secondly, data had to be collected directly from the economically active public in Port Elizabeth concerning their attitudes towards hunting. The latter was addressed as the empirical component of the study.

To address the empirical component of the study, the nature of the required data was carefully considered. It was obvious that data of a primary nature was needed. This called for descriptive quantitative research methods. The various options for collecting the data were considered carefully and it was decided that survey methods would be the most suitable. After considering all the possible survey methods it was established that personal interviews, otherwise known as face-to-face surveys, were a suitable survey method. It was also established that questionnaires were a suitable survey instrument. The design of a suitable questionnaire was discussed and before administering the
questionnaire it was pre-tested to ensure that all possible problems had been eliminated.

The research population was identified as the entire population of economically active people in Port Elizabeth. After careful consideration and consultation with a statistician, a pilot study of 50 samples was conducted and the final sample size was determined through statistical calculations. The sampling procedure was executed in two distinct steps. Firstly, business addresses were randomly selected from a list of 31 691 addresses of registered businesses in Port Elizabeth. These businesses were approached by the researcher, who then personally conducted 384 personal in-office interviews amongst the employees of 128 businesses. Secondly, it was essential for the sample to be proportionally similar to the demographical composition of the economically active public in Port Elizabeth. Proportional stratified sampling was thus used to select a sample amongst the employees from the randomly selected businesses in such a way that the sample was in accordance with the proportions of each demographical sub-group within the research population.

The response to the questionnaire was then discussed. Of the 139 businesses that were approached for this research project, a total of 128 agreed to participate in the survey, representing a response rate of 92,1%.
Finally, an explanation was provided of the capturing and processing of the data.
CHAPTER 3

DEVELOPMENT OF A THEORETICAL BASIS ON ATTITUDES TOWARDS HUNTING

3.1 INTRODUCTION

Several major environmental problems aroused public concern regarding environmental issues over the years (Viljoen et al., 1987, p.13). One of these problems confronting today’s societies is the near exhaustion of natural resources as a result of injudicious exploitation over many years. A related problem is the rapid disappearance of wildlife and the general disturbance of the ecology as a result of human intervention (Viljoen et al., 1987, pp.3-6). Irresponsible hunting practices in the past could have contributed to this problem (Barnett & Patterson, 2005, p.44; Child, 2009, p.5 & pp.21-22) and as a consequence this may have resulted in negative public attitudes towards hunting.

However, the commercialization of hunting towards the end of the 20th Century resulted in a move towards the sustainable utilization of wildlife and this contributed significantly to conservation (Child, 2009, p.29). Since then the impact of wildlife ranching activities on private land on biodiversity has been broadly positive (Aylward & Lutz as cited in Bothma
Game numbers increased dramatically as a result of sustainable utilization practices by game ranchers (Landbouweekblad, 2001) and the total land area used for wildlife utilization practices exceed that of officially declared conservation areas and national parks by far (Bothma & Von Bach as cited in Bothma et al., 2009, p.149). Notwithstanding this, the attitudes of the general public towards hunting are sometimes negative and the social acceptability of hunting is often questioned, resulting in a potential threat to the hunting industry, and hence, conservation.

This chapter provides a literature review of existing knowledge about the psychology of attitudes, people’s attitudes towards hunting, as well as demographic trends and other factors affecting people’s attitudes towards hunting. This chapter firstly explores a number of sources dealing with the psychology of human perceptions and attitudes. Secondly, this chapter focuses on existing sources of information which provides insight into people’s attitudes towards hunting. Finally, the literature on the psychology of perceptions and attitudes, and the research on attitudes towards hunting, are then summarized and conclusions drawn concerning demographic trends and other factors affecting people’s attitudes towards hunting. This information is then employed in the empirical component of the study.
3.2 HUMAN PERCEPTIONS, ATTITUDES AND HUNTING

3.2.1 The psychology of perceptions and hunting

Perception can be seen as the process of interpreting or understanding information - based on one’s past experiences, knowledge and culture - which forms the basis for one’s opinions, feelings and attitudes toward the percept (Perception, 2008).

What one perceives is a result of interplays between one’s knowledge, past experiences, culture and the interpretation of the perceived. If a person does not have support in any of these perceptual bases it is unlikely that such a person will be able to attain an accurate perception of reality. Therefore, the extent of a person’s knowledge and experience creates their reality as much as the truth, because the human mind can only contemplate that which it has been exposed to in the past. When a situation is viewed without understanding, the mind will try to reach for something that it already recognizes in order to process what it is viewing. That which most closely relates to the unfamiliar from our past experiences, makes up what we see when we look at things that we don’t comprehend. When people view something with a preconceived idea about it, they tend to take those preconceived ideas and see them whether or not they are there (Perception, 2008).
The above discussion offers some explanation why people perceive hunting differently. This is mostly because people do not have the same support in their perceptual bases, such as past experiences, knowledge or culture. A lack of either one of the latter may influence a person’s ability to interpret the concept hunting. In other words, people who have never been exposed to hunting, or whose knowledge of hunting are very limited, are likely to have considerably different perceptions of and attitudes towards hunting than people who have been exposed to hunting or people who have a considerable amount of knowledge of hunting. Furthermore, the discussion on the psychology of perceptions in the beginning of section 3.2.1 also suggests that the nature of the exposure to hunting will also affect a person’s perception of hunting. For example, a person whose knowledge of hunting and exposure to hunting is limited only to negative images conjured up by the media, will most likely have perceptions of hunting that is considerably different to that of a person who have first-hand experience or knowledge of hunting.

With the above discussion in mind, survey results from the United States indicate that hunters show the strongest support for hunting, while the next strongest variable associated with positive attitudes towards hunting was having a family member who hunts (Duda, 2002, p.46). According to Duda (2002, p.46), the closer people are to hunting, even if they don’t hunt themselves, the stronger support they have for it. Duda (2002, p.47)
argues that this is most likely because the non-hunter who has a family member who hunts has been exposed to what hunting is all about. Instead of the negative images conjured up by the media, these individuals have been exposed to the importance of hunting and understand the hunting mind (Duda, 2002, p.47). This makes sense in the light of what has been discussed above on the psychology of human perceptions.

3.2.2 The basic underlying processes of attitudes and hunting

An attitude is an idea charged with emotion which predisposes a class of actions to a particular class of social situations (Triandis, 1971, p.2). This definition suggests that attitudes have three interrelated components, namely the cognitive component, that is, the idea; the affective or emotional component, that is, the emotion which charges the idea; and the action tendency or behavioural component, that is, a predisposition to action (McGinnies, 1970, p.300; Triandis, 1971, pp.2-3). This is called the structure of attitudes (Triandis, 1971, p.8). Attitudes are thus an idea (the cognitive component) which is reinforced by beliefs that often attract strong feelings (the affective component) which may lead to particular behavioural intents (the behavioural component) (Oppenheim, 1992, p.175). The cognitive component forms the basis on which the affective component is formed, which in turn results in the particular behavioural
component. It should be noted that these three components are interrelated (Triandis, 1971, pp.8-12). However, Eagly and Chaiken (1993, p.16) explain that an attitude does not necessarily have all three of these aspects and some attitudes can be formed by only one of these processes, while other attitudes may be formed by a variety of these processes. Furthermore, attitudes are not necessarily formed in a logical or rational manner (Oppenheim, 1992, p.178). The basic underlying process of attitude formation and behaviour will now be briefly discussed in terms of these three interrelated components.

The cognitive component contains thoughts that people may have about the attitude object and it refers to the categorization of objects or stimuli (Eagly & Chaiken, 1993, p.10; Triandis, 1971, p.9). There are potentially an infinite number of noticeable differences in the human environment. For instance, in the area of colour discriminations alone, colour engineers estimate that there are 7,500,000 discriminable colours. It is, therefore, obvious that it would be impossible to consider all the details in every situation. It is beyond human capability to perceive and form an attitude towards every possible difference in the environment and every detail in every situation. Therefore, people tend to categorize objects and form attitudes towards each of these categories. In other words, in order to simplify the task of responding to the environment, man categorizes objects and then responds to each of these broad categories, instead of
responding to each and every object individually. However, when an object is placed in a category, it can lead to a great loss of crucial information. Misinformation may also be added since, when an object is placed in a category, it is perceived in the same way as the other members of the category and the object is viewed with a preconceived idea towards it (Triandis, 1971, pp.8-10). Take for example a person who does not have any concept of a car. He cannot have a considered attitude towards cars. When seeing a car he probably would place it in one of his already existing categories (for example, monster) and might have an attitude towards this object, but not towards cars (Triandis, 1971, p.3). As explained earlier, the extent of a person’s knowledge creates their reality as much as the truth, because the human mind can only contemplate that which it has been exposed to in the past. When an object is viewed without understanding, the mind will try to reach for something that it already recognizes in order to process what it is viewing. That which most closely relates to the unfamiliar from our past experiences, makes up what we see when we look at things that we don’t comprehend (Perception, 2008). Another example could be that of a person who does not have any concept of hunting. When confronted with the object of hunting, his mind will try to reach for something that it already recognizes in order to process what it is viewing. He would, thus, probably place the object of hunting in one of his already existing categories (for example, poaching, animal
cruelty or exploitation of natural resources) and may have an attitude towards these objects, but not toward hunting.

Following the cognitive component is the affective component, otherwise known as the emotional component. Once the attitude object has been categorized, it is possible for a person to associate it with pleasant or unpleasant emotions or desirable or undesirable goals. When this happens, the category becomes charged with affect and emotions, and the person would experience positive or negative feelings towards the object. The way a person feels about an object is often determined by the previous association of the attitude object with pleasant or unpleasant states of affairs. The more pleasant the events, and the more frequently they occur in the presence of the category, the greater is the amount of affect that becomes attached to the category (Triandis, 1971, p.3 & p.11). The example was used earlier of the person who does not have any concept of hunting. It was said that when confronted with the object of hunting, his mind would associate the object of hunting with one of his already existing categories, say for instance a category of an enjoyable recreational activity in nature. He then forms an attitude towards this category, but not towards hunting itself. The person may enjoy other recreational activities in natural surroundings, such as fishing, hiking or camping. Therefore he has previously experienced pleasant events in this category and thus he has a great amount of positive affect attached to this
specific category. This will then result in him having a favourable attitude towards hunting. What is of importance is to understand that a person who does not have any concept of an object, such as hunting, cannot have a considered opinion of it. Instead, it is his attitude towards the category in which his mind places the object that is responsible for him having a favourable or unfavourable attitude towards the object. Therefore, attempts to promote hunting must strive to present hunting as an object that most people will associate with a category that has a great amount of positive affect. Bossenmaier (cited in Duda & Jones, 2008, p.15) suggested that hunting promotion must strive to put hunting into the context of ecological goals (wildlife management) and conservation of land and wildlife, rather than as a form of recreation or sport. Duda and Jones (2008, p.15), also suggest in order to promote the acceptability of hunting one must strive to highlight the utilitarian motivations for hunting, rather than as a form of recreation or sport.

Not only is a person’s feeling towards an attitude object determined by the previous association of the attitude object with pleasant or unpleasant events, as discussed above. Once the attitude object has been categorized it is also possible for a person to associate it with desirable or undesirable goals. The basic concept, however, stays the same. More positive affect are experience towards objects that leads us to desirable goals and negative affect towards objects that hinder us or lead us to
undesirable goals (Triandis, 1971, p.3 & p.11). In other words, a person’s emotional state towards an object (such as hunting) is determined by the perceived probabilities of a connection between the object (hunting) and the various outcomes, as well as the satisfaction associated with each outcome (Triandis, 1971, p.11). The example where hunting is the attitude object is again used to explain the latter. Two persons – who have no true concept of hunting – are confronted with the object of hunting. Their minds will try to reach for something that it already recognizes in order to process what they are viewing and then associate the object with one of their already existing categories which, in their own minds, resemble the object of hunting. Say for instance the first person’s mind associates hunting with categories such as poaching, the exploitation of wildlife or animal cruelty, whereas the second person’s mind associates hunting with categories such as wildlife management practices. Each person can then associate the category in which they placed hunting with desirable or undesirable goals. Let us assume that both persons have a mutual concern for the conservation of wildlife and the welfare of animals. The first person will thus have more negative affect towards the object of hunting, because the categories in which his mind placed hunting (poaching, the exploitation of wildlife or animal cruelty) is in direct conflict with his goals (namely, the conservation of wildlife and animal welfare). He will thus perceive the connection between hunting and the outcome to be undesirable, resulting in a negative affect towards hunting. However,
the second person will have a more positive affect towards the object of hunting, because the categories in which his mind placed hunting (wildlife management) is in line with his goals (namely, the conservation of wildlife and animal welfare). He will thus perceive the connection between hunting and the outcome to be desirable, resulting in a positive affect towards hunting.

Following the affective component is the behavioural component, otherwise known as the action tendency component. This component refers to the predisposition to action. However, it is important to understand that the cognitive and affective components do not necessarily result in behaviour (Eagly & Chaiken, 1993, p.16). Associated with categorizations of objects (cognitive component) are certain emotional states, pleasant or unpleasant. In addition, there are associations with certain ideas about what is correct behaviour. These behavioural norms typically develop in small groups or subcultures. They are ideas about what is correct behaviour for a member of this group – a family, a group of friends, a school, a club, a culture, and so forth. Thus, one group may express its pleasant emotional state, in connection with a specific object (such as hunting), by acting upon it or participating in it, but another group may have a very weak norm about acting upon it or participating in it, but a stronger norm about talking either in favour of such objects. A third group may have norms consistent with doing both. In other words, a positive
emotion towards an attitude object will not necessarily result in positive behaviour towards it, and a negative emotion towards an attitude object will not necessarily result in hostile behaviour towards it (Triandis, 1971, p.12). Two things are of importance here. Firstly, a positive or negative attitude towards an object, such as hunting, will not necessarily result in any behaviour towards it. It will be pointed out later in this chapter that a large majority of people who have favourable attitudes towards hunting does not necessarily participate or actively support hunting, and a large majority of people who disapprove of hunting does not necessarily actively oppose hunting. Secondly, it is important to notice that behavioural norms and ideas about what is correct behaviour typically develop in small social groups or subcultures, such as a family or group of friends. This phenomenon may be an important aspect to keep in mind in the study of attitudes towards hunting, and it was already pointed out that people who have family members or friends who hunt tend to have more favourable attitudes towards hunting, even if they do not hunt themselves (Duda, 2002, p.46).

Understanding people’s attitudes towards an object are certainly not an easy task. The purpose of the above discussion was simply to understand the very basic underlying process of how an attitude towards a specific object is formed and how it may result in behaviour.
Some attitudes are rooted at a much deeper psychological level than others and lie at the base of a person’s fundamental philosophy of life, while others are relatively superficial. For ease of understanding, social psychologists make a rough distinction between these different levels, calling the most superficial one “opinions”, the next one “attitudes”, a deeper level “values” or “basic attitudes”, and a still deeper level, “personality”. These rather vague distinctions between different levels of attitudes must be thought of as more enduring versus less enduring, deeper versus more superficial and relatively stable versus relatively changeable. At the simplest level, that of opinions, change is relatively easy to bring about as long as the underlying attitude is not involved. For example, it may not be too difficult to convince a man with strong anti-hunting views that he is wrong in his opinion that hunting endangers wildlife populations, but his underlying anti-hunting attitude remains unaltered, and he will soon find some other belief with which to bolster his hostile attitude towards hunting (Oppenheim, 1992, pp.176-178).

Typically, attitudes do not exist in isolation within the individual. They generally have links with components of other attitudes and with the deeper levels of value systems within the person (Oppenheim, 1992, p.177). For instance, suppose a person is asked if he likes hunting, and
he answers no. At this point we may say to ourselves that we are dealing with an opinion, with a relatively superficial attitude. However, with further questioning we may find that his dislike of hunting has to do with a deeper underlying attitude towards animals as food. This in turn may be linked to an underlying value system that has to do with the way humans behave towards other creatures or with religious views.

It is important to realize that attitudes are only very rarely the product of a balanced conclusion after a careful assembly of evidence. As a rule, attitudes are acquired or modified by absorbing, or reacting to, the attitudes of others. We like to maintain the fiction of rationality and impartiality in reaching our conclusions, but, in fact, attitudinal predispositions and social ties play a very considerable part in our formation of attitudes. Attitudes can be highly emotional, irrational and illogical, but it can also be very superficial (Oppenheim, 1992, p.178).

3.2.4 Attitudes towards wildlife and the natural environment

The value and the meaning people attach to wildlife and the natural environment contribute to the understanding of people’s attitudes towards hunting.
Kellert (cited in Responsive Management, 2003, pp.64-65) developed a typology of attitudes towards animals based on extensive open-ended and closed-ended personal interviews with Americans nationwide. Following are the nine attitudes towards animals that Kellert identified: naturalistic, ecologistic, humanistic, moralistic, scientistic, aesthetic, utilitarian, dominionistic, and negativistic. Each of these nine attitudes toward animals will now be defined:

- **Naturalistic**: Primary interest and affection for wildlife and outdoors.
- **Ecologistic**: Primary concern for the environment as a system, for interrelationships between wildlife species and natural habitats.
- **Humanistic**: Primary interest and strong affection for individual animals, principally pets. Regarding wildlife, focus on large attractive animals with strong anthropomorphic associations.
- **Moralistic**: Primary concern for the right and wrong treatment of animals, with strong opposition to exploitation or cruelty towards animals.
- **Scientistic**: Primary interest in the physical attributes and biological functioning of animals.
- **Aesthetic**: Primary interest in the artistic and symbolic characteristics of animals.
- **Utilitarian**: Primary concern for the practical and material value of animals or the animal’s habitat.
- **Dominionistic**: Primary interest in the mastery and control of animals, typically in sporting situations.

- **Negativistic**: Primary orientation in active avoidance of animals due to dislike or fear. Hypothetically, the negativistic attitude can be divided into two attitude types, a neutralistic attitude reflecting a passive avoidance of animals due to indifference or lack of interest, and a negativistic attitude reflecting active avoidance of animals.

In a study of 22 schools in Connecticut in the United States, Kellert and Westervelt (cited in Responsive Management, 2003, p.65) found that the most common attitude amongst all children was the humanistic attitude. The authors note “In general, strong, emotional attachment to individual animals and a tendency towards anthropomorphism were the most typical perceptions of animals amongst the children studied.” The second and third most frequent attitudes were the naturalistic and negativistic. The moralistic attitude ranked fourth and the utilitarian attitude was fifth in overall frequency of occurrence. The dominionistic attitude was relatively uncommon, ranking sixth in frequency of occurrence. The least frequently occurring attitudes were the ecologistic and scientistic. The aesthetic attitude was not tested due to the difficulty in developing an adequate scale in which to evaluate it. Kellert (cited in Responsive Management, 2003, p.65) notes, “In the national study of American adults, the humanistic attitude was also the most frequent perspective of animals,
and the negativistic and moralistic attitudes were similarly popular. The most striking difference in attitudes towards animals amongst children and adults was the widely varying occurrence of the naturalistic and utilitarian perspectives. The naturalistic attitude was much more common amongst children, while a utilitarian view of animals was far more typical of adults.” It is important to take note of this difference in attitudes towards animals amongst children and adults, as these different views towards animals may provide a clue as to how one should strive to present the concept of hunting amongst children and amongst adults, in order to promote the acceptability of hunting amongst them. Duda and Jones (2008, p.15) established that hunting for food proved to be a motivation that is much more acceptable to the adult American public than some other reasons for hunting, such as for a trophy. They concluded that in order to promote the acceptability of hunting amongst adult Americans, one must strive to highlight the utilitarian motivations for hunting, rather than as a form of recreation or sport. However, this approach may not be effective to promote hunting amongst children.

3.3 ATTITUDES TOWARDS HUNTING

No research regarding attitudes towards hunting has previously been conducted in South Africa. The results obtained from research conducted in other countries may not be a direct reflection of the South African
public’s attitudes towards hunting. However, research conducted in other countries proved to be very useful in understanding the demographics and other factors affecting people’s attitudes towards hunting. For this reason similar studies conducted in other countries were considered to be of great importance to this study, as it provided the researcher with valuable insight and information which were relevant to the objectives of this study. A review of the literature which was relevant to this study will now be discussed.

3.3.1 Trends in the attitudes towards hunting in the United States and Sweden

Research regarding attitudes towards hunting has been conducted almost exclusively in the United States (Heberlein & Willebrand, 1998, p.1073). Scientific research on attitudes towards hunting began in the United States during the early 1970’s. This first research of its kind was conducted by Stephen Kellert between 1973 and 1978. In his research Kellert (cited in Heberlein & Willebrand, 1998, p.1071) broke the general attitude object – hunting – into three more specific objects, namely traditional native (subsistence) hunting; hunting for recreation and meat; and hunting for recreation and sport. This was done not only to identify people’s attitudes towards hunting, but also to address motivations for hunting. During 1978 in a national survey, based on nearly 3000 personal interviews, Kellert (cited in Heberlein & Willebrand, 1998, p.1071) found
that 85% of the respondents approved of subsistence hunting and 67% percent approved of hunting for meat and recreation. When people were asked if they support hunting for sport and recreation, support dropped to 37%. The average support for the three divisions was 63%. Furthermore, Kellert’s research showed that only 4.5% of the United States population opposed hunting under any circumstances (Heberlein & Willebrand, 1998, p.1071).

Research conducted by Heberlein and Willebrand (1998, p.1076) indicated that attitudes towards hunting in the United States in 1995 was not significantly different from those in 1978, although it did tend to be more positive. Heberlein and Willebrand (1998, p.1076) found that 91% of the American public supported native subsistence hunting and 73% supported hunting for meat and recreation, while only 40% of the American public supported hunting for sport and recreation during 1995. The average support for the three divisions was 68%. Heberlein and Willebrand’s (1998, p.1076) also found that only 4.4% of the American public opposed hunting under any circumstances during 1995. This figure is in line with the research findings by Kellert, which was discussed earlier in this section.

Heberlein and Willebrand (1998, p.1076) conducted similar research in Sweden during 1997 in an attempt to compare attitudes towards hunting
between the United States and Sweden. A summary of the research results of Heberlein and Willebrand (1998, p.1076) is provided in Table 3.1. The research results indicate that more than nine out of ten people support at least some form of hunting in the United States and Sweden. This was found during 1978 in the United States and also in both the United States and Sweden in 1997. According to Heberlein and Willebrand (1998, p.1077), this research suggests that statements that the public opposes hunting are not accurate.

Table 3.1. ATTITUDES TOWARDS THREE TYPES OF HUNTING AMONGST THE GENERAL POPULATION OF THE UNITED STATES IN 1978 AND 1995 AND SWEDEN IN 1997

<table>
<thead>
<tr>
<th>Attitudes towards:</th>
<th>Survey</th>
<th>Favour</th>
<th>Opposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional native subsistence hunting</td>
<td>U.S. 1978</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>U.S. 1995</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Sweden 1997</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>Hunting for recreation and meat</td>
<td>U.S. 1978</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>U.S. 1995</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td></td>
<td>Sweden 1997</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>Hunting for recreation and sport</td>
<td>U.S. 1978</td>
<td>37%</td>
<td>63%</td>
</tr>
<tr>
<td></td>
<td>U.S. 1995</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Sweden 1997</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>Averages for the three divisions</td>
<td>U.S. 1978</td>
<td>63%</td>
<td>37%</td>
</tr>
<tr>
<td></td>
<td>U.S. 1995</td>
<td>68%</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>Sweden 1997</td>
<td>69%</td>
<td>31%</td>
</tr>
</tbody>
</table>

Repeated nationwide surveys conducted by Responsive Management in the United States suggested that adult Americans’ approval of hunting increased slightly over time. In 1995, 73% of adult Americans approved of hunting, while 22% disapproved; in 2003, 75% approved of hunting and 17% disapproved; and in 2006, 78% approved of hunting and only 16% disapproved (Duda & Jones, 2008, p.2 & p.10; Responsive Management, 1995, p.6).

It is worth noting that a person’s disapproval of hunting does not always translate into a desire to ban hunting altogether. A nationwide study conducted by Responsive Management in 1995 found that some of the respondents who disapprove of hunting still agree that hunting should remain legal, irrespective of them personally disapproving of it. The study found that 73% of the respondents approved of hunting and 22% disapproved. However, when asked to comment on the legality of hunting an astonishing 81% of respondents agreed that hunting should continue to be legal, while 16% felt that hunting should be made illegal. The percentage of respondents who agreed that hunting should remain legal is significantly higher than the percentage of respondents who personally approved of hunting (Responsive Management, 1995, p.6). Therefore, it can be concluded that a person’s disapproval of hunting does not always translate into a desire to ban hunting altogether. The survey results from the latter study closely match the results of another survey conducted by
USA Today in 1992 where 80% of Americans felt hunting should remain legal while 17% said hunting should be illegal (Responsive Management, 1995, p.6).

Applegate (cited in Heberlein & Willebrand, 1998, p.1072) conducted repeated surveys between 1974 and 1992 on attitudes towards deer hunting in the United States, in the state of New Jersey. The general public in New Jersey was presented with exactly the same question each time: “Do you approve or disapprove of deer hunting?” The percentage supporting deer hunting ranged from a low of 49% to a high of 55% between 1974 and 1984. Applegate (cited in Heberlein & Willebrand, 1998, p.1073) concluded that “the most noteworthy aspect of attitudes toward deer hunting in New Jersey is that relatively little change in the levels of approval and disapproval has occurred in 10 years”. Applegate conducted the survey again in 1987 and found that 54% of New Jersey residents supported deer hunting. In 1992 he conducted a final survey and found that the support for deer hunting had increased to 65%. However, Applegate speculated that the reason for this increase resulted from high deer densities with its associated problems, such as an increase in deer damage to crops and Lyme disease which is carried by deer (Heberlein & Willebrand, 1998, pp.1072-1073).
Although New Jersey is not representative of the United States as a whole, it is the most densely populated state in the United States (Heberlein & Willebrand, 1998, pp.1072-1073). With the latter in mind, research conducted by Decker and Mattfield in the United States (cited in Heberlein & Willebrand, 1998, p.1074) concluded that rural residence and rural ties are key factors leading to exposure to hunting and pro-hunting attitudes. Furthermore, research conducted by Heberlein and Willebrand (1998, p.1073), as well as research conducted by Responsive Management (1995, p.3) seem to indicate that rural societies will hold more positive attitudes towards hunting than urbanized societies. Therefore, one can argue that attitudes towards hunting in the other states of the United States may be even more supportive of hunting than in the densely populated New Jersey. This argument seems to hold some truth, especially if one compares survey results from the entire United States with that of New Jersey – the most densely populated state in the United States. Table 3.2 below compares survey results from the state of New Jersey in the United States with survey results from the entire United States. In both instances the survey results showed that the general public in New Jersey was 8% less likely to approve of hunting than the general public in the entire U.S. during approximately the same time.

<table>
<thead>
<tr>
<th>Survey</th>
<th>In favour of hunting</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Jersey 1992</td>
<td>65%</td>
</tr>
<tr>
<td>U.S. 1995</td>
<td>73%</td>
</tr>
<tr>
<td>Difference</td>
<td>8%</td>
</tr>
<tr>
<td>New Jersey 1974 - 1984</td>
<td>49% - 55%</td>
</tr>
<tr>
<td>U.S. 1978</td>
<td>63%</td>
</tr>
<tr>
<td>Difference</td>
<td>8%</td>
</tr>
</tbody>
</table>

#### 3.3.2 Youth's attitudes towards hunting in the United States

According to Duda (2003), a nationwide study on the perceptions of children towards and their participation in hunting was conducted in the United States by the United States Fish and Wildlife Services in 2003. Fifty-six percent of youth between the ages 8 to 18 years old surveyed either strongly or moderately agreed that it was acceptable to hunt wild animals for food. This figure is 10% higher than it was in a study conducted by the United States Fish and Wildlife Services in 1985, when only 46% of those surveyed agreed (Duda, 2003).

The research found that as children grew older they became more supportive of hunting. Whereas only 40% of children in grades one to four supported hunting, 64% of high school students (grades 9 to 12) supported hunting. This may be related to cognitive and emotional
development (Duda & Jones, 2008, pp.12-13). If this finding is compared with Kellerts’ research of 1978 (cited in Heberlein & Willebrand, 1998, pp.1071-1072), and the research of Heberlein and Willebrand (1998, pp.1072-1073), this was to be expected based on what is known about adults’ attitudes towards hunting in the United States.

The study by Duda (2003) also revealed that gender affects children’s attitudes towards hunting. The research revealed that this attitude difference begins at an early age and boys were more than twice as likely to strongly support hunting as girls (Duda, 2003).

One of the questions that were asked to the children in order to determine their perception of hunting was, “Do you think kids your age think hunting is very cool, a little cool or not cool at all.” The majority of the youth (55%) said hunting was a little cool, while nearly an equal number of kids said hunting was very cool (16%) or not cool at all (18%). The study found that the overall lack of strong feelings towards hunting may be due to the fact that most children are not exposed to hunting (Duda, 2003). This was to be expected in the light of what is known about how perceptions are formed. The mind can only contemplate that which it has been exposed to in the past and has knowledge about (Perception, 2008). Research conducted by Duda and Young (cited in Responsive Management, 2003, p.1) also support this argument. They found that more than 90% of
today’s adult hunters in the United States were initiated into hunting before the age of 20. In fact, if an individual has not learned to hunt by the age of 20, there is a very low likelihood of hunting participation as an adult. Their research also shows that not only is active participation by an adult determined by early exposure to hunting, but also that the level of adult avidity is determined by level of exposure as a child. Youth who frequently participate in hunting as a child are more likely to avidly participate as an adult. Conversely those who start hunting later in life hunt less as an adult and are more likely to cease hunting altogether. Clearly, exposure to hunting as a child is critical to participation as an adult. In addition, Duda and Young (cited in Responsive Management, 2003, p.1) concluded that participation in hunting by adults are critical to hunting recruitment and retention of the youth of the next generation.

The research by Duda (2003) revealed that children perceive hunting as a dangerous recreational activity. Only 40% of the youth agreed that hunting is a safe recreational activity, while 50% of the youth believe that hunting is dangerous (Duda, 2003). This research provides guidelines on what needs to be done in order to improve the perceptions of children towards hunting. The message that hunting is a safe recreational activity needs to be conveyed to children, and they need to be exposed to hunting.
3.3.3 Support for and opposition to hunting for various reasons

Research in the United States indicated that Americans’ support for and opposition to hunting can vary dramatically, based on a number of factors, of which the motivation for participation in hunting activities, animal welfare, behaviour of hunters, concerns about the safety of hunting, the species involved, and knowledge and beliefs of people were found to be the most important (Duda & Jones, 2008, p.1). Each of these factors is now briefly discussed.

It was found that public opinion on hunting varies based on the motivation for hunting. More Americans approve of hunting for food (85%), to protect humans from harm (85%), for wildlife management (81%), and to protect property (71%) than those who approve of hunting strictly for recreation (53%), for the challenge (40%), or for a trophy (28%) (Duda & Jones, 2008, p.4). Heberlein and Willebrand (1998, p.1076) came to the same conclusion based on their research in the United States and Sweden (see section 3.3.1). Furthermore, Minnesota Department of Natural Resources (cited in Duda & Jones, 2008, p.4) found that 27% of hunters, who hunted in the year prior to the survey, oppose hunting strictly for recreation. It is obvious that hunting for food or ecological reasons (such as for wildlife management) proved to be a motivation that is much more acceptable to the public than some other reasons for hunting, such as for a trophy. In
other words, to promote the acceptability of hunting one must strive to highlight the utilitarian motivations for hunting, rather than the recreational or sporting aspects (Duda & Jones, 2008, p.15). Bossenmaier (cited in Duda & Jones, 2008, p.15) suggested that hunting promotion must strive to place hunting into the context of ecological goals (wildlife management) and conservation of land and wildlife, rather than as a form of recreation or sport.

A large majority of people are concerned about animal welfare when it comes to hunting. Kellert (cited in Duda & Jones, 2008, p.5) found in one national survey that the most prominent reason why people oppose hunting is that they perceive it as morally wrong to kill animals and 56% of anti-hunters gave this reason for their opposition. The same study found that 18% of anti-hunters were opposed because of the pain inflicted on animals and 15% because they love animals. Related to this is that Americans are generally more willing to accept wildlife population reductions to benefit wildlife, habitat, or the environment than to benefit people (Duda & Jones, 2008, p.5).

One study revealed that hunter behaviour strongly affected opposition to hunting. The study concluded that many people who oppose hunting do so for reasons that has actually very little to do with ethical hunting itself,
but rather because they associated hunting with the poor behaviour of individual hunters (Duda & Jones, 2008, p.6).

There is some opposition to hunting based on safety concerns. A national study found that approximately 2 of 5 Americans feel that hunting is an unsafe recreational activity (Duda & Jones, 2008, p.6). A study conducted by the United States Fish and Wildlife Services also revealed that children perceive hunting as a dangerous recreational activity. Only 40% of the youth agreed that hunting is a safe recreational activity, while 50% of the youth were of the opinion that hunting is dangerous, and the rest said they didn’t know (Duda, 2003). Furthermore, of the youth in the United States who said their parents would not allow them to go hunting, 42% said that the reason was that hunting is not safe (Responsive management, 2003, p.v).

Attitudes towards hunting also vary according to the species hunted. Research indicates that the hunting of ungulates are generally more acceptable than the hunting of predators (Duda & Jones, 2008, p.8).

According to Duda (2002, pp.46-47) research found that anti-hunters generally had incorrect beliefs regarding animal populations. Anti-hunters believed that most wildlife species’ populations were declining or in great danger of declining, even though many species have increased in number.
Furthermore, research also indicated that many anti-hunters do not understand simple facts about wildlife, and believe that hunting endangers wildlife populations (Duda & Jones, 2008, p.7). These incorrect beliefs and lack of knowledge about wildlife often result in opposition to hunting.

3.3.4 Demographical factors affecting attitudes towards hunting

A demographical analysis of survey data from the United States identified certain demographical factors that seem to affect people’s attitudes towards hunting. These demographical factors are population density, gender, education, age and ethnicity (Duda & Jones, 2008, pp.11-13). The influence of each of these factors on people’s attitudes towards hunting will now be discussed briefly.

The likelihood of approving of hunting increases as the population density decreases. Responsive Management (cited in Duda & Jones, 2008, p.11) found that in the United States, 70% of urban residents, 72% of suburban residents, 80% of residents in small cities or towns, and 89% of rural residents approved of hunting. Other studies at the state level were strongly supportive of the latter, and also revealed the same tendency. Adams and Thomas (cited in Duda & Jones, 2008, p.11) found in a study in Texas that the majority of state residents who were members of, or who
expressed a desire to become members of an anti-hunting organization (which made up only 5% of the general population) were urban residents.

Gender also has a considerable effect on approval of hunting, with males more likely than females to approve of hunting. Amongst all hunters in the United States, nine out of ten are male (Duda, 2001, p.35). While in the United States 84% of males approve of hunting, only 72% of females approve of it, and, conversely, only 13% of males disapprove of hunting, while 20% of females disapprove. Other studies at the state level also revealed the same tendency (Duda & Jones, 2008, p.11). The aforementioned study of Adams and Thomas (cited in Duda & Jones, 2008, p.11) in Texas found that the majority of state residents who were members of or who expressed a desire to become members of an anti-hunting organization were females. Amongst the youth, gender also effect children’s attitudes towards hunting. It was found that boys were more than twice as likely to strongly support hunting than girls (Duda, 2003).

Higher levels of education are negatively correlated with approval of hunting. Responsive Management (cited in Duda & Jones, 2008, p.12) found that in the United States 51% of those with no degree strongly approve of hunting, while only 43% of those with Bachelor’s degree and 40% of those with a post-graduate degree strongly approve of hunting. Other similar research studies at state level verified that this finding holds
true. In the state of Pennsylvania, it was found that the higher the level of education rises, the more the percentage who approve of hunting declines. Furthermore, a study of landowners in the state of Texas found that those who prohibited hunting on their land were more educated than were those who allowed it (Duda & Jones, 2008, p.12).

Age affects approval rates of hunting. The likelihood of approving of hunting increases as age increases. A national study, conducted by Responsive Management, found that 83% of Americans of 65 years old and older approved of hunting, while only 55% of Americans of 18 to 24 years old approved (Duda & Jones, 2008, p.12). Adams and Thomas (cited in Duda & Jones, 2008, p.11) found in a study in Texas that the majority of state residents who were members of, or who expressed a desire to become members of an anti-hunting organization, were from 18 to 34 years old. Amongst the youth, age also strongly influence approval of hunting (refer to section 3.4.2). Research found that as children get older they become more supportive of hunting. Whereas 40% of children in grades one to four supported hunting, 64% of youth in the ninth to twelfth grades supported hunting. This may be related to cognitive and emotional development (Duda & Jones, 2008, pp.12-13) and lack of exposure to hunting at a very young age (Duda, 2003).
Ethnicity is linked to variations in approval of hunting. White Americans have a higher approval rate (83%) than do non-whites (61%) (Duda & Jones, 2008, p.13).

To conclude this section on demographical characteristics of people who support and those who oppose hunting, Kellert (1980) and Shaw (1977), as cited in Duda and Jones (2008, p.13), agreed that anti-hunters are, in general, well-educated, female, and urban living.

3.4 SUMMARY OF MAIN FINDINGS

Perceptions refer to the process of interpreting or understanding information, based on one’s past experiences, knowledge and culture. The way in which an object (such as hunting) is perceived forms the basis for one’s opinions, feelings and attitudes towards it. When an object is viewed, the human mind will attempt to associate it with something that it already recognizes and then categorize the object accordingly. Once the mind has categorized an object (hunting), it is possible for a person to associate the object with pleasant or unpleasant emotions or desirable or undesirable goals. The person will then, in fact, have an attitude towards the category, but not towards the object itself. However, since the mind associates the object with the specific category, the object will automatically be associated with the attitude the person holds towards the
category. In other words, the categories with which a person’s mind associates hunting, will directly influence a person’s attitudes and feelings towards hunting. With the latter in mind, in order to promote the acceptability of hunting one must strive to present hunting to the public as an object that most people will associate with a category that has a great amount of positive affect. Researchers from the United States suggest that hunting becomes more acceptable amongst the public if it is put into the context of ecological goals (wildlife management and conservation) and also when the utilitarian motivations for hunting is highlighted, rather than to present hunting to the public as a form of recreation or sport.

It is important to understand that the mind can only comprehend that which it has been exposed to in the past, and that the extent of one’s experience and knowledge towards an object will ultimately determine how accurately the object is perceived and categorized. Thus, the greater a person’s knowledge is about hunting and the more a person has been exposed to hunting, the greater his ability would be to attain an accurate perception of hunting. Research from the United States supports the latter and indicates that the closer people are to hunting, even if they don’t hunt themselves, and the more knowledge they have about wildlife and what hunting is all about, the stronger the support they have for it. In support of the latter, survey results from the United States indicate that hunters showed the strongest support of hunting, while the next strongest variable
associated with positive attitudes towards hunting was having a family member who hunts. However, when an object – such as hunting – is viewed without understanding, the mind will try to associate it with something that it already recognizes and will place the object in one of its existing categories. Thus, one’s knowledge and past experiences determine how an unfamiliar object is categorized and perceived. If a person does not have support in any of these perceptual bases (knowledge and experience), it is likely that his mind will associate the object with categories which does not fit the true nature of the object, resulting in an inaccurate perception of the object. In support of the latter, research from the United States suggests that many anti-hunters do not understand simple facts about hunting and wildlife. As a result of ignorance and lack of exposure to hunting, the minds of many anti-hunters associate hunting with “categories” which provoke unpleasant emotions, resulting in negative attitudes towards hunting.

From the literature study on the psychology of attitudes it was pointed out that a positive or negative attitude towards an object will not necessarily result in behaviour towards it. Research in the United States found that a large majority of people who have favourable attitudes towards hunting does not necessarily participate in hunting activities and a large majority of people who disapprove of hunting does not necessarily actively oppose hunting. It was also noted that disapproval of hunting does not always
translate into a desire to ban hunting altogether. Research found that although a substantial percentage of people may disapprove of hunting, they generally do not go so far as to say that others should not hunt.

It is important to notice that behavioural norms and ideas about what is correct behaviour typically develop in small social groups or subcultures, such as a family or group of friends. This phenomenon may be an important aspect to keep in mind in the study of attitudes towards hunting. It was pointed out earlier that research in the United States found that people who have family members or friends who hunt tend to have more favourable attitudes towards hunting, even if they do not hunt themselves.

A typology of attitudes towards animals and the natural environment was developed and includes nine attitudes. It was found that the humanistic attitude, with strong affection for individual animals and emotional attachment to large attractive animals with strong anthropomorphic associations was the most common perspective of animals amongst the adult public in the United States. The negativistic and moralistic attitudes were similarly popular. It was noted that the most striking difference in attitudes towards animals amongst children and adults was that naturalistic attitudes was much more common amongst children, while utilitarian views towards animals was far more typical of adults. This seems to support the suggestions that the utilitarian motivation of hunting
should be highlighted in order to promote the acceptability of hunting amongst the adult public.

A considerable amount of scientific research has been conducted in the United States on attitudes towards hunting since the early 1970’s, all of which concluded that the general assumption which is often made that the public opposes hunting are made without any foundation and are simply incorrect. Scientific research indicates that the majority of people in the United States and Sweden approve of hunting, and that there is a slight increase in the rate of approval towards hunting over time. Research conducted in the United States in 2006 indicated a 78% support for hunting opposed to a 16% opposition to hunting, while the remaining 6% remained neutral. It was found that the support for hunting is far greater than the opposition to hunting. Surprisingly, most of the research found that only a small percentage of the people in the United States remained neutral, and do not agree nor disagree of hunting. One may conclude from the latter that the concept of hunting does not provoke any strong feelings in this group, and that the large majority of the people in the United States have either positive or negative attitudes towards hunting. This may indicate that the public in the United States has well developed attitudes towards hunting, whether positive or negative. A possible interpretation of this phenomenon is that very few people in the United States do not regard hunting as important enough to have a considered
opinion about it. It is also worth noting that Swedish attitudes towards hunting seem to be very similar to that of the United States.

Research concluded that attitudes towards hunting vary when the motivation for hunting is considered. As mentioned earlier, research for the United States suggested that hunting for food (utilitarian motivations) or for ecological reasons, such as wildlife management, proved to be a motivation that is much more acceptable to the public than some other reasons for hunting such as recreation or sport, or for a trophy. It was found that people are more willing to accept wildlife population reductions when done to benefit wildlife, habitat or the environment rather than to benefit people.

A number of possible reasons why people oppose hunting were identified in research conducted in the United States. The most prominent reasons include: people perceive it as morally wrong to kill animals; feelings regarding animal pain and suffering; safety concerns; perceived damage to wildlife populations and ecosystems; hunter behaviour; animal welfare and emotional reasons, such as loving animals.

As already mentioned earlier, research in the United States found that anti-hunters generally have incorrect beliefs regarding animal populations, which often result in them opposing hunting. Anti-hunters generally
believe most wildlife populations are declining or in great danger of declining, even though the numbers of many species have, in fact, increased.

A demographical analysis of survey data from the United States revealed five demographical characteristics that seem to affect people’s attitudes towards hunting, namely population density, age, gender, education, and ethnicity. Research concluded that the likelihood to approve of hunting increases as the population density decreases. Related to this, research found that rural societies will hold more positive attitudes towards hunting than urban societies. This is because rural residence and rural ties are key factors leading to exposure to hunting and pro-hunting activities. Age also affects approval rates of hunting. The likelihood to approve of hunting increases as age increases, not only amongst children, but also amongst adults. Gender also has a considerable effect on approval of hunting, with males more likely than females to approve of hunting. Furthermore, higher levels of education are negatively correlated with approval of hunting. Ethnicity is also linked to variations in approval of hunting. Amongst the public of the United States, white people are more supportive of hunting than non-whites. The section on demographical trends affecting attitudes towards hunting was then concluded with the remarks of two researchers who agreed that anti-hunters are, in general, well educated, female, and urban living.
Although the human dimension research regarding hunting that was conducted in other countries are not a direct reflection of the South African situation, it was possible to make valuable conclusions regarding demographical trends and other factors affecting people’s attitudes towards hunting. The latter played an important role in the development and planning of the empirical component of this study, especially during the planning of the questionnaire, and more specifically, the question content.
CHAPTER 4

PRIMARY INFORMATION ON THE ATTITUDES OF THE ECONOMICALLY ACTIVE PUBLIC IN PORT ELIZABETH TOWARDS HUNTING

4.1 INTRODUCTION

The attitudes of the general public towards hunting remain a controversial issue and the social acceptability of hunting is often questioned. This study provides an objective analysis of the public’s attitudes towards hunting.

This chapter explains and discusses the results that were obtained from the quantitative survey which was conducted amongst the economically active public in Port Elizabeth. The discussion is aimed at answering the research question, or problem statement, as well as the sub-problems of this study as stipulated in chapter 1.

4.2 RESULTS OF THE QUANTITATIVE SURVEY

The methodology of the quantitative survey was discussed in detail earlier in chapter 2. It was established that personal interviews, otherwise known as face-to-face surveys, were a suitable survey method and that
questionnaires were a suitable survey instrument for measuring attitudes towards hunting. The questionnaire that was used to measure attitudes towards hunting amongst the economically active public in Port Elizabeth is attached in this study as Appendix A. Section A of the questionnaire dealt with the demographical information which was expected to be of importance in this study, as was established earlier in chapter 3. This demographical information was essential for analyzing the survey results. Section B dealt with information regarding attitudes towards hunting.

A sample that could be considered representative of the population of the economically active public in Port Elizabeth had to be selected. The procedure that was followed for selecting and obtaining such a sample was discussed in detail in section 2.3.3, 2.3.4, 2.3.8 and 2.3.9 of the study. In total, the sample population consisted of 384 respondents. Throughout this chapter, sample estimates and findings from the survey reflect the attitudes of the economically active public in Port Elizabeth. The sample estimates’ deviation (95% confidence intervals) from the true values that exist within the population will be supplied at the bottom of each table in this chapter. Therefore, throughout this chapter the statistical results of the survey will be considered to be representative of the entire population of the economically active public in Port Elizabeth, within the specified margin of error.
Note that for purposes of enhancing the discussion of the research findings, the survey results are not discussed according to a strict chronological order and therefore the discussion of the results does not necessarily follow the same order as that of the questions in the questionnaire. Firstly, the results of the demographical analysis (question 1, 2, 3 and 4) are discussed. Secondly, the support for and the opposition to hunting are then investigated (question 9), followed by a discussion of findings related to respondents who oppose hunting (question 10, 11 and 12), as well as findings related to respondents who support hunting (question 13, 14 and 15). Lastly, question 5, 6, 7 and 8 are all grouped together towards the end of this chapter, as they investigate the extent to which various factors influence attitudes towards hunting. The results obtained from the empirical study will now be discussed.

4.2.1 Demographical analysis of respondents’ attitudes towards hunting

As mentioned earlier, section A of the questionnaire dealt with the demographical information. Respondents were requested to indicate their gender, ethnicity, age and qualification level in question 1, 2, 3 and 4 of the questionnaire. This information was used to conduct a demographical analysis of respondents in order to identify demographical factors associated with the support for and opposition to hunting. The latter
addresses some of the aspects in sub-problems 1.3.1 to 1.3.5 of the study (see chapter 1).

Two statistical tests were used during the demographical analysis, namely chi-squared ($\chi^2$) test and Cramer's V test. Firstly, a series of chi-squared ($\chi^2$) tests were used to determine whether or not there is any significant evidence in the sample that an association exists between some demographical factors and respondents' tendency to approve or disapprove of hunting. If a chi-squared ($\chi^2$) test revealed evidence of such a statistical significant association, a Cramer's V test was conducted to determine the practical significance and importance of the association.

The chi-squared ($\chi^2$) tests suggested that there was an extremely significant association between gender and respondents' support for or opposition to hunting in question 9 ($\chi^2_4 = 46.259; P < 0.001$). The latter results are highly significant, indicating that there is strong evidence suggesting that a difference exists between male respondents and female respondents with regard to their attitudes towards hunting. Cramer's V test revealed the practical significance and importance of this association and indicated that gender had a moderate effect on respondents' support for or opposition to hunting (Cramer's $V = 0.347$ (moderate effect size)). This variable obtained the third highest Cramer's V test value in the study, indicating that gender was the variable in the study which had the third
largest effect on the attitudes of the economically active public in Port Elizabeth towards hunting. It was found that males seem to be much more likely to approve of hunting and much less likely to disapprove of hunting than females. The results are displayed in Table 4.1 and graphically presented in Figure 4.1. The study found that while 68% of male respondents supported hunting, only 35% of female respondents supported it, and, conversely, only 14% of male respondents opposed hunting, while 40% of female respondents opposed it. It seems as if males are almost twice as likely to support hunting as females, whereas females are almost three times more likely to oppose hunting than males. Furthermore, it seems as if male respondents were slightly less likely to feel neutral towards hunting than females, as can be seen in Table 4.1.

Table 4.1. RELATIONSHIP BETWEEN GENDER AND ATTITUDES TOWARDS HUNTING

<table>
<thead>
<tr>
<th>CATEGORY (Question 1 x Question 9)</th>
<th>STRONGLY APPROVE</th>
<th>APPROVE</th>
<th>NEUTRAL</th>
<th>DISAPPROVE</th>
<th>STRONGLY DISAPPROVE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>47</td>
<td>99</td>
<td>39</td>
<td>18</td>
<td>13</td>
<td>216</td>
</tr>
<tr>
<td>Female</td>
<td>19</td>
<td>40</td>
<td>41</td>
<td>46</td>
<td>22</td>
<td>168</td>
</tr>
<tr>
<td>TOTAL</td>
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<td>139</td>
<td>80</td>
<td>64</td>
<td>35</td>
<td>384</td>
</tr>
<tr>
<td>%</td>
<td>22%</td>
<td>46%</td>
<td>18%</td>
<td>8%</td>
<td>6%</td>
<td>100%</td>
</tr>
<tr>
<td>Male</td>
<td>11%</td>
<td>24%</td>
<td>24%</td>
<td>27%</td>
<td>13%</td>
<td>100%</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 68% ± 6.2% for males and 35% ± 7.3% for females in support of hunting; and 14% ± 4.7% for males and 40% ± 7.5% for females in opposition to hunting.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
Chi-squared ($\chi^2$) test suggested that a statistical significant association also exist between ethnicity and respondents’ support for or opposition to hunting in question 9 ($\chi^2_8 = 19.751; P = 0.011$). The latter results are highly significant, indicating that there is strong evidence suggesting that a difference exists between the various ethnic groups with regard to their attitudes towards hunting. Cramer’s V test revealed the practical significance and importance of this association and indicated that ethnicity had little effect on respondents’ support for or opposition to hunting ($Cramer’s V = 0.163$ (small effect size)). The results are displayed in Table 4.2 and graphically presented in Figure 4.2. The study found that
while white respondents were the ethnic group most likely to approve of hunting (66%), black respondents were second most likely to approve (53%), coloured respondents were third most likely to approve (43%), and Indian or Asian respondents were the least likely to approve (17%). Conversely, Indian or Asian respondents were by far the ethnic group most likely to disapprove of hunting (50%), followed by black respondents (28%) and coloured respondents (26%), with white respondents least likely to disapprove of hunting (20%). Furthermore, coloured respondents and Indian or Asian respondents were much more likely to feel neutral towards hunting than black and white respondents. Although the chi-squared ($\chi^2$) test revealed that there is evidence suggesting that a difference exists between the various ethnic groups with regard to their attitudes towards hunting, further testing revealed that there seem to be no evidence of a statistical significant difference between the attitudes of black respondents and that of white respondents towards hunting ($\chi^2 = 5.21; P = 0.266$). Thus, the differences in the observed percentages between specifically these two ethnic groups are not meaningful, and may be attributed to sampling variation and possibly to the limited sample size of the sub-groups. Statistical significant differences in attitudes towards hunting did, however, exist between black respondents and coloured respondents ($\chi^2 = 9.777; P = 0.044$), as well as between white respondents and coloured respondents ($\chi^2 = 14.226; P = 0.007$), with Cramer's V test indicating that these differences have little effect on
respondents’ support for or opposition to hunting in practice (*Cramer’s V = 0.195 and 0.260 respectively*).

Note that chi-squared ($\chi^2$) tests were not done on the ethnic group Indian or Asian due to the limited sample size of this group. Townend (2002, p.175) explains the reason for the latter and states that chi-squared ($\chi^2$) tests involve calculating expected values from the actual numbers observed in the sample. None of these expected values should be less than 1, and no more than 20% of the expected values should be less than 5, or the chi-squared ($\chi^2$) test becomes inaccurate. The latter is referred to as Cochran’s rules. Furthermore, Townend (2002, p.175) suggests that categories or sub-groups with expected values which do not fit the above criteria should be left out of the analysis. The expected values that were calculated for the ethnic group Indian or Asian during the chi-square test did not meet the necessary criteria, due to the limited sample size of this group. Therefore, it was necessary to exclude the ethnic group Indian or Asian from the chi-squared ($\chi^2$) tests.
Table 4.2. RELATIONSHIP BETWEEN ETHNICITY AND ATTITUDES TOWARDS HUNTING

<table>
<thead>
<tr>
<th>CATEGORY (Question 2 x Question 9)</th>
<th>STRONGLY APPROVE</th>
<th>APPROVE</th>
<th>NEUTRAL</th>
<th>DISAPPROVE</th>
<th>STRONGLY DISAPPROVE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>29</td>
<td>57</td>
<td>30</td>
<td>34</td>
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<td>161</td>
</tr>
<tr>
<td>White</td>
<td>25</td>
<td>51</td>
<td>16</td>
<td>15</td>
<td>8</td>
<td>115</td>
</tr>
<tr>
<td>Coloured</td>
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<td>29</td>
<td>30</td>
<td>13</td>
<td>12</td>
<td>96</td>
</tr>
<tr>
<td>Indian or Asian</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL</td>
<td>66</td>
<td>139</td>
<td>80</td>
<td>64</td>
<td>35</td>
<td>384</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>BLACK</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>INDIAN OR ASIAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>18% 35% 19% 21% 7%</td>
<td>22% 44% 14% 13% 7%</td>
<td>13% 30% 31% 14% 13%</td>
<td>0% 17% 33% 17% 33%</td>
</tr>
</tbody>
</table>

Pearson chi-squared: 19.751; df = 8; p = 0.011; Cramer’s V = 0.163 (Small effect size).

Chi-square test was conducted excluding ethnic group Indian or Asian, because of small sample size.

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 66% ± 8.8% for whites, 53% ± 7.8% for blacks, 43% ± 10% for coloureds and 17% ± 23.7% for Indians or Asians in support of hunting; and 20% ± 7.4% for whites, 28% ± 7% for blacks, 26% ± 8.9% for coloureds and 50% ± 31.8% for Indians or Asians in opposition to hunting.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
There is insufficient evidence to conclude that there is a significant relationship between ages ($\chi^2_{16} = 20.222; P = 0.21$) or educational levels ($\chi^2_{16} = 20.165; P = 0.213$) of respondents and their support for or opposition to hunting in question 9. Therefore, the differences in the observed percentages between the various age groups, as well as between the various educational groups are not meaningful, and can thus be attributed to sampling variation and possibly to the limited sample size of the sub-groups. The results of the attitudes towards hunting of the various age groups and educational levels are displayed in Table 4.3 and Table 4.4 respectively.
Table 4.3. RELATIONSHIP BETWEEN AGE AND ATTITUDES TOWARDS HUNTING

<table>
<thead>
<tr>
<th>CATEGORY (Question 3 x Question 9)</th>
<th>STRONGLY APPROVE</th>
<th>APPROVE</th>
<th>NEUTRAL</th>
<th>DISAPPROVE</th>
<th>STRONGLY DISAPPROVE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 24</td>
<td>4</td>
<td>11</td>
<td>14</td>
<td>7</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>25 - 34</td>
<td>17</td>
<td>42</td>
<td>26</td>
<td>19</td>
<td>14</td>
<td>118</td>
</tr>
<tr>
<td>35 - 44</td>
<td>28</td>
<td>41</td>
<td>25</td>
<td>17</td>
<td>9</td>
<td>120</td>
</tr>
<tr>
<td>45 - 54</td>
<td>14</td>
<td>29</td>
<td>13</td>
<td>17</td>
<td>6</td>
<td>79</td>
</tr>
<tr>
<td>55 - older</td>
<td>3</td>
<td>16</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>TOTAL</td>
<td>66</td>
<td>139</td>
<td>80</td>
<td>64</td>
<td>35</td>
<td>384</td>
</tr>
</tbody>
</table>

Pearson Chi-squared: 20.222; df = 16; p = 0.210

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

Table 4.4. RELATIONSHIP BETWEEN EDUCATION AND ATTITUDES TOWARDS HUNTING

<table>
<thead>
<tr>
<th>CATEGORY (Question 4 x Question 9)</th>
<th>STRONGLY APPROVE</th>
<th>APPROVE</th>
<th>NEUTRAL</th>
<th>DISAPPROVE</th>
<th>STRONGLY DISAPPROVE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Grade 12</td>
<td>25</td>
<td>49</td>
<td>32</td>
<td>28</td>
<td>8</td>
<td>142</td>
</tr>
<tr>
<td>Grade 12</td>
<td>29</td>
<td>59</td>
<td>37</td>
<td>31</td>
<td>19</td>
<td>175</td>
</tr>
<tr>
<td>National Diploma</td>
<td>7</td>
<td>13</td>
<td>6</td>
<td>4</td>
<td>5</td>
<td>35</td>
</tr>
<tr>
<td>Degree</td>
<td>2</td>
<td>14</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>Post-graduate</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>66</td>
<td>139</td>
<td>80</td>
<td>64</td>
<td>35</td>
<td>384</td>
</tr>
</tbody>
</table>

Pearson Chi-squared: 20.165; df = 16; p = 0.213

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
4.2.2 Attitudes towards hunting

As mentioned earlier, the total sample population consisted of 384 respondents. Each one of these respondents was requested to answer question 9 of the questionnaire, which prompted them to indicate their support for, or opposition to hunting. This question addresses the main research question of the study (see chapter 1) by measuring respondents’ attitudes towards hunting. Therefore, question 9 of the questionnaire was considered to be one of the key variables in the study.

As explained above, the total sample population was required to indicate their support for, or their opposition to hunting in question 9 of the questionnaire. The results are displayed in Table 4.5 and graphically presented in Figure 4.3. The study found that the majority of the economically active public in Port Elizabeth supports hunting. Only 26% of respondents opposed hunting (disapproved or strongly disapproved of hunting), whereas 53% of respondents supported hunting (approved or strongly approved of hunting). Respondents were, thus, twice as likely to support hunting than to oppose it. Surprisingly, a substantial proportion of the respondents (21%) felt neutral towards hunting and did not approve, nor disapprove of it. The latter seems to suggest that the concept of hunting does not provoke any strong feelings in these individuals, or that
they do not regard hunting as important enough to have a considered opinion about it.

Table 4.5. ATTITUDES OF THE ECONOMICALLY ACTIVE POPULATION IN PORT ELIZABETH TOWARDS HUNTING

<table>
<thead>
<tr>
<th>CATEGORY (Question 9)</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
<th>CUMULATIVE COUNT</th>
<th>CUMULATIVE % PER MAIN CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Approve</td>
<td>66</td>
<td>17%</td>
<td>205</td>
<td>53%</td>
</tr>
<tr>
<td>Approve</td>
<td>139</td>
<td>36%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td>80</td>
<td>21%</td>
<td>80</td>
<td>21%</td>
</tr>
<tr>
<td>Disapprove</td>
<td>64</td>
<td>17%</td>
<td>99</td>
<td>26%</td>
</tr>
<tr>
<td>Strongly Disapprove</td>
<td>35</td>
<td>9%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>384</td>
<td>100%</td>
<td>384</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 53% ± 5% in the support of hunting; 21% ± 4.1% for those who felt neutral; and 26% ± 4.4% in opposition to hunting.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
4.2.3 Opposition to hunting

As explained earlier in section 4.2.2, the total sample population was required to indicate their support for, or their opposition to hunting in question 9 of the questionnaire. This question divided the sample population into three sub-groups, namely respondents who supported hunting, respondents who felt neutral towards hunting, and respondents who opposed hunting. The discussion in this section is focused on investigating the sub-group who opposed hunting in question 9. This sub-group consisted of 99 respondents.
4.2.3.1 Attitudes of those who disapprove of hunting towards allowing other people to hunt

It was found that disapproval of hunting did not necessarily translate into a desire to ban hunting altogether. The study showed that a substantial proportion of those respondents who personally disapproved of hunting did not necessarily mind if other people were to hunt (question 11). The results of question 11 are displayed in Table 4.6. Amongst the 99 respondents who either disapproved or strongly disapproved of hunting in question 9 of the questionnaire, 40% indicated that although they personally disapprove of hunting they think other people should be allowed to hunt if they want to, whereas the remaining 60% felt that nobody should be allowed to hunt. This evidence suggests that a large proportion of those who personally disapprove of hunting will not necessarily go so far as to say that hunting should not be allowed. The respondents who felt that nobody should be allowed to hunt constituted a mere 15% of the total sample population, with 95% confidence that this sample estimate will not deviate by more than 3.6% from the true values within the population of economically active public in Port Elizabeth. This means that there is a 95% statistical probability that the true value for the population lies in the range $15\% \pm 3.6\%$ (between 11.4% and 18.6%). There is thus convincing evidence that only a small proportion of the total population of economically active public in Port Elizabeth finds hunting
completely unacceptable. These individuals may pose a threat to the hunting industry, since their disapproval of hunting could be translated into a desire to ban hunting.

Table 4.6. ATTITUDES OF THOSE WHO DISAPPROVE OF HUNTING TOWARDS ALLOWING OTHER PEOPLE TO HUNT

<table>
<thead>
<tr>
<th>CATEGORY (Question 11)</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS OPPOSING HUNTING</th>
<th>% OF TOTAL SAMPLE POPULATION (n = 384)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunting should still be allowed</td>
<td>40</td>
<td>40%</td>
<td>10%</td>
</tr>
<tr>
<td>Nobody should be allowed to hunt</td>
<td>59</td>
<td>60%</td>
<td>15%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>99</td>
<td>100%</td>
<td>26%</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 40% ± 9.8% for those who personally disapproved of hunting but still felt that hunting should be allowed; 60% ± 9.8% for those who personally disapproved of hunting and felt that nobody should be allowed to hunt; and 15% ± 3.6% of the total population who felt that nobody should be allowed to hunt.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

The above findings made it obvious that people who disapprove of hunting can be divided into two distinct categories, namely those who still find hunting acceptable and feel that people should be allowed to hunt and those who find hunting unacceptable and feel that nobody should be allowed to hunt. A demographical analysis of these two groups were conducted using as series of chi-squared ($\chi^2$) tests. Some evidence was found of a statistical significant difference between the attitudes of male respondents and female respondents who disapproved of hunting, with
regard to their feelings as to whether hunting should be allowed or not ($\chi^2_1 = 3.994; P = 0.046$). Cramer’s V test was conducted to reveal the practical significance and importance of the latter, and indicated that the statistical significant difference that was found is of little practical significance (Cramer’s $V = 0.2$ (small effect size)). This suggests that gender had, in fact, little effect on whether respondents who disapproved of hunting felt that hunting should be allowed or not. The results of the influence that gender has on the attitudes of those who disapprove of hunting towards allowing other people to hunt, are displayed in Table 4.7 and graphically presented in Figure 4.4. Amongst the male respondents who either disapproved or strongly disapproved of hunting, 74% felt that “nobody should be allowed to hunt”, while 26% felt that “although they personally disapprove of hunting, other people should be allowed to hunt if they want to”.

However, amongst the female respondents who either disapproved or strongly disapproved of hunting, 53% felt that “nobody should be allowed to hunt”, while 47% felt that “although they personally disapprove of hunting, other people should be allowed to hunt if they want to”. Since Cramer’s V test found that gender had little effect on whether respondents who disapproved of hunting felt that hunting should be allowed or not, the differences in the observed proportions may possibly be attributed to the limited sample size of this specific sub-group.
Table 4.7. RELATIONSHIP BETWEEN GENDER AND ATTITUDES AMONGST THOSE WHO DISAPPROVE OF HUNTING TOWARDS ALLOWING OTHER PEOPLE TO HUNT

<table>
<thead>
<tr>
<th>CATEGORY (Question 1 x Question 11)</th>
<th>Hunting should still be allowed</th>
<th>Nobody should be allowed to hunt</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>8</td>
<td>23</td>
<td>31</td>
</tr>
<tr>
<td>Female</td>
<td>32</td>
<td>36</td>
<td>68</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>59</td>
<td>99</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>n%</th>
<th>Male 26%</th>
<th>74% 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female 47%</td>
<td>53% 100%</td>
<td></td>
</tr>
</tbody>
</table>

Pearson Chi-squared: 3.994; df = 1; p = 0.046; Cramer’s V = 0.20 (Small effect size).

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 26% ± 16% for males who personally disapproved of hunting but still felt that hunting should be allowed; 74% ± 16% for males who personally disapproved of hunting and felt that nobody should be allowed to hunt; 47% ± 12.1% for females who personally disapproved of hunting but still felt that hunting should be allowed; and 53% ± 12.1% for females who personally disapproved of hunting and felt that nobody should be allowed to hunt.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
Figure 4.4. GRAPHICAL PRESENTATION OF THE RELATIONSHIP BETWEEN GENDER AND ATTITUDES AMONGST THOSE WHO DISAPPROVE OF HUNTING TOWARDS ALLOWING OTHER PEOPLE TO HUNT

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

The demographical analysis with chi-squared ($\chi^2$) tests could not find sufficient evidence to conclude that there is any significant differences in the attitudes of those respondents who disapprove of hunting towards allowing other people to hunt between the various ethnic groups ($\chi^2 = 2.429; P = 0.297$), age groups ($\chi^2 = 1.904; P = 0.386$) or education groups ($\chi^2 = 1.312; P = 0.519$). Note that the age groups 15 to 24 and 55 to older, the ethnic group Indian or Asian, as well as respondents with degrees or post-graduate qualifications were all excluded from the chi-squared ($\chi^2$) tests due to the limited sample size of these sub-groups (see
Cochran’s rules which were discussed earlier in section 4.2.1). The results of the influence that various ethnic groups, age groups and education groups have on the attitudes of those who disapprove of hunting towards allowing other people to hunt, are displayed in Table 4.8, Table 4.9 and Table 4.10 respectively.

Table 4.8. RELATIONSHIP BETWEEN ETHNICITY AND ATTITUDES AMONGST THOSE WHO DISAPPROVE OF HUNTING TOWARDS ALLOWING OTHER PEOPLE TO HUNT

<table>
<thead>
<tr>
<th>CATEGORY (Question 2 x Question 11)</th>
<th>Hunting should still be allowed</th>
<th>Nobody should be allowed to hunt</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>20</td>
<td>25</td>
<td>45</td>
</tr>
<tr>
<td>White</td>
<td>11</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>Coloured</td>
<td>7</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>Indian or Asian</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>59</td>
<td>99</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>White</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>Coloured</td>
<td>28%</td>
<td>72%</td>
</tr>
<tr>
<td>Indian or Asian</td>
<td>33%</td>
<td>67%</td>
</tr>
</tbody>
</table>

Pearson Chi-squared: 2.429; df = 2; p = 0.297.
(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
Table 4.9. RELATIONSHIP BETWEEN AGE AND ATTITUDES AMONGST THOSE WHO DISAPPROVE OF HUNTING TOWARDS ALLOWING OTHER PEOPLE TO HUNT

<table>
<thead>
<tr>
<th>CATEGORY (Question 3 x Question 11)</th>
<th>Hunting should still be allowed</th>
<th>Nobody should be allowed to hunt</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 24</td>
<td>2</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>25 - 34</td>
<td>12</td>
<td>21</td>
<td>33</td>
</tr>
<tr>
<td>35 - 44</td>
<td>12</td>
<td>14</td>
<td>26</td>
</tr>
<tr>
<td>45 - 54</td>
<td>12</td>
<td>11</td>
<td>23</td>
</tr>
<tr>
<td>55 - older</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>59</td>
<td>99</td>
</tr>
</tbody>
</table>

Pearson Chi-squared: 1.904; df = 2; p = 0.386.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

Table 4.10. RELATIONSHIP BETWEEN EDUCATION AND ATTITUDES AMONGST THOSE WHO DISAPPROVE OF HUNTING TOWARDS ALLOWING OTHER PEOPLE TO HUNT

<table>
<thead>
<tr>
<th>CATEGORY (Question 4 x Question 11)</th>
<th>Hunting should still be allowed</th>
<th>Nobody should be allowed to hunt</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Grade 12</td>
<td>15</td>
<td>21</td>
<td>36</td>
</tr>
<tr>
<td>Grade 12</td>
<td>21</td>
<td>29</td>
<td>50</td>
</tr>
<tr>
<td>National Diploma</td>
<td>2</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Degree</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Post-graduate</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>40</td>
<td>59</td>
<td>99</td>
</tr>
</tbody>
</table>

Pearson Chi-squared: 1.312; df = 2; p = 0.519.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).


4.2.3.2 Reasons for opposing hunting

In question 10 of the questionnaire each one of the 99 respondents who disapproved or strongly disapproved of hunting was asked what their most important reasons were for opposing hunting. Each respondent was given a list of possible reasons why people generally disapprove of hunting, as was established earlier in chapter 3. Respondents were allowed to select up to three reasons why they oppose hunting. Furthermore, if a respondent’s reasons for opposing hunting did not appear on the list, provision was made for respondents to write down their own reason for opposing hunting. The results are displayed in Table 4.11 and graphically presented in Figure 4.5.

The survey found that the most prominent reasons why respondents opposed hunting are that they think hunting endangers wildlife (54%) and they perceive it as being morally wrong to kill animals (51%). The survey also revealed that 47% of respondents were opposed to hunting because of the pain inflicted on animals. Furthermore, other reasons why respondents opposed hunting were because they love animals (31%), because they think it is wrong to use animals for people’s own benefit (27%), because of the poor behaviour of hunters (19%) and because they are concerned that hunting is an unsafe activity (17%). Two percent of the respondents did not supply a reason why they oppose hunting.
It is important to notice that the large majority of respondents who opposed hunting did so because they believe that hunting endangers wildlife, when, in fact it is known that hunting contributes to the conservation of wildlife (Bothma, 2000, p.1; Barnett & Patterson, 2005, p.1). This evidence suggests that many people who oppose hunting may not understand the importance of hunting to conservation and wildlife management. Thus, the primary reason for opposing hunting is not based on facts, but rather on a lack of knowledge and understanding. It is also interesting to notice that many of the motivations for opposing hunting are based on emotions and a concern for animal welfare. Following the primary motivation for opposing hunting, these emotionally based reasons seem to be the second most frequently occurring motivations for opposing hunting. The motivations that seem to occur least frequently are those based on reasons which have little to do with wildlife, animals or even hunting itself. Instead, these motivations are formed based on objects associated with hunting, such as hunter behaviour and safety concerns.

Table 4.11. REASONS FOR OPPOSING HUNTING

<table>
<thead>
<tr>
<th>CATEGORY (Question 10)</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunting endangers wildlife</td>
<td>53</td>
<td>54%</td>
</tr>
<tr>
<td>Morally wrong to kill animals</td>
<td>50</td>
<td>51%</td>
</tr>
<tr>
<td>Because of pain inflicted on animals</td>
<td>47</td>
<td>47%</td>
</tr>
<tr>
<td>I love animals</td>
<td>31</td>
<td>31%</td>
</tr>
<tr>
<td>Use of animals for own benefit</td>
<td>27</td>
<td>27%</td>
</tr>
<tr>
<td>Poor behavior of hunters</td>
<td>19</td>
<td>19%</td>
</tr>
<tr>
<td>Hunting is an unsafe activity</td>
<td>17</td>
<td>17%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
4.2.3.3 Anti-hunting organizations

Question 12 of the questionnaire asked each one of the 99 respondents who disapproved or strongly disapproved of hunting to indicate whether or not they belong to an anti-hunting or animal rights organization. It was found that 0% of the respondents who opposed hunting belonged to an anti-hunting or animal rights organization. These results are reported at a 95% statistical probability that the sample estimates do not deviate from the true value for the population of economically active public in Port Elizabeth. Therefore, it seems as if there is extremely few, or possibly no significant proportion of the economically active population in Port
Elizabeth that actively supports an anti-hunting or animal rights organization.

4.2.4 Support for hunting

As explained earlier in section 4.2.1, the total sample population was required to indicate their support for, or their opposition to hunting in question 9 of the questionnaire. This question divided the sample population into three sub-groups, namely respondents who supported hunting, respondents who felt neutral towards hunting, and respondents who opposed hunting. The discussion in this section is focused on investigating the sub-group who supported hunting in question 9. This sub-group consisted of 205 respondents.

4.2.4.1 Participation in hunting activities

Question 13 asked each one of the 205 respondents who approved or strongly approved of hunting to indicate whether they “never” participate in hunting activities, participate in hunting activities “from time to time”, or “regularly”. This was done in order to get an indication of what proportion of the population actively participates in hunting activities. A total of 60% of the respondents who approved or strongly approved of hunting indicated that they never participate in hunting activities, while 32%
indicated that they participate in hunting activities from time to time. Only 8% of the respondents who approved or strongly approved of hunting indicated that they regularly participate in hunting activities. If these numbers are adapted to express the proportions for the total sample population, it is evident that only 17% of the total sample population participates in hunting activities from time to time, while only a mere 4% of the total sample population regularly participates in hunting activities. The remaining 79% of the total sample population never participates in hunting activities. The results are displayed in Table 4.12. These results suggest that very few people participate in hunting activities. A possible interpretation of the latter is that opportunities to become involved in hunting is lacking.

Table 4.12. PARTICIPATION IN HUNTING ACTIVITIES

<table>
<thead>
<tr>
<th>CATEGORY (Question 13)</th>
<th>NUMBER OF RESPONDENTS IN SUPPORT OF HUNTING</th>
<th>% OF RESPONDENTS IN SUPPORT OF HUNTING</th>
<th>NUMBER OF RESPONDENTS IN TOTAL SAMPLE POPULATION</th>
<th>% OF TOTAL SAMPLE POPULATION (384 respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>123</td>
<td>60%</td>
<td>302</td>
<td>79%</td>
</tr>
<tr>
<td>From time to time</td>
<td>66</td>
<td>32%</td>
<td>66</td>
<td>17%</td>
</tr>
<tr>
<td>Regularly</td>
<td>16</td>
<td>8%</td>
<td>16</td>
<td>4%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>205</td>
<td>100%</td>
<td>384</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 60% ± 6.7% for those in support of hunting who never participate in hunting activities; 32% ± 6.4% for those in support of hunting who participate in hunting activities from time to time; 8% ± 3.7% for those in support of hunting who regularly participate in hunting activities; 79% ± 4.1% for the total population who never participate in hunting activities; 17% ± 3.8% for the total population who participate in hunting activities from time to time; and 4% ± 2% for the total population who regularly participate in hunting activities.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
4.2.4.2 Reasons for supporting hunting

Each one of the 205 respondents who approved or strongly approved of hunting was asked what their most important reasons are for supporting hunting in question 14 of the questionnaire. Each respondent was given a list of possible reasons why people generally approve of hunting. Respondents were allowed to select up to three reasons why they support hunting. Furthermore, if a respondent’s reasons for supporting hunting did not appear on the list, provision was made for the respondent to write down their own reasons for supporting hunting. The results are displayed in Table 4.13 and graphically presented in Figure 4.6.

The survey found that the most prominent reason why respondents supported hunting were that they consider hunting as an important wildlife management tool (43%). The survey also revealed that 38% of respondents supported hunting because of the contribution it makes to the country’s economy. Furthermore, other reasons why respondents supported hunting were because they felt that hunting leads to the conservation of wildlife (32%), because they are in favour of the sustainable utilization of wildlife (31%), because hunting is a way of educating people about nature (30%), because people should have freedom of choice to hunt if they wish to do so (29%) and because they consider hunting to be part of their cultural heritage (27%). Finally, 22% of
the respondents supported hunting because they think hunting is an enjoyable recreational activity.

The results suggest that many of the respondents who supported hunting recognized hunting as an essential part of wildlife management. However, not all of the respondents who supported hunting shares this view and it is evident that a substantial proportion still does not recognize the importance of hunting as a wildlife management instrument. Furthermore, although the conservational value of hunting ranked third amongst the reasons for supporting hunting, it is still worth noting that less than a third of respondents supported hunting for this reason. This may imply that many people – even amongst those who support hunting – do not truly comprehend the conservational value of hunting.

Table 4.13. REASONS FOR SUPPORTING HUNTING

<table>
<thead>
<tr>
<th>CATEGORY (Question 14)</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wildlife management tool</td>
<td>88</td>
<td>43%</td>
</tr>
<tr>
<td>Contributes to the economy</td>
<td>77</td>
<td>38%</td>
</tr>
<tr>
<td>Hunting leads to conservation</td>
<td>65</td>
<td>32%</td>
</tr>
<tr>
<td>In favour of sustainable utilization</td>
<td>64</td>
<td>31%</td>
</tr>
<tr>
<td>Way to educate about nature</td>
<td>62</td>
<td>30%</td>
</tr>
<tr>
<td>People should have freedom of choice</td>
<td>60</td>
<td>29%</td>
</tr>
<tr>
<td>Hunting is my cultural heritage</td>
<td>56</td>
<td>27%</td>
</tr>
<tr>
<td>Enjoyable recreational activity</td>
<td>45</td>
<td>22%</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>
4.2.4.3 Hunting organizations

Question 15 of the questionnaire prompted respondents who approved or strongly approved of hunting to indicate whether or not they belong to a hunting organization. It was found that 2% of the respondents who support hunting belonged to a hunting organization, whereas 98% of the respondents who support hunting did not belong to any hunting organization.

Each one of the 4 respondents who indicated that they belong to a hunting organization was asked to name the hunting organization they belong to.
Only 1 of the four respondents belonged to the South African Hunters Association, whereas the remaining three indicated that they belonged to Eastern Cape Game Management Association (ECGMA).

4.2.5 The effect of direct exposure to hunting on a person’s attitudes towards hunting

In the literature review on the psychology of perceptions and attitudes which was discussed earlier in chapter 3, it was established that the more a person has been exposed to hunting, and the greater a person’s knowledge is about hunting, the greater his ability would be to attain an accurate perception of what hunting entails. With the latter in mind, question 5 of the questionnaire asked each one of the 384 respondents in the sample population whether or not they have been on a hunt before. This was done in order to establish whether or not respondents have previously been directly exposed to hunting and, consequently, to determine how exposure to hunting influence their attitudes towards it. Thus, the aim of question 5 was to establish if there is any significant difference in the attitudes towards hunting between respondents who have been on a hunt before and those who have never been on a hunt before.

The survey results found that respondents who have been on a hunt before seem to be much more likely to support hunting than respondents
who have never been on a hunt. The results are displayed in Table 4.14 and graphically presented in Figure 4.7. The chi-squared ($\chi^2$) test revealed that there was sufficient evidence of an extremely significant association between direct exposure to hunting and respondents’ attitudes towards hunting ($\chi^2_{4} = 78.202; P < 0.001$). The latter results are highly significant, with strong evidence suggesting that there is a statistically significant difference between respondents who have been on a hunt before and respondents who have not been on a hunt before with regard to their attitudes towards hunting. Cramer’s V test revealed the practical significance and importance of this association and indicated that exposure to hunting had a moderate effect on respondents’ support for or opposition to hunting (Cramer’s V = 0.451 (moderate effect size)). This variable obtained the highest Cramer’s V test value in the study, indicating that direct exposure to hunting is the single variable in the study which has the largest effect on the attitudes of the economically active public in Port Elizabeth towards hunting. The study found that while 82% of respondents who have been on a hunt before approved of hunting, only 39% of respondents who have never been on a hunt before approved of it, and, conversely, only 7% of respondents who have been on a hunt before disapproved of hunting, while 35% of respondents who have never been on a hunt before disapproved. It seems as if respondents who have been directly exposed to hunting are almost twice as likely to support hunting as respondents who have never been directly exposed to hunting, whereas
respondents who have never been directly exposed to hunting are five times more likely to oppose hunting than respondents who have been directly exposed to hunting. These findings are important because they indicate that exposure to hunting has a very positive effect on the attitudes of the economically active public in Port Elizabeth towards hunting.

It is worth noting that 255 of the 384 respondents in the sample population (which represent 66% of the total sample population) indicated that they have never been on a hunt before, whereas only 129 of the 384 respondents in the sample population (which represents 34% of the total sample population) indicated that they have been on a hunt before. This indicates that the large majority of the economically active public in Port Elizabeth has never been directly exposed to hunting. The latter supports the earlier finding (see section 4.2.4.1) that opportunities to become involved in hunting seem to be lacking.
Table 4.14. RELATIONSHIP BETWEEN EXPOSURE TO HUNTING AND ATTITUDES TOWARDS HUNTING

<table>
<thead>
<tr>
<th>CATEGORY (Question 5 x Question 9)</th>
<th>STRONGLY APPROVE</th>
<th>APPROVE</th>
<th>NEUTRAL</th>
<th>DISAPPROVE</th>
<th>STRONGLY DISAPPROVE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Been on a hunt before</td>
<td>45</td>
<td>61</td>
<td>14</td>
<td>7</td>
<td>2</td>
<td>129</td>
</tr>
<tr>
<td>Never been on a hunt before</td>
<td>21</td>
<td>78</td>
<td>66</td>
<td>57</td>
<td>33</td>
<td>255</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>66</strong></td>
<td><strong>139</strong></td>
<td><strong>80</strong></td>
<td><strong>64</strong></td>
<td><strong>35</strong></td>
<td><strong>384</strong></td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>100%</td>
</tr>
<tr>
<td>Been on a hunt before</td>
<td>35%</td>
<td>47%</td>
<td>11%</td>
<td>5%</td>
<td>2%</td>
<td>100%</td>
</tr>
<tr>
<td>Never been on a hunt before</td>
<td>8%</td>
<td>31%</td>
<td>26%</td>
<td>22%</td>
<td>13%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Pearson Chi-squared: 78.202; df = 4; p < 0.001; Cramer’s V = 0.451 (Moderate effect size).

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 82% ± 6.7% for those who have been on a hunt before and support hunting; 39% ± 6% for those who have never been on a hunt before and support hunting; 7% ± 4.5% for those who have been on a hunt before and oppose hunting; and 35% ± 5.9% for those who have never been on a hunt before and oppose hunting.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

Figure 4.7. GRAPHICAL PRESENTATION OF THE RELATIONSHIP BETWEEN EXPOSURE TO HUNTING AND ATTITUDES TOWARDS HUNTING

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
4.2.6 The effect of rural ties on a person’s attitudes towards hunting

In the literature review regarding attitudes towards hunting discussed earlier in chapter 3, it was established that rural societies will hold more positive attitudes towards hunting than urban societies and that contacts or ties with people in rural areas will likely lead to direct or indirect exposure to hunting.

With the latter in mind, question 6 of the questionnaire prompted respondents to indicate whether or not they have any contacts or ties with farmers or people in rural areas. This was done in order to establish if there is any significant difference in the attitudes towards hunting between respondents with rural ties and respondents with no rural ties. The results are displayed in Table 4.15 and graphically presented in Figure 4.8. The chi-squared ($\chi^2$) tests suggested that there was an extremely significant association between having rural ties and respondents’ attitudes towards hunting ($\chi^2 = 48.497; P < 0.001$). Cramer’s V test revealed the practical significance and importance of this association and indicated that having rural ties had a moderate effect on respondents’ support for or opposition to hunting ($\text{Cramer's V} = 0.355 \text{ (moderate effect size)}$). This variable obtained the second highest Cramer’s V test value in the study, indicating that rural ties is the variable in the study which has the second largest effect on the attitudes of the economically active public in Port Elizabeth.
towards hunting. The study found that while 69% of respondents who have rural ties approved of hunting, only 37% of respondents who do not have any rural ties approved of it, and, conversely, only 16% of respondents who have rural ties disapproved of hunting, while 36% of respondents who do not have any rural ties disapproved. The latter indicates that respondents who have rural ties tend to be much more likely to support hunting and much less likely to oppose hunting than respondents who do not have any rural ties. This is most likely because rural ties are key factors leading to exposure to hunting and pro-hunting activities.

Furthermore, it is worth noting that 199 of the 384 respondents in the sample population (which represents 52% of the total sample population) indicated that they have contacts or ties with farmers or people in rural areas, whereas 185 of the 384 respondents in the sample population (which represents 48% of the total sample population) indicated that they do not have any contacts or ties with farmers or people in rural areas. This indicates that approximately half of the economically active public in Port Elizabeth does have rural contacts ties, while the remaining half does not have any rural contacts or ties.
Table 4.15. RELATIONSHIP BETWEEN HAVING RURAL TIES AND ATTITUDES TOWARDS HUNTING

<table>
<thead>
<tr>
<th>CATEGORY (Question 6 x Question 9)</th>
<th>STRONGLY APPROVE</th>
<th>APPROVE</th>
<th>NEUTRAL</th>
<th>DISAPPROVE</th>
<th>STRONGLY DISAPPROVE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural contacts or ties</td>
<td>53</td>
<td>84</td>
<td>30</td>
<td>18</td>
<td>14</td>
<td>199</td>
</tr>
<tr>
<td>No rural contacts or ties</td>
<td>13</td>
<td>55</td>
<td>50</td>
<td>46</td>
<td>21</td>
<td>185</td>
</tr>
<tr>
<td>TOTAL</td>
<td>66</td>
<td>139</td>
<td>80</td>
<td>64</td>
<td>35</td>
<td>384</td>
</tr>
<tr>
<td>Rural contacts or ties</td>
<td>7%</td>
<td>42%</td>
<td>15%</td>
<td>9%</td>
<td>7%</td>
<td>100%</td>
</tr>
<tr>
<td>No rural contacts or ties</td>
<td>7%</td>
<td>30%</td>
<td>27%</td>
<td>25%</td>
<td>11%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Pearson Chi-squared: 48.497; df = 4; p < 0.001; Cramer’s V = 0.355 (Moderate effect size).

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 69% ± 6.5% for those who have rural ties and support hunting; 37% ± 7% for those who do not have rural ties and support hunting; 16% ± 5.1% for those who have rural ties and oppose hunting; and 36% ± 7% for those who do not have rural ties and oppose hunting.

(Note that, because of rounding, some sums may appear to be off by as much as 1 percentage point).

Figure 4.8. GRAPHICAL PRESENTATION OF THE RELATIONSHIP BETWEEN HAVING RURAL TIES AND ATTITUDES TOWARDS HUNTING

(Note that, because of rounding, some sums may appear to be off by as much as 1 percentage point).
4.2.7 The effect of social ties on a person’s attitudes towards hunting

Another factor associated with the support for or opposition to hunting is social ties. In the literature review on the psychology of perceptions and attitudes, which was discussed earlier in chapter 3, it was established that social ties may play an important part in a person’s formation of attitudes and a person’s behaviour. Attitudes and behavioural norms typically develop in small social groups or subcultures. A person’s ideas and thoughts about what can be considered to be an appropriate attitude or correct behaviour towards a specific object (such as hunting) is directly linked to that person’s social ties.

With the latter in mind, the survey also revealed that people who have family members or friends who hunt, tend to have more favourable attitudes towards hunting – even if they do not hunt themselves. Question 7 of the questionnaire asked respondents whether or not they have any family members or friends who hunt. This was done in order to establish if close contact with someone who is a hunter has a significant influence on people’s attitudes towards hunting. Thus, the aim of question 7 was to establish if there is any significant difference in the attitudes towards hunting between respondents who have family members or friends who hunt and those who do not have any family members or friends who hunt. The results are displayed in Table 4.16 and graphically presented in
Figure 4.9. The chi-squared ($\chi^2$) test revealed that there was sufficient evidence of an extremely significant association between having family members or friends who hunt and attitudes towards hunting in question 7 ($\chi^2_4 = 36.607; P < 0.001$). Despite the fact that the chi-squared ($\chi^2$) test found a highly significant association, Cramer's V test revealed that having family members or friends who hunt was of moderate practical significance with regard to respondents' support for or opposition to hunting (Cramer's $V = 0.309$ (moderate effect size)). This variable obtained the fourth highest Cramer's V test value in the study, indicating that social ties is the variable in the study which has the fourth largest effect on the attitudes of the economically active public in Port Elizabeth towards hunting. The study found that while 66% of respondents who have family members or friends who hunt approved of hunting, only 37% of respondents who do not have any family members or friend who hunt approved of it, and, conversely, only 17% of respondents who have family members or friends who hunt disapproved of hunting, while 37% of respondents who do not have any family members or friends who hunt, disapproved. The results indicate that respondents who have family members or friends who hunt tend to be more likely to support hunting and less likely to oppose hunting than respondents who do not have any family members or friends who hunt.
Furthermore, it is worth noting that 220 of the 384 respondents in the sample population (which represents 57% of the total sample population) indicated that they have family members or friends who hunt, whereas 164 of the 384 respondents in the sample population (which represents 43% of the total sample population) indicated that they do not have any family members or friends who hunt. This indicates that although the majority of the economically active public in Port Elizabeth has close social ties with hunters, there is a substantial proportion of the population who does not have close social ties with hunters.

Table 4.16. RELATIONSHIP BETWEEN HAVING FAMILY MEMBERS OR FRIENDS WHO HUNT AND ATTITUDES TOWARDS HUNTING

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>STRONGLY APPROVE</th>
<th>APPROVE</th>
<th>NEUTRAL</th>
<th>DISAPPROVE</th>
<th>STRONGLY DISAPPROVE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family member or friend</td>
<td>52</td>
<td>93</td>
<td>37</td>
<td>23</td>
<td>15</td>
<td>220</td>
</tr>
<tr>
<td>No family member or friend</td>
<td>14</td>
<td>46</td>
<td>43</td>
<td>41</td>
<td>20</td>
<td>164</td>
</tr>
<tr>
<td>TOTAL</td>
<td>66</td>
<td>139</td>
<td>80</td>
<td>64</td>
<td>35</td>
<td>384</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 66% ± 6.3% for those who have family members or friends who hunt and support hunting; 37% ± 7.4% for those who do not have family members or friends who hunt and support hunting; 17% ± 5% for those who have family members or friends who hunt and oppose hunting; and 37% ± 7.4% for those who do not have family members or friends who hunt and oppose hunting.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
4.2.8 Likert scale analysis

Question 8 of the questionnaire is based on the Likert scale type questions. It evaluated various aspects of respondents’ attitudes towards hunting on a continuum of “strongly agree” to “strongly disagree”. The Likert scale required that respondents give an indication of their degree of agreement or disagreement with a specific statement by choosing between five possible response categories, namely “strongly agree”, “agree”, “neutral”, “disagree” and “strongly disagree”.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
Some questions in the Likert scale were asked twice, each time from a different perspective in order to test the consistency and reliability of respondents’ responses. Question 8.1 and 8.6 of the questionnaire is related to each other, question 8.3 and 8.8 of the questionnaire is related, while question 8.4 and 8.7 is related and, finally, question 8.5 and 8.9 of the questionnaire is also related to each other. Question 8.2 stands alone and was not meant to be related to any other question in the Likert scale.

This section will discuss and interpret the results of the questions asked in the Likert scale, followed by a brief comparison of the questions which were related to each other as mentioned above. This was done in an attempt to obtain a sense of the consistency and reliability of respondents’ responses. In order to test the internal consistency reliability of the related items in the Likert scale, it was necessary to calculate the Cronbach alpha coefficient (Litwin, 2003, p.22). The Cronbach alpha coefficient is an indicator of how well different items measure the same issue. It measures the internal reliability of variables and indicates the consistency with which the related items in a summated scale were answered (Litwin, 2003, p.20-22). Cronbach’s alpha coefficient ranges from 0 to 1. The higher the score, the more reliable the generated scale is and the more consistent the respondents’ answers were. A Cronbach alpha coefficient of 0.7 is generally considered to be an acceptable reliability coefficient, although lower thresholds are sometimes used as well. A scale’s internal
consistency reliability generally improves as more items are added to the scale (Litwin, 2003, p.25). Thus, it is easier to obtain a high Cronbach alpha coefficient with many related items in a scale than with only a few related items. With few related items in a scale it often becomes more difficult to obtain a Cronbach alpha coefficient of 0.7 or higher, even if the scale produced reliable and consistent results. Therefore, with only a few related items (2 related questions in the case of this study) thresholds lower than 0.7 may still be considered to be an acceptable reliability coefficient.

With the latter in mind, the Likert scale in question 8 of the questionnaire only asked two questions for each variable measured in the scale – with the exception of question 8.2 which was not meant to be related to any other question in the Likert scale. Therefore, since the Likert scale only asked two questions for each variable measured in the scale, a Cronbach alpha coefficients somewhat lower than 0.7 can still be considered to be an acceptable reliability coefficient.

4.2.8.1 Attitudes towards the legality or acceptability of hunting

Question 8.3 and question 8.8 of the questionnaire were related to each other. Both these questions were designed to measure the same variable,
namely how respondents felt about the legality or acceptability of hunting. The results for these two questions are discussed below.

Question 8.3 of the questionnaire asked respondents in a direct manner how they feel about the legality of hunting. Seventeen percent of the respondents agreed that hunting should be made illegal, 18% neither agreed nor disagreed, and 65% disagreed and felt that hunting should remain legal. The results of question 8.3 are displayed in Table 4.17. The results from the latter question closely matches the results of question 8.8 of the questionnaire, which asked respondents in an indirect manner how they feel about the legality of hunting. A total of 19% of the respondents agreed with the statement that hunting is wrong and nobody should ever be allowed to hunt, while 17% neither agreed nor disagreed and 63% disagreed. The results of question 8.8 are displayed in Table 4.18. It is thus obvious that only a small proportion of the respondents felt that hunting should be made illegal, while the large majority of the respondents felt that hunting should remain legal. These findings seem to be in correspondence with the findings of a similar question in the questionnaire (question 11), which was discussed earlier in section 4.2.5.1.
Table 4.17. ATTITUDES TOWARDS THE LEGALITY OF HUNTING

<table>
<thead>
<tr>
<th>STATEMENT: Hunting should be made illegal</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>17</td>
<td>4%</td>
</tr>
<tr>
<td>Agree</td>
<td>49</td>
<td>13%</td>
</tr>
<tr>
<td>Neutral</td>
<td>70</td>
<td>18%</td>
</tr>
<tr>
<td>Disagree</td>
<td>152</td>
<td>40%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>96</td>
<td>25%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>384</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 17% ± 3.8% for those who felt hunting should be made illegal; 18% ± 3.8% for those who felt neutral; and 65% ± 4.8% for those who felt that hunting should remain legal.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

Table 4.18. ATTITUDES TOWARDS THE ACCEPTABILITY OF HUNTING

<table>
<thead>
<tr>
<th>STATEMENT: Hunting is wrong and nobody should ever be allowed to hunt</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>24</td>
<td>6%</td>
</tr>
<tr>
<td>Agree</td>
<td>50</td>
<td>13%</td>
</tr>
<tr>
<td>Neutral</td>
<td>66</td>
<td>17%</td>
</tr>
<tr>
<td>Disagree</td>
<td>155</td>
<td>40%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>89</td>
<td>23%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>384</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 19% ± 3.9% for those who felt hunting is unacceptable; 17% ± 3.8% for those who felt neutral; and 63% ± 4.8% for those who felt that hunting is acceptable.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
Question 8.3 and question 8.8 of the questionnaire were designed to measure the same variable, namely attitudes towards the legality or acceptability of hunting. This was done in order to assess the internal consistency reliability of the scale. A Cronbach alpha coefficient of 0.6 was calculated for these two related questions, indicating good internal consistency and reliability in this scale. This indicates that respondents answered consistently and that the scale produced reliable results. The latter inspires confidence in the reliability of the data that was obtained.

4.2.8.2 Beliefs regarding the impact of hunting on wildlife and the future existence of wildlife

Question 8.2 was aimed at establishing whether or not respondents believed that hunting has the potential to be beneficial to wildlife populations if it is done correctly. Question 8.2 of the questionnaire asked respondents whether or not they believe that hunting can be beneficial to wildlife populations if it is done correctly. A total of 78% of the respondents agreed that hunting has the potential to be beneficial to wildlife populations if it is done in a correct manner, 10% neither agreed nor disagreed, and 12% disagreed and believed that hunting does not have the potential to be beneficial to wildlife populations, even when it is done in a correct manner. The results are displayed in Table 4.19. The latter clearly indicates that the large majority of people believe that hunting
does have the potential to be beneficial to wildlife populations if it is done correctly.

Table 4.19. BELIEFS REGARDING THE IMPACT OF HUNTING ON WILDLIFE POPULATIONS

<table>
<thead>
<tr>
<th>CATEGORY (Question 8.2)</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>95</td>
<td>25%</td>
</tr>
<tr>
<td>Agree</td>
<td>203</td>
<td>53%</td>
</tr>
<tr>
<td>Neutral</td>
<td>38</td>
<td>10%</td>
</tr>
<tr>
<td>Disagree</td>
<td>35</td>
<td>9%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>13</td>
<td>3%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>384</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 78% ± 4.2% for those who agreed that hunting has the potential to be beneficial to wildlife populations if it is done correctly; 10% ± 3% for those who felt neutral; and 12% ± 3.3% for those who disagreed and felt that hunting does not have the potential to be beneficial to wildlife populations even when it is done correctly.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

Question 8.4 and question 8.7 of the questionnaire were related to each other. Both these questions attempted to determine whether respondents thought hunting threatens the future existence of wildlife or ensures a future for wildlife. The results for these two questions are discussed below.

Question 8.4 of the questionnaire asked respondents whether or not they are of the opinion that hunting endangers wildlife. A total of 41% of the
respondents believed that hunting does endanger wildlife, while 22% neither agreed nor disagreed and 38% disagreed and thought that hunting does not endanger wildlife. The results of question 8.4 are displayed in Table 4.20. The results from the latter question matches closely the results of question 8.7 of the questionnaire, which asked respondents whether or not they are of the opinion that hunting will ensure a future for wildlife. Thirty five percent of the respondents disagreed and doubted that hunting will ensure a future for wildlife, while 25% neither agreed nor disagreed and 41% agreed and believed that hunting will ensure a future for wildlife. The results of question 8.7 are displayed in Table 4.21.

The findings of both question 8.4 and question 8.7 are in agreement that a relatively large proportion of the population seems to think that hunting threatens the future existence of wildlife. The latter is supported by the results of question 10 of the questionnaire (see section 4.2.3.2), which suggest that the most prominent reasons why respondents opposed hunting were based on the belief that hunting endangers wildlife.
Table 4.20. BELIEFS REGARDING THE IMPACT OF HUNTING ON THE FUTURE EXISTENCE OF WILDLIFE: HUNTING ENDANGERS WILDLIFE

<table>
<thead>
<tr>
<th>CATEGORY (Question 8.4)</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>47</td>
<td>12%</td>
</tr>
<tr>
<td>Agree</td>
<td>110</td>
<td>29%</td>
</tr>
<tr>
<td>Neutral</td>
<td>84</td>
<td>22%</td>
</tr>
<tr>
<td>Disagree</td>
<td>114</td>
<td>30%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>29</td>
<td>8%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>384</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 41% ± 4.9% for those who agreed that hunting endangers wildlife populations; 22% ± 4.1% for those who felt neutral; and 38% ± 4.8% for those who disagreed and felt that hunting does not endanger wildlife populations.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

Table 4.21. BELIEFS REGARDING THE IMPACT OF HUNTING ON THE FUTURE EXISTANCE OF WILDLIFE: HUNTING AS A MEANS TO ENSURE A FUTURE FOR WILDLIFE

<table>
<thead>
<tr>
<th>CATEGORY (Question 8.7)</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>26</td>
<td>7%</td>
</tr>
<tr>
<td>Agree</td>
<td>130</td>
<td>34%</td>
</tr>
<tr>
<td>Neutral</td>
<td>96</td>
<td>25%</td>
</tr>
<tr>
<td>Disagree</td>
<td>102</td>
<td>27%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>30</td>
<td>8%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>384</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 41% ± 4.9% for those who agreed that hunting will ensure a future for wildlife; 25% ± 4.3% for those who felt neutral; and 35% ± 4.8% for those who disagreed and felt that hunting will not ensure a future for wildlife.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
Question 8.4 and question 8.7 of the questionnaire were designed to measure the same variable, namely attitudes towards hunting and the future existence of wildlife. This was done in order to assess the internal consistency reliability of the scale and of the respondents’ responses. A Cronbach alpha coefficient of 0.75 was calculated for these two related questions, indicating very good internal consistency and reliability in this scale. This indicates that respondents answered consistently and that the scale produced reliable results. The latter inspires confidence in the reliability of the data that was obtained.

The results in Table 4.19 indicated that the majority of respondents believed that hunting has the potential to be beneficial to wildlife, while the results in Table 4.20 and Table 4.21 indicated that a relatively large proportion of the respondents seem to think that hunting threatens the future existence of wildlife. A possible interpretation of these almost contradicting results may be that it indicates that although the majority of the respondents recognized that hunting has the potential to be beneficial to wildlife, many of them also feel that hunting is done irresponsibly or unsustainably and therefore endangers wildlife.
4.2.8.3 Attitudes towards hunting as a wildlife management instrument

Question 8.5 and question 8.9 of the questionnaire were related to each other. Both these questions attempted to determine whether or not respondents perceived hunting as a wildlife management instrument. The results for these two questions are discussed below.

Question 8.5 of the questionnaire asked respondents whether or not they believe that hunting plays an important role in the ecological management of wildlife. A total of 67% of the respondents agreed that hunting plays an important role in the ecological management of wildlife, 17% neither agreed nor disagreed, and 16% disagreed and felt that hunting does not play an important role in the ecological management of wildlife. The results of question 8.5 are displayed in Table 4.22. The results from the latter question matches closely the results of question 8.9 of the questionnaire, which asked respondents whether or not they believe that hunting is an important wildlife management tool. Fifty two percent of the respondents agreed that hunting is an important wildlife management tool, 21% neither agreed nor disagreed, and 26% disagreed and felt that hunting is not an important wildlife management tool. The results of question 8.9 are displayed in Table 4.23.
In the literature review earlier in chapter 3 it was established that hunting becomes more acceptable amongst the public when it is put into the context of ecological goals and wildlife management, rather than to present hunting to the public as a form of recreation or sport. The results of question 8.5 and question 8.9 both indicate that a significant proportion of the population does not comprehend the importance of hunting as a wildlife management instrument. This means that this proportion of the population does not associate hunting with aspects such as wildlife management and, consequently, this may contribute to many people having negative attitudes towards hunting.

Table 4.22. ATTITUDES TOWARDS THE IMPORTANCE OF HUNTING IN THE ECOLOGICAL MANAGEMENT OF WILDLIFE

| STATEMENT: Hunting plays an important role in the ecological management of wildlife |
|---------------------------------|----------------------------------|
| CATEGORY (Question 8.5)        | NUMBER OF RESPONDENTS | % OF RESPONDENTS |
| Strongly Agree                 | 58                  | 15%               |
| Agree                          | 200                 | 52%               |
| Neutral                        | 64                  | 17%               |
| Disagree                       | 51                  | 13%               |
| Strongly Disagree              | 11                  | 3%                |
| **TOTAL**                      | **384**             | **100%**          |

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 67% ± 4.7% for those who agreed that hunting plays an important role in the ecological management of wildlife; 17% ± 3.7% for those who felt neutral; and 16% ± 3.7% for those who disagreed and felt that hunting does not play an important role in the ecological management of wildlife.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
Table 4.23. ATTITUDES TOWARDS THE IMPORTANCE OF HUNTING AS A WILDLIFE MANAGEMENT TOOL

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>42</td>
<td>11%</td>
</tr>
<tr>
<td>Agree</td>
<td>159</td>
<td>41%</td>
</tr>
<tr>
<td>Neutral</td>
<td>82</td>
<td>21%</td>
</tr>
<tr>
<td>Disagree</td>
<td>84</td>
<td>22%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>17</td>
<td>4%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>384</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 52% ± 5% for those who agreed that hunting is an important wildlife management tool; 21% ± 4.1% for those who felt neutral; and 26% ± 4.4% for those who disagreed and felt that hunting is not an important wildlife management tool.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

As mentioned earlier, question 8.5 and question 8.9 of the questionnaire were related to each other and measured the same variable, namely attitudes towards hunting as a wildlife management instrument. This was done in order to assess the internal consistency reliability of the scale and of the respondents’ responses. A Cronbach alpha coefficient of 0.75 was calculated for these two related questions, indicating very good internal consistency and reliability in this scale. This indicates that respondents answered consistently and that the scale produced reliable results. The latter inspires confidence in the reliability of the data that was obtained.
4.2.8.4 Hunting and safety concerns

Question 8.1 and question 8.6 of the questionnaire were related to each other. Both these questions attempted to determine whether or not respondents perceived hunting as a dangerous activity. The results for these two questions are discussed below.

Question 8.1 of the questionnaire asked respondents whether or not they felt that hunting is dangerous compared to other recreational activities. In total 27% of the respondents agreed that hunting is not dangerous compared to other recreational activities, while 21% neither agreed nor disagreed and 51% disagreed and felt that hunting is dangerous compared to other recreational activities. The results of question 8.1 are displayed in Table 4.24. Question 8.6 of the questionnaire asked respondents whether or not they feel that hunting is an unsafe activity. Thirty six percent of the respondents disagreed and felt that hunting is a safe activity, while 23% neither agreed nor disagreed and 40% agreed and felt that hunting is a dangerous activity. The results of question 8.6 are displayed in Table 4.25. The findings of both these questions are in agreement that a substantial proportion of the population seems to perceive hunting as a dangerous activity.
Table 4.24. ATTITUDES TOWARDS HUNTING AND SAFETY CONCERNS: HUNTING AS A SAFE ACTIVITY

<table>
<thead>
<tr>
<th>CATEGORY (Question 8.1)</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>28</td>
<td>7%</td>
</tr>
<tr>
<td>Agree</td>
<td>76</td>
<td>20%</td>
</tr>
<tr>
<td>Neutral</td>
<td>81</td>
<td>21%</td>
</tr>
<tr>
<td>Disagree</td>
<td>159</td>
<td>41%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>40</td>
<td>10%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>384</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 27% ± 4.4% for those who agreed that hunting is a safe activity compared to other recreational activities; 21% ± 4.1% for those who felt neutral; and 51% ± 5% for those who disagreed and felt that hunting is an unsafe activity compared to other recreational activities.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).

Table 4.25. ATTITUDES TOWARDS HUNTING AND SAFETY CONCERNS: HUNTING AS AN UNSAFE ACTIVITY

<table>
<thead>
<tr>
<th>CATEGORY (Question 8.6)</th>
<th>NUMBER OF RESPONDENTS</th>
<th>% OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>42</td>
<td>11%</td>
</tr>
<tr>
<td>Agree</td>
<td>112</td>
<td>29%</td>
</tr>
<tr>
<td>Neutral</td>
<td>90</td>
<td>23%</td>
</tr>
<tr>
<td>Disagree</td>
<td>109</td>
<td>28%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>31</td>
<td>8%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>384</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Sample estimates are displayed with 95% confidence that the true values for the population lies in the range of 40% ± 4.9% for those who agreed that hunting is an unsafe activity; 23% ± 4.2% for those who felt neutral; and 36% ± 4.8% for those who disagreed and felt that hunting is a safe activity.

(Note that, because of rounding, some figures may appear to be off by as much as 1 percentage point).
Question 8.1 and question 8.6 of the questionnaire were designed to measure the same variable, namely safety concerns regarding hunting. This was done in order to assess the internal consistency reliability of the scale and of the respondents’ responses. A Cronbach alpha coefficient of 0.65 was calculated for these two related questions, indicating good internal consistency and reliability in this scale. This indicates that respondents answered consistently and that the scale produced reliable results, inspiring confidence in the reliability of the data that was obtained.

4.3 SUMMARY OF MAIN FINDINGS

This chapter explained and discussed the results that were obtained from the quantitative survey that was conducted amongst the economically active public in Port Elizabeth regarding their attitudes towards hunting. It was stated that the statistical results of the survey can be considered to be representative of the entire population of the economically active public in Port Elizabeth within the specified margins of error.

A demographical analysis of the latter survey results revealed some evidence of a statistical significant relationship between both gender and ethnicity and the attitudes of the economically active public in Port Elizabeth towards hunting. It seemed as if male respondents were almost twice as likely to support hunting as female respondents, whereas female
respondents were almost three times more likely to oppose hunting as male respondents. The ethnic groups that were found to be most likely to support hunting were white respondents and black respondents, with coloured respondents less likely to support hunting and with Indian or Asian respondents least likely to support hunting. No evidence was found of any statistical significant relationship between the various age groups or between the various educational levels and their attitudes towards hunting.

It was found that the majority of the economically active public in Port Elizabeth had favourable attitudes towards hunting. A total of 53% of respondents supported hunting, whereas only 26% of respondents opposed hunting. Respondents were, thus, twice as likely to support hunting as to oppose it. It was found that 21% of the respondents had neutral feelings towards hunting and did not approve, nor disapprove of it. Since a substantial proportion of the respondents felt neutral towards hunting, it was interpreted that the concept of hunting does not seem to provoke any strong feelings in these individuals, or that they do not regard hunting as important enough to have a considered opinion about it.

It was found that respondents who disapproved of hunting can be divided into two distinct groups. People belonging to the first group personally disapproved of hunting, but still felt that hunting was acceptable and that other people should have the freedom of choice to hunt if they want to. It
was argued that individuals belonging to this group could not be considered to be a true threat to the future of the hunting industry, since they did not mind if other people hunted. People belonging to the second group felt that hunting is unacceptable and that nobody should be allowed to hunt. The latter group constituted a mere 15% of the total sample population, with a 95% statistical probability that the true value for the economically active population in Port Elizabeth lies in the range 15% ± 3.6% (between 11.4% and 18.6%). It was argued that individuals belonging to this group could be considered to be a true threat to the hunting industry since they were of the opinion that hunting is unacceptable and should be banned. These results closely matched the findings of a related question in the questionnaire, where the response indicates that 17% of the total sample population felt that hunting should be made illegal.

It was found that the most prominent reasons why respondents opposed hunting were because they thought hunting endangers wildlife. This evidence suggested that many people who oppose hunting are not aware of the conservation value of hunting. Furthermore, it was found that many people who oppose hunting do not recognize hunting as an important wildlife management instrument. Contrary to the latter, it was found that the most prominent reasons why respondents supported hunting were because they recognize the importance of hunting as a wildlife
management instrument. Furthermore, the conservation value of hunting ranked third amongst the reasons why respondents supported hunting. Despite this, it also seemed possible that a relatively large proportion of respondents who supported hunting do not truly comprehend the importance of hunting to wildlife management and conservation.

The study revealed that exposure to hunting was the variable that had the most significant impact on respondents' attitudes towards hunting. It was found that respondents who had been on a hunt before (direct exposure) were almost twice as likely to support hunting as respondents who had never been on a hunt before. Conversely, respondents who had never been on a hunt before were found to be five times more likely to oppose hunting than respondents who had been on a hunt before. Furthermore, the survey results indicated that the large majority of the economically active population in Port Elizabeth has never been directly exposed to hunting.

Respondents who had rural ties were more likely to support hunting and much less likely to oppose hunting than respondents who did not have any rural ties. This is most likely because rural ties are key factors leading to exposure to hunting and pro-hunting activities. It was concluded that many people who oppose hunting do so simply because they have never been directly or indirectly exposed to hunting and consequently have an
incorrect perception of what hunting is truly about. It was concluded that the closer people are to hunting – even if they do not hunt themselves – the stronger the support they have for it.

The study also revealed that social ties had a significant influence on a person’s attitudes and behaviour towards hunting. Attitudes and behavioural norms typically develop in small social groups or subcultures. Social ties are a key factor influencing people’s attitudes towards hunting. This is because a person who has social ties with hunters is likely to have been directly or indirectly exposed to hunting. Respondents who have family members or friends who hunt were much more likely to support hunting and much less likely to oppose hunting than respondents who did not have any family members or friends who hunt. This is most likely the case because people who have family members or friends who hunt have been exposed to the hunting mind and, consequently, have a better understanding of what hunting is all about. Furthermore, the survey results indicated that a substantial proportion of the economically active public in Port Elizabeth does not have any close social ties with hunters.

The survey results clearly indicated that the large majority of people believe that hunting does have the potential to be beneficial to wildlife populations if it is done correctly. Despite this, many believed that hunting
is a threat to the future existence of wildlife and that hunting endangers wildlife.

Hunting generally becomes more acceptable amongst the public when put into the context of ecological goals and wildlife management, rather than to present hunting to the public as a form of recreation or sport. The survey results revealed that a significant proportion of the population does not understand the importance of hunting as a wildlife management instrument and, consequently, hunting is often not perceived by the public as a means to manage wildlife.

In the final instance, it was found that hunting is often perceived as a dangerous activity and that a substantial proportion of the population seems to share this perception about hunting.
CHAPTER 5

SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This study investigated the attitudes of the economically active public in Port Elizabeth towards hunting. This study was effectuated in two phases. Firstly a literature review was conducted on the psychology of attitudes and human perceptions, as well as on factors associated with people’s attitudes towards hunting. This was done in order to establish the necessary theoretical base for the study. Secondly, primary data on the attitudes of the economically active public in Port Elizabeth towards hunting was collected, processed and interpreted. This was done in order to investigate the attitudes of the economically active public in Port Elizabeth towards hunting.

In this chapter, the major findings of this study are summarized, followed by a discussion of the conclusions which were derived from the study. Based on these conclusions, a number of recommendations are then made, followed by a summary of the chapter.
5.2 SUMMARY OF MAIN FINDINGS

The important aspects of each chapter in this study are summarized in this section. The summary is structured into sections, dealing firstly with the introductory chapter of this study, secondly with the research methodology, thirdly with the literature study on the psychology of human perceptions and attitudes, fourthly with the literature study on attitudes towards hunting, and lastly with the primary information obtained in this study.

5.2.1 Introduction and problem statement

The first chapter of this study focused on setting the scene and defining the main problem and sub-problems of the study.

Hunting is generally recognized as a sustainable form of wildlife utilization that not only makes countless contributions to the conservation of South Africa’s natural resources, but also contributes significantly towards the country's economy. Notwithstanding this, hunting has become a controversial issue amongst the general public and the humaneness and social acceptability of hunting is often questioned by animal rightist organizations, resulting in a potential threat to the hunting industry, and hence, conservation.
Basic information on the public’s attitudes towards hunting in South Africa was not available. This lack of information leaves the hunting industry almost defenceless against social threats and the anti-hunting lobby. In order to overcome these threats it is essential to have a sound understanding of the dynamics of the public’s attitudes towards hunting. If any meaningful attempt to understand attitudes towards hunting were to be made, an important initial step was to investigate the attitudes towards hunting of a relevant sub-population within South Africa. Therefore, this study focused on investigating the attitudes of the economically active public in Port Elizabeth towards hunting.

5.2.2 Research methodology

The second chapter of this study focussed on identifying suitable methodologies for conducting the research, as well as discussing and explaining the details of the methodologies that were used in this study.

The methodologies chosen for this study were, firstly, a literature review to build a theoretical base for the study on the psychology of human perceptions and attitudes, and also on factors or characteristics associated with the public’s attitudes towards hunting.
The second research method employed was personal interviews, during which self-administered questionnaires were used as the survey instrument. Personal interviews were conducted amongst the economically active population in Port Elizabeth in order to investigate the attitudes of the economically active public in Port-Elizabeth towards hunting. The latter addressed the empirical component of the study. A sufficient sample size was calculated and both random sampling and proportional stratified sampling procedures was employed to select a sample that would be representative of the entire population of the economically active public in Port Elizabeth. The statistical results of the survey could, therefore, be considered to be representative of the entire population of the economically active public in Port Elizabeth within a specified margin of error. The procedure that was used to calculate the sample estimates’ deviation (95% confidence intervals) from the true values of the sample population was explained.

5.2.3 Literature study on the psychology of human perceptions and attitudes

In the third chapter of this study a literature study was undertaken to explore the psychological processes of perceiving objects and forming attitudes towards objects. This was essential in order to obtain a sense of how these psychological processes are related to a person’s perception of
hunting and attitudes towards it. This was done as part of establishing a sound theoretical foundation for the study.

The human mind can only comprehend that which it has been exposed to in the past or has knowledge about. A person’s ability to perceive and categorize an object (such as hunting) accurately will directly depend on the extent of the person’s knowledge of and previous exposure to hunting. If a person does not have sufficient support in any of these perceptual bases it is unlikely that such a person will be able to accurately categorize the object of hunting in his mind, and consequently that person will not be able to attain an accurate perception of the realities related to hunting and vice versa. When the social acceptability of hunting therefore comes into question, people who have knowledge of hunting or who have previously been exposed to hunting would be able to attain a more accurate perception of what hunting truly is. Consequently, they will have a more considered opinion and rational attitudes regarding the acceptability of hunting than people who do not have any knowledge of hunting or previous exposure to hunting.

When the object of hunting is viewed, the human mind will attempt to associate it with something that it already recognizes – based on the extent of a person’s knowledge of and previous exposure to hunting – and then categorize the object accordingly. When the human mind associates
the object of hunting with a specific category, the object of hunting will then automatically be associated with the same attitude the person holds towards the specific category. Therefore, when a person views the object of hunting without understanding – usually as a result of ignorance or a lack of previous exposure to hunting – his mind will not be able to categorize the object of hunting accurately. As a result, the person’s mind will probably place the object of hunting in one of his already existing categories and, consequently, adopt the respective attitude he holds towards the specific category (see section 3.2.2). This usually leads to a complete misconception of the realities related to hunting and can result in a person having preconceived ideas and attitudes towards it. Thus, ignorance and lack of exposure to hunting can result in many people associating hunting with categories which provoke unpleasant emotions, resulting in negative attitudes towards hunting.

It was found that attitudes and behavioural norms typically develop in small social groups or subcultures, for example within a family or within a group of friends. A person’s ideas and thoughts about what can be considered to be an appropriate attitude or correct behaviour towards a specific object (such as hunting) is directly linked to that person’s social ties. Therefore, social ties can play a considerable role in a person’s adoption of attitudes and behaviour towards objects such as hunting.
5.2.4 Literature study on attitudes towards hunting

Chapter three describes a literature study that was undertaken to identify and investigate demographical and social factors, as well as any other factors, which may potentially influence people’s attitudes towards hunting. During the literature study previous research regarding public attitudes towards hunting, which was conducted in the United States and Sweden, were studied. This was done in an attempt to obtain a better understanding of the dynamics of public attitudes towards hunting. It contributed to the establishment of a solid theoretical foundation for the study and played an important role in the development and planning of the empirical component of the study.

Research studies from the United States and Sweden all indicate that the majority of people are in favour of hunting and that the support for hunting is far greater than the opposition to it. It also transpired that a person’s disapproval of hunting did not always translate into a desire to ban hunting altogether. Some people who disapprove of hunting will agree that hunting should remain legal, irrespective of whether they disapprove of it or not.

Negative attitudes towards hunting are usually a result of ignorance or a lack of knowledge and exposure to hunting. It was found that many people who oppose hunting do not understand simple facts about wildlife, and
consequently these people have incorrect beliefs regarding wildlife and hunting. These beliefs lead them to have negative attitudes towards hunting. It was found that many anti-hunters believe that hunting endangers wildlife populations, when in fact hunting contributes towards the conservation of wildlife.

Social ties and exposure to hunting have an extremely significant influence on people’s attitudes towards hunting and are to a large extent responsible for the formation of attitudes. In the United States the strongest support for hunting was found amongst hunters, while the next strongest variable associated with positive attitudes towards hunting was having a family member who hunts. Furthermore, people with rural ties were also found to be more likely to have favourable attitudes towards hunting. This is because rural ties are a key factor that leads to exposure to hunting and pro-hunting attitudes. It was found that the closer people are to hunting, even if they don’t hunt themselves, and the more knowledge they have about wildlife and what hunting is all about, the stronger the support they have for it.

The literature study on attitudes towards hunting suggested that hunting usually becomes more acceptable amongst the public in the United States if it is put into the context of ecological goals (wildlife management and conservation) and also when the utilitarian motivations for hunting is
highlighted, rather than to present hunting to the public as a form of recreation or sport.

A demographical analysis of the studies from the United States revealed five demographical factors that seem to affect people’s attitudes towards hunting, namely age, gender, education, ethnicity and population density. In addition to the latter, it was found that the likelihood to approve of hunting increases as the population density decreases. Thus, rural societies usually hold more positive attitudes towards hunting than urbanized societies. This is because rural residence is likely to lead to exposure to hunting and pro-hunting attitudes.

5.2.5 Primary information obtained from the economically active public in Port-Elizabeth regarding their attitudes towards hunting

The fourth chapter of this study discussed the results of the survey which was conducted amongst the economically active public in Port Elizabeth. This was done in order to answer the main research question of the study.

The primary information obtained in the study found that the large majority of the economically active public in Port Elizabeth is in favour of hunting, and respondents were twice as likely to support hunting as to oppose it.
Furthermore, it was found that a large proportion of respondents have neutral feelings towards hunting.

A demographical analysis of the primary information found a significant difference in the attitudes towards hunting between the genders, with male respondents having much more favourable attitudes towards hunting than female respondents. Furthermore, the demographical analysis also found a significant difference in the attitudes towards hunting between ethnic groups, with black and white respondents having the most favourable attitudes towards hunting, followed by coloured respondents, and with Indian or Asian respondents having the least favourable attitudes towards hunting. Respondents’ ages and educational levels were not found to have any significant influence on their attitudes towards hunting.

It was found that disapproval of hunting did not necessarily translate into a desire to ban hunting. A substantial proportion of those respondents who personally disapproved of hunting did not necessarily mind if other people were allowed to hunt, while a rather small proportion of the respondents felt that hunting is unacceptable and that hunting should be made illegal. This small proportion of individuals who finds hunting unacceptable constitutes the true threat to the hunting industry, since these individuals are the ones who felt that hunting should be banned completely.
The most prominent reason why respondents opposed hunting was because they believe that hunting endangers wildlife. The second most important motivations for opposing hunting were those based on respondents’ emotions and concern for animal welfare. The least frequently occurring motivations for opposing hunting were those based on reasons which have little to do with wildlife, animals or hunting itself, but rather based on objects associated with hunting, such as hunter behaviour and safety concerns.

The most prominent reason why respondents supported hunting was that they consider hunting to be an important wildlife management tool. The second most frequently occurring reason why respondents supported hunting was because it contributes to the economy, whereas the third most frequently occurring reason was because hunting leads to the conservation of wildlife.

The study revealed that the extent of a person’s previous exposure to hunting had a tremendous effect on attitudes towards hunting. It was found to be the variable having the most significant impact on the attitudes of the economically active public in Port Elizabeth towards hunting. Respondents who have been directly exposed to hunting in the past were found to be much more likely to support hunting and much less likely to oppose hunting than respondents who have never been directly exposed
to hunting. Furthermore, the results indicated that the large majority of the economically active population in Port Elizabeth had never been directly exposed to hunting.

Social ties also play an important part in a person’s formation of attitudes and behaviour towards hunting, and it was found that respondents who have family members or friends who hunt were much more likely to support hunting and much less likely to oppose hunting than respondents who did not have any family members or friends who hunt. It was also found that respondents who have rural ties tend to be much more likely to support hunting and much less likely to oppose hunting than respondents who did not have any rural ties. Furthermore, a substantial proportion of the economically active public in Port Elizabeth indicated that they do not have any rural ties or close social ties with hunters.

The study clearly indicated that the large majority of respondents believed that hunting have the potential to be beneficial to wildlife populations if it is done correctly. Despite this, it was found that many of these respondents also believed that hunting is a threat to the future existence of wildlife and that hunting endangers wildlife. It was suggested that these almost contradicting results may possibly indicate that although the large majority of respondents recognized the potential of hunting to be beneficial to wildlife, many of them were also of the opinion that hunting endangers
wildlife – possibly because they think hunting is done irresponsibly or unsustainably. Furthermore, a significant proportion of the population does not recognize the importance of hunting as a wildlife management instrument. Finally, the primary information suggested that a substantial proportion of the population perceives hunting as a dangerous activity.

5.3 CONCLUSIONS

Conclusions are drawn on a number of aspects regarding the attitudes of the economically active public in Port Elizabeth towards hunting. Conclusions are firstly made about the nature of the attitudes towards hunting amongst the economically active public in Port Elizabeth. Secondly, conclusions are also drawn on factors influencing attitudes towards hunting amongst the economically active public in Port Elizabeth.

It may be concluded from the primary information obtained in this study that the economically active public in Port Elizabeth has fairly favourable attitudes towards hunting. Only a relatively small proportion of the population has negative attitudes towards it, with even a smaller proportion feeling that hunting should be banned. Furthermore, with a substantial proportion of respondents having neutral feelings towards hunting, it may lead one to conclude that there seem to be a lack of interest in issues regarding wildlife amongst the economically active public in Port Elizabeth.
It seems as if the population of economically active public in Port Elizabeth follows the same general trends regarding their attitudes towards hunting as that of the public in the United States and Sweden. This is most likely because the basic psychological processes of perceiving objects and forming attitudes towards objects are generally the same across all countries. Based on the latter, it may be concluded that the factors driving attitudes towards hunting can be expected to be the same in all populations around the world, while only the nature of the population and the specific circumstances under which these factors operate may change from one population to the next.

With regard to the latter, in the literature study on the psychology of human perceptions and attitudes it was established that a person’s opinions, feelings and attitudes towards a specific object is based on three interrelated components, namely past experience with the object, knowledge of the object and social ties. Along with the literature study on attitudes towards hunting, as well as from the primary information obtained in this study, it can be concluded that a number of key factors have a significant influence on the attitudes of the economically active public in Port Elizabeth towards hunting. For discussion purposes, these key factors driving attitudes towards hunting are structured into sections, dealing firstly with exposure to hunting, secondly with the extent of a
person’s knowledge of hunting, thirdly with social factors, and lastly with demographical factors. The conclusions drawn on each of the latter four factors is discussed below.

5.3.1 Exposure to hunting

From the literature study on the psychology of human perceptions and attitudes, it may be concluded that a person’s ability to attain an accurate perception of an object – such as hunting – improves as the person’s exposure to the object increases. With the latter in mind, the primary information obtained in this study found that respondents who have previously been directly exposed to hunting have more favourable attitudes towards hunting than those who have never been directly exposed to hunting. Thus, this leads to the conclusion that hunting is indeed socially acceptable and that negative attitudes towards hunting are very often the result of a person’s inability to attain an accurate perception of hunting due to a lack of exposure to hunting.

Keeping in mind that the primary information obtained in this study indicates that the large majority of the economically active public in Port Elizabeth has never been directly exposed to hunting, it is also possible to argue that the attitudes of the economically active public in Port Elizabeth
will – in all probability – become more favourable towards hunting if a larger proportion of the population were to be directly exposed to hunting.

5.3.2 Extent of a person’s knowledge of hunting

From the literature study on the psychology of human perceptions and attitudes, it may be concluded that the extent of a person’s knowledge of a particular matter (such as hunting) usually leads to particular beliefs regarding it. In turn, these beliefs then result in particular attitudes towards it. Sufficient knowledge of hunting will thus improve a person’s ability to better comprehend the concept of hunting, leading to accurate beliefs regarding hunting. The latter would most likely result in rational attitudes and considered opinions towards hunting. Conversely, a lack of knowledge of hunting is likely to lead to preconceived or inaccurate beliefs regarding hunting, which in turn may result in irrational or unjustified attitudes towards hunting.

From the primary information obtained in this study it may also be concluded that negative attitudes towards hunting are usually the result of incorrect beliefs regarding hunting. These incorrect beliefs seem to be the result of a lack of knowledge of hunting amongst the public. A number of these incorrect beliefs regarding hunting were identified amongst the economically active public in Port Elizabeth – beliefs on which negative
attitudes towards hunting is often based. The belief that hunting endangers wildlife seems to be the most prominent, followed by a similar belief that hunting is done in an irresponsible manner and therefore threatens the future existence of wildlife. The economically active public in Port Elizabeth also seems to believe that hunting is not an important wildlife management instrument. Finally, they also believe that hunting is a dangerous activity. The conclusions drawn on the latter four beliefs will now be discussed.

The primary information obtained in this study revealed that the most prominent reasons why respondents opposed hunting were based on their incorrect belief that hunting endangers wildlife. Since hunting does in fact contribute to the conservation of wildlife, it may be concluded that the primary reasons for opposing hunting are not based on facts, but rather on a lack of knowledge and, hence, incorrect beliefs. It seems as if many people who oppose hunting do not understand simple facts regarding hunting. Negative attitudes towards hunting are very often the result of preconceived or inaccurate beliefs regarding hunting, mainly due to ignorance.

The primary information obtained in this study clearly indicates that the large majority of respondents think that hunting does have the potential to be beneficial to wildlife populations if it is done correctly. Therefore, it
seems as if the potential benefits that hunting holds for wildlife populations are recognized to some extent. However, contrary to the latter, the primary information also suggests that respondents believe that hunting threatens to the future existence of wildlife. These almost contradicting results may lead to the conclusion that many respondents believe that hunting is done in an irresponsible or perhaps unsustainable manner, instead of living up to its potential to be beneficial to wildlife populations. This implies that the economically active public in Port Elizabeth is probably not aware of the countless contributions that hunting has made to conservation in the past, and that they do not truly comprehend the present conservation value of hunting.

The literature study on attitudes towards hunting revealed that hunting generally becomes most acceptable amongst the public when it is put into the context of ecological goals, or when it is perceived by the public as a form of wildlife management – to benefit wildlife instead of people. The primary information obtained in this study indicates that a relatively small but significant proportion of the economically active public in Port Elizabeth do not perceive hunting as a wildlife management instrument. Instead, they probably associate the object of hunting with categories which, in all likelihood, provoke unpleasant emotions, resulting in negative attitudes towards hunting. Therefore, a lack of knowledge of hunting is likely to result in a person having an inaccurate perception of hunting, which may
lead to incorrect beliefs regarding hunting and possibly cause it to be less acceptable amongst the public.

The primary information obtained in this study found that hunting is often believed to be a dangerous activity. It is concluded that this belief may be an obstacle which could prevent many people from being exposed to hunting. To support the latter conclusion, the following example is given: Parents who perceive hunting as a dangerous activity would probably not allow their children to go on a hunt when such an opportunity arise and, as a consequence, these children will not have the opportunity to be exposed to hunting. Furthermore, since people who have never been exposed to hunting are likely to oppose hunting, it therefore seems obvious that this belief may contribute significantly towards negative attitudes towards hunting amongst the public.

5.3.3 Social factors

From the literature study on the psychology of human perceptions and attitudes it was found that attitudes and behavioural norms typically develop in small social groups. The primary information obtained in this study indicates that family members and friends have a rather significant influence on a person’s attitudes towards hunting. It may therefore be concluded that family members and friends are indeed important social
groups in which attitudes and behavioural norms regarding hunting typically develop. This is most likely because people who have family members or friends who hunt have been exposed to the hunting mind and, consequently, have a better understanding of what hunting is all about. Furthermore, the primary information obtained in this study revealed that rural ties also have a rather significant influence on attitudes towards hunting. It may be concluded that both social ties and rural ties are key factors leading to direct or indirect exposure to hunting and pro-hunting attitudes. Social ties and rural ties are thought to have an influence on the extent of a person’s knowledge of hunting and exposure to hunting. It seems that the closer people are to hunting, even if they do not hunt themselves, the stronger the support is that they have for it.

The primary information obtained in this study indicates that a substantial proportion of the economically active public in Port Elizabeth do not have close social ties with hunters or any rural ties. It is thus possible to conclude that the attitudes of the economically active public in Port Elizabeth will become more favourable towards hunting if a larger proportion of the population were to have close social ties with hunters or people in rural areas.
5.3.4 Demographical factors

In the literature study on attitudes towards hunting it was found that the likelihood of approving of hunting increases as the population density decreases. Thus, rural societies usually hold more positive attitudes towards hunting than urbanized societies. The primary information obtained in this study represents the economically active public in Port Elizabeth. Since the latter is an urban society, it may be concluded that the total South African public may be expected to have more favourable attitudes towards hunting than that of the economically active public in Port Elizabeth.

From the demographical analysis of the primary information obtained in this study it may be concluded that gender have a very significant influence on attitudes towards hunting, with females being much more likely to disapprove of hunting than males. Although ethnicity was found to have some influence on attitudes towards hunting, it was found to be of little significance. Age and educational status was found to have no significant influence on attitudes towards hunting.
5.4 RECOMMENDATIONS

Based on conclusions that were made throughout the study, a number of recommendations can now be made. These recommendations are discussed below, followed by a sub-section which highlights opportunities for further research in this field.

- With little information available on the South African public’s attitudes towards hunting, it is difficult to anticipate the nature and extent of social threats facing the hunting industry in South Africa. With the latter in mind, since it seems as if the economically active public in Port Elizabeth follows many of the same general trends with regard to attitudes towards hunting as that of the public in the United States and Sweden (see section 5.3), it is recommended that a lack of information may be supplemented by research from other countries. However, this does not mean that research regarding attitudes towards hunting from other countries should be viewed as substitute information in the instances where information is not available. Instead, it is merely suggested that attitudes towards hunting in different countries seem to be driven by the same psychological processes, which may be used as indications regarding possible attitudes towards hunting under specific circumstances for a given population.
• Negative attitudes towards hunting are very often the result of a person’s inability to attain an accurate perception of hunting due to a lack of exposure to hunting (see section 5.3.1). Based on the latter conclusion, and since exposure to hunting was found to be the variable having the most significant impact on the attitudes of the economically active public in Port Elizabeth towards hunting (see section 4.2.5 and 5.2.5), it is recommended that attempts to improve the social acceptability of hunting amongst the economically active public in Port Elizabeth should focus on directly exposing members of the public to hunting.

• It was concluded that negative attitudes towards hunting are also often the result of incorrect beliefs regarding hunting and that these incorrect beliefs seem to be the result of a lack of knowledge of hunting (see section 5.3.2). It is recommended that attempts to promote the social acceptability of hunting should, therefore, be focused on addressing these incorrect beliefs by educating the public about hunting. It is recommended that the public should be informed about the contributions that hunting makes towards the conservation of wildlife. The public also needs to be sensitised about the countless contributions that hunting has made to conservation in the past, as well as the importance of hunting to conservation in the future. The public should also be kept informed about the conservational successes achieved by the hunting community and
hunting industry on an ongoing basis. It is also important to convey the message that hunting is done in a responsible and ethical way. It was found that people are generally more willing to accept wildlife population reductions if it is to the benefit of wildlife, habitat, or the environment rather than to the benefit of people (see section 3.3.3). Therefore, it is recommended that hunting should be positioned within the context of ecological goals. It should be presented to the public as a form of wildlife management, rather than purely a form of recreation or sport (see section 5.2.4). Finally it is recommended that hunting should be projected as a safe activity.

- It was concluded in section 5.3.3 that family members and friends are important social groups which contribute towards the development of attitudes and behavioural norms regarding hunting. It is therefore recommended that hunters should interact and educate non-hunters and anti-hunters about hunting, as this will improve the likelihood that the public will continue to support the hunting tradition.

- Since it was found that urbanized societies generally hold more negative attitudes towards hunting than rural societies (see section 5.3.4), it is recommended that attempts to promote hunting amongst the public should be focused on urbanized societies as this is likely to have the greatest impact.

- Gender was found to be the demographical factor having the most significant influence on attitudes towards hunting amongst the
economically active public in Port Elizabeth, with females being much more likely to disapprove of hunting than males (see section 5.3.4). It is therefore recommended that hunting promotion amongst the public should be focused on females as this would have the greatest impact.

5.4.1 Opportunities for research

Very little research regarding attitudes towards hunting has previously been done in South Africa. As a result, many opportunities for further research flow from this study. Recommendations about future research in the field of attitudes towards hunting are put forward for consideration.

- A more comprehensively study could be undertaken on public attitudes towards hunting, to further expand and refine the current understanding of public attitudes towards hunting in South Africa.
- Since only the attitudes of the economically active public in Port Elizabeth was surveyed for the purpose of this study, possible limitations of this study lies in the fact that this sample cannot be seen as fully representative of the South African public. Therefore, a more extensive study could be undertaken to investigating public attitudes towards hunting over a larger geographical area – such as a
specific province in South Africa or even the entire South Africa – including both urban and rural societies.

- Specific factors that influence attitudes towards hunting and the extent to which these factors affect attitudes towards hunting could be investigated in more detail.

- Comparative studies could be undertaken on the attitudes towards hunting in different provinces of South Africa. Since a substantial amount of research regarding attitudes towards hunting has already been conducted in other countries, such as the United States and Sweden, comparative studies could also be undertaken to compare attitudes towards hunting between South Africa and other countries.

- Factors related to hunting participation, hunter recruitment, as well as hunter retention could be studied.

- Public attitudes towards the various methods of directly utilizing wildlife (such as hunting, cropping of game (culling), as well as capture and live sales of game) can be studied, and possibly compared.

- A study could be undertaken to develop effective strategies to influence public attitudes towards hunting in favour of the hunting industry, and by so doing reduce social threats facing the hunting industry.
5.5 SUMMARY

The aims of the study were to identify factors that influence attitudes towards hunting and to investigate the attitudes of the economically active public in Port Elizabeth towards hunting. It was found that the large majority of the economically active public in Port Elizabeth is in favour of hunting and that the support for hunting is far greater than the opposition to hunting. The study concluded that a number of factors drive attitudes towards hunting, such as the extent to which a person has been exposed to hunting, a person’s knowledge of hunting, a person’s social ties and rural ties, as well as demographical factors. It was recommended that the key to promoting hunting amongst the economically active public in Port Elizabeth may be in developing strategies focused on influencing these factors.

It is believed that the main research question of this study was addressed by firstly gathering information from existing literature on the psychology of human perceptions and attitudes, as well as from literature on attitudes towards hunting. Secondly, a survey was conducted to collect primary data on the attitudes of the economically active public in Port Elizabeth towards hunting. Finally, the results from the literature study, along with the survey results were carefully investigated and discussed. The study was concluded with specific recommendations regarding the attitudes of
the economically active public in Port Elizabeth towards hunting and possible measures to improve the social acceptability of hunting.

This study provides information that could assist the leaders in the hunting industry to overcome social threats facing the hunting industry and to develop effective strategies which may be used to influence government policies and regulations to the benefit of the hunting industry.
LIST OF SOURCES


# QUESTIONNAIRE ON PERCEPTIONS OF AND ATTITUDES TOWARD HUNTING

Cross the appropriate block or write the answer in the space provided (if applicable).

## SECTION A: DEMOGRAPHICAL INFORMATION

**Q1:** Please indicate your gender:

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
</table>

**Q2:** To which ethnic group do you belong?

<table>
<thead>
<tr>
<th>Black African</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td></td>
</tr>
<tr>
<td>Coloured</td>
<td></td>
</tr>
<tr>
<td>Indian or Asian</td>
<td></td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>

**Q3:** Please indicate your age:

<table>
<thead>
<tr>
<th>15 to 24</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>25 to 34</td>
<td></td>
</tr>
<tr>
<td>35 to 44</td>
<td></td>
</tr>
<tr>
<td>45 to 54</td>
<td></td>
</tr>
<tr>
<td>55 and older</td>
<td></td>
</tr>
</tbody>
</table>

**Q4:** What is your highest qualification?

<table>
<thead>
<tr>
<th>Less than grade 12</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 12 Certificate</td>
<td></td>
</tr>
<tr>
<td>National diploma</td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td></td>
</tr>
<tr>
<td>Post-graduate qualification</td>
<td></td>
</tr>
</tbody>
</table>
SECTION B:
HUNTING PERCEPTIONS AND ATTITUDES

Q5: Have you ever been on a hunt before?

Yes  No

Q6: Do you have contacts or ties with farmers or people in rural areas?

Yes  No

Q7: Do you have family members or friends who hunt?

Yes  No

Q8: Please indicate to what extent do you agree or disagree with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 Compared to other recreational activities, hunting is not dangerous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.2 Hunting can be beneficial to wildlife populations if it is done correctly</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3 Hunting should be made illegal</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.4 Hunting endangers wildlife populations</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.5 Hunting plays an important role in the ecological management of wildlife</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.6 Hunting is an unsafe activity</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.7 Hunting will ensure a future for wildlife</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.8 Hunting is wrong and nobody should ever be allowed to hunt</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.9 Hunting is an important wildlife management tool</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q9: Please indicate your support for or opposition to hunting

<table>
<thead>
<tr>
<th>Strongly Approve of Hunting</th>
<th>Approve of Hunting</th>
<th>Neutral</th>
<th>Disapprove of Hunting</th>
<th>Strongly Disapprove of Hunting</th>
</tr>
</thead>
</table>

If disapprove or strongly disapprove please proceed to question Q10 – Q12.

If approve or strongly approve please proceed to question Q13 – Q15.

If neutral it is not necessary to complete the rest of the questionnaire. Thank you for your participation.
IF DISAPPROVE OR STRONGLY DISAPPROVE PLEASE

COMPLETE Q10 – Q12.

Q10: What is your most important reason for opposing hunting?

(Please select only those which you feel strongest about, but not more than three please).

- It is morally wrong to kill animals
- Because of the pain inflicted on animals
- Hunting endangers wildlife populations
- Because of the poor behavior of hunters
- I am concerned that hunting is an unsafe activity
- Because people use animals for their own benefit
- I love animals
- I don’t know
- Other (please specify)

Q11: Which of the following two statements do you agree with most:

- Although I personally disapprove of hunting I think others should be allowed to hunt if they want to
- Nobody should be allowed to hunt

Q12: Do you belong to an anti-hunting or animal rightist organization?

- Yes
- No

If yes, please specify which organization you belong to:

Thank you for your participation

We appreciate your help!
IF APPROVE OR STRONGLY APPROVE PLEASE

COMPLETE Q13 – Q15.

Q13: Do you participate in hunting activities?

<table>
<thead>
<tr>
<th>Never</th>
<th>From time to time</th>
<th>Regularly</th>
</tr>
</thead>
</table>

Q14: What is your most important reason for supporting hunting? (Please select only those which you feel strongest about, but not more than three please).

- I am in favor of sustainable utilization of wildlife
- Hunting leads to the conservation of wildlife
- Hunting is an important wildlife management tool
- Hunting contributes to the economy
- Hunting is part of my cultural heritage
- Hunting is an enjoyable recreational activity
- Hunting is a way of educating people about nature
- People should have freedom of choice
- Other (please specify)

Q15: Do you belong to a hunting organization?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

If yes, please specify which organization you belong to:

Thank you for your participation.

We appreciate your help!