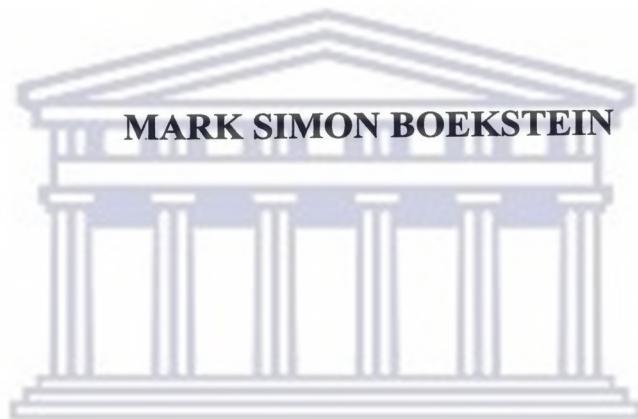


**THE ROLE OF HEALTH IN THE MOTIVATION TO  
VISIT MINERAL SPA RESORTS IN THE  
WESTERN CAPE**



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A mini-thesis submitted in partial fulfilment for the degree of M.A. in the  
Department of Geography and Environmental Studies,  
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## DECLARATION

I declare that *The Role of Health in the Motivation to Visit Mineral Spa Resorts in the Western Cape* is my own work, that it has not been submitted before for any degree or examination in any other university, and that all the sources used or quoted have been indicated and acknowledged by complete references.

Mark Simon Boekstein

November 2001

Signed: .....

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## ACKNOWLEDGEMENTS

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## **ABSTRACT**

### **THE ROLE OF HEALTH IN THE MOTIVATION TO VISIT MINERAL SPA RESORTS IN THE WESTERN CAPE**

This research sets out to examine the role of health in the motivation to visit the mineral spa resorts of the Western Cape. It also examines motivation not related to health, and the extent to which these resorts are being used as bases for visiting surrounding attractions.

Internationally, especially in Europe and North America, the mineral spa market is undergoing rapid and significant changes. Traditional forms of mineral spa tourism, where the emphasis was on medical treatments, is changing to 'health tourism', with a growing demand for health and beauty treatments, as well as fitness and wellness programmes, in relaxing leisure environments.

Using a combination of factor analysis and cluster analysis, the respondents are divided into five segments, each of which consists of spa visitors with similar motivations. These segments form the basis for ascertaining the motivations and preferences of visitors to mineral spa resorts in the Western Cape, including the role of health as a motivation.

It is established that health does indeed play a major part in the motivation to visit the mineral spa resorts of the Western Cape, and that other important motivations include swimming in hot water, good accommodation and clean surroundings, and a safe and secure environment. Being able to use mineral spa resorts as bases for visiting surrounding attractions is not particularly important to visitors. Finally, recommendations are made for the development of a Western Cape mineral spa tourism product that would build upon the health-consciousness of the domestic market, while also catering for the growing international 'health tourism' market.

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## GLOSSARY OF TERMS

### **Healing properties of hot mineral water**

A combination of high temperature and mineral content of water is said to contribute towards curing a range of illnesses, most commonly arthritis and other rheumatic diseases, as well as skin diseases.

### **Hot spring**

A natural thermal spring, with temperatures ranging from warm to very hot. The water temperatures at the resorts in this study vary from 40°C to 51°C.

### **Mineral water**

Naturally-occurring water with a high mineral content.

### **Motivation**

Motivation, in a tourism context, refers to the needs and wants of travellers, and how these needs and wants are satisfied (Holloway, 1994).

### **Market segmentation**

Classifying heterogeneous customers with different needs, characteristics and behavior patterns, into homogeneous groups, called segments (Bennett, 2000).

### **Resort**

A destination area that is relatively self-contained, and typically provides a wide range of tourist facilities and services, including those designed for recreation and relaxation (World Tourism Organization, 1994).

### **Spa**

The European Spas Federation defines a spa as “a mineral spring or a place or a resort where such a spring is found” (Smith & Jenner, 2000: 42). However, in the USA the word has taken on a far wider meaning. The US-based International Spa and Fitness Association (ISPA) defines it as “a place where active and sustained use of natural therapeutic agents and health-giving elements are applied within a hospitable environment over a period of time” (Smith & Jenner, 2000: 42).

### **Visitors**

The term includes domestic and international tourists, who stay away from home for at least 24 hours, but not more than one year, as well as domestic and international excursionists, who spend less than 24 hours away from home (Bennett, 2000).

### **Wellness**

An emphasis on ‘preventive health’, the importance of a balanced lifestyle, adequate rest and relaxation, as well as physical, mental and emotional well-being (Loverseed, 1997).



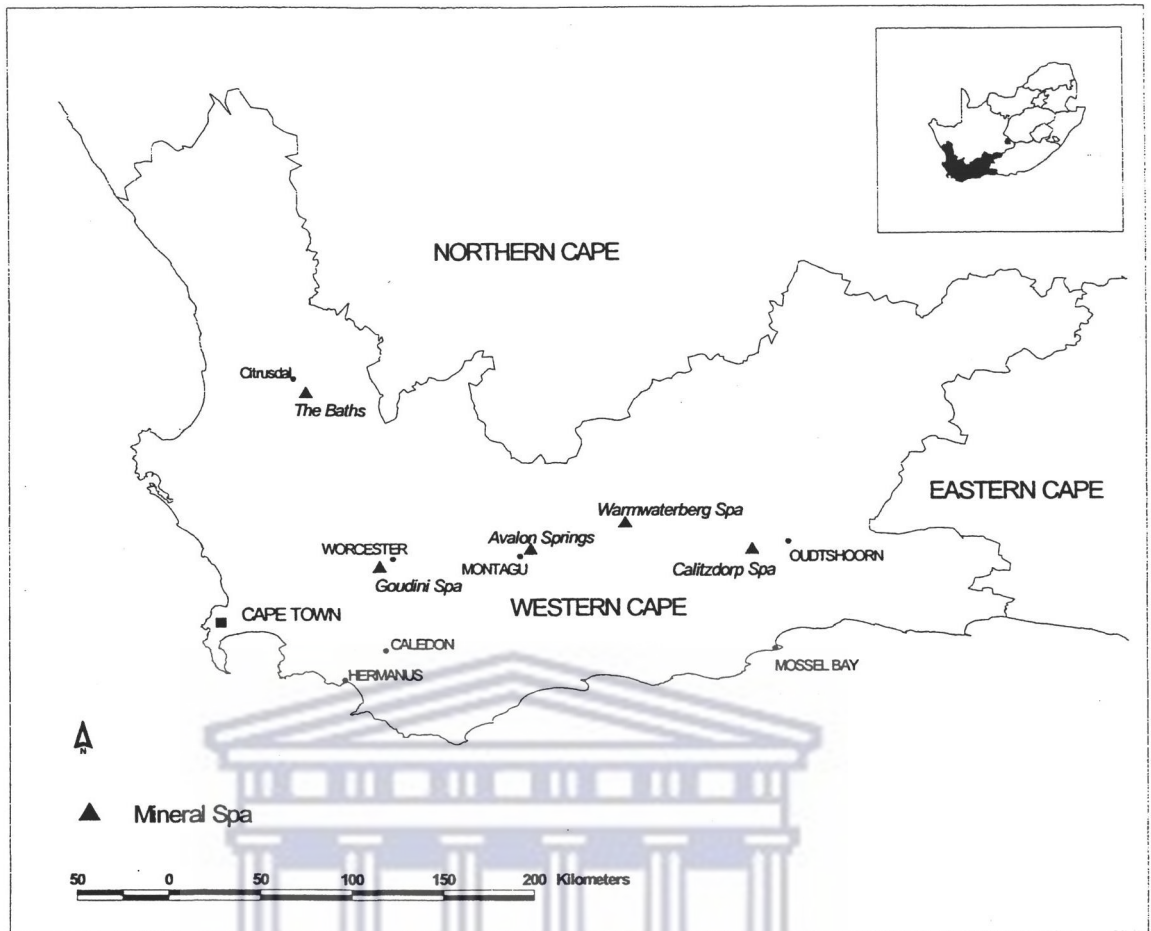
# CHAPTER 1

## INTRODUCTION AND CONTEXT OF THE STUDY

### 1.1 INTRODUCTION

Mineral spa tourism is regarded as the oldest form of tourism, dating back to the time of the Romans, who established more than one hundred 'spa' resorts all over Europe, which were used for a combination of healing and leisure purposes. Although these resorts have had mixed fortunes over the centuries, many of them survive to this day. During recent years, however, there have been considerable changes in the utilization patterns at mineral spring resorts, particularly in Europe and the United States, where the rapidly expanding 'health and wellness' market, together with the leisure market, are increasingly taking precedence over traditional medically-oriented uses.

The Western Cape has five mineral spa (hot mineral spring) resorts, situated at Goudini (near Worcester), Montagu, Barrydale, Calitzdorp and Citrusdal (Figure 1). In addition the Caledon Casino Hotel and Spa was recently opened. All were originally established principally for the treatment of various diseases, due to the apparent healing powers of the waters. However these resorts, which are patronized almost exclusively by domestic tourists and excursionists, are no longer being utilized as health resorts, but rather as family leisure resorts. Despite the fact that limited health and fitness facilities are offered at some of these resorts, these, and the hot mineral water, seem to be incidental to the motivation to visit these resorts.



**Figure 1: Location of the mineral spa resorts**

## 1.2 STATEMENT OF THE PROBLEM

The mineral spa resorts of the Western Cape were originally founded because of the apparent healing properties of the hot mineral water. Although limited facilities for health treatments and fitness are offered at some of the resorts, it seems that in recent decades these resorts have become primarily family leisure resorts, with health as a motivator having declined in importance.

In the light of the rapidly increasing demand for healthy holidays in other parts of the world, it may be that a potentially lucrative natural resource, hot mineral water with a long tradition of healing, is being lost, or at least is not being adequately utilized, as part

of the Western Cape's tourism offering. This study endeavours to answer the question of whether health is still an important motivation to visit the mineral spa resorts of the Western Cape.

### **1.3 OBJECTIVES OF THE STUDY**

The primary objective of this study is to segment the Western Cape's mineral spa tourism market according to differences in the motivation to visit mineral spa resorts, and thereby determine whether and to what extent health forms part of the motivation to visit mineral spa resorts in the Western Cape. The importance of motivations that are not related to health are also assessed, as well as the extent to which these resorts are being used as bases for visiting surrounding tourist attractions.

### **1.4 SIGNIFICANCE OF THE STUDY**

Health tourism, of which 'mineral spa tourism' is an integral part, has experienced a dramatic increase in popularity during recent years in Europe and North America, as well as in Asian countries such as Japan (Smith and Jenner, 2000; Loverseed, 1998; Graburn, 1995; Gilbert and Van De Weert, 1991). However, as Bell and Vazquez-Illa (1996) point out, this growth has been accompanied by a significant 'paradigm shift' in the health tourism industry, characterized by a decline in demand for the medically-oriented services offered by traditional mineral spas, and an increase in demand for facilities and experiences focusing on a healthy lifestyle, fitness and relaxation.

The *Weekend Argus* (Cape Town, 2001) reports that more and more people are visiting Cape Town for the purpose of seeking a regenerating holiday or break, adding that the 21<sup>st</sup> century has "brought an awareness of the need to relax and take time off to restore the body's balance". If this is indeed the case, the mineral spa resorts of the Western Cape may be eminently suited to satisfy what appears to be a growing trend in international tourism demand.



## 1.5 OVERVIEW OF THE RESEARCH DESIGN AND METHODOLOGY

The objectives of the study are achieved through market segmentation, that is, by dividing visitors to mineral spa resorts into homogeneous groups, which form the basis for further analysis.

Fieldwork was carried out during the July 2001 school holiday period, at five mineral spa resorts in the Western Cape (Figure 1), namely:

- a) Goudini Spa, a family leisure resort near Worcester, the largest of the resorts included in the survey.
- b) Avalon Springs, a resort situated on the outskirts of Montagu.
- c) Warmwaterberg Spa, a small resort situated between Barrydale and Ladismith.
- d) Calitzdorp Spa, a resort situated between Calitzdorp and Oudtshoorn.
- e) The Baths, a small resort near Citrusdal.

Visitors to the above resorts were asked to complete a questionnaire in either English (Appendix 1) or Afrikaans (Appendix 2), consisting of closed and open-ended questions designed to elicit demographic and trip-related data, as well as information relating to user patterns and preferences. In addition, a set of 47 questions pertaining to benefits sought, facility preferences and activity preferences, scaled according to a Likert scale of 1 to 5, are included in the questionnaire. The 47 scaled questions are used as input data for factor analysis. After factors are named and described, the factor scores, in turn, are used as input data for cluster analysis, and the respondents are divided into segments. Discriminant analysis is used to test the validity of the clustering. A profile is then constructed of each segment, based on the degree to which each of the named factors are represented. The results of the cluster analysis, in combination with demographic and trip-related data, enable conclusions to be reached regarding the objectives of the study.

## 1.5 ORGANIZATION OF THE THESIS

Chapter 2 contains a review of the historical development of mineral spa tourism, and current international trends in the health and mineral spa tourism markets. This chapter also focuses on the mineral spa tourism market in the Western Cape. The final part of the chapter addresses the concept of tourist motivation in relation to visiting mineral spa resorts, as well as the rationale for market segmentation. The research design and methodology is described in Chapter 3. In Chapter 4 the results of the survey are presented and analyzed. Chapter 5 contains recommendations for future development, marketing and research.



## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 INTRODUCTION

This chapter contains discussions on the meaning of the word 'spa', the historical development of mineral spa tourism and the modern concept of 'health tourism'. Recent developments in the mineral spa tourism industries of Europe, the United States of America, Israel and Japan, as well as the mineral spa tourism industry in the Western Cape, are reviewed. The final part of the chapter contains a review of tourist motivation and the rationale for market segmentation.

#### 2.2 INTERNATIONAL HEALTH AND MINERAL SPA TOURISM

##### 2.2.1 Meaning of the Word 'Spa'

Hot spring resorts are often referred to as 'spas', or 'mineral spas', including three of the five resorts which form the basis of this study. However, the word 'spa' means different things to different people, and has in fact changed over time. The European Spa Association (ESPA) defines a spa as "a mineral spring or place or resort where such a spring is found" (Smith and Jenner, 2000:42). However, in North America the term 'spa' is used much more loosely than in Europe, and can be used to describe anything from a 'whirlpool bath' to a full-service health centre offering therapeutic treatments (Loverseed, 1998). The American-based International Spa Association (ISPA) defines a spa as "a place where active and sustained use of natural therapeutic agents and health-giving elements are applied within a hospitable environment over a period of time", and goes further to define a "mineral spring spa" as a spa which offers "an on-site source of natural mineral, thermal or seawater, for use in hydrotherapy treatments" (Smith and Jenner, 2000:42).



## 2.2.2 Historical Development of Mineral Spa Tourism

People have used mineral water since ancient times to cure such ailments as rheumatism, skin infections and poor digestion (Goodrich, 1994). In 2000 B.C. the Babylonian word for physician signified “one who knows water” (Gilbert and Van de Weert, 1991: 5). The Romans laid great stress both on the therapeutic and social value of hot mineral springs, which they called ‘thermae’. Indeed, many of the famous European baths, such as Aix-les-Bains and Vichy in France, Aachen and Baden-Baden in Germany, Bath in England and Bursa in Turkey, were developed by the Romans (Booyens, 1981).

The fall of the Roman Empire led to a decline in most of the European baths, and it was only by the early 17<sup>th</sup> century that a recovery began to take place, when many of the European mineral springs were developed into extremely sophisticated resorts. Because visitors could take only a limited daily number of therapeutic baths, much time was left for other activities, and amenities, including theatres, opera houses, dance halls, libraries and casinos, were provided. This resulted in a shift in emphasis, from health to pleasure, and a symbiotic relationship between health and recreation was seen in the structures of most spas. According to Hall (1992: 151), “the ‘taking the waters’ of the elites of 17<sup>th</sup> century Europe provided one of the foundations for the modern pleasure resort concept”.

In later years, according to Gilbert and Van de Weert (1991) scientific advances in water therapy led to the creation of smaller, specialized spas, concentrating more on the curative powers of the springs and developing health routines, which reduced the emphasis placed on leisure. During the latter half of the 20<sup>th</sup> century spa treatments were incorporated into the national health services of a number of European countries, including Germany, France, Italy, Austria, Switzerland, Belgium and Denmark. These countries had a strong historic belief in the value of spa treatments.

Bell and Vazquez-Illa (1996) add that in some countries, particularly the USA and the United Kingdom, spa treatments were considered unscientific and more costly than

receiving a prescription, and the spa industry suffered a significant decline. During the 1960s and 1970s, North America witnessed the development of specialized kinds of spas, including 'fitness spas' and 'beauty spas', which are not based on the availability of hot springs for the delivery of services.

### **2.2.2 Health Tourism**

The traditional notion of mineral spa tourism has changed substantially since the 1980s, with the rapid expansion of 'health tourism', what the International Union of Official Travel Organizations (IOUTO) (as cited in Hall, 1992: 151) defines as "the provision of health facilities utilizing the natural resources of a country, in particular mineral water and climate". Bell and Vazquez-Illa (1996: 560) add that there has been a significant "paradigm shift" in the health tourism industry, characterized by a "decline in demand for the medically-oriented services offered by traditional mineral spas, and an increase in demand for facilities and experiences focusing on a healthy lifestyle, fitness and relaxation".

Becheri (as cited in Hall, 1992: 152), describes health tourism as "thermal spring tourism of well-being", and explains that this refers to "thermal spring tourism which includes one or more of the following: health and fitness centres, diet therapy, physiotherapy, massage, beauty treatments, detoxicating treatments, sports and exercise, steam baths, hydrotherapy, health education and relaxation techniques".

Goodrich (1994: 228) defines health tourism as "the attempt on the part of a tourist facility (eg. a hotel) or destination (eg. Baden, Switzerland) to attract tourists by deliberately promoting its health-care services and facilities, in addition to its regular tourist amenities". Goodrich adds that thermal swimming pools are "but one of a range of health-care treatments offered at some resorts, among them special diets, daily exercise programmes, yoga, acupuncture, underwater massage, body massages, saunas, hydrotherapy treatments, mud pack treatments, herbal wraps and a range of beauty treatments". Goodrich (1994: 236) remarks that "more and more people are becoming



aware of the value of regular exercise, low-fat diets and rest and relaxation, as part of a healthier, happier life, and traditional medicine seems to be accepting more readily the contribution of 'holistic' medicine to a healthy life".

#### 2.2.4 Health and Mineral Spa Tourism in Europe

According to the European Spa Association (Smith and Jenner, 2000), some 20 million people in Europe spend about 120 million bed-nights annually at spas, with an average of six nights per visit. The largest nationality is German (40%), followed by Russian (30%), Austrian (10%), British (5%), Italian, French, Swiss and Finnish (all 2%).

The Deutscher Bäderverband (the federation of five German spa and health resort associations), claims that German spa towns attract as many as 40-45% of domestic and international tourists, and in a survey conducted by the European Travel Monitor (ETM) in 1994, some 6% of all outbound German holiday-makers said they planned to take an international health holiday somewhere abroad between 1995 and 1997 (Cockerell, 1996).

Gilbert & Van De Weert (1991: 6) distinguish three forms of health tourism product in European spas:

- a) The 'classical' health product, similar to the German 'Kur' concept, an intensive treatment programme with emphasis on health problems such as cardiovascular diseases. The treatment method is characterized by the use of natural substances originating from the earth, sea or climate.
- b) The 'specialized' health product, which focuses on a particular health aspect required by groups of consumers. Specialized packages, like 'holidays for the skin' and 'keep slim' packages are being offered.
- c) The *remise en forme* health product, which was originally developed by the French in the 1970s, and incorporates more relaxed, less intensive treatment, allocating more time to leisure facilities. This product is directed more towards a segment of healthy consumers wishing to enjoy a relaxing, body-care holiday.

The German 'Kur'(cure) industry is distinguished by four main types of resort (Gilbert & Van De Weert,1991: 7):

- a) Spas based on 'Kneipp' treatments, a method characterized by alternating warm and cold hydro-therapeutic applications, which has been found to strengthen and improve the body's own immunity system.
- b) Mineral water and mud treatments.
- c) *Heilklimatische Kurorte*, treatment based on the therapeutic properties of the climate.
- d) *Seeheiläder*, also referred to as thalassotherapy, health resorts near the sea offering a range of treatments based on sea water, seaweed and sea climate.

Cockerell (1996) divides the European health tourism market into two segments, those visiting spas and health resorts primarily for medical reasons, and those for leisure and traditional tourism. While purists jealously guard the traditional medical image of the spa and health resort business, many argue that in order to be commercially successful in future, diversification is necessary, urging that spas and health resorts need to be opened up to a much broader clientele with a far wider range of budgets.

Smith and Jenner (2000) point out that old mineral spa resorts are facing increasing competition from their more modern health and fitness counterparts, for both custom, and public and private funding of treatments. However, there is also a growing recognition of the benefits of preventative medicine, which seems to include a revival of the tradition of 'taking the waters' as an antidote to the stresses of urban living.

Gilbert and Van de Weert (1991: 6) remark that "in recent years, many of the successful European spas have recaptured full attention by moving their focus from the treatment of ailments to the improvement and prolongation of health in a leisure environment". This change was necessary to escape from a too pronounced 'geriatric specialization', and to attract younger visitors, who had turned to sea, sand and sun holidays. Kaspar (1990: 299) remarks that the "traditional concept of 'taking the waters', which contained essential social and creative elements, has developed into a modern form of health

tourism, and the use of local cures, especially water, is being brought into line with the tourists' holiday requirements, such as at Evian, on Lake Geneva, where sports and curative water have been closely linked".

There has been a slight resurgence of mineral spa tourism in the United Kingdom, although on a relatively small scale (Witt and Witt,1989). Droitwich and Leamington Spa now provide treatments, and the waters have been turned back on in Buxton, Bath, Harrogate and Tunbridge Wells. However, the British Tourist Authority does not market spa towns as 'health spa' towns, but rather as 'spa heritage' towns, with facilities for shopping (particularly antiques), leisure, history and entertainment. Osborne (2001b) points out that the boundaries of mainstream medicine are expanding in the United Kingdom, and as a result, opening doors to the reintroduction of spas. Osborne maintains that the modern spa offers a holistic approach to well-being and is relevant to those who want to stay healthy as well as those seeking to remedy a particular ailment.

Smith and Jenner (2000) mention that there are conflicting views within the spa industry over what Europe's spas will look for in future. Some people believe they will develop into 'wellness centres', emphasizing preventive health, rather than medical or beauty treatments, while others believe that real growth will come from the leisure, rather than the health side of the industry.

Bell and Vazquez-Illa (1996) caution that the word 'spa' will not necessarily be linked to rural or non-urban settings, or even to hot springs, and that many new spa developments tend to locate in urban settings, linked to high-quality properties, so-called 'urban spa hotels'. The above authors predict that the 'business meetings' segment of the tourism market is likely to become a primary target market for spas, because it is believed that spa services provide a special ambiance for business meetings, which are not provided in a conventional business hotel.



### **2.2.5 Health and Mineral Spa Tourism in North America**

In an analysis of the spa tourism market in North America, Loverseed (1998) finds that North Americans are turning away from 'sun, sea and sand' type holidays, and are seeking more meaningful experiences. Linking health to tourism seems to be more and more common, and people are increasingly attracted to holidays that allow them to relax and remain healthy at the same time as enjoying a break from the routine of their daily lives.

Americans make around 2.5 million annual visits to spas, and this is a mere 1% of the population, compared to 12.4% in Germany (Loverseed, 1998). Loverseed attributes this comparatively low level of interest to the out-of-date image that spas have amongst the general public, and to the fact that many people feel that spa holidays are both boring and too expensive.

The North American spa market is divided into three main types of spas (Loverseed, 1998):

- a) Destination spas, which offer some kind of medical component in their programmes.
- b) Resort spas, which are more numerous, with a broader appeal, and typically offer exercise programmes, aromatherapy and hydrotherapy, along with the usual attractions that one finds at a resort. The locations of resort spas are considered almost as important as facilities, and the most sought-after resort spas are in picturesque places that give clients the feeling that they are communing with nature. People who go to resort spas are not as focused on health as those who take their holidays at destination spas. Resort spa guests want to relax, but also want to have fun.
- c) Day spas, the fastest growing sector of the industry, which offer treatments only, without accommodation.

There are three main categories of spa holiday motivation in North America (Loveseed, 1998). Firstly, there are those who just want to relax at a resort and use the spa facilities from time to time. Secondly, there are those who make a trip with the specific purpose of improving their health and altering their lifestyle; and thirdly, there are those who are considered as dedicated spa-goers, attending spas several times a year.

In a 1997 market study, in which 2767 people at 36 spas were surveyed (Loveseed, 1998), it was found that holiday-makers going to destination spas are particularly dedicated to achieving a specific goal. Destination spa visitors list their four principal motivations as 'exercising and getting fit', 'rest and relaxation', 'emotional and spiritual renewal', and 'learning how to live a healthier life'. Some 52% indicate a desire to lose weight. Those visiting resort spas identify their motivations in a different order, starting with 'rest and relaxation', followed by 'being pampered', 'having beauty treatments', and finally 'exercising and getting fit'.

#### **2.2.6 Government Involvement: Israel and Japan**

The governments of both Israel and Japan are actively involved in the development of mineral spa tourism in their respective countries. Niv (1989) discusses health tourism and the health benefits of mineral water and mineral water treatments in Israel, and identifies four basic characteristics which Israel has that can transform it into a leading centre for health tourism, namely:

- a) Good natural resources (mineral water)
- b) Stable, comfortable climate all year round
- c) One of the world's most progressive medical systems
- d) Attractive scenic locations which have a calming effect on patients

Niv (1989) points out that Israel has, in recent years, won international recognition as a destination offering possibilities for the treatment of non-contagious diseases which do not impose limitations on daily living, such as dermatological ailments and various rheumatic conditions, in combination with a holiday. Israel has developed a network of

treatment centres, where treatment involves immersion in thermal mineral waters, as well as water from the Dead Sea, which has a unique concentration of minerals. Skin treatment spas have been established to treat mainly psoriasis, which afflicts some two million people worldwide. This type of package provides the cure-seeking visitor with the feeling of a real vacation while he/she attends to his/her health, a combination which often has great psychological value. Health tourists may also combine health motivations with other interests, as at Hamat Gader, where vacationers combine a visit to an ancient archaeological site with bathing in a thermal pool.

According to Niv (1989), the Israeli government, recognizing the importance of this sector of the tourism industry and its inherent potential for the national economy, has established a 'Health Spa Authority' for the purpose of commissioning medical studies on the therapeutic value of Israel's natural resources, carry out research and coordinate data on health spas and other health-cure facilities.

Graburn (1995) mentions that in recent years Japan experienced an *onsen buumu* (hot spring boom), a rush to small rural-town hot spring resorts, said to have curative, or at least recuperative powers. The baths are filled with constantly flowing naturally heated spring water in which one soaks. The baths themselves may be enamel, tile or wood, but are considered most 'chic' when constructed from local rock, so as to resemble a natural pool. The highlight of the most attractive *onsens* is the *rotenburo*, an outside bath or pool, which appeals to a population mourning an ever-decreasing experience of 'Japaneseness', as valued in both nature and culture. With the help of government development grants, many of these have now become popular tourist destinations.

### **2.3 MINERAL SPA TOURISM IN THE WESTERN CAPE**

There is very little up-to-date literature on the mineral spa industry in South Africa. The medicinal value of the waters of the springs was analyzed by Kent (1952). Booyens (1981) describes the historical development of a 'mineral bath culture' around the mineral baths of the Western Cape and other parts of South Africa. Boekstein (1998)



focuses on South African hot springs as tourist attractions, drawing attention to the potential of South Africa's hot spring resorts to serve as bases for visiting surrounding tourist attractions.

The Weekend Argus (2001) reports that health tourism is emerging as a new trend internationally, and that Cape Town has already established itself as the 'health tourism capital' of South Africa. This report describes health tourism as "travelling to destinations to obtain health care services such as operations, or to obtain health-related benefits such as clean air, sunshine, rest and relaxation after an operation or illness, or to reduce stress".

A report by the Western Cape Investment and Trade Promotion Agency (WESGRO) (1997) concludes that the health tourism market in the Western Cape seems to be underdeveloped, given the relatively high number of mineral spas, together with good medical infrastructure. It is predicted that the refurbishing of spa resorts would create a new tourism feature which would not merely cause tourists to switch tourist category, but would increase the overall number of tourists. The majority of visitors to spa resorts are currently drawn from within the Western Cape (70-90%), while other visitors are from the rest of the provinces, with a very small share of overseas tourists (2-5%). The report (1997: 24) remarks that the mineral spa resorts of the Western Cape are fairly 'old' and have not been very dynamic in their marketing strategy, often keeping a comparatively low profile.

### **2.3.1 Caledon: The Oldest Mineral Spa in South Africa**

There is a long-established healing tradition attached to the hot springs of the Western Cape. The Dutch, French and later English settlers in South Africa arrived with a highly developed mineral bath culture, and were not long in discovering and putting to use the mineral springs in the vicinity of the settlement at the Cape. Booyens (1981) writes that the hot springs at Caledon were mentioned by Adam Tas as early as 1695, and by 1710 they were being visited regularly for healing purposes. These springs, which became

known as *die bruin bronne* ('the brown springs', because of the reddish-brown colour of the water, which has a high iron content) were found to be highly effective in the cure of cutaneous, rheumatic and other diseases, as well as for sufferers from pulmonary complaints. At first the baths were only utilized by those seeking some form of medical treatment, but according to Burman (1970), when a new bathhouse was completed in 1821, with furnished rooms and excellent food, the baths started to be visited by people from all walks of life, for pure relaxation as well as for therapeutic purposes.

The railway from Cape Town reached Caledon in 1902, considerably reducing the time required for travelling. As a result, in 1904, the palatial three-storey 'Caledon Baths and Sanatorium' was built, and Caledon became the 'Baden-Baden' of South Africa. Unfortunately the sanatorium was destroyed by fire in 1946, and all that remains today is a single hot water swimming pool known as the 'Victorian Spa Bath'.

For many years there was no accommodation at the Caledon baths, until the 94-room 'De Overberger Country Hotel and Spa' was opened in the 1980s, which became 'The Caledon Casino Hotel and Spa' in late 2000, after the town was granted a casino licence. The new spa began functioning in April 2001. The 'Victorian Spa Bath' has been restored, and a number of smaller hot pools have been built. There is a gymnasium, a Turkish bath and a sauna, and hydrotherapy, thalassotherapy, as well as a range of beauty treatments are offered. The Caledon Casino Hotel and Spa was not included in this study, due to the fact that it has only recently opened, and does not as yet have a well-established clientele. The spa also functions independently of the hotel and casino, and therefore cannot be classified as a 'resort'.

### **2.3.2 Avalon Springs (Montagu)**

The springs at Montagu were being visited by farmers by the early 18<sup>th</sup> century, and after the railway reached Ashton, Montagu became a popular winter holiday destination for residents of Cape Town (Booyens, 1981). The first bathing facilities were erected in 1873, and soon accommodation facilities were added. An additional attraction was



the perceived healthy qualities of the 'Karoo air'.

Today the area is occupied by two establishments, the Avalon Springs Hotel, which has 14 rooms and a 30-room timeshare section, with a number of restaurants, and the Montagu Springs Holiday Resort, which has a range of self-catering chalets (Boekstein, 1998). Both have conference facilities. The area around the resort offers many opportunities for walking and mountaineering. There are four wine cellars in and around Montagu, all offering wine tasting and sales, and Montagu is close to the Breede River Valley, which is known for its wine routes and many scenic drives.

Spa facilities at Avalon Springs include five outdoor hot pools, ranging in temperature from 43°C down to 35°C, and two spa baths. Avalon Springs Hotel has a separate health spa, with hot and cold indoor mineral water pools, a sauna and a fully equipped gym. A comprehensive range of treatments is available, which includes massage, aromatherapy, manicures, pedicures, reflexology, foot alignment therapy and stress release treatments (Boekstein, 1998). Various all-inclusive five-day health packages are also offered. About 40 000 visitors per annum make use of the hot water pools.

### **2.3.3 Goudini Spa**

Goudini Spa, near Rawsonville, is the largest of the resorts included in this study. It offers more than 150 rondawels and flats, caravan and camping sites, conference facilities, a shop and a restaurant. Spa facilities include indoor and outdoor hot pools (36°C) and a jacuzzi complex (Boekstein, 1998). It is close to Cape Town (an hour's drive), and close to the wine routes and other attractions of the Breede River Valley. It is a very popular weekend and conference destination, attracting more than 150 000 visitors annually. Apart from the swimming pools, one of which has a water slide, Goudini has a wide variety of leisure facilities, including mini-golf, tennis courts, trampolines, an indoor games room, and a daily family entertainment programme is offered during school holidays.

#### **2.3.4 The Baths**

The Baths, near Citrusdal, started in 1739 as a military post, when the Dutch East India Company erected a stone building and a few bathing huts (Booyens,1981). Set in a narrow valley surrounded by groves of orange trees, the resort offers self-catering flats and chalets, as well as caravan and camping sites. It is characterized by well preserved Victorian style buildings, giving it an old-world feel (Boekstein, 1998). Spa facilities include two mineral water swimming pools, one hot (38°C), the other cold. In addition, there are five jacuzzis (up to 43°C) and two whirlpools. The resort is situated close to the Olifants River Valley and its wine route, and the Cederberg Mountains. It is also well-placed for drives to view the renowned spring wild flowers.

#### **2.3.5 Warmwaterberg Spa**

Warmwaterberg Spa, between Barrydale and Ladismith, is the smallest of the resorts included in this survey. It has hot (40°C) and cold outdoor mineral water pools, with accommodation in self-catering chalets and flats, some of which have one hundred year old walk-in baths, as well as caravan and camping sites (Boekstein, 1998). There are also conference facilities, a shop and restaurant.

#### **2.3.6 Calitzdorp Spa**

The hot springs at Calitzdorp have been visited since 1777, and according to Booyens (1981), the water here was found to be particularly good for gout, rheumatism, skin diseases, abscesses and ulcers. Today Calitzdorp Spa has 40 self-catering chalets, conference facilities, a shop and a restaurant. Spa facilities include two hot outdoor pools (44°C and 38°C), a small indoor hot pool (38°C) and four private mineral baths (Boekstein, 1998). Being only 30 kilometers from Outdshoom, it is ideally placed for day visits to the Cango Caves, the ostrich show farms and other attractions of the Klein Karoo.

### **2.3.7 Other Hot Springs in the Western Cape**

A number of hot springs, that at one time had facilities for bathing and accommodation, are unfortunately no longer open to the public. The springs at Brandvlei, near Rawsonville, are the hottest and strongest in South Africa, providing 126 litres of water per second at 64°C. A bathhouse was built in the early 1800s, but a 'mineral spa resort culture' did not develop, possibly because of the dominance of the Caledon baths (Booyens, 1981). Brandvlei is now located on private land, and although the springs can be visited, there are unfortunately no longer facilities for swimming (Boekstein 1998).

The warm salt spring in the centre of the town of Malmesbury has been known for the relief of rheumatism, neuralgia, gout and lumbago since the early 1800s. Although it was the springs that led to the founding of a community, and later a town, various attempts to develop the spring have not been successful (Booyens, 1981).

The lukewarm underground river which flows into the caves at De Kelders, near Gansbaai, has also been known to travellers since the early colonial days (Proctor, 1948), and its waters were considered to be good for rheumatism and other 'aches and pains'. Unfortunately these caves are also no longer open to the public.

### **2.3.8 Healing Properties of the Hot Mineral Water in the Western Cape**

According to Gilbert and Van De Weert (1991), the main minerals that are beneficial in spa treatments are sodium, calcium, magnesium, carbon, sulphur and iron. These minerals all occur in appreciable quantities in the mineral waters of the Western Cape (Kent, 1952). Many springs are radioactive, although not to the point of being dangerous. According to Kent (1952), thermal and highly mineralized waters, especially those rising from igneous rocks, are generally much more radioactive than normal surface and underground waters.



Kent (1952) explains that waters may be drunk, or the skin may be exposed to them. Taken internally, water can directly influence the digestive organs, then go through the liver into the blood circulation, finally being eliminated through the kidneys. In this way, the water introduces various minerals to all areas of the body in a naturally balanced composition. Externally, mineral waters stimulate the skin by improving circulation and toning muscles, and some of the minerals reach the blood stream by penetrating the skin.

South Africa has many different chemical types of thermal waters (Kent,1952). The north of the country is characterized by alkaline waters, which have sodium carbonate and bicarbonate as important ingredients. Such springs are found at Warmbaths, Die Oog and Tshipise in the Northern Province, and Badplaas in Mpumalanga. Sulphate springs, with significant amounts of sodium or magnesium sulphate, are found at Shu-Shu near the Tugela river in Kwazulu Natal. Triple-waters, with significant amounts of chlorides, sulphates and carbonates, are found at Natal Spa near Vryheid in northern Kwazulu-Natal. The hot mineral waters of the Western Cape can be classified as being either 'indifferent' or 'chalybeatic', and do not occur anywhere else in South Africa.

Indifferent waters contain small amounts of dissolved solids, less than one part per thousand, with no dominant mineral. Drinking this water is often beneficial for purifying the system, and bathing has also been found to be remarkably effective for the treatment of gout, although this is dependent upon both temperature and length of immersion. In the Western Cape, indifferent waters can be found at The Baths (Citrusdal), Aliwal Springs (Montagu) and Goudini Spa. Chalybeatic springs, found at Caledon, Warmwaterberg and Calitzdorp Spa, contain appreciable quantities of iron in solution as ferrous bicarbonate, which decomposes on exposure to air, and reddish hydrated oxides of iron form as a floc in the water. This gives the water its characteristic reddish-brown colour. Drinking chalybeate waters is recommended in cases where a person may suffer from lack of iron, while rheumatism and skin ailments are treated by bathing in hot chalybeate waters.

## 2.4 TOURIST MOTIVATION

Tourist motivation, according to Holloway (1994), refers to the needs and wants of travellers, and how they are satisfied. Motivation is an important determinant of tourist behaviour and the subsequent satisfaction derived from the experience (Ryan, 1995).

### 2.4.1 Needs and Need Satisfaction

There are many theories of tourist motivation. Witt and Wright (1992) note that central to most theories of motivation is the concept of 'need'. Needs are seen as the forces which arouse motivated behaviour, with the assumption that in order to understand human motivation, it is necessary to discover what needs people have, and how they can be fulfilled.

Probably the best known of all motivation theories is 'Maslow's Hierarchy of Needs', formulated by Abraham Maslow in 1943 (Witt and Wright, 1992). Maslow identified five classes of needs, namely:

- a) Physiological needs - the need to eat, drink, sleep, etc.
- b) Safety needs - the need for freedom from threat or danger, and for a secure, orderly and predictable environment.
- c) Social needs - the need for a feeling of belonging, for affectionate relationships, friendship and group membership.
- d) Esteem needs - the need for self-respect, achievement, self-confidence, recognition by others and prestige.
- e) Self-actualization needs - the need to realize one's potential.

Maslow (as cited in Witt and Wright, 1992) suggested that these needs form a hierarchy, with physiological needs at the lowest level, and the need for self-actualization at the highest, and reasoned that if no needs are satisfied, then the lowest-level needs, the physiological ones, dominate behaviour. However, if these are satisfied, the individual is motivated by the next level in the hierarchy, safety needs. Once these are satisfied,

the individual can move up to the next level, continuing to work up the hierarchy as the needs at each level are met.

The 'ten most common positive holiday experiences' identified by Pearce (as cited in Ryan,1997) are closely associated with the satisfaction of needs:

- a) Relaxing/peaceful (Self-actualization)
- b) A good climate (Physiological)
- c) Scenery (Self-actualization)
- d) Exploring/discovering new places (Self-actualization)
- e) Food (Physiological)
- f) Being with family/friends (Social)
- g) Good walking (Self-actualization)
- h) A sense of freedom/independence (Self-actualization)
- i) Friendly people (Social)
- j) Good accommodation/good hotel (Physiological)

Motivation, according to Mill and Morrison (as cited in Witt and Wright,1992), occurs when a person wants to satisfy a need. For instance, people who travel to relieve tension can be seen to be seeking to satisfy their basic physiological needs. Motivation is expressed in two distinct forms that Holloway (1994: 49) refers to as 'general motivation' and 'specific motivation'. The former is aimed at achieving a broad objective, such as getting away from the routine and stress of the workplace in order to enjoy different surroundings, and a healthy environment, while the latter arises out of the ability of destinations to attract tourists. These two forms of motivation are sometimes referred to as 'push' and 'pull' factors, with tourists being 'pushed' into going on holiday by the need to get away from their everyday environments, and 'pulled' to travel to particular destinations.

There is no widely recognized way of categorizing the many motivating factors in tourism (Swartbrooke and Horner, 1999). Some of the major ones are outlined below:

- a) Physical motivators - relaxation, suntanning, exercise and health.



- b) Cultural motivators - sightseeing, experiencing new cultures.
- c) Emotional motivators - romance, adventure, escapism, spiritual fulfilment.
- d) Personal motivators - visiting friends and relatives, making new friends, searching for economy if on a limited income.
- e) Personal development motivators - increased knowledge, learning a new skill.
- f) Status motivators - exclusivity, fashionability, obtaining a good deal, ostentatious spending opportunities.

#### **2.4.2 The Motivation to Visit Mineral Spa Resorts**

In the words of Holloway (1994: 49), “certain types of holiday have become popular because they best meet common, basic needs. For instance, the ‘sun, sea, sand’ type of package holiday, which caters to the mass market, is essentially a passive form of leisure that entails nothing more than a relaxing time on the beach, enjoyment of the perceived healthy benefits of sunshine and saltwater bathing, and good food”. Those travelling on their own might also seek opportunities to meet other people (belonging and social needs), and families can simultaneously satisfy their own needs while also providing a healthy and enjoyable time for their children on the beach. What is provided is therefore a ‘bundle of benefits’, and the more a particular destination can be shown to provide the range of benefits sought, the more attractive will that holiday appear compared to other holidays on offer.

In a similar way, mineral spa resorts satisfy a variety of needs, from basic physiological needs, up to the need for self-actualization, probably including all of the ten most common positive holiday experiences identified by Pearce (as cited in Ryan, 1997). The motivation to visit mineral spa resorts results from a combination of physical (relaxation, suntanning, exercise and health), cultural (sightseeing), emotional (escapism) and personal motivators (making new friends, searching for economy if on a limited income).

However, no tourist is likely to be influenced by a single motivator. Most people's holidays represent a compromise between a number of motivators. Either one motivation becomes dominant, or a holiday is purchased which ensures that all of the motivators can at least be partially satisfied. Not only are motivators different for each individual tourist, but they are also likely to vary between different market segments (Swartbrooke and Horner, 1999). Market segmentation can lead to a better understanding of these differences in motivation.

### **2.4.3 Market Segmentation**

Segmentation, in its broadest sense, is defined by Fitzgibbon (1987: 490) as "a method of analysis that involves disaggregation of data, followed by reassembly and synthesis". Market segmentation is defined by Kotler (as cited in Gunn, 1988: 96) as "the subdividing of a market into homogeneous sets of customers, where any subset may conceivably be selected as a target market". It is the classification of heterogeneous customers with different needs, characteristics and behaviour patterns, into homogeneous groups, or segments.

The aim of segmentation is to provide maximum homogeneity within segments, and maximum heterogeneity between segments (Saayman, 1997). According to Mill & Morrison (1998), market segmentation is a recognized and universal way of analyzing tourism markets and selecting from them. Each segment may be used as a target market, to be reached with a separate marketing strategy.

Market segmentation is based on certain assumptions (Bennett 2000):

- a) The market for a tourism product or service is made up of particular segments, in which members have distinctive needs and preferences.
- b) A single tourism offering, such as a holiday resort, appeals more to some segments of the market than others.
- c) Organizations can make their marketing efforts more effective by developing specific offerings for specific segments.



The logic of segmentation resembles, in some ways, the logic of regionalization (Smith, 1989: 39), where “the analyst’s task is to define groups of people that are relatively similar with respect to some internal criteria, and yet are relatively different from other groups”. The more an organization knows about the needs, desires, attitudes and behavior of its customers, the better it will be able to design and implement the products required to satisfy them. Once segments have been distinguished, specially designed marketing mixes can be offered, according to identified desires and preferences.

#### 2.4.4 Bases for Segmentation

A number of general bases have been used in segmentation (Bennett, 2000), the main categories of which are:

- a) Demographic segmentation - identifying segments according to attributes such as age, gender, education, stage in family life cycle and income.
- b) Geographic segmentation - identifying segments according to location of residence.
- c) Psychographic segmentation - identifying segments according to attributes such as personality and lifestyle.
- d) Behavioral segmentation - identifying segments according to attributes such as benefits pursued, facilities used, frequency of visits, activities partaken in and types of information sources used.

There are two general types of segmentation (Mill & Morrison, 1998):

- a) Forward segmentation, which uses *a priori* methods, and the marketer predetermines the bases to be used, such as demographic or geographic.
- b) Backward segmentation, which uses *a posteriori* methods, and segments are derived from the application of specific statistical analytical techniques, such as factor-cluster analysis.

There has been much debate over which bases should be used to segment travel markets (Moscardo, *et al*, 2001). According to Mill & Morrison (1998), forward, or *a priori*,

segmentation methods have traditionally been the most frequently used in tourism, primarily because they are the easier of the two to use. Fitzgibbon (1987) stresses the necessity for what she refers to as 'attitudinal segmentation', the need to probe beyond demographic information and attempt to understand the needs, wants, values and desires of consumers in the purchasing decision-making process. According to Fitzgibbon (1998: 487), consideration of attitudinal segmentation as a route into the dynamics of consumer attitudes "will direct the travel industry's attention to the 'marketing', as opposed to the 'sale' of travel, and it will focus the industry's market development efforts on the consumer, not just in terms of how old or how rich he/she is, or how often he/she has traveled in the past, but in terms of his/her travel needs and wants".

In recent years, backward, or *a posteriori* methods of segmentation, are increasingly being used by tourism researchers. The most commonly used method is factor-cluster segmentation (Smith, 1989), which produces segments analytically using a combination of factor analysis and cluster analysis. Factor-cluster segmentation involves the definition of important characteristics inherent in a data set through factor analysis of a large number of variables, after which these characteristics are used to cluster individuals into statistically homogeneous segments.

#### **2.4.5 Benefit Segmentation**

A form of factor-cluster segmentation increasingly common in tourism research is often referred to as 'benefit segmentation', which is segmentation of a market based on benefits sought in a product (Frochot and Morrison, 2000). Methodologies differ from researcher to researcher, but in most cases this has involved factor-cluster segmentation, often followed by profiling of segments according to demographic and trip-related information. Goodrich (as cited in Frochot and Morrison, 2000: 37) suggests that "standard variables such as age, income, occupation and education, may be more useful as supplementary rather than as primary bases for defining tourist market segments".



One reason for the great interest in benefit segmentation in travel and tourism is its focus on travellers' motivations, which have always been portrayed as a critical variable in the decision-making process (Frochot and Morrison, 2000). Benefit segmentation is seen as having a much wider range of applications than traditional segmentation methods, since it provides marketers with a fuller picture of customers, from their motivation profiles to behavioral or socio-economic characteristics, which may be useful in a positioning or promotional strategy.

According to Woodside and Jacobs (as cited in Loker and Perdue, 1992: 30), "learning the benefits realized by a destination's visitors from major market segments may be helpful in planning unique positioning messages to appeal successfully to each segment, adjusting advertisement messages, and improving physical facilities". Loker and Perdue (1992: 35) add that "benefit segmentation has the advantage of being based upon predictive, causal factors, and when combined with key descriptive variables, provides clear insight into marketing and communication strategy formulation".

However, as Frochot and Morrison (2000) point out, there has never been a precise definition of what should be included as 'benefits', which has led to mixed interpretation. Otto & Ritchie (as cited in Frochot and Morrison, 2000), argue that because tourism mixes both consumption of a tangible service and the fulfilment of emotional expectations, this has led to two different streams of research, that in which tangibles are considered as benefits, and that in which emotional expectations are considered as benefits, or a mixture of both. Researchers who have used destination attributes as benefits in combination with motivations include May, Bastian, Taylor and Whipple (2001), who segmented the Wyoming 'snowmobiling market', and Yannopoulos and Rotenberg (1999), who carried out a benefit segmentation of the 'near-home' tourism market in upper New York State. In studies using only motivational benefits, Ahmed, *et al* (1998) segmented the Canadian 'winter sun destination' market on the basis of sought product benefits, and Loker and Perdue (1992) conducted a benefit-based segmentation of the summer travel market in North Carolina, in the United States.



Lang and O'Leary (1997) maintain that travel behavior is multi-dimensional and influenced in varying degrees by all the bases of segmentation. Suggesting that a multiple segmentation approach be employed, they developed a typology of nature travellers in Australia, segmenting travellers according to a combination of benefits pursued, activity participation and destination preferences. Lang and O'Leary (1997: 160) believe that this methodology "can reveal relationships between psychographic backgrounds and actual behavior, to better classify markets and provide more information to aid in the development of tourist products, promotional materials, management programmes and marketing strategies".

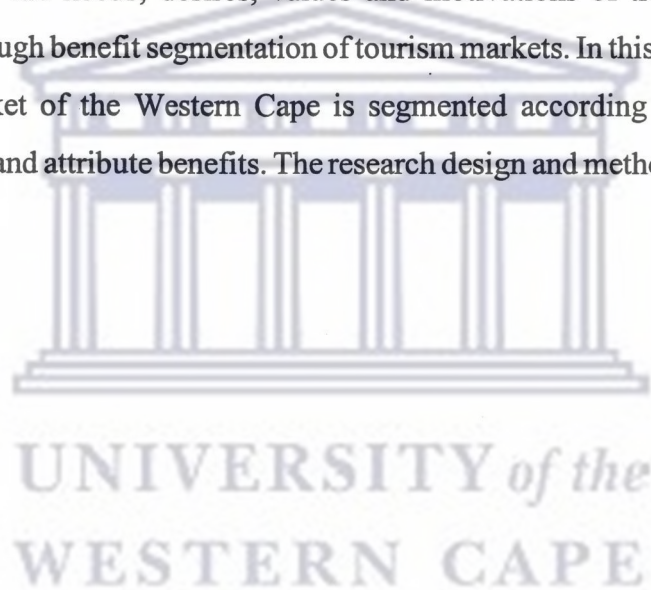
## 2.5 SUMMARY

Health tourism, of which mineral spa tourism forms an integral part, has undergone significant changes in recent years. The emphasis of the mineral spa tourism product has changed from being primarily focused on utilizing hot mineral water and related facilities for medical treatments, to a product focused, in some cases, on health and beauty treatments, and in others, on preventive health in a leisure setting, or a combination of both. In both instances much of the emphasis is on relaxation, as well as the release of stress and tension. It is recognized, especially in North America and Europe, that the principal growth in the market will be on the side of leisure. It is also recognized that tourists wish to combine health motivations with other interests. It should be borne in mind that competition will come from new spa developments that are not linked to rural settings or resorts, or even to mineral water, but rather to high quality 'urban spa hotels' which cater primarily for the business meetings market.

It is reported that more and more people are visiting Cape Town for the purpose of seeking a regenerating holiday or break. Given the relatively high number of mineral spas in the Western Cape, the health tourism market seems to be underdeveloped. The majority of visitors to spa resorts are currently drawn from within the Western Cape. Despite a long tradition of healing, these resorts began to position themselves as leisure resorts many years ago. The resorts covered in this study offer hot mineral water pools,

accommodation, and various leisure and entertainment facilities. Avalon Springs, outside Montagu, offers limited 'health spa' facilities, such as beauty treatments, while Goudini Spa and The Baths have jacuzzis.

The motivation to travel arises out of the desire to satisfy needs. Mineral spa resorts are able to satisfy a variety of needs, and thus the motivation to visit these resorts varies considerably between individuals and market segments. Market segmentation can lead to a better understanding of these differences in motivation. While there is no generally accepted method for market segmentation in travel and tourism, it is commonly agreed that it is necessary to go beyond demographic, geographic and trip-related variables, and also consider the needs, desires, values and motivations of travellers. This can be achieved through benefit segmentation of tourism markets. In this study the mineral spa tourism market of the Western Cape is segmented according to a combination of motivational and attribute benefits. The research design and methodology are discussed in Chapter 3.



# RESEARCH DESIGN AND METHODOLOGY

## 3.1 INTRODUCTION

The main objective of this study is to segment the Western Cape's mineral spa tourism market, and thereby determine the extent to which health forms part of the motivation to visit mineral spa resorts in the Western Cape. The role of other motivating factors is also evaluated, as well as the extent to which these resorts serve as bases for visiting surrounding tourist attractions.

The above objectives are achieved through market segmentation, that is, by dividing visitors to mineral spa resorts into homogeneous groups, which form the basis for further analysis. An *a posteriori* segmentation method, factor-cluster analysis, is used, with the segmentation based on a combination of motivational benefits and attribute benefits.

## 3.2 STUDY MATRIX

The study was carried out at five mineral spa resorts (Figure 1) in the Western Cape:

- a) Goudini Spa
- b) Avalon Springs
- c) Warmwaterberg Spa
- d) Calitzdorp Spa
- e) The Baths

The above resorts are discussed in detail in Chapter 2, section 2.3.



### **3.3 DATA COLLECTION**

The questionnaire (Appendix 1) consists, firstly, of closed and open-ended questions designed to elicit both demographic data and trip-related information relating to user patterns and preferences. Secondly, it includes a set of 47 questions pertaining to benefits sought, facility preferences and activity preferences. These questions are scaled according to a Likert scale of 1 to 5, to be used for the factor-cluster analysis and subsequent segmentation. The questionnaire was translated into Afrikaans (Appendix 2), and respondents had the option to answer in either English or Afrikaans.

### **3.4 THE SAMPLE**

Fieldwork was carried out during the July 2001 (winter) school holidays. A day was spent at each of the five resorts. The resorts vary in size, with the largest resort, Goudini Spa, accommodating an estimated annual number of visitors seven times more than that of the smallest resort, Warmwaterberg Spa. It was decided that respondents would not be selected according to resort size, since this would result in a skewed picture of the general mineral spa tourism market in the Western Cape.

While the intention was for at least 20 questionnaires to be completed at each resort, this was not possible at all of the resorts in the time available. The number of respondents per resort, together with the estimated number of visitors per annum and per day, are indicated in Table 3.1. No accurate statistics are available on visitor numbers, but estimates were provided by the resort managers.

**TABLE 3.1: ESTIMATED NUMBER OF VISITORS, TOGETHER WITH THE TOTAL NUMBER OF RESPONDENTS FOR EACH RESORT**

RESORT	VISITORS P/A (EST.)*	VISITORS P/D (EST.)*	RESPONDENTS	% OF RESPONDENTS #
Goudini Spa	150 000	410	19	21
Calitzdorp Spa	40 000	110	22	23
Avalon Springs	36 000	99	18	20
The Baths	30 000	82	15	16
Warmwaterberg Spa	22 000	60	18	20
<b>Total</b>	<b>278 000</b>	<b>761</b>	<b>92</b>	<b>100</b>

\* Source: Estimates provided by resort managers

# Percentages rounded up/down to nearest whole number

Respondents at the respective resorts were randomly selected, with no preconditions or requirements, other than that only one respondent per family group was included. Each was given the questionnaire to complete in the presence of the researcher, in case of any questions.

A total of 96 respondents were given questionnaires to complete. Four of the responses were found to be unusable and consequently rejected, leaving a total of 92 usable responses. This equates to approximately 12% of the average total number of visitors per day for all the resorts combined, based on the estimates illustrated in Table 3.1. The sample of 92 respondents should result in a confidence level of 95%, and a confidence interval of 10.22% (Malhotra, 1996). Thus, when the 92 respondents are included, one should be 95% certain that no estimated percentage will be off by more or less than 10.22%. In cases where less than the 92 respondents are included, the margin of error will be greater.

### **3.5 LIMITATIONS**

Possible limitations of this study include the fact that this survey was carried out during the July (winter) school holiday period. The mineral spa tourism market for the summer school holidays, weekends throughout the year, as well as periods falling outside school holidays, may be different.

Another limitation may be that only mineral spa users were included in this study. Osborne (2001a) remarks that it is important to consider whether research should be directed at existing users, or potential new consumers. The decision to orchestrate market research in such a way as to pick up existing users may well result in a potential new user group being missed or ignored. A survey conducted on non-users may shed light on requirements which could turn them into users.

### **3.6 METHODOLOGY**

The demographic and trip-related data is analyzed, after which SPSS™ is used to carry out factor-cluster analysis. The 47 questions (variables) pertaining to benefits sought, facility preferences and activity preferences, scaled on a Likert scale of 1 to 5, are used as input data for factor analysis, using principle components with varimax rotation as the extraction method. Factors with eigenvalues greater than 1.0 are identified and variables with high loadings on each factor are analyzed and named accordingly.

The standardized factor scores, saved as variables, are then used as input data for cluster analysis, and the sample is divided into clusters (segments). A number of possible cluster solutions are produced, with the one deemed most appropriate retained for further analysis. Discriminant analysis is used to test the validity of the clustering. A profile is then constructed of each segment, based on the degree to which the named factors are represented. The segments are also cross-tabulated with demographic and trip-related data. The segments form the basis for reaching conclusions on the motivations and preferences of visitors to mineral spa resorts in the Western Cape, including the role of health as a motivation for visiting. The results of the empirical survey are presented and analyzed in Chapter 4.



## CHAPTER 4

### PRESENTATION AND ANALYSIS OF RESULTS

#### 4.1 INTRODUCTION

In this chapter, demographic characteristics of respondents and trip-related data are presented and discussed, after which factor-cluster analysis is carried out on the 47 variables pertaining to benefits sought, facility preferences and activity preferences. The results of the factor-cluster analysis, together with the afore-mentioned data, are then analyzed, and conclusions are reached concerning the objectives of the study.

#### 4.2 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Demographic data relating to the respondents is illustrated in Table 4.1. The field survey consists of a total of 92 usable responses. More than half of the respondents are from Cape Town (57%), or other parts of the Western Cape (38%), with 4% from other parts of South Africa and 1% from overseas.

Slightly more than half (52%) of the respondents are English speaking, while slightly less than half (48%) are Afrikaans speaking. About two-thirds (71%) are males, and one-third (29%) females. Almost half (48%) of the respondents are between 40 and 60 years old, with 45% between 20 and 40 years old. Only 5% are 60 and above, and 2% are under 20 years old.

Some 94% are married, and 6% are unmarried. Almost all of the respondents (94%) indicated that they have children. Of those with children, most (91%) have them at the resort, and a few have their grandchildren with them. Many of the respondents did not indicate the number of children and their ages accurately, and hence only 60% of the responses for this question are usable. Of these, nearly half of the children (45%) are between 5 and 12 years old, with a further 31% between 13 and 18. Some 22% are under 5 and 2% over 18 years old.

Of the 82 respondents willing to reveal their monthly family income, 26% have an income of more than R20 000, while 35% earn between R10 000 and R20 000. Some 33% earn between R5 000 and R10 000, and 6% indicate a monthly income of less than R5 000.

**TABLE 4.1: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS**

		FREQUENCY	%#
Origin of Respondents (N = 92)	Cape Town	52	57
	Other parts of Western Cape	35	38
	Other parts of South Africa	4	4
	Overseas	1	1
Language (N = 92)	English	48	52
	Afrikaans	44	48
Gender (N = 92)	Male	65	71
	Female	27	29
Age group (N = 92)	Under 20	5	2
	20 - 40	44	45
	40 - 60	41	48
	Older than 60	2	5
Marital status (N = 92)	Married	86	94
	Unmarried	6	6
Children (N = 92)	Yes	86	94
	No	6	6
Monthly family income (N = 82)	Less than R5 000	5	6
	R5 001 - R10 000	27	33
	R10 001 - R20 000	29	35
	More than R20 000	21	26

# Percentages rounded up/down to nearest whole number

### 4.3 TRIP-RELATED DATA

Table 4.2 illustrates trip-related data that emerged from the survey.

#### **Group size**

The majority of the respondents (78%) travel in groups of between three and five, with a further 15% in groups of between six and ten. Only 6% are in groups of one or two. Thus, while there were some large multi-family groups, most respondents travel in single-family groups, with very few single travellers or couples without children. The low number of singles and couples without children may be due to the fact that the survey was carried out during the July school holidays .

#### **First-time visitors**

Of the respondents, 42% are first-time visitors, while 58% had previously stayed at or visited the resort where they completed the questionnaire.

#### **Frequency of visits**

Of those who had stayed at or visited the resort before, some 75% indicate that they return once a year, or more often.

#### **Length of stay**

Some 54% of the respondents stay, or intend to stay, for more than three nights, while 41% only stay between one and three nights. The remaining 5% are day visitors.

#### **Type of accommodation**

Of the respondents staying overnight, 59% are staying in self-catering chalets, rondawels or flats. A further 27% are staying in caravans, with 6% camping. Hotel accommodation is used by 4%, and a similar number are staying in self-catering timeshare units. Three respondents have not answered this question.



**TABLE 4.2: TRIP-RELATED DATA**

		<b>FREQUENCY</b>	<b>%<sup>#</sup></b>
Group size (N = 92)	1 - 2	6	6
	3 - 5	72	78
	6 - 10	14	15
	More than 10	1	1
First-time visitors (N = 92)	Yes	39	42
	No	53	58
Frequency of visits (N = 53)	Once a year or more often	40	75
	Less than once a year	13	25
Length of stay (N = 89)	Day visitor	5	5
	1 to 3 nights	36	41
	More than 3 nights	48	54
Type of accommodation (N = 84)	Hotel	3	4
	Self-catering chalet/rondawel/flat	50	59
	Timeshare	3	4
	Caravan	23	27
	Tent	5	6

<sup>#</sup> Percentages rounded up/down to nearest whole number

#### **4.4 REASONS FOR VISITING MINERAL SPA RESORTS**

Respondents have a variety of reasons for visiting mineral spa resorts (Table 4.3). Most prominent among these is 'relaxation, lack of stress, peaceful atmosphere', mentioned by 56% of the 88 respondents who answered this question. The hot pools themselves are mentioned by 32%, followed by 'good climate, good weather, good winter destination' (18%), 'outdoor life, natural unspoilt countryside, scenery' (8%), 'good facilities for children, lots to do for children, safe for children' (7%) and 'to explore wine routes and other attractions in the area' (6%).

From these answers, it appears that more than half of the respondents are motivated by the need for relaxation and reduction of stress, and the satisfaction of these needs is expedited by a peaceful atmosphere, the availability of hot swimming pools to relax in, pleasant weather, outdoor life and attractive scenery. Other motivations include the need for a safe and secure environment, especially for children, and visiting tourist attractions in the area. Health and healing are not mentioned directly by any of the respondents.

**TABLE 4.3: REASONS FOR VISITING MINERAL SPA RESORTS**  
(Respondents provided multiple answers)

	<b>FREQUENCY (N = 88)</b>	<b>%#</b>
Relaxation, lack of stress, peaceful atmosphere	49	56
Hot pools, hot springs	28	32
Good climate, good weather, good winter destination	18	20
Outdoor life, nature, natural unspoilt countryside, scenery	7	8
Good facilities for children, lots to do for children, safe for children	6	7
To explore wine routes and other attractions in area	5	6
Easy to get to	4	5
Using it as stopover (not as a primary destination)	4	5
Affordable, value for money, no extra charge to use pools	3	3
Entertainment, family entertainment	2	2
Friendly people, sociable atmosphere	2	2
Good accommodation, good service	2	2
Good facilities	1	1
Walks	1	1
Golf	1	1

# Percentages rounded up/down to nearest whole number

#### **4.5 HEALTH**

The majority of the respondents (98%) are aware that swimming in the hot spring water is reputed to be very healthy, and 74% feel that the water is good for their own health.

The responses of those who feel that the water is good for their own health are depicted in Table 4.4. Some 35% of the 69 respondents who answered this question are not able to say exactly how the water contributes to their health. Another 28% feel that it helps to relieve tired and aching muscles, as well as aches and pains, including backache. Some 25% feel that it helps with general relaxation and 12% emphasize the relief of stress and tension. A further 6% note that it helps with rheumatoid problems (arthritis, rheumatism and gout), 3% with blood circulation and 3% with sinus problems. Some 3% feel that it helps them to sleep better and 1% say it gives them a better appetite.

**TABLE 4.4 WAYS IN WHICH THE HOT MINERAL WATER CONTRIBUTES TO RESPONDENTS' HEALTH**  
(Respondents provided multiple answers)

	FREQUENCY (N = 69)	% <sup>#</sup>
Nothing specific	24	35
Relaxation of tired muscles, relief for aches and pains	19	28
General relaxation	17	25
Reduction of tension and relief of stress	8	12
Relief of arthritis, rheumatism, gout	5	7
Better blood circulation	2	3
Relief of sinus problems	2	3
Better sleep	2	3
Better appetite	1	1

<sup>#</sup> Percentages rounded up/down to nearest whole number

#### 4.6 ANALYSIS OF THE SCALED VARIABLES

The 47 variables pertaining to benefits sought, facility preferences and activity preferences, that were answered according to a Likert scale of 1 to 5, are shown in Table 4.5. The variables are listed according to descending means. Some 42 out of the 47 variables have a minimum value of 1, and a maximum value of 5, with relatively high mean deviations, which suggests that there is a high degree of variation among the



respondents.

The variables with the highest mean scores, such as 'A safe and secure environment' (4.78), 'Neat and clean destination' (4.68) and 'A relaxing environment' (4.65) also have the lowest standard deviations (0.49, 0.59 and 0.60 respectively), which implies that these variables are rated highly by almost all of the respondents. Most of the variables have relatively high standard deviations, which suggests that there is a high degree of variability among the respondents.

## **4.7 FACTOR ANALYSIS**

### **4.7.1 Factor Analysis as a Statistical Technique**

Factor analysis is a multivariate statistical technique that identifies the underlying structure in a data set that is otherwise too complex to distinguish (Frochot and Morrison, 2000). It is a data reduction method that simplifies subsequent analysis. The procedure followed is explained by Smith (1989). The first step involves the construction of a correlation matrix, in which the values of each sampled individual on each variable are compared to their values on all the other variables. Correlations range from -1.0 (perfect inverse correlation) to 1.0 (perfect direct correlation). A new set of variables, called factors, is produced. Each factor is a set of the original variables multiplied by weights, called loadings, that represent the correlations between the original variables and the newly defined factor, which is statistically independent of every other factor. Eigenvalues, the sum of the squares of the loadings of all variables for each factor, are then calculated. Usually only factors with eigenvalues greater than 1.0 are retained for analytical purposes.

**TABLE 4.5: VARIABLES USED IN THE FACTOR ANALYSIS**

VARIABLE	MIN.	MAX.	MEAN	STD. DEV.
A safe and secure environment	3	5	4.78	.49
Neat and clean destination	2	5	4.68	.59
A relaxing environment	3	5	4.65	.60
Safe for children	1	5	4.62	.81
Being together as a family	1	5	4.58	.85
Hot pool/s to swim in	1	5	4.53	.79
To be outdoors/in nature	3	5	4.48	.69
Attractive scenery	3	5	4.47	.70
Good value for money	1	5	4.42	.88
Escaping from routine	1	5	4.33	1.10
Swimming in winter	1	5	4.25	1.15
Good accommodation	1	5	4.24	.96
Mineral water to swim in	1	5	4.22	1.11
A quiet hot pool to relax in	1	5	4.20	1.04
A healthy lifestyle	1	5	4.13	1.19
Going for walks	1	5	4.12	.94
Activities for the whole family	1	5	3.97	1.09
Swimming at night	1	5	3.92	1.18
Easy to get to	1	5	3.80	1.15
Good facilities for cooking	1	5	3.54	1.39
Reading a book	1	5	3.42	1.55
Keeping fit	1	5	3.42	1.36
Organized entertainment for children	1	5	4.41	1.29
Outdoor leisure activities	1	5	3.32	1.33
Indoor leisure activities	1	5	3.23	1.31
Visiting nearby tourist attractions	1	5	3.21	1.20
Taking photographs	1	5	3.20	1.34
Good camping facilities	1	5	3.16	1.58
A restaurant at the resort	1	5	3.13	1.29
Socializing with old friends	1	5	3.11	1.26
Sporting activities	1	5	3.08	1.48
A jacuzzi	1	5	3.02	1.43
Doing nothing at all	1	5	2.95	1.68
Shopping in nearby towns	1	5	2.87	1.42
Meeting new people	1	5	2.83	1.24
Organized games and entertainment	1	5	2.80	1.41
Cycling	1	5	2.76	1.35
Take-away foods available	1	5	2.73	1.40
A sauna/steam room	1	5	2.65	1.39
Cold pool/s to swim in	1	5	2.63	1.35
Meeting people with similar interests	1	5	2.53	1.17
Jogging	1	5	2.42	1.27
Cultural activities, like music and concerts	1	5	2.26	1.17
A gym	1	5	2.24	1.35
Bar lounge	1	5	2.22	1.34
Health and beauty treatments	1	5	2.15	1.33
Buying souvenirs to take home	1	5	1.93	1.16

A clearer pattern, for purposes of identifying factors, can be obtained through a statistical procedure called rotation, the most commonly used form of which is 'varimax' rotation. This procedure forces loadings to approach 1.0, -1.0 or 0.0 as closely as possible on each factor, while retaining same level of explained variance obtained in the initial factor solution. This simplifies the interpretation of the factor structure. Each

retained factor is then named in accordance with the pattern of loadings produced for that factor.

The next step is the calculation of factor scores for each respondent for each of the new factors. All factor scores are standardized to a mean of 0.0 and a standard deviation of 1.0. The standardized factor scores are then saved as variables and used as raw data for the subsequent cluster analysis.

#### 4.7.2 Identification of Factors

The 47 scaled variables are used as raw data for factor analysis, using principal components analysis with varimax rotation as the extraction method. A total of 14 factors with eigenvalues greater than 1.0, are identified, which together account for 72% of the total variance. These are summarized in Table 4.6.

**TABLE 4.6 FACTORS WITH EIGENVALUES GREATER THAN 1.0, AND TOTAL VARIANCE EXPLAINED**

COMPONENT	EIGENVALUE	% OF VARIANCE	CUMULATIVE %
1	10.62	21.408	21.408
2	2.597	7.653	29.061
3	2.623	5.581	34.642
4	2.470	5.255	39.898
5	2.243	4.772	44.670
6	2.092	4.451	49.121
7	1.779	3.785	52.906
8	1.653	3.516	56.422
9	1.532	3.260	59.682
10	1.489	3.168	62.850
11	1.273	2.708	65.558
12	1.090	2.320	67.878
13	1.080	2.298	70.176
14	1.007	2.143	72.319

The loadings for all the variables on each factor (Appendix 3) were then studied, and each factor was named according to the variables with the highest loadings. The factors



were named as follows:

**Factor 1: Entertainment and games**

Factors with high loadings on the first factor are 'Outdoor leisure activities' (0.764), 'Indoor leisure activities' (0.719), 'Activities for the whole family' (0.715), 'Organized games and entertainment' (0.695), 'Organized entertainment for children' (0.650), and 'A restaurant at the resort' (0.587). Respondents with high scores on this factor clearly rate entertainment and games, both indoors and outdoors, as well as family leisure activities, especially those for children, as being very important.

**Factor 2: Sporting activities**

'Going for walks' (0.756), 'cycling' (0.739), 'Keeping fit' (0.711), 'Jogging' (0.622) and 'Sporting activities' (0.622) all have high loadings on the second component. Walking, sporting activities and generally keeping fit form an important part of the motivation of respondents with high scores on this factor.

**Factor 3: Swimming in hot water**

The third factor is characterized by high loadings on 'Hot pools to swim in' (0.799), 'A quiet hot pool to relax in' (0.760), 'Swimming at night' (0.674) and 'Swimming in winter' (0.538). These respondents enjoy the hot water for its own sake, but not necessarily for the mineral content or its health-value or apparent healing powers.

**Factor 4: Health spa treatments and facilities**

The fourth factor has high loadings on 'Health and beauty treatments' (0.703), 'A sauna/steam room' (0.696), 'A gym' (0.671) and 'A jacuzzi' (0.573). Respondents with high scores on this factor enjoy the type of facilities typical of a 'health spa', but not necessarily connected to a mineral spring.

**Factor 5: Meeting people and cultural activities**

The fifth factor consists of 'Meeting new people' (0.762), 'Meeting people with similar

interests' (0.753) and 'Cultural activities, like music and concerts' (0.659). Meeting new people and making new friends is important to respondents with high scores on this factor, and they enjoy cultural activities.

**Factor 6: Good accommodation and clean surroundings**

The sixth factor has high loadings on 'Good accommodation' (0.834), 'Good facilities for cooking' (0.589) and 'Neat and clean destination' (0.510). High scores on this factor show concern for the standard of accommodation and other facilities, as well as neatness and cleanliness of the surroundings.

**Factor 7: Safety and security**

The seventh factor has high loadings on 'A safe and secure environment' (0.756) and 'Safe for children' (0.705), with a reasonably high loading on 'Value for money' (0.454). Respondents with high scores on this factor are concerned about the general security of their surroundings, and being able to feel that their children are safe, as well as getting good value for money.

**Factor 8: Photographs and souvenirs**

The eighth factor has high loadings on 'Taking photographs' (0.844) and 'Buying souvenirs to take home' (0.661). There is also a reasonably high loading on 'Visiting nearby tourist attractions and places of interest' (0.431). These respondents put more emphasis on taking photographs and buying souvenirs, which enable them to 'relive' their holidays on returning home. They enjoy visiting tourist attractions in the vicinity, although not as their first priority.

**Factor 9: Travelling as a family and visiting tourist attractions**

The ninth factor has high loadings on 'Being together as a family' (0.738), 'To be outdoors/in nature' (0.560) and 'Visiting nearby tourist attractions and places of interest' (0.493). Respondents with high scores on this factor value being together as a family and being outdoors, and also enjoy visiting nearby tourist attractions.

lifestyle' (0.720). Respondents with high scores on this factor link the concept of a healthy lifestyle to the fact that there is mineral water to swim in, in effect acknowledging the health-value of the mineral water.

**Factor 11: Getting away to relax**

The eleventh factor has high scores on 'A relaxing environment' (0.771) and 'Escaping from routine' (0.536). Respondents with high scores on this factor look for a relaxing environment, away from daily routine.

**Factor 12: Drinking and eating**

The twelfth factor has high loadings on 'Bar lounge' (0.821) and 'A restaurant at the resort' (0.501). Drinking and eating are priorities for respondents with high scores on this factor.

**Factor 13: Doing nothing and reading a book**

'Doing nothing at all' (-0.783) and 'Reading a book' (-0.515) both have high loadings. These two variables also have the highest standard deviations of all 47 variables (1.68 and 1.55 respectively). Thus, it seems that while some people enjoy doing very little, or simply reading a book, there are others who are vehemently opposed to it. 'Good camping facilities' (0.635) also has a high loading.

**Factor 14: Socializing with old friends**

'Socializing with old friends' (0.779) is the only variable with a high loading on this factor, thus implying that there are respondents who attach importance to socializing with old friends. They may meet the same people every year, or groups of friends may be travelling together.



## 4.8 CLUSTER ANALYSIS

### 4.8.1 Cluster Analysis as a Statistical Technique

From the initial identification of factors, it seems that health is in fact an important motivator for visiting mineral spa resorts. Factors 2, 4, 10 and 11 have direct or indirect bearing on health. Cluster analysis will group the respondents according to all of the named factors, so that the relative importance of each factor can be determined.

In cluster analysis, the factor scores on each of the factors, for all respondents, can be used as input data (Smith, 1989). Clusters are defined from factor scores by measuring the distance between each individual in the 'mathematical space' defined by the factor structure. The general goal of cluster analysis (Frochot and Morrison, 2000: 33) is "to identify homogeneous groups of respondents, or clusters, that are different from all other groups". A good cluster should exhibit high within-cluster homogeneity and high between-cluster heterogeneity.

Two clustering methods are commonly used in travel and tourism, either hierarchical or non-hierarchical clustering. The main difference between the two lies in the format of the cluster solutions provided. Hierarchical methods, such as Ward's method, produce a range of cluster solutions, and the researcher has to select a solution, represented by a specific number of clusters, from this range. Non-hierarchical methods, such as K-means clustering, place each case (respondent) into only one cluster, the number of clusters being specified by the researcher before running the analysis. According to Frochot and Morrison (2000), most travel and tourism researchers have tended to use hierarchical clustering, since it offers certain advantages, based mainly on the use of tree-like structures in forming clusters, that provide researchers with a relatively good visual understanding of relationships among cases (respondents) or variables.

The most difficult issue for researchers is how to determine the optimum number of clusters. Some studies have used analysis of variance (Ahmed, Barber and d'Astous, 1998; Lang and O'Leary, 1997) or discriminant analysis (Lovingood and Mitchell, 1989) to test for significant differences among clusters, where cluster membership is set as the dependent variable, and the variables used to generate the cluster solution as the independent variables. Frochot and Morrison (2000: 35) believe that the best way to test validity is "to run several cluster analyses, each with different numbers of clusters, and then determine which solution provides the most meaningful and practical definition of segments".

Smith (1989) emphasizes that regardless of which method is chosen to define segments, there are several criteria which any good segmentation should satisfy, namely:

- a) Accessibility - the researcher or market planner should be able to reach segments through existing information channels, and within the available budget.
- b) Size - segments should be of sufficient size to make them economical to reach.
- c) Measurability - segments should be defined in such a way so as to obtain adequate information about their market behavior, for monitoring the effectiveness of a marketing campaign.
- d) Appropriateness - certain products are inappropriate for segmentation.

#### **4.8.2 Results of the Cluster Analysis**

In this survey, the factor scores are used as input data for cluster analysis, using Ward's method of hierarchical clustering. Four possible cluster solutions were generated, ranging from three to six clusters (Table 4.7). The 3-cluster and 4-cluster solutions contain clusters that are too big to reveal enough of the variability in the data. On the other hand, the two largest clusters in the 6-cluster solution are very similar in composition, and are better combined in the 5-cluster solution. Thus the 5-cluster solution (Table 4.8) was selected for further analysis, since it provides the most meaningful range of clusters, with one cluster that includes about half of the

respondents, and without any clusters containing less than nine respondents.

**TABLE 4.7: THE 3-, 4-, 5- AND 6-CLUSTER SOLUTIONS**

CLUSTER NUMBER.	NO. OF RESPONDENTS: 3-CLUSTER SOLUTION	NO. OF RESPONDENTS: 4-CLUSTER SOLUTION	NO. OF RESPONDENTS: 5-CLUSTER SOLUTION	NO. OF RESPONDENTS: 6-CLUSTER SOLUTION
1	20	11	11	11
2	47	9	9	9
3	25	47	47	21
4		25	14	14
5			11	26
6				11
	N = 92	N = 92	N = 92	N = 92

**TABLE 4.8: THE 5-CLUSTER SOLUTION**

CLUSTER	NO. OF RESPONDENTS	% OF RESPONDENTS <sup>#</sup>
1	11	12
2	9	10
3	47	51
4	14	15
5	11	12
	N = 92	100%

<sup>#</sup> Percentages rounded up/down to nearest whole number

The validity of the selected cluster solution was then tested, using discriminant analysis. The 5-cluster solution was set as the dependent variable, and all 47 variables used in the factor analysis were set as the independent variables. According to the results of the



discriminant analysis thus shows that 98.9% of the respondents are correctly classified.

### 4.8.3 Profiling of Clusters

The clusters are profiled by calculating the average scores on each factor for every cluster (Table 4.9), and named accordingly. Clusters (now called segments) with above average scores on specific factors thus contain a greater proportion of those factors. Factors with well above average scores are considered primary motivators, and factors with slightly above average scores are considered secondary motivators.

#### Segment 1: Spa facility users

- \* N = 11 (12%)
- \* Primary motivators (well above average factor scores)  
Factor 4 (0.76), Factor 1 (0.45), Factor 13 (0.34), Factor 9 (0.32)
- \* Secondary motivators (slightly above average factor scores)  
Factor 12 (0.15), Factor 11 (0.06), Factor 3 (0.05), Factor 7 (0.05)

Members of this segment would definitely make use of health spa facilities, such as health and beauty treatments, a sauna, jacuzzi and gym, if they were offered (Factor 4), although they are more interested in therapeutic activities than in fitness. At the same time they are there to have fun, and enjoy both indoor and outdoor leisure activities in which the whole family can take part, as well as organized entertainment (Factor 1). Being together as a family is important, and they also enjoy being outdoors and in nature, as well as visiting nearby tourist attractions (Factor 9). These respondents are also quite happy to do very little and simply spend time reading a book (Factor 13). On a secondary level they enjoy being able to get away and relax (Factor 11), swimming in hot water (Factor 3), a safe and secure environment (Factor 7) and a bar lounge and restaurant (Factor 12).

**TABLE 4.9: AVERAGE SCORES FOR EACH FACTOR IN EVERY CLUSTER (Above Average Scores Are Indicated in Bold)**

	<b>SEGMENT 1: SPA FACILITY USERS N = 11 (12%)</b>	<b>SEGMENT 2: RELAXERS N = 9 (10%)</b>	<b>SEGMENT 3: BELIEVERS IN A HEALTHY LIFESTYLE N = 47 (51%)</b>	<b>SEGMENT 4: SOCIALIZERS N = 14 (15%)</b>	<b>SEGMENT 5: LEISURE ACTIVITY SEEKERS N = 11 (12%)</b>
Factor 1: Entertainment and games	<b>0.45</b>	-0.44	<b>0.1</b>	-0.7	<b>0.37</b>
Factor 2: Sporting activities	-0.66	-0.16	<b>0.51</b>	-0.72	-0.5
Factor 3: Swimming in hot water	<b>0.05</b>	<b>0.32</b>	<b>0.21</b>	-0.17	-1.01
Factor 4: Health spa facilities	<b>0.76</b>	-0.28	-0.12	<b>0.17</b>	-0.27
Factor 5: Meeting people and cultural activities	-0.26	-0.03	<b>0.19</b>	-0.08	-0.42
Factor 6: Good accommodation and clean surroundings	-0.89	<b>0.37</b>	<b>0.05</b>	<b>0.22</b>	<b>0.07</b>
Factor 7: Safety and security	<b>0.05</b>	<b>0.26</b>	-0.13	<b>0.37</b>	-0.18
Factor 8: Photographs and souvenirs	-0.49	<b>0.08</b>	<b>0.23</b>	-0.65	<b>0.28</b>
Factor 9: Travelling as a family and visiting tourist attractions	<b>0.32</b>	<b>0.1</b>	<b>0.12</b>	<b>0.01</b>	<b>0.08</b>
Factor 10: Mineral water and healthy lifestyle	-0.02	-2.15	<b>0.35</b>	<b>0.36</b>	-0.19
Factor 11: Getting away to relax	<b>0.06</b>	<b>0.68</b>	<b>0.12</b>	-0.15	-1.5
Factor12: Drinking and eating	<b>0.15</b>	-0.28	<b>0.12</b>	-0.44	<b>0.13</b>
Factor13: Doing nothing and reading a book	<b>0.34</b>	-0.01	<b>0.13</b>	-0.46	-0.29
Factor14: Socializing with old friends	-0.86	-0.21	<b>0.12</b>	<b>0.8</b>	-0.51

## **Segment 2: Relaxers**

- \* N = 9 (10%)
- \* Primary motivators (well above average factor scores)  
Factor 11 (0.68), Factor 6 (0.37), Factor 3 (0.32), Factor 7 (0.26)
- \* Secondary motivators (slightly above average factor scores)  
Factor 9 (0.1), Factor 8 (0.08)

The main motivation of respondents in this segment is to be able to get away from routine, and into a relaxing environment (Factor 11). These respondents want comfortable accommodation, both with good facilities, and neat and clean surroundings (Factor 6). They enjoy swimming in the hot pools, appreciate being able to swim at night and in winter, and would value a separate, quiet hot pool to relax in (Factor 3). They are particularly concerned about the general security of their environment, and about the being able to feel that their children are safe (Factor 7). On a secondary level these respondents enjoy being together as a family, being outdoors and in nature, and visiting nearby tourist attractions and places of interest (Factor 9). They also take photographs and buy souvenirs to take home (Factor 8).

The fact that the hot water in the pools is mineral water is of little concern to 'Relaxers'. They enjoy the hot pools simply because it helps them to relax. They would be as happy at any resort that provided good accommodation and good facilities, in a safe and secure environment.

## **Segment 3: Believers in a healthy lifestyle**

- \* N = 47 (51%)
- \* Primary motivators (well above average factor scores)  
Factor 2 (0.51), Factor 10 (0.35), Factor 8 (0.23), Factor 3 (0.21),  
Factor 5 (0.19)



- \* Secondary motivators (slightly above average factor scores)
  - Factor 13 (0.13), Factor 9 (0.12), Factor 11 (0.12), Factor 12 (0.12),
  - Factor 14 (0.12), Factor 1 (0.1), Factor 6 (0.05)

This is the largest segment, and respondents have the widest range of interests. 'Believers in a healthy lifestyle' enjoy exercise and keeping fit, but without the need for health spa facilities. They prefer going for walks, cycling, jogging and sporting activities (Factor 2). While they like swimming in the hot pools (Factor 3), they associate swimming in hot mineral water with a healthy lifestyle, thereby acknowledging the health-value of the mineral water (Factor 10). They are fond of taking photographs and buying souvenirs, which enables them to relive their experiences after they have returned home. They also enjoy visiting nearby tourist attractions, but not as a first priority (Factor 8). They like to meet new people and people with similar interests, and enjoy attending and participating in cultural activities, such as music and concerts (Factor 5).

On a secondary level these respondents enjoy most of what the resorts have to offer, such as being able to relax (Factor 11), doing very little or simply reading a book (Factor 13), being together as a family and being outdoors (Factor 9), a bar lounge and restaurant (Factor 12), socializing with old friends (Factor 14), entertainment and games (Factor 1), good accommodation, and neat and clean surroundings (Factor 6).

#### **Segment 4: Socializers**

- \* N = 14 (15%)
- \* Primary motivators (well above average factor scores)
  - Factor 14 (0.8), Factor 7 (0.37), Factor 10 (0.36), Factor 6 (0.22)
- \* Secondary motivators (slightly above average factor scores)
  - Factor 4 (0.17), Factor 9 (0.01)

This main motivation of 'Socializers' is to be able to socialize with old friends (Factor 14). They may meet the same people every year, or groups of friends may be travelling together. They do not require facilities for entertainment, being happy to socialize amongst themselves. Nor do they require facilities such as bars and restaurants. They attach a lot of importance to a safe and secure environment (Factor 7), as well as comfortable accommodation, with good facilities, and neat and clean surroundings (Factor 6). They also associate swimming in hot mineral water with a healthy lifestyle (Factor 10). On a secondary level these respondents would make use of health spa facilities if they were available (Factor 4), and enjoy being together as a family and travelling to nearby attractions (Factor 9).

#### **Segment 5: Leisure activity seekers**

- \* N = 11 (12%)
- \* Primary motivators (well above average factor scores)  
Factor 1 (0.37), Factor 8 (0.28)
- \* Secondary motivators (slightly above average factor scores)  
Factor 12 (0.13), Factor 9 (0.08), Factor 6 (0.07)

'Leisure activity seekers' place much emphasis on indoor and outdoor leisure activities in which the whole family can take part, as well as organized entertainment, both for children and adults (Factor 1). They also enjoy taking photographs and buying souvenirs to take home, and visiting nearby tourist attractions (Factor 8). On a secondary level they would make use of a restaurant and bar lounge (Factor 12). They value being together as a family, as well as being outdoors (Factor 9), and appreciate good accommodation with neat and clean surroundings (Factor 6).

#### **4.9 VARIATIONS IN DEMOGRAPHIC CHARACTERISTICS**

To ascertain whether there are any notable differences in demographic characteristics between segments, a cross-tabulation was performed (Table 4.10). The results can be

interpreted as follows:

### **Origin**

Segment 3 (Believers in a healthy lifestyle) is almost equally divided between respondents from Cape Town and those from other parts of the Western Cape. All the other segments are dominated by respondents from Cape Town.

### **Language**

All of the segments are almost equally divided between English speakers and Afrikaans speakers.

### **Gender**

Males form 91% of Segment 1 (Spa facility users), but only 71% of the sample as a whole. One would have expected more females to identify with this segment, but the predominance of males may be due to the fact that in family situations it was mostly the males who completed the questionnaires, with the views recorded reflecting those of the whole family.

### **Marital status**

Most of the unmarried respondents belonged to Segment 3 (Believers in a healthy lifestyle).

### **Age group**

Segment 1 (Spa facility users) is dominated by the '20 to 40' age group (64%). Segments 2, 3 and 4 consist of about half in the '20 to 40' age group, and half in the '40 to 60' age group, while Segment 5 (Leisure activity seekers) is dominated by the '40 to



60' age group. There are too few respondents in the 'older than 60' age group to be able to draw any significant conclusions.

### **Monthly family income**

Four income categories are distinguished. The largest parts of Segments 1 (70%) and 4 (77%) fall into the two higher categories. Members of Segment 2 are divided almost equally between the two higher and two lower categories, while Segments 3 and 5 have slightly more than half in the higher categories. Only Segments 3 (7%) and 5 (20%) have members in the lowest category. Thus, Segments 1 (Spa facility users) and 4 (Socializers) attract higher income visitors.



**TABLE 4.10: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS  
CROSS-TABULATED WITH SEGMENTS**  
(Figures are indicated as percentages<sup>#</sup>)

		<b>SEGMENT 1: SPA FACILITY USERS N = 11 (12%)</b>	<b>SEGMENT 2: RELAXERS N = 9 (10%)</b>	<b>SEGMENT 3: BELIEVERS IN A HEALTHY LIFESTYLE N = 47 (51%)</b>	<b>SEGMENT 4: SOCIALIZERS N = 14 (15%)</b>	<b>SEGMENT 5: LEISURE ACTIVITY SEEKERS N = 11 (12%)</b>
Origin (N = 92)	Cape Town	64	67	51	57	64
	Western Cape	27	33	47	36	18
	Rest of S.A.	9	0	2	0	18
	Overseas	0	0	0	7	0
Language (N = 92)	English	55	56	51	50	55
	Afrikaans	45	44	49	50	45
Gender (N = 92)	Male	91	67	70	71	55
	Female	9	33	30	29	45
Marital status (N = 92)	Married	100	89	91	93	100
	Single	0	11	9	7	0
Age group (N = 92)	Under 20	0	11	2	0	0
	20 - 40	64	44	43	50	27
	40 - 60	27	44	49	50	64
	Older than 60	9	0	6	0	9
Monthly family income (N = 82)	Less than R5 000	0	0	7	0	20
	R5 001 - R10 000	30	50	37	23	20
	R10 001 - R20 000	50	25	39	31	20
	More than R20 000	20	25	17	46	40

<sup>#</sup> Percentages rounded up/down to nearest whole number

#### **4.10 VARIATIONS IN TRIP-RELATED CHARACTERISTICS**

To ascertain whether there are any notable differences in trip-related characteristics between segments, a cross-tabulation was performed (Table 4.11). The results can be interpreted as follows:

##### **Group size**

In all the segments the vast majority of respondents are in groups of 3 to 5 people, except for Segment 4 (Socializers), where almost half of the respondents are in groups of 6 to 10 people. Single people and couples are found only in Segments 3 and 5 (9% of each). Segment 5 (Leisure activity seekers) is the only segment with respondents belonging to a group, or groups, of more than 10 people (9%).

##### **First-time visitors**

The majority of respondents in Segment 1 (Spa facility users) and Segment 5 (Leisure activity seekers) are not first-time visitors, while Segments 2, 3 and 4 are more or less equally divided between first-time visitors and those who have visited before.

##### **Frequency of visits**

Segments 1, 2 and 3 each contain a majority (more than 80%) of regular visitors (once a year or more often).

##### **Length of stay**

The majority of visitors in Segments 1, 2 and 3 stay for more than three nights, while most of the members of Segment 4 (71%) stay for between one and three nights. There are no day visitors in Segment 3, although day visitors make up between 7% and 11% of the other segments.

##### **Type of accommodation**

The majority of respondents in Segments 4 (77%) and 5 (64%) stay in chalets, rondawels or flats. These two segments also contain most of the timeshare users.



Respondents who stay in caravans make up about a third of Segments 1, 2 and 3.

**TABLE 4.11: TRIP-RELATED DATA CROSS-TABULATED WITH SEGMENTS**  
(Figures are indicated as percentages<sup>#</sup>)

		<b>SEGMENT 1: SPA FACILITY USERS N = 11 (12%)</b>	<b>SEGMENT 2: RELAXERS N = 9 (10%)</b>	<b>SEGMENT 3: BELIEFS IN A HEALTHY LIFESTYLE N = 47 (51%)</b>	<b>SEGMENT 4: SOCIALIZERS N = 14 (15%)</b>	<b>SEGMENT 5: LEISURE ACTIVITY SEEKERS N = 11 (12%)</b>
Group size (N = 92)	1 - 2	0	0	9	0	9
	3 - 5	82	100	81	57	73
	6 - 10	18	0	10	43	9
	More than 10	0	0	0	0	9
First-time visitors (N = 92)	Yes	27	45	49	50	27
	No	73	55	51	50	73
Frequency of visits (N = 53)	Once a year or more often	88	83	83	57	50
	Less than once a year	12	17	17	43	50
Length of stay (N = 89)	Day visitor	10	11	0	7	9
	1 to 3 nights	30	22	38	71	46
	More than 3 nights	60	67	62	21	46
Type of accommo- dation (N = 83)	Hotel	0	14	2	0	9
	Self-catering chalet/ rondawel/flat	56	43	55	77	64
	Timeshare	0	0	2	8	9
	Caravan	33	29	34	15	9
	Tent	11	14	7	0	9

<sup>#</sup> Percentages rounded up/down to nearest whole number

#### 4.11 SPATIAL VARIATION IN MOTIVATION

To ascertain whether there is any significant spatial variation in the respondents' motivation to visit mineral spa resorts in the Western Cape, the five segments are cross-tabulated with the resorts where the questionnaires were completed (Table 4.12). Wherever a resort contains a proportion of a particular segment that is higher than the proportion of that segment for the sample as a whole, this is indicated in bold. However, because of the relatively small number of respondents from individual resorts, these figures may not be indicative of any general trend.

**TABLE 4.12: SPATIAL VARIATION IN MOTIVATION<sup>#</sup>**  
(Above average figures indicated in bold)

	<b>SEGMENT 1: SPA FACILITY USERS N = 11 (12%)</b>	<b>SEGMENT 2: RELAXERS N = 9 (10%)</b>	<b>SEGMENT 3: BELIEVERS IN A HEALTHY LIFESTYLE N = 47 (51%)</b>	<b>SEGMENT 4: SOCIALIZERS N = 14 (15%)</b>	<b>SEGMENT 5: LEISURE ACTIVITY SEEKERS N = 11 (12%)</b>
Goudini Spa (N = 19)	<b>4 (21%)</b>	1 (5%)	6 (32%)	4 (21%)	4 (21%)
Calitzdorp Spa (N = 22)	1 (5%)	1 (5%)	<b>16 (73%)</b>	2 (9%)	2 (9%)
Avalon Springs (N = 18)	2 (11%)	<b>3 (17%)</b>	7 (39%)	2 (11%)	<b>4 (22%)</b>
The Baths (N = 15)	<b>3 (20%)</b>	1 (7%)	5 (33%)	<b>5 (33%)</b>	1 (7%)
Warmwater- berg Spa (N = 18)	1 (6%)	<b>3 (17%)</b>	<b>13 (72%)</b>	1 (6%)	0 (0%)

<sup>#</sup> Percentages rounded up/down to nearest whole number

Goudini Spa has an above average share of Segments 1, 4 and 5. This is understandable, since it is essentially a leisure resort, with much socializing, and is not particularly

attractive to those who are looking for relaxation and a healthy lifestyle. Warmwaterberg Spa, on the other hand, has an above average share of Segments 2 and 3, with a below average share of Segments 1, 4 and 5. It is the hot pools, the quiet and relaxing atmosphere, and the lack of leisure and entertainment facilities that attracts people to this resort. Avalon Springs has an above average share of Segments 2 and 5, with the others being near average. This resort thus attracts respondents who not only want to relax, but also enjoy the leisure and entertainment facilities.

Calitzdorp Spa has an above average share of Segment 3 only. This segment consists of about half of the sample, which suggests that Calitzdorp Spa has more universal appeal than the other resorts. It is a resort that offers 'something for everyone', with hot pools, sporting activities, a relaxing, healthy lifestyle, good accommodation, good facilities for camping and caravanning, a bar lounge and restaurant, and lots to see and do in the area, including world-famous tourist attractions. The Baths has an above average share of Segments 1 and 4. With its jacuzzis and whirlpools it attracts people who enjoy 'health spa facilities' and socializing with old friends.

#### **4.12 HEALTH AS A MOTIVATION TO VISIT THE MINERAL SPA RESORTS OF THE WESTERN CAPE**

The primary objective of this research is to segment the Western Cape's mineral spa tourism market, and thereby determine to what extent health forms part of respondents' motivation to visit mineral spa resorts. Although no respondents referred directly to health or healing in giving their reasons for visiting the mineral spa resorts (Table 4.3), more than half of the respondents appeared to be motivated by the need for relaxation and reduction of stress, and the satisfaction of these needs is expedited by a peaceful atmosphere, the availability of hot swimming pools to relax in, pleasant weather, outdoor life and attractive scenery.

In the initial analysis it was found that almost all of the respondents (98%) are aware that swimming in the hot spring water is reputed to be very healthy, and that 74% feel that the water is good for their own health. Respondents cite a number of ways in which



the water contributes to their health (Table 4.4). Most prominent among these are 'relaxation of tired muscles/relief for aches and pains', 'general relaxation', 'reduction of tension/relief of stress', and 'relief of arthritis/rheumatism/gout'. About a third (35%) of the respondents who feel that the water is good for their health are not able to say exactly how the water helps.

Thus it is apparent that most of the respondents definitely do get considerable health benefits out of their visits, not only through swimming in the hot mineral water, but also out of being at the mineral spa resorts themselves. The factor-cluster analysis provides further insight into health benefits derived from being at mineral spa resorts.

Four different types of benefits, two direct and two indirect, emerged during the factor-cluster analysis:

- a) Indirect health benefits through exercise and sport (Factor 2).
- b) Direct health benefits through being able to make use of health spa facilities, such as health and beauty treatments, a gym and a sauna (Factor 4).
- c) Direct health benefits due to the apparent healing properties of the hot mineral water (Factor 10).
- d) Indirect health benefits through being able to relax, leading to the release of stress and tension (Factor 11).

The relative importance of health motivators is illustrated in Table 4.13, where it can be seen that:

- a) Factor 2 (Sporting activities) is a primary motivator for Segment 3 (51% of the respondents).
- b) Factor 4 (Health spa facilities) is a primary motivator for Segment 1 (12% of the respondents), and a secondary motivator for Segment 4 (12% of the respondents).
- c) Factor 10 (Mineral water and healthy lifestyle) is a primary motivator for Segments 3 and 4 (66% of the respondents).
- d) Factor 11 (Getting away to relax) is a primary motivator for Segment 2 (10% of

the respondents), and a secondary motivator for Segments 1 and 2 (22% of the respondents).

Except for Segment 5 (12% of the respondents), all of the other segments have at least one health motivator as a primary motivator. Segment 3 (51% of the respondents) has two. It can thus be concluded that health is a very important motivation for visiting the mineral spa resorts of the Western Cape.

**TABLE 4.13: THE RELATIVE IMPORTANCE OF HEALTH MOTIVATORS**

✓✓ = Primary Motivator    ✓ = Secondary Motivator

	SEGMENT 1: SPA FACILITY USERS N = 11 (12%)	SEGMENT 2: RELAXERS N = 9 (10%)	SEGMENT 3: BELIEVERS IN A HEALTHY LIFESTYLE N = 47 (51%)	SEGMENT 4: SOCIALIZERS N = 14 (15%)	SEGMENT 5: LEISURE ACTIVITY SEEKERS N = 11 (12%)
Factor 2: Sporting activities			✓✓		
Factor 4: Health spa facilities	✓✓			✓	
Factor 10: Mineral water and healthy lifestyle			✓✓	✓✓	
Factor 11: Getting away to relax	✓	✓✓	✓		

#### 4.13 THE RELATIVE IMPORTANCE OF MOTIVATORS NOT RELATED TO HEALTH

The relative importance of motivators not related to health are illustrated in Table 4.14. Health motivators are included for comparative purposes. The most important motivators are:

- a) Factor 3 (Swimming in hot water), which is a primary motivator for Segments 2 and 3 (61% of the respondents).
- b) Factor 6 (Good accommodation and clean surroundings), which is a primary

motivator for Segments 2 and 4 (25% of the respondents), and a secondary motivator for Segments 3 and 5 (63% of the respondents).

- c) Factor 7 (Safety and security), which is a primary motivator for Segments 2 and 4 (25% of the respondents), and a secondary motivator for Segment 1 (12% of the respondents).
- d) Factor 9 (Travelling as a family and visiting tourist attractions), which is a primary motivator for Segment 1 (12% of the respondents), and a secondary motivator for Segments 2, 3, 4 and 5 (88% of the respondents).

**TABLE 4.14: THE RELATIVE IMPORTANCE OF MOTIVATORS NOT RELATED TO HEALTH, WITH HEALTH MOTIVATORS INCLUDED FOR COMPARATIVE PURPOSES**

✓✓ = Primary Motivator    ✓ = Secondary Motivator

	SEGMENT 1: SPA FACILITY USERS N = 11 (12%)	SEGMENT 2: RELAXERS N = 9 (10%)	SEGMENT 3: BELIEVERS IN A HEALTHY LIFESTYLE N = 47 (51%)	SEGMENT 4: SOCIALIZERS N = 14 (15%)	SEGMENT 5: LEISURE ACTIVITY SEEKERS N = 11 (12%)
Factor 1: Entertainment and games	✓✓		✓		✓✓
Factor 2: Sporting activities			✓✓		
Factor 3: Swimming in hot water	✓	✓✓	✓✓		
Factor 4: Health spa facilities	✓✓			✓	
Factor 5: Meeting people and cultural activities			✓✓		
Factor 6: Good accommodation and clean surroundings		✓✓	✓	✓✓	✓
Factor 7: Safety and security	✓	✓✓		✓✓	
Factor 8: Photographs and souvenirs		✓	✓✓		✓
Factor 9: Travelling as a family and visiting tourist attractions	✓✓	✓	✓	✓	✓
Factor 10: Mineral water and healthy lifestyle			✓✓	✓✓	
Factor 11: Getting away to relax	✓	✓✓	✓		
Factor 12: Drinking and eating	✓		✓		✓
Factor 13: Doing nothing and reading a book	✓✓		✓		
Factor 14: Socializing with old friends			✓	✓✓	



#### **4.14 VISITING NEARBY TOURIST ATTRACTIONS AND PLACES OF INTEREST**

Some 55% of the respondents indicate that they have visited, or intend to visit, nearby tourist attractions and places of interest, and as is illustrated in Table 4.3, visiting nearby tourist attractions and places of interest is not an often-stated reason for visiting these resorts. Some 6% of the respondents give 'To explore wine routes and other attractions in the area' as their main reason for visiting.

In the factor-cluster analysis, the variable 'Visiting nearby tourist attractions and places of interest' has reasonably high loadings on Factor 8 (Photographs and souvenirs) and Factor 9 (Travelling as a family and visiting tourist attractions), 0.431 and 0.493 respectively. However, this variable does not play a significant role in either factor. Factor 9 is a primary motivator only for Segment 1 (12% of the respondents), but it is a secondary motivator for all of the others. Thus all the respondents gave an indication that they are interested in visiting nearby tourist attractions and places of interest, but it is not a priority for most of them. Their first priorities are the resorts themselves, with the opportunity to relax, the hot mineral water, and the entertainment and leisure facilities provided.

Two factors may be influencing the propensity of respondents to visit nearby attractions and places of interest. Firstly, 95% of the respondents are from the Western Cape (Table 3.1), and 75% are frequent visitors (Table 3.2). Thus many respondents may have already seen the main attractions in the area. Secondly, the resorts are located in vastly different areas, and do not enjoy equal accessibility to attractions and places of interest.

According to Table 4.15, the majority of visitors (78%) to Goudini Spa tend to stay at the resort. A possible explanation lies in the fact that this resort is relatively self-contained, with a shop, restaurants and a variety of leisure and entertainment facilities. Conversely, the majority of visitors to Calitzdorp Spa (77%) and Avalon Springs (72%) do travel to surrounding attractions and places of interest. This may be due to locality,

since there are many attractions close to these resorts. Calitzdorp Spa is situated within half an hour's drive of Outdshoorn and the ostrich show farms, and the world-famous Cango Caves are only a little further away.

Slightly more than half of the visitors to Warmwaterberg Spa (53%) visit surrounding attractions, as do slightly less than half of visitors to The Baths (44%). Both of these resorts are located relatively far from tourist attractions. Warmwaterberg Spa is situated half way between Barrydale and Ladismith, and The Baths is situated 18 kilometers from Citrusdal.

Thus it can be concluded that using the resorts as bases for visiting surrounding attractions does not seem to enjoy high priority in the motivations of visitors, but it does vary from resort to resort, depending partly on location relative to tourist attractions, and partly on leisure and entertainment facilities available at the resorts.

**TABLE 4.15: RESPONDENTS WHO HAVE VISITED NEARBY TOURIST ATTRACTIONS AND PLACES OF INTEREST**

	HAVE VISITED NEARBY ATTRACTIONS (FREQ.)	HAVE VISITED NEARBY ATTRACTIONS (%#)	HAVE NOT VISITED NEARBY ATTRACTIONS (FREQ.)	HAVE NOT VISITED NEARBY ATTRACTIONS (%#)
Goudini Spa (N = 19)	5	22	14	78
Calitzdorp Spa (N = 22)	17	77	5	23
Avalon Springs (N = 18)	13	72	5	28
The Baths (N = 15)	8	44	7	56
Warmwaterberg Spa (N = 18)	8	47	10	53

# Percentages rounded up/down to nearest whole number

#### 4.15 SUMMARY

The 47 variables rated by respondents on a Likert scale of 1 to 5 were reduced, through factor analysis, to 14 factors. The factor scores for these 14 factors were then used as input data for cluster analysis. This resulted in the 92 respondents being segmented into five segments, namely:

- a) Spa facility users (12%)
- b) Relaxers (10%)
- c) Believers in a healthy lifestyle (51%)
- d) Socializers (15%)
- e) Leisure activity seekers (12%).

While there are considerable differences in motivation between the five segments, it should be noted that these segments are not mutually exclusive. Certain motivators are common to more than one segment. Differentiations between segments are less clear when demographic characteristics and trip-related data are used for profiling. This agrees with the research findings of Goodrich, 1980 (in Frochot and Morrison, 2000), who found that benefits discriminated significantly among individuals surveyed, while demographic variables did not.

Health has been shown to be an important motivation to visit the mineral spa resorts of the Western Cape. The part played by health is manifested in a combination of direct and indirect health-related motivators. Other important motivators include swimming in hot water, good accommodation and clean surroundings, and a safe and secure environment. However, visiting nearby tourist attractions and places of interest while at a mineral spa resort is of primary importance only to a small proportion of visitors.

In the final chapter, a number of recommendations are made for the development and marketing of the Western Cape's mineral spa tourism product, that will cater to the needs and wants of both the domestic and international tourism markets, and at the same time improve linkages between the mineral spa resorts and their surrounding areas, and between the resorts themselves.



## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 CONCLUSIONS

It can be concluded that health is definitely an important motivation for visiting mineral spa resorts in the Western Cape. Four different types of health motivators, two direct and two indirect, were identified in this study. The health motivators act in different combinations, together with other motivators, in inducing respondents to visit these resorts.

In developing a 'mineral spa tourism product' for the Western Cape, the following objectives should be borne in mind:

- a) The hot mineral water is a natural resource, and should be utilized to the advantage of as many people as possible.
- b) The mineral spa tourism product should build upon the desire for a healthy lifestyle expressed by many current users, and at the same time be designed to attract international 'health tourism' visitors.
- c) Any product developed should also benefit areas surrounding the mineral spa resorts, which can be achieved by encouraging resort visitors to visit nearby tourist attractions and other places of interest.
- d) The resorts should not be regarded as being mutually exclusive, and should market themselves as a unit, particularly to international markets.

#### 5.2 RECOMMENDATIONS

A number of recommendations can be made to enable the mineral spa resorts of the Western Cape to position themselves optimally *vis à vis* both the domestic and international tourism markets:

1. Modify the 'mineral spa tourism product' to include more 'health spa' facilities.

Current international trends are moving towards mineral spa tourism products aimed at providing health and beauty treatments and/or facilities for keeping fit and healthy, in a relaxed and stress-free environment. This research shows that the Western Cape's mineral spa tourism market is already health-conscious, and that the motivations of visitors are not very different to those of their overseas counterparts. However, the mineral spa resorts of the Western Cape need to make provision for more 'health spa' facilities, such as gymnasiums and saunas, and professional skin care and beauty treatments, hydrotherapy and stress release programmes. This would serve to attract a new, and substantial, segment of the international health tourism market, and should also be welcomed by a significant segment of the domestic market.

2. Target international countries with well-established mineral spa or health tourism markets.

This research confirms the conclusion reached by the Western Cape Investment and Trade Promotion Agency (WESGRO) (1997), that international tourists form only a small part of the visitors to the mineral spa resorts of the Western Cape. It was pointed out in Chapter 2 that some 20 million people in Europe spend about 120 million bed-nights annually at spas, with an average of six nights per visit, and that 40% of these spa visitors are German (Smith and Jenner, 2000). With an appropriately modified mineral spa tourism product, the Western Cape should target the above market, as well as the mineral spa markets of countries such as Austria, Italy, France and Japan. The domestic and international markets could complement each other, since the domestic market is essentially a weekend and school holiday market, while international tourists could be encouraged to visit during off-peak periods.

3. Develop specialized package holidays for both domestic and international tourists.

Swartbrooke and Horner (1999: 381) emphasize that “tour operators are increasingly seeking to exploit the growing interest in health and beauty to develop package holidays, based on different kinds of spa treatments”. Tour operators in the Western Cape should be encouraged to produce specialized ‘mineral spa tourism’ packages, designed to meet the needs of different groups, both domestic and international, such as sportsmen and sportswomen, women who have just had babies, people who are trying to give up smoking, people who are trying to lose weight, people recovering from operations, and elderly people.

4. Encourage increased interaction between visitors to mineral spa resorts and the surrounding areas.

Although visiting surrounding attractions is not a priority for the majority of the respondents, most show at least some interest in it, and this could be nurtured and developed. Considering the large number of respondents that visit resorts like Goudini Spa and Aliwal Springs during school holiday periods, it would be advisable for local tourism bureaus to set up information desks at these resorts during these times. Another way of achieving this goal is to arrange sporting events, such as bicycle races. Calitzdorp Spa hosts a very successful bicycle race every year in spring, to coincide with the annual Port Festival held in the town and on surrounding wine farms. This serves to link the resort with its surrounding areas, local communities and the town itself. All the resorts should be encouraged to hold similar events, especially during the June/July school holiday period. The majority of respondents in this survey are from the Western Cape, but visitors from other parts of South Africa, and especially overseas visitors, are more likely to use the resorts as bases for visiting nearby attractions. The development and marketing of a self-drive ‘Mineral Spa Route’ would also serve to link the resorts with their surrounding areas, and help to link the resorts



themselves.

5. Conduct further research on the healing properties of the hot mineral water and make information available.

It has been shown that the apparent healing properties of the hot mineral water form an important part of the motivation of the majority of respondents. Some 35% of these respondents are not able to specify exactly how the water helps them. Thus, while there seems to be widespread agreement that the water is good for one's health, there is very little information available to spa resort visitors on exactly what the water is reputed to be good for. Further research needs to be done on the healing properties of the water. If the resorts are able to make information available on the healing properties of the water, this would not only confirm what many local people already believe, but could also contribute to attracting an international market with a long-established belief in the healing properties of mineral water.

6. Form a Western Cape Mineral Spa Tourism Association

A regional mineral spa tourism association needs to be formed, with links to international health and mineral spa tourism associations, such as the American-based International Spa Association (ISPA) and the European Spa Association (ESPA). The mineral spa resorts of the Western Cape should be marketed as a unit, possibly in conjunction with other tourist attractions in the province.

### **5.3 CONCLUDING REMARKS**

The Western Cape's mineral spa resorts were originally established because of the apparent healing properties of the mineral water, and while it is true that today they function principally as family leisure resorts, it has been shown that health still forms an important part of the motivation of domestic tourists and excursionists to visit these

resorts. Modifying the Western Cape's mineral spa tourism product will not only lead to a higher degree of satisfaction among current users, but will also attract new markets, which will benefit not only the resorts themselves, but tourism in the Western Cape as a whole.



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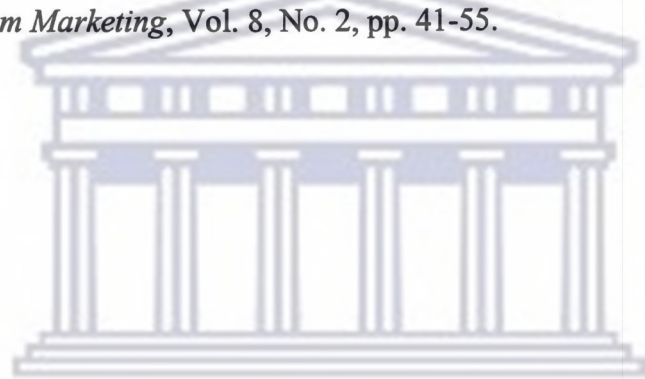
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## APPENDIX 1



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## WESTERN CAPE HOT SPRING VISITOR SURVEY

This survey is being conducted to ascertain how visitors to Hot Spring Resorts in the Western Cape feel about certain aspects of their holidays or visits. Your input in answering the questions below would be greatly appreciated.

- |   |  |
|---|--|
| <p>1. Where are you from? .....</p> <p>2. Into which age group do you fit?</p> <p style="padding-left: 20px;"><input type="checkbox"/> Under 20 years      <input type="checkbox"/> 20-40 years</p> <p style="padding-left: 20px;"><input type="checkbox"/> 40-60 years      <input type="checkbox"/> Older than 60 years</p> <p>3. What is your occupation? .....</p> <p>4. What is your approximate monthly family income?</p> <p style="padding-left: 20px;">(Optional - for statistical purposes only)</p> <p style="padding-left: 20px;"><input type="checkbox"/> Under R5 000      <input type="checkbox"/> R5 001 - R10 000</p> <p style="padding-left: 20px;"><input type="checkbox"/> R10 001 - R20 000      <input type="checkbox"/> More than R20 000</p> <p>5. Your gender? <input type="checkbox"/> Male      <input type="checkbox"/> Female</p> <p>6. What is your marital status? <input type="checkbox"/> Married      <input type="checkbox"/> Single</p> <p>7. How many people are there in your party/group? .....</p> <p>8. Do you have children? <input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p>9. If yes, how many of your own children are with you at the resort? Fill in the number in the appropriate space below, according to age group.</p> <p style="padding-left: 20px;"><input type="checkbox"/> None    [ ] Under 5    [ ] 5-12</p> <p style="padding-left: 20px;">[ ] 13 - 18    [ ] Older than 18</p> <p>14. How did you know about this resort? (Please specify where necessary)</p> <p><input type="checkbox"/> Recommended by family/friends</p> <p><input type="checkbox"/> Advertisement in a magazine/newspaper - if possible, specify which .....</p> <p><input type="checkbox"/> Read about it in a guide book - if possible, specify which .....</p> <p><input type="checkbox"/> Recommended by a tourist information centre - if possible, specify which .....</p> <p><input type="checkbox"/> Have always known about it</p> <p><input type="checkbox"/> Other .....</p> <p>15. What is/are your main reason/s for visiting or staying at this resort? .....</p> <p>.....</p> <p>.....</p> | <p>10. Have you visited or stayed at this resort before?</p> <p style="padding-left: 20px;"><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p>11. If yes, how often do you visit or stay at this resort?</p> <p style="padding-left: 20px;"><input type="checkbox"/> More than once a year</p> <p style="padding-left: 20px;"><input type="checkbox"/> Once a year</p> <p style="padding-left: 20px;"><input type="checkbox"/> Once in two years</p> <p style="padding-left: 20px;"><input type="checkbox"/> Less than once in two years</p> <p>12. How many nights are you staying at this resort?</p> <p style="padding-left: 20px;"><input type="checkbox"/> None (Day visitor]      <input type="checkbox"/> One</p> <p style="padding-left: 20px;"><input type="checkbox"/> Two      <input type="checkbox"/> Three</p> <p style="padding-left: 20px;"><input type="checkbox"/> More than three ..... (Please specify)</p> <p>13. What type of accommodation are you using?</p> <p style="padding-left: 20px;"><input type="checkbox"/> Hotel      <input type="checkbox"/> Chalet/rondawel/flat</p> <p style="padding-left: 20px;"><input type="checkbox"/> Timeshare      <input type="checkbox"/> Caravan</p> <p style="padding-left: 20px;"><input type="checkbox"/> Tent      <input type="checkbox"/> None (Day Visitor)</p> |
|---|--|

PLEASE TURN OVER

18. What activities do you partake in while at this resort? You may mark more than one. (Please specify where necessary)

- Swimming
- Sporting activities (jogging, tennis, bowls, golf, cycling, etc.) - please specify .....
- Outdoor leisure activities (putt-putt, etc.) - please specify .....
- Indoor leisure activities (snooker, table tennis, etc.) - please specify .....
- Going for walks
- Reading
- Other - please specify .....

19. Are you aware that swimming/bathing in hot spring water is reputed to be very healthy?  Yes  No

20. Do you feel that swimming/bathing in the hot water at this resort is good for your health?

- Yes  No  Don't know  Don't care

21. If yes, is there anything specific that the water helps with? .....

22. While staying at this resort, have you visited, or do you intend to visit, any nearby tourist attractions/places of interest?

- Yes  No

23. If yes, please specify which tourist attractions/places of interest you have visited, or intend to visit. ....

24. How important are the following to you as regards your stay at or visit to a hot spring resort? Indicate as follows:

Very important 5 ----- 4 ----- 3 ----- 2 ----- 1 Not at all important

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Attractive scenery                    | <input type="checkbox"/> Hot pool/s to swim in                                   | <input type="checkbox"/> Health and beauty treatments (massage, skin care, etc.) |
| <input type="checkbox"/> A safe and secure environment         | <input type="checkbox"/> Cold pool/s to swim in                                  | <input type="checkbox"/> Reading a book  |
| <input type="checkbox"/> Easy to get to                        | <input type="checkbox"/> Swimming in winter                                      | <input type="checkbox"/> Shopping in nearby towns                                |
| <input type="checkbox"/> Safe for children                     | <input type="checkbox"/> A jacuzzi   | <input type="checkbox"/> Outdoor leisure activities (putt-putt, etc.)            |
| <input type="checkbox"/> Neat and clean destination            | <input type="checkbox"/> Swimming at night                                       | <input type="checkbox"/> Indoor leisure activities (snooker, table tennis, etc.) |
| <input type="checkbox"/> Good value for money                  | <input type="checkbox"/> A gym   | <input type="checkbox"/> A sauna/steam room                                      |
| <input type="checkbox"/> Mineral water to swim in              | <input type="checkbox"/> A quiet hot pool to relax in                            | <input type="checkbox"/> Sporting activities (tennis, squash, etc.)              |
| <input type="checkbox"/> Good accommodation                    | <input type="checkbox"/> Visiting nearby tourist attractions, places of interest | <input type="checkbox"/> Jogging   |
| <input type="checkbox"/> Good facilities for cooking           | <input type="checkbox"/> Cultural activities, like music and concerts            | <input type="checkbox"/> Cycling   |
| <input type="checkbox"/> Good camping facilities               | <input type="checkbox"/> Activities for the whole family                         | <input type="checkbox"/> Going for walks   |
| <input type="checkbox"/> Escaping from routine                 | <input type="checkbox"/> A restaurant at the resort                              | <input type="checkbox"/> Keeping fit   |
| <input type="checkbox"/> A relaxing environment                | <input type="checkbox"/> Bar lounge  | <input type="checkbox"/> Doing nothing at all                                    |
| <input type="checkbox"/> A healthy lifestyle                   | <input type="checkbox"/> Take-away foods available                               | <input type="checkbox"/> Taking photographs                                      |
| <input type="checkbox"/> Being together as a family            | <input type="checkbox"/> Organized games and entertainment                       | <input type="checkbox"/> Buying souvenirs to take home                           |
| <input type="checkbox"/> Meeting new people                    | <input type="checkbox"/> Organized entertainment for children                    |  |
| <input type="checkbox"/> Meeting people with similar interests |  |  |
| <input type="checkbox"/> Socializing with old friends          |  |  |
| <input type="checkbox"/> To be outdoors/in nature              |  |  |

THANK YOU VERY MUCH FOR YOUR COOPERATION



## APPENDIX 2



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## WESKAAP WARMBRON BESOEKER OPNAME

Hierdie opname word onderneem om die opinies van besoekers oor sekere aspekte van hul besoeke aan of vakansies by Warmwaterbronne in die Weskaap vas te stel. U bydrae met die beantwoording van die volgende vrae sal baie waardeer word.

1. Van waar is u? .....
2. In watter ouderdomsgroep val u?
- Jonger as 20 jaar       20-40 jaar
- 40-60 jaar       Ouer as 60 jaar.
3. Wat is u beroep? .....
4. Wat is u gesin se geskatte maandelikse inkomste?
- (Opsioneel - slegs statistiese doeleindes)
- Minder as R5 000       R5 001 - R10 000
- R10 001 - R20 000       Meer as R20 000
5. U geslag?       Manlik       Vroulik
6. Wat is u huwelikstatus?       Getroud       Ongetroud
7. Hoeveel mense is in u groep? .....
8. Het u kinders?       Ja       Nee
9. Indien ja, hoeveel van u eie kinders is saam met u by die oord? Vul die getal in die toepaslike spasie onder, volgens ouderdomsgroep.
- Geen      [ ] Jonger as 5      [ ] 5-12
- [ ] 13-18      [ ] Ouer as 18
10. Het u al voorheen hier tuis gegaan of die oord besoek?
- Ja       Nee
11. Indien ja, hoe gereeld gaan u hier tuis of besoek u as dagbesoeker?
- Meer as een keer per jaar
- Een keer per jaar
- Een keer elke tweede jaar
- Minder as een keer elke tweede jaar
12. Hoeveel nagte gaan u hier tuis?
- Geen (Dagbesoeker)       Een
- Twee       Drie
- Meer as drie ..... (Spesifiseer asseblief)
13. Dui aan watter van die volgende tipe akkommodasie u gebruik maak.
- Hotel       Chalet/rondawel/woonstel
- Tyddeel       Woonwa
- Tent       Geen (Dagbesoeker)
14. Hoe het u te hore gekom van hierdie oord? U mag meer as een noem. (Spesifiseer asseblief waar nodig)
- Aanbeveel deur familie/vriende
- Advertensie in tydskrif/koerant - indien moontlik, spesifiseer waarin .....
- Daarvan gelees in toeristegids (guidebook) - indien moontlik, spesifiseer waarin .....
- Aanbeveel deur toeriste informasie buro/sentrum - indien moontlik, spesifiseer waar .....
- Het maar altyd daarvan geweet
- Ander .....
15. Wat is u hoofrede/s vir die besoek aan hierdie oord? .....
- .....
- .....
16. Het u al enige ander warmbron in Suid Afrika besoek of tuis gegaan?       Ja       Nee
17. Indien ja, noem asseblief die naam/name van sodanige oord/e?
- .....
- .....

BLAAI OM ASSEBLIEF

18. Aan watter aktiwiteite neem u deel tydens u verblyf by hierdie oord? (Spesifiseer asseblief waar nodig)

- Swem
- Sport (draf/jogging, tennis, rolbal, golf, fietsry, ens.) - spesifiseer asseblief .....
- Buitelug ontspanningsaktiwiteite (putt-putt, ens.) - spesifiseer asseblief .....
- Binnenshuis ontspanningsaktiwiteite (snoeker, tafeltennis, ens.) - spesifiseer asseblief .....
- Stap
- Boeke lees
- Ander - spesifiseer asseblief .....

19. Is u bewus dat daar beweer word dat swem in die warmbron baie goed is vir die gesondheid?

- Ja     Nee

20. Voel u dat om in die warm water te swem goed is vir u gesondheid?

- Ja     Nee     Weet nie     Gee nie om nie

21. Indien ja, is daar enigiets spesifiek waarmee die water help?

22. Het u, of beoog u, om enige toeristeaatraksies/besienswaardighede in die omgewing te besoek tydens u verblyf by hierdie oord?  Ja     Nee

23. Indien ja, spesifiseer asseblief watter toeristeaatraksies/besienswaardighede u al besoek het, of beoog om te besoek.

24. Hoe belangrik is die volgende ten opsigte van u verblyf by, of besoek aan, 'n warmwaterbron? Dui aan as volg:

Baie belangrik 5 ----- 4 ----- 3 ----- 2 ----- 1 Glad nie van belang nie

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Pragtige natuurskoon                         | <input type="checkbox"/> Om in die buitelug/natuur te wees              | <input type="checkbox"/> Georganiseerde vermaaklikheid vir kinders                          |
| <input type="checkbox"/> 'n Veilige omgewing                          | <input type="checkbox"/> Warm baddens om in te swem                     | <input type="checkbox"/> Gesondheids/skoonheidsbehandelinge - masseer, velbehandeling, ens. |
| <input type="checkbox"/> Maklik om daar te kom                        | <input type="checkbox"/> Koue baddens om in te swem                     | <input type="checkbox"/> Inkopies doen (shopping) in nabygeleë dorpe                        |
| <input type="checkbox"/> Veilig vir kinders                           | <input type="checkbox"/> Om tydens die winter te kan swem               | <input type="checkbox"/> Buitelug ontspanningsaktiwiteite (putt-putt, ens.)                 |
| <input type="checkbox"/> Skoon en netjiese bestemming                 | <input type="checkbox"/> 'n 'jacuzzi'                                   | <input type="checkbox"/> Binnenshuisontspanningsaktiwiteite (snoeker, tafeltennis, ens.)    |
| <input type="checkbox"/> Goeie waarde vir geld                        | <input type="checkbox"/> 'n Gimnastiekkamer                             | <input type="checkbox"/> 'n Sauna/stoomkamer  |
| <input type="checkbox"/> Mineraalwater om in te swem                  | <input type="checkbox"/> 'n Rustige warmbad om in te ontspan            | <input type="checkbox"/> Sport (tennis, muurbal, ens.)                                      |
| <input type="checkbox"/> Goeie akkommodasie                           | <input type="checkbox"/> Besoeke aan nabygeleë besienswaardighede       | <input type="checkbox"/> Draf (Jogging)   |
| <input type="checkbox"/> Goeie kookfasiliteite                        | <input type="checkbox"/> Kulturele aktiwiteite, soos musiek en konserte | <input type="checkbox"/> Fietsry  |
| <input type="checkbox"/> Goeie kampeerfasiliteite                     | <input type="checkbox"/> Aktiwiteite vir die hele gesin                 | <input type="checkbox"/> Stap   |
| <input type="checkbox"/> Om van roetine weg te kom                    | <input type="checkbox"/> 'n Restaurant op die oord                      | <input type="checkbox"/> Fiks bly   |
| <input type="checkbox"/> 'n Ontspannende omgewing                     | <input type="checkbox"/> Kroeg (Bar lounge)                             | <input type="checkbox"/> Om niks te doen nie  |
| <input type="checkbox"/> 'n Gesonde lewenswyse                        | <input type="checkbox"/> Wegneemetes beskikbaar                         | <input type="checkbox"/> Fotos neem   |
| <input type="checkbox"/> Om as 'n familie bymekaar te wees            | <input type="checkbox"/> Georganiseerde speletjies en vermaaklikheid    | <input type="checkbox"/> Aandenkings (souvenirs) te koop om huistoe te neem                 |
| <input type="checkbox"/> Om nuwe mense te ontmoet                     | <input type="checkbox"/> Boeke lees                                     |   |
| <input type="checkbox"/> Om mense met gelykoortige belange te ontmoet |   |   |
| <input type="checkbox"/> Om met ou vriende gesellig te verkeer        |   |   |
| <input type="checkbox"/> Om saans te kan swem                         |   |   |



## APPENDIX 3



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Rotated Component Matrix<sup>a</sup>

	Component						
	1	2	3	4	5	6	7
37OLA	.764	.211	6.610E-02	.121	.155	.195	.209
38IND	.719	.158	.230	.286	7.691E-02	2.506E-02	4.728E-02
28ACT	.715	2.193E-02	-5.000E-02	2.020E-02	5.340E-02	-6.032E-02	.104
32GAM	.695	6.950E-02	.102	.216	.256	8.125E-02	.147
33ENT	.650	-.108	.224	.267	.207	7.407E-02	7.751E-02
29RES	.587	8.298E-02	.141	-5.148E-02	.263	-9.066E-02	4.979E-02
31TAK	.429	-8.359E-02	.320	.173	.348	4.139E-02	.138
43WAL	-6.265E-02	.756	.236	-2.171E-02	-.171	9.511E-02	-3.677E-02
42CYC	.241	.739	-.122	-4.700E-02	.230	5.692E-02	9.962E-02
44FIT	7.300E-02	.711	-1.263E-02	.221	-4.415E-02	8.276E-02	3.148E-02
41JOG	.109	.622	7.380E-02	.365	.165	-.188	.111
40SPO	.434	.508	-1.532E-02	.315	.190	.185	.147
21HOT	.191	9.323E-02	.799	6.565E-02	-6.229E-03	8.334E-03	7.705E-02
25QUI	.125	1.271E-02	.760	.198	1.502E-02	.232	-9.091E-02
19NIG	5.475E-02	2.468E-02	.674	.226	.256	-.132	-1.797E-02
23WIN	.225	8.355E-02	.538	-.214	1.802E-02	-.130	.246
34HBT	.292	.125	3.786E-02	.703	.134	-.154	5.254E-02
39SAU	.187	.212	.165	.696	5.745E-02	.237	-.232
20GYM	.214	.234	.139	.671	.244	.140	7.823E-02
24JAC	.331	-.140	.308	.573	.112	4.996E-02	6.327E-02
15MEE	.187	6.479E-02	6.955E-02	.133	.762	-1.652E-02	-7.020E-03
16SIM	.303	-1.676E-02	7.358E-02	.158	.753	4.991E-02	-5.361E-02
27CUL	.336	.204	9.077E-02	.180	.659	.114	-9.006E-02
8ACC	.138	5.217E-04	-1.375E-03	4.172E-02	2.721E-02	.834	6.312E-02
9COO	-.127	.133	-3.943E-02	.435	.186	.589	.212
5NEA	.324	9.924E-02	.130	-.101	9.268E-04	.510	.343
35SHO	.345	.241	.171	-.104	.134	.441	1.486E-02
1SCE	1.581E-02	-2.822E-02	4.221E-02	8.394E-02	-.219	.422	.217
2SAF	.139	1.023E-02	-1.591E-02	.110	-.142	.188	.756
4SCH	.243	.133	1.859E-02	-7.817E-02	4.346E-03	6.906E-02	.705
6VAL	5.631E-02	7.613E-02	.206	-7.570E-04	4.285E-02	.359	.454
3EAS	.169	-7.067E-02	.284	.164	.189	-1.218E-02	.331
46PHO	6.380E-02	2.130E-02	4.559E-02	.240	-6.919E-02	-8.254E-03	3.218E-02
47SOU	.339	.132	.136	-2.075E-02	.196	6.083E-02	4.062E-03
14TOG	.121	5.931E-02	-.120	3.590E-02	.147	-3.763E-02	9.762E-02
18OUT	.130	.277	.245	-.127	-.193	4.470E-02	-.125
26VIS	-4.429E-02	.336	8.982E-02	2.779E-02	.127	.208	.159
22COL	.196	.178	4.604E-02	6.372E-02	.241	-.252	.336
7MIN	-8.546E-03	5.030E-02	9.251E-02	8.273E-02	4.633E-02	4.956E-03	-6.006E-02
13HEA	.114	.160	5.936E-02	6.611E-02	.130	.103	2.156E-02
12REL	8.700E-02	.215	.117	7.850E-02	6.259E-02	.102	.190
11ESC	-.158	-3.650E-02	.273	-1.952E-02	.245	.161	.176
30BAR	.216	-4.680E-02	3.169E-02	9.079E-02	.205	-6.402E-02	1.884E-02
45NOT	-7.444E-02	-.226	-4.152E-02	2.917E-02	-.148	3.729E-02	-3.355E-02
10CAM	.144	6.294E-02	-5.733E-02	6.911E-02	3.269E-03	6.626E-02	-8.217E-02
36BOO	-.175	.336	.304	7.701E-02	.142	-1.900E-02	4.886E-02
17SOC	-2.637E-02	-3.633E-02	2.360E-02	.109	.227	.103	-.152

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.

Rotated Component Matrix<sup>a</sup>

	Component						
	8	9	10	11	12	13	14
37OLA	9.765E-02	9.151E-02	-3.840E-02	-6.142E-02	2.849E-02	7.830E-02	-6.329E-02
38IND	6.328E-02	1.261E-02	6.928E-02	-9.266E-02	.114	6.205E-02	7.622E-02
28ACT	-2.051E-02	.224	6.677E-02	.332	6.160E-02	.146	8.807E-02
32GAM	.171	-9.467E-02	-2.605E-02	-2.904E-02	6.918E-02	4.499E-02	7.872E-02
33ENT	8.774E-02	-.191	-9.023E-03	.144	7.321E-02	2.628E-02	-4.823E-02
29RES	.144	.206	.169	-8.589E-02	.501	-1.571E-02	-.135
31TAK	.152	.206	-.104	-.143	.369	-6.001E-03	-.286
43WAL	-7.142E-02	.251	.175	-.115	1.011E-02	2.035E-02	-9.451E-03
42CYC	.109	2.727E-02	-3.352E-02	.189	-5.008E-02	-6.366E-02	.171
44FIT	.121	-4.310E-02	.213	.171	-4.060E-02	.186	-.278
41JOG	.152	-2.501E-05	-7.311E-02	8.623E-02	-2.282E-02	1.718E-02	-1.392E-02
40SPO	-3.805E-02	.112	-1.879E-03	6.380E-02	2.899E-02	.115	9.912E-02
21HOT	3.920E-02	-9.928E-02	.186	5.130E-02	2.745E-02	-.133	-.135
25QUI	-4.931E-03	-8.290E-03	-4.920E-02	.133	6.477E-02	5.043E-02	-1.528E-02
19NIG	.246	8.565E-02	8.648E-02	-9.617E-03	3.769E-02	-1.300E-02	.145
23WIN	1.499E-02	6.335E-02	7.199E-03	.103	-7.566E-02	-2.871E-02	.391
34HBT	.136	4.086E-02	7.635E-02	9.082E-02	.134	-7.723E-02	7.944E-02
39SAU	-9.531E-02	-.111	.176	2.247E-02	8.687E-02	-.116	2.396E-02
20GYM	.254	-4.235E-02	5.877E-02	-5.215E-03	4.231E-02	.178	-9.181E-02
24JAC	.155	.108	-3.149E-02	-2.977E-02	-.184	1.901E-02	.185
15MEE	4.109E-03	-5.367E-03	3.040E-02	7.620E-02	.203	.118	.185
16SIM	7.125E-02	-1.911E-02	8.262E-02	6.588E-02	8.848E-02	-2.157E-02	.263
27CUL	7.183E-02	.165	9.515E-02	4.198E-02	6.621E-03	-2.303E-02	-.133
8ACC	.127	2.749E-02	5.254E-02	.115	-.105	2.436E-02	9.651E-02
9COO	-.159	-3.750E-02	6.656E-02	-8.612E-03	.186	-5.469E-02	-3.670E-02
5NEA	3.500E-02	-8.526E-03	6.856E-02	.192	-.291	4.707E-02	-.194
35SHO	.371	.175	-.354	-.133	8.383E-02	2.272E-02	-1.285E-02
1SCE	-7.957E-02	.175	.378	2.850E-02	.363	-.116	.197
2SAF	-6.494E-02	.125	-1.076E-02	.171	-4.211E-02	-9.660E-02	-8.554E-02
4SCH	.121	-7.582E-02	-6.809E-02	4.206E-02	.144	2.170E-02	-4.953E-02
6VAL	7.959E-03	.337	.273	.307	-.185	.154	1.953E-02
3EAS	.303	7.469E-02	.178	-.169	.324	.260	.283
46PHO	.844	6.185E-02	7.882E-02	.108	6.768E-02	-4.648E-02	9.707E-02
47SOU	.661	5.250E-02	9.072E-02	1.050E-02	-.147	1.414E-02	-1.940E-02
14TOG	9.479E-02	.738	.193	8.249E-02	-5.564E-03	3.669E-02	8.978E-02
18OUT	4.953E-02	.560	3.381E-02	.302	.180	9.766E-02	.116
26VIS	.431	.493	2.698E-02	-6.123E-02	-9.454E-03	-.108	6.537E-02
22COL	9.287E-02	-.386	9.397E-02	-.115	2.312E-02	1.849E-02	.311
7MIN	.157	-4.062E-03	.840	-2.188E-02	6.012E-02	-1.438E-02	1.758E-02
13HEA	-2.689E-02	.239	.720	.223	7.338E-04	1.006E-02	-7.706E-02
12REL	-1.374E-02	.147	8.243E-02	.771	2.944E-02	3.055E-03	6.609E-02
11ESC	.230	.170	.343	.536	5.224E-02	-3.036E-02	-6.567E-02
30BAR	-6.029E-02	-2.944E-02	3.421E-02	.123	.821	-1.766E-02	3.728E-02
45NOT	.160	-.247	5.808E-02	4.961E-02	7.161E-02	-.783	3.563E-02
10CAM	.157	-.177	-3.682E-04	.473	.189	.635	.193
36BOO	-2.878E-02	.172	-4.629E-02	8.663E-02	.107	-.515	3.427E-02
17SOC	8.998E-02	.123	-4.635E-02	7.755E-02	3.564E-02	4.097E-02	.779

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 23 iterations.