PROFILING VISITORS OF FOUR SELECTED URBAN GREEN SPACES IN THE CITY OF TSHWANE

by

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ABSTRACT

Urban dwellers not having the opportunity to experience urban green spaces lead to decreased physiological well-being. This exploratory research intends to profile visitors to four selected urban green spaces in the City of Tshwane. *Visitor motivation, environmental awareness and subjective well-being* were investigated. Purposive sampling was used to collect primary data by distributing questionnaires at these spaces. Exploratory factor analysis was applied, the results revealed that *rest and relaxation/escape* and *pleasure seeking/activities* ranked the highest for visitor motivation. Two themes relating to environmental awareness were identified, namely *learning/action* and *commitment*. More attention towards *environmental awareness* is imperative for sustainable urban green spaces. Similarly, two themes namely, *quality of life* and *general well-being*, were identified for subjective well-being. Visitors agreed that their quality of life and general well-being improved after a visit. Clear profiling in each of the four urban green spaces were evident which provides tourism managers with tailor-made product offerings to use in marketing the attraction.

Key terms: tourism, visitor motivation, environmental awareness, subjective well-being, urban green spaces, revisit intention, preferences of activities.

OPSOMMING

Die feit dat stedelinge nie die geleentheid het om stedelike groengebiede te beleef nie lei tot ’n afname in fisiologiese welstand. Hierdie ondersoekende navorsing is daarop gemik om ‘n profiel van besoekers aan vier uitgekose stedelike groengebiede in die stad Tswane op te stel. Besoekermotivering, omgewingsbewustheid en soeke na genot/aktiwiteite is ondersoek. Doelbewuste steekproefneming is gebruik om primêre data in te samel deur vraelyste by hierdie groengebiede uit te deel. Ondersoekende faktoranalise is toegepas, en die resultate het getoon dat rus en ontspanning/ontvlugting en soeke na genot/aktiwiteite heel bo aan die ranglys vir besoekermotivering is. Twee temas wat met omgewingsbewustheid verband hou, is geïdentifiseer, naamlik leer/aksie en toewyding. Omgewingsbewustheid moet meer aandag geniet indien stedelike groengebiede volhoubaar gaan wees. Op dieselfde trant, is lewenskwaliteit en algemene welstand vir subjektiewe welstand geïdentifiseer. Besoekers het saamgestem dat hul lewenskwalitewit en algemene welstand na ’n besoek verbeter. Duidelike profielsamestelling is in elk van die vier gebiede bemerk dit verskaf aan toerismebestuurders perfekte produkaanbiedings om in die bemarking van die groen-attraksies te gebruik.

Sleutelwoorde: Toerisme, besoekermotivering, omgewingsbewustheid, subjektiewe welstand, stedelike groengebiede, voorneme om te besoek, voorkeur van aktiwiteite

KAKARETŠO

Go hloka sebaka sa go itemogela mafelo a bohle a diphaka a motsesetoropo ka badudi ba motsesetoropong go dira gore go be le phokotšego ya bophelo bjo bobotse bja mmele. Maikemišetšo a nyakišišo ye ya go tsenelela ke go profaela baeti go mafelo a bohle a diphaka a mane a motsesetoropo ao a kgethilwego ka Toropongkgolo ya Tshwane. Tlhohleletšo ya baeti, temogo ya tikologo le bophelo bjo bo botse bja go kgotsofatša di nyakišišitšwe. Go kgetha go ya ka nepo go šomišitšwe go kgoboketša datha ya mathomo ka go phatlalatša mananeopotšišo mafelong a. Tshekatsheko ya mabaka a go tsenelela e šomišitšwe, dipoelo di utolotše gore mediro ya go khutša le go iketla/go ithabiša le go nyaka lethabo e mo maemong a godimodimo a tlhohleletšo ya baeti. Dikgwekgwe tše pedi tšeo di amanago le temošo ya tikologo di hlaotšwe, e lego go ithuta/tiro le boikgafo. Tlhokomelo ye ntši go ya go temošo ya tikologo e bohlokwa go mafelo aa go bohle a diphaka a motsesetoropo nako ye telele. Ka go swana, dikgwekgwe tše pedi e lego, boleng bja bophelo le bophelo bjo bo botse bja kakaretšo, di hlaoletšwe bophelo bjo bo botse bja go kgotsofatša. Baeng ba dumetše gore boleng bja bophelo bja bona le bophelo bjo bo botse bja kakaretšo di kaonafetše ka morago ga ketelo. Go dira profaele ya go kwagala go le lengwe le le lengwe la mafelo a bohle a diphaka a mane a motsesetoropo go bonagetše e lego seo se fago balaodi ba tša boeti mehuta ya ditšweletšwa tša maleba go di šomiša mo go bapatšeng kgogedi.

Mareo a bohlokwa: boeti, tlhohleletšo ya baeti, temošo ya tikologo, bophelo bjo bo botse bja go kgotsofatša, mafelo a bohle a diphaka a motsesetoropo, maikemišetšo a go etela gape, dikgetho tša mediro.

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DECLARATION

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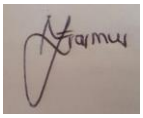
“Profiling visitors of four selected urban green spaces in the City of Tshwane”

I declare that the above dissertation is my own work and that all the sources that I have used or quoted have been duly indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.



November 2021

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SIGNATURE DATE

LIST OF ACRONYMS AND ABBREVIATIONS

DEAT	Department of Environmental Affairs and Tourism (South Africa)
BCGI	The Botanic Gardens Conservation International
CoCT	City of Cape Town
GDP	Gross Domestic Product
NGO	Non-Governmental Organisation
SA	South Africa
SANBI	South African National Biodiversity Institute
SIT	Special Interest Tourism
UN-WTO	United Nations World Tourism Organisation
VFR	Visiting friends and relatives

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CHAPTER 1: INTRODUCTION TO URBAN GREEN SPACES RESEARCH

1.1 BACKGROUND TO THE STUDY

Urban tourism brings place, consumption, people, experiences, mixed cultures, values, and expectations together while providing an exciting landscape where visitors can explore their hearts' content (Edwards, Griffin & Hayllar, 2008; Grah, Dimovski, & Peterlin, 2020). Urban open spaces play a crucial role by providing numerous benefits for visitors such as social, mental, educational, health, and personal well-being (Milliken, 2015). "Urban environments worldwide have for many years been amongst the most significant of all tourist destinations" (Edwards et al., 2008).

The tourism industry is mainly made up of business and leisure tourism and can be differentiated into the following three categories (Cooper, 2012; George, 2015):

- *Leisure and recreation* – holiday, sport, natural, visiting urban green spaces, cultural, visiting friends and relatives (VFR), special interest tourism, pleasure, and relaxation.
- *Other tourism purposes* – study, health, religious and spiritual tourism.
- *Business and professional* – meetings, conferences, missions, incentive trips, and business tourism.

Cooper (2012) identified various forms of tourism, including heritage, cultural, rural, urban, eco, and nature-based tourism. Urban tourism is defined as "one form of tourism, destined for, and undertaken in towns, cities, and urban resort areas" (Page & Connell, 2014). Urban tourism can also be referred to as city tourism. City tourism is a form of tourism that takes place in large human agglomerations, usually in main cities or urban spaces (UNWTO, 2021). In some context's urban tourism can be city tourism, but for the purpose of this study, the term urban tourism is used. "Urban tourism and urban areas are primarily signified by a busy, interactive built environment purposely developed to

meet the needs of many stakeholders" (Edwards et al., 2008). Urban tourism is of importance from both a global perspective and a local perspective. Globally, the socio-cultural impact and the importance of making all cities inclusive, safe and sustainable is widely recognized (UNWTO, 2021). Locally, research on urban tourism in South Africa has also emerged as an important topic for research (Rogerson & Visser, 2017; 2004; Visser, 2013; Visser & Rogerson, 2014).

One component of urban tourism is urban green spaces, which are an essential element in the urban environment (Ugolini, Massetti, Calaza-Martínez, Cariñanos, Dobbs, Ostoić, Marin, Pearlmutter, Saaroni, Šaulienė, & Simoneti, 2020). Urban green spaces refer to "tourism that is simply nature travel and conservation in a city environment" (Wu, Wong & Ho, 2009). Green spaces are diverse, ranging from city parks to rooftop gardens, from urban forests to allotment gardens and any vegetation found in an urban environment (Cvejic, Eler, Pintar, Zeleznikar, Haase, Kabish & Strohbach, 2015). Research has extended the view that urban green tourism provides a "unique set of opportunities for greening cities and city-based tourism, but also for educating people and the industry about greening practices" (Gibson, Dodds, Joppe & Jamieson, 2003; Miller, Merrilees & Coghlan, 2015).

Access to green spaces, especially in an urban environment, provides a range of benefits to visitors, including improvements to physical, emotional, mental, and social health (Milliken, 2015). Urban nature and green spaces also contribute to the well-being of the community (Cervinka, Röderer & Hefler, 2011). Accoring to Cvejic et al. (2015) criteria that are used to explain why urban green spaces are essential for liveable and well-functioning cities include:

- Contributing to the conservation of biodiversity;
- Playing a recreational role;
- Improving and maintaining the environmental quality of the cities;
- Contributing to the cultural identity of the city; and
- Providing natural solutions to technical problems such as sewage treatments in cities.

In the current decade, people are constantly working and are at a high risk of burnout as they remain psychologically and physiologically attached to the work environment (Knight, 2015). Furthermore, the Covid-19 pandemic influenced the well-being of overworked people (Ugolini et al., 2020). Regular opportunities for relaxation and recreation are necessary to improve well-being, for example by taking a walk, going for a run or participating in an interesting activity (Knight, 2015). The beneficial effects of nature on the physical, social, and psychological well-being of humans are frequently reported in the literature (Cervinka et al., 2011). Nature experiences and outdoor activities contribute positively to health and well-being (Cervinka et al., 2011). “Such benefits can be experienced by spending time in natural outdoor environments, ranging from urban nature to wild nature” (Cervinka et al., 2011). This demonstrates the need and value urban green spaces can have for their citizens, which merits further research. The next section discusses the problem statement.

1.2 PROBLEM STATEMENT

The role of green spaces in urban tourism, and their impact on social and environmental regeneration in urban settings, lacks the necessary recognition and represents an unrealised potential within communities (Sadeghian & Vardanyan, 2013). According to Sadeghian and Vardanyan (2013), research on this subject will promote the value of urban green spaces and generate knowledge to enable planners and providers to integrate tourism objectives and activities into urban regeneration plans and projects. Urbanisation, the lack of natural surroundings and the busy time schedules of urban dwellers have impaired environmental and social processes, which is associated with decreased well-being (Kasser, 2002; Kuhn, 2001; Totton, 2003). Previous studies have indicated the importance of green spaces for the health of urban dwellers through exercise, outdoor social interaction, stress reduction, and environmental education (City of Cape Town, 2008; Kaplan, Kaplan & Ryan, 1998; Milliken, 2015; Nielsen & Hansen, 2007; Scopelliti & Giuliani, 2004). Urban green spaces serve important social, health, ecological, psychological, and aesthetic functions, yet these functions are often taken for granted by the city and public authorities (Ward, Parker & Shackleton, 2010). The linking

of recreation dimensions and education within an urban green space paradigm would be useful as the topic needs further investigation (Ward et al., 2010).

To date, limited research is reported on urban green spaces from a South African perspective, more so in South African cities and especially on the City of Tshwane (Milliken, 2015). The most liveable cities and world-famous cities such as Central Park in New York, Hyde Park in London, Phoenix Park in Dublin, and the Bukit Timah Nature Reserve in Singapore are renowned for their urban green spaces, for example amongst others (Penalosa, 2017). Open spaces in urban environments provide many advantages, including the preservation of natural environments, formal and informal sport and recreation, and health benefits (e.g. reduced stress levels and depression for the visitors). Urban green spaces can bring social services for quality of life and are also considered a key component for sustainability (Lee & Kim, 2015, cited in Yıldırım, Asilsoy, & Özden, 2020).

Less scientific and political attention is being paid to open spaces near where people live and work, to small-scale green areas in cities, and their benefits to urban dwellers (Chiesura, 2003; Yıldırım, Asilsoy, & Özden, 2020). Urban parks and open green spaces are of great importance for an improved quality of life of an increasingly urbanised society (Chiesura, 2003; Tyrvainen & Vaanaen, 1998).

Addressing the need for access to urban green space has become a pertinent topic of interest (Milliken, 2015). In a South African case study, Milliken (2015) focused on eight nature reserves or conservation areas managed by the City of Cape Town. Similar research is required in various urban areas within South Africa would be valueable to provide accessible urban green spaces especially for those cities known as popular tourist attractions.

One such example is the City of Tshwane, a metropolitan city in the Gauteng province . The city serves as the country's administrative and diplomatic capital (City of Tshwane, 2021). The City of Tshwane comprises 2 198 km^2, has a well-developed infrastructure and can be easily accessed by three airports. It offers numerous activities and attractions for visitors, including open green spaces (Heath & Kruger, 2010; City of Tshwane, 2021).

The City of Tshwane has several urban green spaces such as a National Botanical Garden, nature reserves, parks, and bird sanctuaries. Specifically, these include, the Pretoria National Botanical Gardens, Bronkhorstspruit Nature Reserve, Colbyn Nature Area, Faerie Glen Nature Reserve, Groenkloof Nature Reserve, Garden of Remembrance – Freedom Park, Jan Celliers Park, Burgers Park, Springbok Park, Klapperkop Nature Reserve, Magnolia Dell, Moreleta Kloof Nature Area, Rietvlei Nature Reserve as well as Wonderboom Nature Reserve, National Zoological Garden of South Africa, Luton Valley Bird Sanctuary, Pierre van Ryneveld Nature Area, Boardwalk Bird Sanctuary, Chamberlain Bird Sanctuary, Kwaggaspruit Nature Area, Venning Rose Park and Colbyn Nature Area (Jones, 2017; National Department of Tourism, 2012).

Research conducted by Ward et al. (2010) aimed at determining the profile of botanical garden users in South Africa and ascertaining the role of botanical gardens as urban green spaces indicated that limited studies had been conducted on botanical gardens as attractions of urban green spaces in South Africa. This study focused on six national botanical gardens, including Harold Porter, Kirstenbosch, Karoo Desert, Free State, Walter Sisulu, and Pretoria (Ward et al*.,* 2010). The visitors' profiles , their primary reasons for visiting and levels of satisfaction with these botanical gardens were investigated in the research (Ward et al., 2010). Moreover, the profiles of visitors to other urban green spaces are relatively under researched (Ward et al., 2010), therefore indicating a need for similar research, especially in the City of Tshwane.

The following urban green spaces were selected for this study: the Rietvlei Nature Reserve, the Pretoria National Botanical Gardens, the National Zoological Garden (Pretoria Zoo), and the Austin Roberts Bird Sanctuary.

Research on urban green spaces in cities can be approached from various angles, including profiles of visitors regarding visitor motivation, environmental awareness, and subjective well-being in the context of urban green spaces (Carrus, Scopelliti, Lafortezza, Colangelo, Ferrini, Salbitano, Agtimi, Portoghesi, Semenzato & Sanesi, 2015; Saayman, Li, Uysal & Song, 2018; Uysal, Sirgy, Woo & Kim, 2016; Ward et al., 2010).

An understanding of the motivation, environmental awareness, and subjective well-being of visitors to urban green spaces will be beneficial in the planning and strategic development of these tourist attractions in a city context. Tourist motivation research is aimed at identifying different types of tourists by exploring their personal and travel characteristics and segmenting these tourists to systematically analyse and better understand their behaviours (Crompton, 1979, Cvelbar, Grün & Dolnicar, 2017, Jönsson & Devonish, 2008). Understanding the needs and wants of visitors and getting them to participate are important considerations for local government officials, reserve wardens and managers to identify new tourism development opportunities and improve sustainability (Beh & Bruyere, 2007; Mugizi, Ayorekire & Obua, 2017). Furthermore, it is also important to understand what motivates visitors, because this generally influences their travel behaviour. Behaviour is influenced by several aspects, of which motivation is only one. Crompton (1979) and Saayman (2006:29) stated that behaviour results from the interaction of several motives, any one of which may be dominant at any given time. Visitor motivations occur regularly and have been highly cited in tourism research in various contexts (Beh & Bruyere, 2007; Bhatia 2007; Botha, 2011; Chen, Wang & Prebensen, 2016; Chiesura, 2003; Conradie, van Zyl & Strasheim, 2013; Donaldson, Eagles, 1992; Ferreira, Didier, Rodary & Swanepoel, 2016; Swanson & Horridge, 2006; Jönsson & Devonish, 2008; Kim, Jogaratnam & Noh, 2006; Lang & O Leary, 1997; Meng & Uysal, 2008; Minghui, 2007; Reitsamer & Brunner-Sperdin, 2017; Saayman & van der Merwe, 2007; Sali & Kuehn, 2006; Sarkar, Au & Law, 2015:34; Thrane, 2008; Ward et al., 2010). To manage and plan effectively, it is imperative that the characteristics (e.g., visitor motivation) of the visitors are understood since urban areas play an essential role in the attractiveness of tourism destinations (Boyvin & Tanguay, 2019; George, 2008; Sali & Kuehn, 2006).

Environmental stewardship or advocacy must be promoted, and visitors must be educated about nature and the environment during a visit, which in turn raises their level of knowledge and satisfaction (Dwyer & Edwards, 2002, Gale & Hill, 2016). The visitors' environmental awareness is important for sustainability and protection of the environment while also influencing an appreciation for the natural environment in their dwelling

(Ballantyne, Packer & Hughes, 2007; Ballantyne, Packer, Hughes & Dierking, 2007; Bulatovic & Rajovic, 2018; Goyal & Grewal, 2017; Groff, Lockhart, Ogden & Dierking 2005; Han, Yu & Kim, 2018; Rawles & Parsons, 2005; van Loggenberg, 2015).

Urban green spaces may benefit local citizens and tourists as they can improve their quality of life and general well-being (Carrus et al., 2015; Uysal et al., 2016). Green elements and contact with nature could also provide relief from stress and other health benefits such as facilitating a faster recovery from surgery and providing a valuable sanctuary during these times (Lafortezza, Carrus, Sanesi & Davies, 2009:99). This study investigated the subjective well-being of the visitors to the selected urban green spaces in a bid to explore the role played by urban green spaces.

This study was undertaken to establish a profile of visitors to urban green spaces in the City of Tshwane by investigating their motivation, environmental awareness and subjective well-being to enhance visits to Tshwane urban green spaces. Clear profiling in each of the four urban green spaces could provide tourism managers with tailor-made product offerings to use in marketing the attraction. It is envisaged that increased visits to urban green spaces could improve environmental awareness and well-being of visitors. The management of urban nature reserves, botanical gardens and parks can also use the information for strategic planning, which may promote urban tourism.

To determine the visitors' motivation, environmental awareness and subjective well-being to urban green spaces in the City of Tshwane, several objectives were set, as discussed next.

1.3 RESEARCH OBJECTIVES

The following research objectives were used to guide this study.

1.3.1 Primary research objective

To profile visitors of four selected urban green spaces in the City of Tshwane: Rietvlei Nature Reserve, Pretoria National Botanical Gardens, the National Zoological Garden (Pretoria Zoo) and the Austin Roberts Bird Sanctuary.

1.3.2 Secondary research objectives

To achieve the primary objective, the following secondary objectives were identified:

- Objective 1: To conceptualise urban tourism, urban green spaces, travel (visitor) motivation, environmental awareness and the subjective well-being of visitors to urban green spaces, from existing literature.
- Objective 2: To determine the motivations of visitors to four urban green spaces in the City of Tshwane.
- Objective 3: To compare visitors' motivational factors within and between the four urban green spaces in the City of Tshwane.
- Objective 4: To examine the visitors' environmental awareness at urban green spaces in the City of Tshwane.
- Objective 5: To determine the subjective well-being of visitors to urban green spaces in the City of Tshwane.
- Objective 6: To determine the intention to revisit the four urban green spaces in the City of Tshwane.
- Objective 7: To identify preferences regarding activities at four urban green spaces in the City of Tshwane.

1.4 RESEARCH DESIGN AND METHODOLOGY

This section details the research design and method used, which included primary research (empirical) and secondary research (literature review).

1.4.1 Literature review

A review of literature is aimed at contributing to a richer understanding of the nature and meaning of the issue identified by the researcher (De Vos, Strydom, Fouche & Delport, 2017:133). It is imperative that existing literature, or the available body of knowledge, is consulted and that the research topic is thoroughly conceptualised (Mouton, 2001:87).

Information relevant to this study was obtained from textbooks, academic journal articles, theses and dissertations, internet websites, databases, and search engines such as

Ebsco Host, Emerald, Science Direct, and Google Scholar. Previous studies in the field of urban tourism, urban green spaces, visitor motivations, environmental awareness and subjective well-being were also consulted.

The literature review for this study conceptualised urban tourism, urban green spaces, visitor motivation, environmental awareness and subjective well-being.

1.4.2 Empirical research

The primary research conducted for this study (refer to Chapter 3) is discussed according to the eight steps of the primary research process (De Vos et al., 2015; Leedy & Ormrod, 2014; Wagner, Kawulich & Garner, 2012).

The first step of the process involved the selection of a research design. For this empirical study, a quantitative cross-sectional survey design was selected to collect primary data using a self-administered questionnaire.

The next step was to select the sample. The target population for this study comprised visitors, 18 years and older, to urban green spaces in the City of Tshwane (Gauteng, South Africa) during the months of January and February 2020. The sample units included urban green spaces in the City of Tshwane, while the sample elements are the visitors to these spaces. Four urban green spaces in the City of Tshwane -- a nature reserve (i.e. Rietvlei Nature Reserve), a botanical garden (i.e. Pretoria National Botanical Garden), a zoo (i.e. the National Zoological Gardens - Pretoria Zo) and a bird sanctuary (i.e. Austin Roberts Bird Sanctuary) -- were selected for this purpose (see section 3.4).

A *sample size* is the number of sample elements (i.e. visitors to the urban green spaces in the City of Tshwane) to be included in a study (Malhotra, 2015). Since a complete sample frame was unavailable, an infinite population size was assumed. Krejcie and Morgan's guidelines (1970) were followed, which illustrate the relationship between the sample size and the total population. The table for determining sample size from a given population shows that for a population (N) greater than a 1 000 000, the recommended sample size is 384 (Krejcie & Morgan, 1970). Based on Krejcie and Morgan's work (1970) and recommendations on a suitable sample size to conduct a factor analysis (Pallant,

2016; Tabachnick & Fidell, 2007), the sample size (n) of 384 seemed appropriate. The information reported in the current research was provided by a total of n = 392 respondents (i.e., visitors to four urban green spaces in the City of Tshwane). The actual sample size (392) was larger than the recommended sample size (384).

Step 3 in the primary research process was to select and develop the research instrument. A self-administered questionnaire was developed, linking questions to each secondary objective. The questionnaire was developed from previous research and the literature review conducted in Chapter 2. The questionnaire comprised six sections (A – F). Section A consisted of two sections: A1 included questions on information about the current visit, and Section A2 comprised questions regarding revisit intention to urban green spaces. Section B, comprised questions on visitor motivation to urban green spaces while Section C detailed questions on preferences regarding activities at the urban green spaces. In Section D, questions on the level of environmental awareness of visitors to urban green spaces in the City of Tshwane were included. The subjective well-being of visitors to urban green spaces in the City of Tshwane was questioned in Section E. Section F determined the biographic information of visitors to urban green spaces in the City of Tshwane, including the respondents' gender, age, ethnicity, highest level of qualification, marital status and province of residence. Refer to Appendix A for the questionnaire. Once the research instrument (questionnaire) was developed, it was tested before the actual data collection could take place. The pilot testing conducted during this study is discussed next.

The *fourth* step in the research process was to conduct a pilot test. Two academic experts in sustainable tourism management were asked to examine and provide their opinion on the questionnaire during October 2019 (Hattingh, 2019; Myburgh, 2019). Based on their feedback, minor modifications to the questionnaire were made. For the pilot study, the researcher selected visitors who already visited the urban green spaces to complete the questionnaire during November 2019. A total of 25 visitors participated in the pilot study, across all four urban green spaces. The feedback from the respondents and the data

analyses based on the pilot test was taken into account to make minor changes to the final questionnaire.

The *fifth* step was to conduct the fieldwork for the study. The population of this study was found at the Rietvlei Nature Reserve, the Pretoria National Botanical Gardens, the National Zoological Gardens (Pretoria Zoo), and the Austin Roberts Bird Sanctuary (see section 3.2 for the study sites). Fieldworkers were appointed and briefed on the purpose of the study, the questionnaire content and how to assist respondents where necessary. The data collection took place during January and February 2020 before the Covid-19 pandemic. Respondents were randomly selected to complete the self-administered questionnaire when exiting the urban green space. The field workers were situated close to the entrance/exit to request passers-by to take part in the survey following their visit. The survey was administered after the visit because one of the questions related to their intention to return to the urban green space.

The *sixth* step in the primary research process, namely, processing the data, included editing, coding, and capturing the data. Data editing consists of inspecting all completed questionnaires to identify and minimise errors, incompleteness and misclassification (Kumar, 2005). Data coding was done using pre- and post-coding. Data capturing took place as each variable in the questionnaire was entered into a database, using Microsoft Excel®.

Data analysis was the *seventh* step in the primary research process. It is the process used to examine and make sense of the data to answer the research questions (Wagner et al., 2012) and involves the measurement and identification of variation within a set of variables (Hair, Black, Babin, Anderson & Tatham, 2014). The study's data was analysed using Statistical Package for the Social Sciences (SPSS 26.0). Before the data was analysed, the data set was cleared from possible coding and data capturing errors (Tustin, Lighthelm, Martin & Van Wyk, 2010). Descriptive statistics, including frequencies, means and standard deviation; (3.9.1), the validity and reliability of the research instrument; (3.9.2), and the statistical methods applied (i.e. exploratory factor analysis --

EFA), group differences (ANOVAs), and correlations in this study are discussed in Chapter 3.

The *eighth* and final step was to present the research results, which are in Chapter 4 of this dissertation. The definitions and key terms used in this study are discussed in the following section.

1.5 DEFINITIONS OF KEY TERMS

This section defines the key terms used in this dissertation.

1.5.1 Urban tourism

Definitions of urban tourism in the literature include tourism that is destined to towns and cities and urban resort areas (Page & Connell, 2014). Urban tourism also “provides a distinctive set of opportunities for greening cities and in turn educating people on the practices of greening” (Miller, Merilees & Cochlan, 2015).

Urban tourism is defined as "an ongoing opportunity to conserve biological and social diversity, create new jobs and improve the quality of life" in an urban environment (Urban Ecotourism Declaration, 2004).

Urban green spaces are discussed in the next section.

1.5.2 Urban green spaces

Urban green spaces can be defined in two ways: as urban green spaces that include all types of vegetations in a given urban area, such as parks, forests, street trees, farmlands, and gardens in gated communities, and the park’s green spaces which provide public recreational and leisure services (Wu & Kim, 2021).

Urban green spaces can include forest land preserves, agricultural areas, conservation easements, wildlife habitats, buffers along waterways, regional and local parks, golf courses, playing fields, and cemeteries (Choumert & Salanie, 2008; Galant, 2011; Milliken, 2015). They are described as attractions that vary in age, size, design, facilities, maintenance, planting, and patterns of use (Milliken, 2015). They are made up of various

elements including trees, grass, ponds, benches, fountains, pathways, statues, gardens, sporting facilities, and playgrounds (Byrne & Wolch, 2009; Milliken, 2015).

Visitor motivation to urban green spaces is introduced in the next section.

1.5.3 Visitor motivation to urban green spaces

"Motivation is a state or need, a condition, that exerts a push on the individual towards certain types of action that are seen as likely to bring satisfaction" (Moutinho, 1987:16; Page & Connell, 2014:53). According to Crompton (1979:427) "travel motivation can be explained as a process of intrinsic psychological factors (needs and wants) that produce disequilibrium within individuals". Crompton's (1979:416) "theory includes nine motivational factors, namely, exploration, escape, evaluation of self, prestige, relaxation, regression, enhancement of kinship relationships, social interaction, novelty and education".

Dann (1977) develops a distinctive input to travel motivation by framing it into two domains -- the 'push' and 'pull' domains. These two broad domains motivate tourists to travel (push) and to be attracted to the desired destination (pull). Intrinsic motivations (push) are psychological needs causing a person to feel a disequilibrium that can be corrected through a tourism experience (Dann, 1977). Pull factors are attributes that attract tourists to a specific destination or attraction (e.g. visiting an urban green space).

Travel motivation is one of the most important stimuli of travel (or visiting) behaviour (Van Vuuren & Slabbert, 2011). Travel motivation is a set of psychological processes such as perception, memory, learning, belief and attitude that may contribute to clarifying the decision-making process of a tourist or visitor (Kotler & Keller, 2009; Cooper, Fletcher, Fyall, Gilbert & Wanhill, 2008). Visitor motivation can further be defined as the reason why people visit a destination or attraction (Chen & Prebensen, 2009).

Travel motivation refers to the intrinsic and extrinsic purpose to visit the attraction or site. Tourists or day visitors are motivated to travel to these sites. For the purpose of this study, a tourist can be a day visitor. Therefore, travel motivation is also referred to as visitor motivation. Motivations must be understood to conceptualise visitor behaviour.

The visitors' environmental awareness to urban green spaces is discussed in the next section.

1.5.4 Environmental awareness of visitors to urban green spaces

Environmental awareness is to comprehend how fragile the environment is and to recognize the importance of its protection (Bulatovic & Rajovic, 2018). Environmental awareness is defined as "the state of people's knowledge, opinions and notions about the role of the environment in human life, including the state of knowledge about methods and tools for the management of using, protecting and shaping the environment" (Bulatovic & Rajovic, 2018:3).

Literature indicates that natural settings such as urban green spaces can promote a visitor's well-being by reducing stress, facilitating the renewal of cognitive resources and encouraging positive emotions (Carrus et al., 2015; Hartig 2004). The subjective well-being of visitors to urban green spaces are therefore discussed.

1.5.5 Subjective well-being of visitors to urban green spaces

Subjective well-being is seen as "the individual's judgment regarding his or her feelings of happiness and their culminating emotional status following their trip" (Kim et al., 2015:77). "The positive impact of a travel experience on a person's subjective well-being, encourages his or her loyalty with the service providers or the destination overall" (Kim et al, 2015; Saayman et al., 2018). Ensuring the presence of green space in urban systems is vital to enhance the well-being of urban dwellers (Carrus et al., 2015).

The organisation and chapter outline are discussed in the next section.

1.6 ORGANISATION OF THE DISSERTATION

In Chapter 1, the background and orientation were provided by introducing urban tourism, nature reserves, travel motivation of visitors, environmental awareness, and subjective well-being of visitors. This was followed by the problem statement, the aim and the research objectives of the study. The research methodology is discussed according to the literature review and the empirical research conducted in the dissertation. Definitions

of relevant terms that are frequently used in the study are explained. These important points of departure set the context for the dissertation.

The literature review is discussed in Chapter 2 which examines tourism and urban tourism as well as urban green spaces and tourist behaviour, namely motivation, environmental awareness, and subjective well-being of visitors to urban green spaces.

In Chapter 3, the research methodology is discussed. This entails a discussion of the study sites followed by a procedure of the primary research process. Details of the research design, sampling plan, research instrument, pilot test, data collection, data processing, and methods for the analysis of data are provided.

Chapter 4 reports and interprets the results of the data analysis of visitors who visited Rietvlei Nature Reserve, the Pretoria National Botanical Gardens, the National Zoological Gardens (Pretoria Zoo), and the Austin Roberts Bird Sanctuary.

Lastly, Chapter 5 concludes and presents recommendations for the City of Tshwane municipality, tourism NGOs such as Tshwane Tourism, a destination marketing organisation of Tshwane as well as the management of the four urban green spaces. Limitations of the study and recommendations for future research are also provided. Figure 1.1 shows the chapter outline of the dissertation.

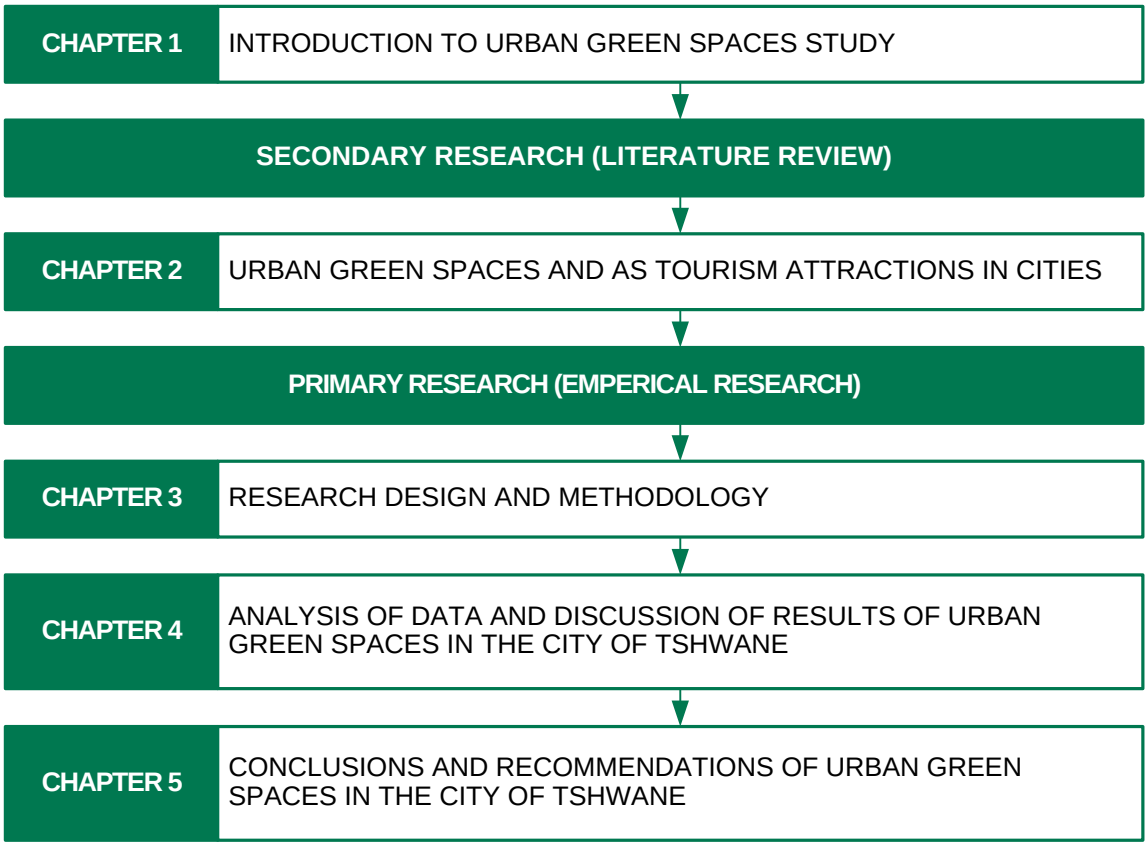

Figure 1.1: Chapter outline of the dissertation

CHAPTER 2: URBAN GREEN SPACES AS TOURISM ATTRACTIONS IN CITIES

2.1. INTRODUCTION

Urban tourism has become a tremendously important form of tourism (Ashworth & Page, 2011; Visser, 2016) and consequently has contributed to economic and sustainable growth of various urban tourism destinations (Damos, Zhu, Li, Hassan & Khalifa 2021). Damos et al. (2021) explain that attention to urban tourism leads to enhanced opportunities to develop locations and tourist areas. “Urban tourism is often highly regarded in order to improve the quality of life of the local communities and has become increasingly important in the globalisation process and leads to urban economies” (Koushkham, Marzuki & Al-Mulali, 2016:95). The stimulation of growth in the economy and job creation to be accelerated have both been identified as key priorities for urban policy makers in South Africa (Rogerson & Rogerson, 2014).

Urbanisation, busy time schedules and the lack of natural surroundings have impaired environmental and social processes of citizens, which in turn are associated with decreased psychological well-being (Kasser 2002; Kim et al. 2015; Kuhn 2001; Pilisuk & Joy, 2001). The reason being that several studies have argued that reconnecting people with nature is useful to improve people’s well-being and happiness as well as to protect the preservation of the physical environment (Kim et al., 2015). A significant part of urban tourism relates to urban green spaces, and its importance has been reported in several research studies (Damos et al., 2021; Milliken, 2015).

A plethora of tourism destinations exist around the world, each one offering different services and products to attract visitors. Potential tourists are thus given an opportunity to choose a destination or visitor attraction which can stimulate their specific interests and motivations to travel to that destination (Jonsson & Devonish, 2008). The central element of the tourism system is the destination with its features and resources; it is, therefore,

vital to examine tourist motivations when visiting these attractions and destinations (Jonsson & Devonish, 2008).

In this chapter tourism, urban tourism and urban green spaces are introduced and linked to the first secondary objective, namely, to conceptualise urban tourism, urban green spaces, travel motivation, environmental awareness, and subjective well-being of visitors to urban green spaces, from existing literature. Figure 2.1 illustrates the structure and flow of the literature review as discussed in this chapter.

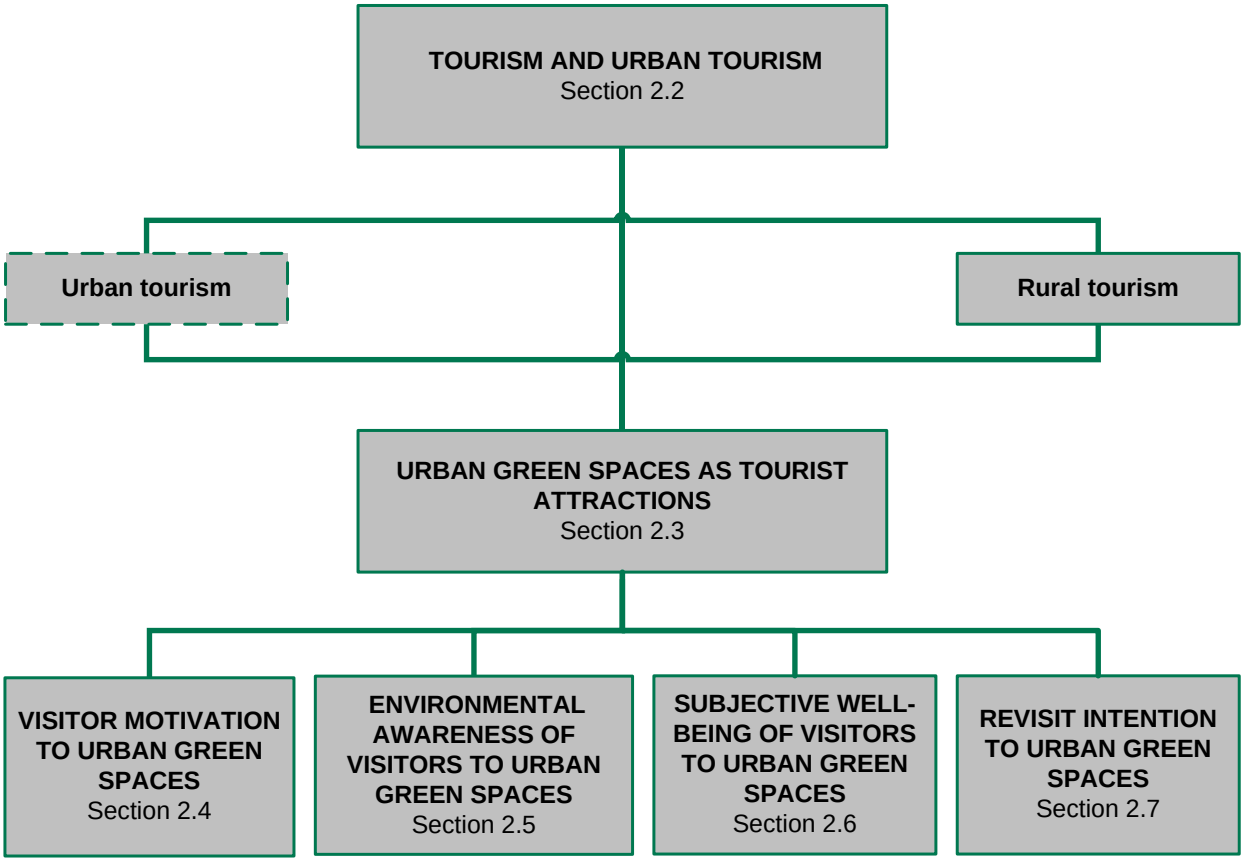

Figure 2.1: Structure and flow of the literature review

The concepts indicated in Figure 2.1 are discussed in the sections that follow.

2.2. TOURISM AND URBAN TOURISM

Tourism may be defined as a distinct activity that takes place away from a person's home area for several reasons (George, 2015). Tourism has unsurprisingly expanded from a rather limited upper-class activity to a common occurrence in the modern society. This complex phenomenon has already proven its persuasive significance in the economy, attracting both government and private developers to rapidly promote tourism as an industry (Dileep, 2019). Tourism is one of the world's fastest growing industries and a universal phenomenon (Elliot, 2020; George, 2015). "Tourism has experienced a continued growth and deepening diversification over the last few decades, to become one of the fastest growing economic sectors in the world" (UNWTO, 2016).

A distinction can be drawn between urban and rural tourism (Goeldner & Ritchie, 2009; Page & Connell, 2014). For this study, the focus is on urban tourism. Urban tourism stands out from other types of tourism since people are travelling to places with a high population density and the time spent at the specific destination is usually shorter than the time normally spent on a vacation (Aall & Koens, 2019). Urban tourism, also called city tourism, is one of the fastest-growing types of tourism with tourism attractions in cities increasingly on high demand by visitors (Muhoro, 2021). Since the need to travel to cities has increased significantly over the previous few years with 80% of tourists visit different cities as part of their trip (George, 2015). Key urban tourism attractions include events, festivals, historical districts, monuments, museums, shopping malls, waterfront developments, exhibitions, convention centres, urban parks, zoos, botanical gardens, nature reserves in city locations and animal statuaries (Ceopedia, n.d.; George, 2015; Ivanovic, Khunou, Reynish, Pawson, Tseane & Wassung, 2017; Milliken, 2015). Tourism attractions and a classification of the different types of urban green spaces are illustrated in Figure 2.2.

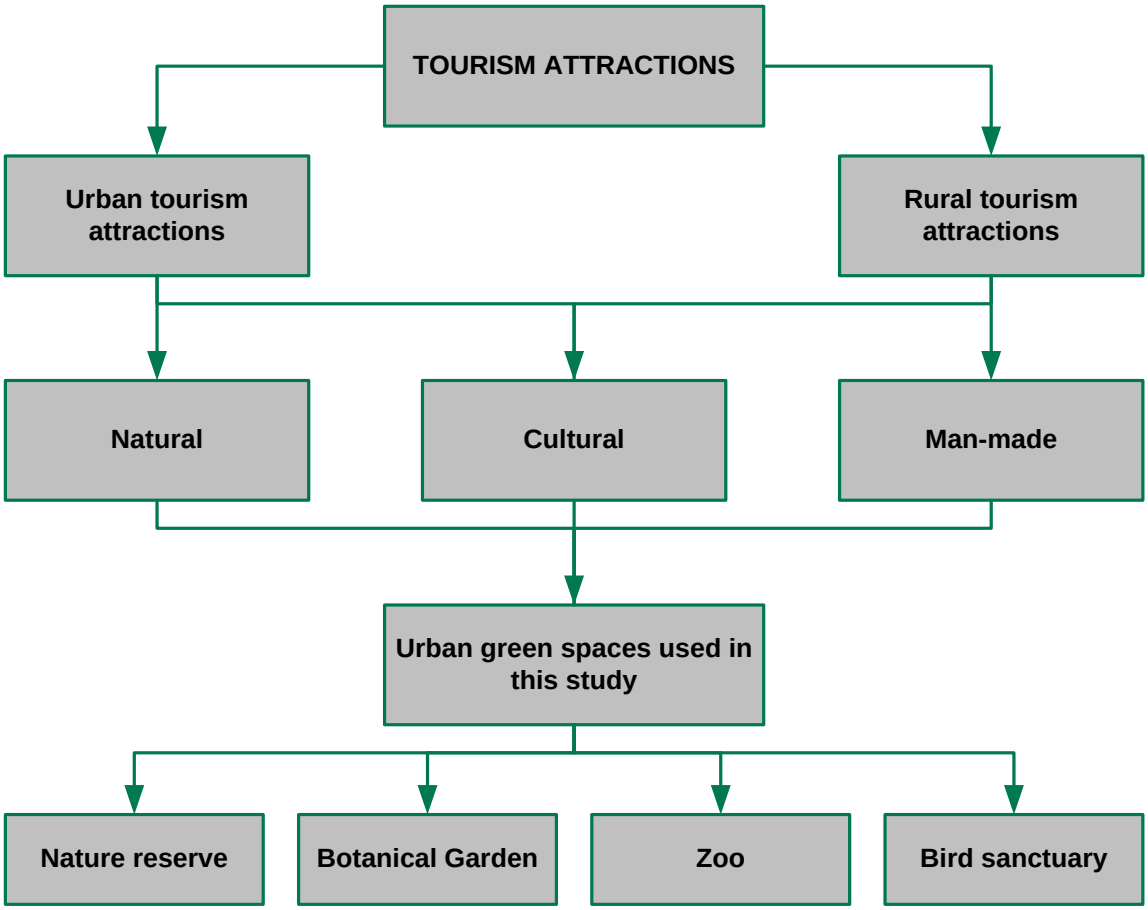

Figure 2.2: Tourism attractions and a classification of different types of urban green spaces (Source: Adapted from George, 2015; George, 2012)

As illustrated in Figure 2.2, tourism attractions may be found in an urban or rural setting; they are further divided into natural, cultural and man-made attractions (George, 2012; Ivanovic et al., 2017). According to George (2012) natural attractions are all the features that are found in the physical environment such as wildlife, the landscape, plants, forests and climate. Ivanovic et al., (2017) explain that natural attractions form part of the natural environment which includes climate, wildlife, beaches, lakes, oceans deserts, rivers, and mountains. Cultural attractions are places or things that are reflective of a specific community such as monuments, museums, arts and cultural villages, clothing, food, and architecture (George, 2012). According to Ivanovic et al., (2017) cultural visitors interact with local people in their environment to learn about traditions, beliefs, and local lifestyles. Man-made attractions are not necessarily constructed to attract tourists and visitors but

serve the needs of locals for example waterfronts, historic building, and cathedrals (George, 2012). Purpose-built attractions are defined as attractions that have been artificially created or built; these include resorts, convention centres, shopping centres, amusement parks, golf courses and sporting facilities. Urban green spaces are attractions found in a city environment such as nature reserves, botanical gardens and zoological gardens (Milliken, 2015). The focus of this study is on urban green spaces as tourist attractions, which are discussed next.

2.3. URBAN GREEN SPACES AS TOURIST ATTRACTIONS

Urban green spaces form an essential part of urban tourism attractions (Ivanovic et al., 2017). Defining urban green spaces, nature reserves, botanical gardens, zoological gardens and sanctuaries are introduced as urban green spaces and discussed next.

2.3.1 Defining urban green spaces

Urban green spaces are areas that can be used for "nature travel and nature conservation in a city environment" (Wu et al., 2009). Urban green spaces vary in age, size, design, facilities, planning, patterns of use and maintenance. These spaces may include elements such as grass, pathways, trees, ponds, fountains, benches, gardens, statues, sporting facilities and playgrounds. Urban green spaces are considered places of social interaction and education, cultural identity and tourist destinations (Byrne & Wolch, 2009; Milliken, 2015).

Preserving and maintaining green spaces in urban environments is a critical aspect to fulfilling environmental quality goals and achieving a liveable city that is socially, economically and environmentally sustainable (Rotenberg, 2008; Ward et al., 2010). According to Milliken (2015), the need for access to urban green spaces has become a topic of interest in an urbanised world. Some of the most liveable and famous cities in the world are known for their open green spaces and their culture (Penalosa, 2017), for example, Central Park in New York and Kirstenbosch in Cape Town.

Open spaces in urban settings provide many formal and informal advantages, such as recreation and sport, management of urban storm water, and green spaces to preserve

natural environments (Penalosa, 2017). The author further explains numerous health benefits associated with access to public parks and open spaces, such as reduced stress levels, reduced depression, and better perceived general health (Penalosa, 2017).

From the various types of urban green spaces, nature reserves, botanical gardens zoological gardens and sanctuaries were selected for the purpose of this study and are discussed in the following section.

2.3.2 Nature reserves as urban green spaces

Nature reserves can be defined as "an area set aside to preserve certain animals, plants, or both. A nature reserve differs from a national park usually in being smaller and having as its sole purpose the protection of nature" (Encyclopaedia Britannica, 2016). Nature reserves that are situated within or close to a city offer a great opportunity for city dwellers to enjoy the natural environment and can be considered as urban green spaces. Easy access to these nature reserves and the value of such green spaces has recently emerged as a point of interest and concern to city managers (Milliken, 2015). Nature reserves offer several benefits to visitors as discussed by the CoCT (2008), Fuller and Irvine (2010), Irvine, Fuller, Devine-Wright, Tratalos, Payne, Warren, Lomas & Gaston (2010), Jones and Comfort (2021), Kaplan et al. (1998), Li, Wang, Paulussen and Liu (2005), Liverpool City Council (2010), Nielsen and Hansen (2007), Scopelliti and Giuliani (2004):

- Numerous urban dwellers seek out green spaces to interact with nature through exercise and recreation.
- To enjoy fresh air and relax in peace and quiet.
- Social interaction for people of all ages, relaxing from a demanding and stressful everyday life.
- Improve the health and quality of life of community members.
- Provide educational spaces and nature-based tourism opportunities.
- Provides psychological health benefits by relieving mental fatigue, reducing levels of stress as well as improving people's sense of well-being.

- Urban regeneration, economic gain, social cohesion, reducing crime, creating a sense of community and environmental awareness.
- Conservation, environmental research, people and partnerships.

2.3.3 Botanical gardens as urban green spaces

The South African National Biodiversity Institute (SANBI) describes botanical gardens as unique public green spaces as they are “shop windows for biodiversity” (SANBI, 2006:28). The Botanic Gardens Conservation International (BCGI) defines botanical gardens as “institutions holding documented collections of living plants for scientific research, conservation, display and education” (Ward et al., 2010; Wyse Jackson, 2000).

These botanic gardens attract a wide range of tourists, both domestic and international, as well as regular visitors from local areas. The purpose of a botanical garden can be seen from a conservation and educational perspective as these gardens are well-placed to educate the community about conservation, encourage the public to support conservation efforts and engender pro-conservation efforts (Ballantyne et al., 2007a).

There are approximately 2 500 registered botanical gardens worldwide (Ward et al., 2010), with an intriguing positive correlation between the human development index of a country and the number of botanical gardens within a country (Kuzevanov & Sizykh, 2006). There are various botanical gardens in South Africa, ten of which have national status and are managed by SANBI (2021). It should be noted that there are only a few formal studies on the contribution of botanical gardens as urban green spaces in developing countries (Ward et al., 2010).

Botanical gardens offer several benefits to local citizens and visitors (Ballantyne et al., 2007a; Kuzevanov & Sizykh, 2006; Miller, Conway, Reading, Wemmer, Wildt, Kleiman, Monfort, Rabinowitz, Armstrong & Hutchins, 2003; Primack & Miller-Rushing 2009; Ward et al., 2010) such as:

- Economic benefits – associated with attracting tourists to the region.
- Recreational, psychological and restoration benefits – appreciation of botanical gardens.

- Educational experiences and opportunities – viewing rare or unusual community identity.
- Conservation and education role – seen as vital by staff and management of botanical gardens.
- Support research programmes.

The positive benefits of botanical gardens on urban dwellers are well reported in the literature. National zoological gardens, which are also evident as urban green spaces in cities, are discussed next.

2.3.4 National zoological gardens as urban green spaces

National zoological gardens are defined as “establishments which maintain a collection of wild animals, typically in a park or gardens, for study, conservation, or display to the public” (Oxford Dictionary, 2021). The main purposes of these modern zoological gardens are to do research, educate and entertain visitors (Oxford Dictionary, 2021). When posing the question of why visitors spend their leisure time visiting zoos, the apparent answer being that they want to enjoy themselves and have fun at the space (Sickler & Fraser, 2009:313). The specific element of what represents fun and enjoyable experiences for visitors and how the different definitions are interpreted might vary between visitors (Sickler & Fraser, 2009:313). However, the interpretation thereof remains mainly unclear in the literature.

National zoological gardens offer several benefits to their visitors (Andereck & Caldwell, 1994; Morgan & Hodgkinson, 1999; Pekarik, Doering & Karns, 1999; Ryan & Saward, 2004; Sickler & Fraser, 2009; Tomas, Scott & Crompton, 2002; Tomas, Crompton & Scott, 2003; Turley, 2001) such as:

- The social experience of the visit described in terms of family togetherness or as social, altruistic, or relational value.
- Animals on exhibition which offers the experience of seeing the ‘real thing’,
- Enjoyment or appreciation of the wildlife.
- The perception that exhibits are animal-friendly.

- Education, learning or conservation.

This section has shed some light on the different types of benefits that are frequently cited by zoo visitors. The following section deliberates on sanctuaries as urban green spaces in cities.

2.3.5 Sanctuaries as urban green spaces

Sanctuaries are defined as "a facility that rescues and provides lifelong care for wild animals, exploited for greater appeal to the public and to attract donations, or misused to justify keeping wild animals captive" (Doyle, 2017:1). A sanctuary is defined in the broadest form as "a place of shelter, refuge and protection" (Merriam-Webster, 2021). Visitors can experience these specialised habitats at sanctuaries as places in which animals have a higher quality of life and, in turn, express more species-specific behaviour (Doyle, 2017).

Various studies are reported on factors that should be considered in assessing motivation in a travel and tourism context (Sickler & Fraser, 2009). Visitor motivation to urban green spaces will be discussed in the next section.

2.4. VISITOR MOTIVATION TO URBAN GREEN SPACES

Motivation is described as an intrinsic state that guides human behaviour to achieve goals and can be defined as a state or need that drives an individual to satisfy this need (Li & Cai, 2012; Li, Zhang & Cai, 2013; Patterson & Balderas, 2018). Motivation has been studied extensively in the tourism field (Crompton 1979; Patterson & Balderas, 2018). The sections that follow will discuss in detail the background to travel and visitor motivation (2.4.1) and motivation of visitors to urban green spaces (2.4.2).

2.4.1. Visitor motivation in context

Travel (or visitor) motivation is explained by Dileep (2019) as the different reasons why people choose to travel, to take part in different tourism activities or visit attractions. Travel motivations are needs or wants which drive tourists to decide on a specific tourism destination or attraction (Andruliene, Macerinskiene & Urbonavicius, 2018; Crompton

1979; Saayman, Kruger & Erasmus, 2001). An individual's motivation to travel begins when they become aware of certain needs, and notices that specific destinations or attractions have the capability to satisfy those needs (Lubbe, 1998). Tourist motivation research aims to identify different types of tourists and segment those tourists in order to better understand them and their behaviour (Jönsson & Devonish, 2008). A tourists' motivation to travel has many dimensions arising from the tourists' socio-cultural and environmental factors, personal traits, psychological factors and linked to the destination and industry (Dileep, 2019).

Understanding the motivation of tourists in urban green spaces may contribute to better insights that may be useful in local decision making regarding the different facets of tourist motivation in general, thereby adding to the existing literature on tourist motivation (Lianouridis, 2010; Madureira, Nunes, Oliveira & Madureira, 2018). This is particularly relevant as the research on tourism motivation in the context of urban green spaces needs further attention (Lianouridis, 2010).

2.4.2. Visitor motivation to urban green spaces

Visitor motivations to urban green spaces begins by defining the urban green space and reporting on relevant research for the specific study context. The motivation to visit either of the following three urban green spaces -- urban parks, zoological and botanical gardens and nature reserves -- is introduced next.

2.4.2.1. Visitor motivation to urban parks

Various authors such as Donaldson et al. (2016) explored the relational, multi-layered constructions and boundaries of urban park spaces. They determined who the users or visitors of the Table Mountain National Park in Cape Town (South Africa) are and explored the motivations of these visitors. There is sufficient empirical evidence that shows the relationship between quality of life and park use for recreation, leisure and tourism activities. It should be noted that visitors are motivated to visit the Table Mountain National Park by activities such as climbing, walking, studying the vegetation, socialisation / group events, picnics, educational fieldtrips, rock climbing, identifying fauna and flora,

photography, sightseeing / views, cycling, jogging, beach use and surfing (Donaldson et al., 2016).

An exploratory study was conducted by Lianouridis (2010) identifying motivations of international tourists to urban parks. The study sought to identify underlying motivations of international tourists visiting the Vondelpark (an urban park) in Amsterdam by adopting push-and-pull motivation theories. The results of the empirical study revealed several motivating factors such as socialisation, escape, relaxation and entertainment (see Table 2.1) to visit the Vondelpark urban green space.

2.4.2.2. Visitor motivation to zoological and botanical gardens

Visitors to the zoo or similar establishments pursue a fun and relaxing excursion while expecting their interaction with the wildlife to be a close resemblance to nature (Botha, Kruger & Viljoen, 2015). The crucial function of the zoo garden, in terms of conservation and education, is less prioritised than “entertaining” the visitors (Botha et al., 2015).

Ballantyne et al. (2007a) described the motivations of visitors to the Mt. Coot-Tha Botanic Gardens as having an interest in garden design and landscaping techniques, appreciating the rare and aesthetic quality of plants, admiring garden ambience and scenery, taking pleasure in the outdoors, the peace and tranquillity of garden spaces and their restorative and spiritual benefits, and recreation social interaction.

2.4.2.3. Visitor motivation to nature reserves

Iversen, Hem and Mehmetoglu (2016) investigated the relationship between personal motives and cultural values in the context of tourism. This study further examined whether cultural values differ across tourist segments based on their travel motivations. An internet survey was administered on potential tourists visiting a nature-based destination, Fjord Norway. The results indicated that travel motives and cultural values can serve as discriminators between lifestyle segments. The three motive segments included the nature and novelty, the status and the relaxation segment.

Kim, Lee, Uysal, Kim and Ahn (2015) explored motivations, well-being, personal values and revisit intentions of hiking tourists' behaviour. The study demonstrated empirical and theoretical evidence of the relationship among these four constructs. A sample of tourists from South Korea was drawn and an exploratory study conducted.

Yousefi and Marzuki (2012) outlined travel motivation of international tourists to Penang, Malaysia. The results of the factor analysis indicated that 'novelty and knowledge seeking' and 'cultural and historical attractions' were the most agreed upon push and pull travel domains for international tourists travelling to Penang.

Jönsson and Devonish (2008) explored the underlying reasons (motivations) tourists visit a nature-based destination in Barbados (West Indies Island). The main objectives were to determine whether differences existed in motivations among people from different countries and examine whether there were differences in motivations between male and female tourists and among tourists of different age groups. A comparative study of differences in motives between specific groups was done. The authors proposed an integrated approach in understanding tourist motivations based on their origins and how these contribute to the tourist' image of the specific destination.

Beh and Bruyere (2007) addressed the needs of three national reserves in North Central Kenya to develop a tourism strategy aimed at enhancing opportunities for tourists at the reserves. Visitor segment profiles based on their motivations for visiting the reserves were identified. A factor analysis on motivations revealed eight motivation factors (See Table 2.1), and three distinct visitor segments, namely learners, escapists and spiritualists were identified using a cluster analysis.

Botha (2011) determined the travel motives of tourists to three selected national parks in South Africa and whether there were differences and / or similarities between these motives. The findings included travel motives of tourists to the selected national parks, which were, among others, to break away from routine, to relax, to explore a new destination, to spend time with friends, for the benefit of my children and family recreation or time with special people, for educational reasons and to learn about nature, wildlife and appreciate endangered species, to learn about animals and endangered species, to

learn about plants, to photograph animals and plants, as well as good accommodation and facilities.

Milliken (2015) used a case study to indicate the motivations of visitors to eight nature reserves or conservation areas located in areas that vary in economic and social equity, in the southern and eastern suburbs of Cape Town. The research was intended to discover who used these urban green spaces and their reasons (motivations) and how the sites were accessed. The study found that eight green spaces were visited for a variety of reasons such as birding, educational programmes, exercise, nature appreciation and fresh air.

Table 2.1 presents a summary of factors measuring travel motivation for visitors to urban green spaces (both internationally and local), as identified by various authors. These are presented in a chronological order and reflect either the visitors' motivational factors or items identified per author Ballantyne et al. (2007a), Beh & Bruyere (2007), Botha (2011), Donaldson et al. (2016), Iversen et al. (2016), Jönsson & Devonish (2008), Kim et al. (2015), Lianouridis (2010), Milliken (2015), Murphy et al. (2007), Sickler & Fraser (2009), Ward, et al., (2010), Yoon & Uysal (2003), and Yousefi & Marzouki (2012) are provided in Table 2.1. The table's layout is presented in a horizontal continuous format as indicated in Table 2.1.

Table 2.1: Summary of the literature on factors used to measure visitors' motivation to urban green spaces

Iversen et al. (2016)	Donaldson, et al. (2016)	Kim et al. (2015)	Milliken (2015)	Yousefi & Marzuki (2012)	Botha (2011)	Lianouridis (2010)
Social interaction	Socialisation		Outing with children		Social interaction, children, friends, and family	Socialisation
	Escape	Enjoying the natural environment and escaping from everyday life	Fresh air		Escape	Escape
	Leisure				Leisure	
Novelty		Pursuing a new type of travel		Novelty and knowledge seeking		Novelty
Active in nature	Activities in nature	Pursuing a healthy life	Exercise		Activities in nature	
Relaxation		Pursuing intimacy	Relax	Rest and relaxation	Relaxation	Relaxation
	Cultural			Cultural and historical	Culture	
			Nature appreciation	Environment and safety		
			Curiosity		Education	
	Recreation		Recreation			Entertainment
Status				Ego enhancement	Prestige	Prestige

Table 2.1 continued after author Lianouridis (2010) with Sickler and Fraser (2009).

Sickler & Fraser (2009)	Jönsson & Devonish (2008)	Ballantyne et al. (2007a)	Beh & Bruyere (2007)	Murphy et al. (2007)	Yoon & Uysal (2003)	
Social experience		Social contact	Adventure	Meet new people		
			Escape	Escape stress/ routine	Escape Away from home	
Aesthetic appreciation		Learning and discovery	Learning	Learn new skills		
			Nature	Exotic places (urban green spaces)		
				Novel experiences		
Relaxation and peace	Physical		Adventure	Physically active	Wide activities Water activities	
				Family and friends	Family togetherness	
			Adventure	Places can talk about		
Entertainment by animals	Culture		Learning Culture		Different Culture Local cuisine	
				Learn about people/ places	Knowledge	
			Nature		Natural scenery	
			Personal growth		Achievement	
			General viewing			
		Learning about plants and gardens	Mega-fauna			
	Pleasure seeking	Enjoyment				

	Relaxation	Restoration			Safety / fun	
					Modern amenities	
		Self-fulfilment				
					Exciting	

From Table 2.1, it is deduced that visitors to urban green spaces are motivated by various factors, including for example, social interaction, novelty, relaxation, status, learning and discovery, escape and pleasure seeking. The literature assisted in selecting items to measure visitor motivations to urban green spaces as applied in this study - see Section 3.5, the construction of the research instrument (questionnaire).

An important variable of visitors to urban green spaces is to understand visitors' perception of the environment and its conservation. Environmental awareness (visitors' knowledge about the environment) of visitors to urban green spaces are introduced and discussed next.

2.5. ENVIRONMENTAL AWARENESS OF VISITORS TO URBAN GREEN SPACES

Environmental awareness of visitors to urban green spaces is presented in the context of which it takes place (2.5.1) and reporting on relevant research done (2.5.2) for the purpose of the study.

2.5.1. Environmental awareness in context

Environmental awareness refers to the opinions, values, ideas and knowledge about the environment as a place in a man's development and life (Bulatovic & Rajovic, 2018; Wielewska & Zuzek, 2015). Environmental awareness is understanding the fragility of the natural environment and the importance of its protection. Promoting environmental awareness is a way to promote environmental stewardship and participation in crafting a positive future for coming generations (Bulatovic & Rajovic, 2018:3).

2.5.2. Environmental awareness of visitors to urban green spaces

Various studies have reported findings related to environmental awareness in general as well as in the tourism field, including nature reserves and botanical gardens. The measuring instruments used in these studies were adapted and applied to this study (Refer to table 2.2). A discussion of the table is as follows:

Research by Bulatovic and Rajovic (2018) measured (by means of a questionnaire), the environmental awareness of residents in Vozdovac (Belgrade, Serbia). Results indicate that in terms of environmental awareness, they act responsible for the benefit of the environment, respondents know the various standards and legislation on environmental protection, classify domestic waste and are aware of the meaning of sustainable development.

In a study conducted by Goyal and Grewal (2017) that investigated environmental awareness attitudes of respondents in Indiathe results indicated consciousness about the fragility of the environment and consciousness about conservation. Respondents with a high level of awareness are found to be significantly high on all five dimensions of environmental attitudes -- environmental concern, health and hygiene, wildlife, population explosion, polluters and forests.

In another study, Ballantyne, Packer and Falk (2011) explained that different wildlife tourism experiences can positively influence tourists' appreciation, actions, and awareness in relation to the natural environment and wildlife. Environmental awareness was measured among respondents in Australia by donating money to a nature or conservation organisation, showing interest in learning about environmental issues, having a strong view on conservation issues, recycling at home, and contemplating actions that harm the natural world. Results indicated that a relatively small proportion of the variance in long-term environmental learning could be accounted for by the visitor experience. The retention of new knowledge and understanding on environmental awareness are maintained and strengthened.

Further research followed and Ballantyne et al. (2007a) informed the development of appropriate interpretive strategies targeting conservation issues. The study addressed the need by describing the environmental awareness, motivations and interests of visitors to the Mt. Coot-Tha Botanic Gardens (Australia). Environmental awareness was measured by items such as: "I am interested in learning about environmental issues"; "I often think about whether my actions harm the natural world"; "I actively search for information, donate money to environmental conservation and I recycle at

home". The results indicated that responses were mostly in the moderate-high range for conservation awareness and low-moderate for conservation commitment. The visitors at the garden were less interested in, and committed to, conservation issues and were less motivated to learn than the visitors to other free-choice learning settings such as zoos, museums, heritage sites, aquariums, natural areas, and wildlife tourism activities.

A summary of the two themes (Theme 1: *Learning / Actions* and Theme 2: *Commitment*) measuring environmental awareness of visitors to urban green spaces are presented chronologically together with the items identified by various authors (Bulatovic & Rajovic, 2018; Goyal & Grewal, 2017; Ballantyne, et al., 2011; Ballantyne et al., 2007a), are provided in Table 2.2. The literature study conducted on environmental awareness revealed rich data that included the various items that were used to measure the construct. Furthermore, it assisted in identifying the items that measured environmental awareness as applied in this study. See Section 3.5 for the construction of the research instrument (questionnaire).

Table 2.2: Summary of the literature on, and items used to measure, visitors' environmental awareness

Bulatovic & Rajovic (2018)	Goyal & Grewal (2017)	Ballantyne et al. (2011)	Ballantyne et al. (2007a)
Theme 1: Learning / Actions			
Priority of environmental issues	Education about pollution and protecting the environment	Interested in learning about environmental issues	Interested in learning about the environment
Behave environmentally responsible	Environmental concern	Think about whether actions harm natural world	Think about whether my actions harm the natural world
		Enjoy spending my leisure time observing animals	
		Enjoy watching TV documentaries about wildlife	Enjoy watching lifestyle, gardening TV programs
Familiar with sustainable development	Familiar with sustainability, sustainable development and conserving biodiversity	Self-rated knowledge about wildlife conservation	
Sources of information about waste disposal and protecting the living space		Look for information about the environment on TV or other media	I would like to learn more about identifying noxious plants, water-wise gardening and organic gardening
		Participate in public land/water clean-up	
		Purchase products that are environmentally friendly	I use environmentally friendly products
	Government should ban plastic		
	Environment pollution control, fines for littering	Pick up other people's litter	
	Fuels should not be wasted, parking fines for using own car, higher gasoline prices, encourage cycling	Carpool or drive a fuel-efficient car	

	Aware of best way of disposing domestic waste		
	Compassionate towards animals		
Theme 2: Commitment			
		Actively search for information about wildlife conservation	Actively search for information about wildlife conservation
		Donate money to nature or conservation organisation	Donate money to environmental conservation
Recycle household waste		Recycle bottles, cans and paper	I recycle at home
Neighbourhood, association, or group actively engaged in environmental issues Participate in environmental action	Participate in campaigns on stopping pollution	Do volunteer work for a group that helps the environment	I do volunteer work for groups who help the environment
		Use green shopping bags	
	Conserve natural resources, use solar ovens	Conserve energy at home or work	
		Conserve water in the home and garden	
		Talk to others about the importance of the environment	

Based on Table 2.2, the environmental awareness literature revealed two themes: *Learning / Actions* and *Commitment*. Furthermore, the *Learning / Actions* theme includes items such as purchasing environmentally friendly products, seeking information about the environment, and having an interest in learning about environmental issues. Items in the *Commitment* theme are to donate money to nature or conservation organisations, recycle household waste and conserving natural resources.

Nature and being outdoors have a significant influence on urban dwellers. Being in urban green spaces has a positive psychological effect on a person's mind. The subjective well-being of visitors to urban green spaces is conceptualised in the next section.

2.6. SUBJECTIVE WELL-BEING OF VISITORS TO URBAN GREEN SPACES

The next two sections introduce the value of urban green spaces on visitors' subjective well-being in the context of which it takes place (2.6.1) and reports on relevant research conducted (2.6.2) for the purpose of the study.

2.6.1. Subjective well-being in context

Literature shows that urban green spaces can contribute to the well-being of the visitors and therefore further research on well-being is needed in the context of urban green spaces (Uysal et al., 2015). Subjective well-being is defined as "the feeling individuals have about their lives or individuals' perceptions of achieving what they want in life" (Diener, 1984; Kim, Lee, Uysal, Kim & Ahn, 2015; Veenhoven, 1991). "Human happiness is so important; it transcends all other worldly consideration" (Aristoteles as cited by Craig, 2021). People experience high subjective well-being when feeling many pleasures and few pains, many pleasant and a few unpleasant emotions, are absorbed in interesting activities and are overall satisfied with their lives in general (Parsons, Filep, Houge, Mackenzie & Brymer, 2019).

Subjective well-being is an important subject in various disciplines, including sociology, psychology, and gerontology (Kim et al., 2015). Different disciplines define subjective

well-being in terms such as happiness, life satisfaction and quality of life (Gilbert & Abdullah, 2004; Kim et al., 2015). It is also recognised in the field of tourism management as literature indicates that tourism contributes to the subjective well-being of tourists and visitors (Kim et al., 2015; Sirgy & Cornwell, 2001). In particular, nature-based tourism activities, including urban green spaces, are related to the health and well-being of tourists and visitors (Balmford & Bond, 2005; Heintzmann & Mannell, 2003, Kim et al., 2015:3).

2.6.2. Subjective well-being of visitors to urban green spaces

The following studies have reported findings related to well-being in the tourism field. The measuring instruments used in these studies were adapted and applied to this study (Refer to Table 2.3).

Saayman et al. (2018) proposed an index approach to study the impact of travel experience on tourists' level of satisfaction and their sense of well-being. Key findings indicated that the higher the impact of the trip on the tourist's sense of well-being, the higher the loyalty towards the visited destination.

Loncaric, Dlacic, Kos Kavran (2018) explored the co-creation of the tourist experience with travel professionals and what impact it had on improving the visitor's quality of life through the general experience of their visit. Adding to existing literature that stresses the role of experiential marketing in co-creating an experience for tourists thus contributing to their quality of life. A survey was conducted among Croatian respondents that indicated that co-creation of the tourist's experience does influence the general trip satisfaction, which in turn influences the perceived quality of life.

Reitsamer and Brunner-Sperdin (2017) investigated the impact of place perception on the well-being of tourists to provide an understanding of how the attributes at a destination influence a tourist's response behaviour. Data was collected through a self-administered survey from respondents at three different tourism destinations in Austria. The following items were used to measure well-being: "I was happy when staying at the destination"; "I was pleased when staying at the destination", "I was satisfied when staying at the destination". The results provided empirical evidence that tourists report

higher levels of psychological well-being if the destination provides an acceptable combination of sense-making in terms of amenities and access as well as attributes they can explore such as activities and attractions, the local community and entertainment options. Findings from Reitsamer and Brunner-Sperdin's (2017) study showed that tourists' well-being has a substantial, positive impact on their intention to return to the specific destination and their desire to engage in positive word-of-mouth referrals about the visited destination.

Mathis, Kim, Uysal, Sirgy and Prebensen (2016) tested a model that proposed relationships among five constructs: satisfaction with the vacation experience, loyalty to the service provider, customer involvement, satisfaction with co-creation of an experience and perceived impact of the vacation on overall life. Data was collected using an online survey in America. Items measuring quality of life were: "Overall, my experience with this trip was memorable having enriched my quality of life", "my satisfaction with life in general was increased shortly after the trip and overall", "I felt happy upon my return from that trip".

Literature reviewed by Uysal, Sirgy, Woo and Kim (2016) provided guidance to spur future research on quality of life and well-being research in tourism. The review focused on two major constituencies: residents of host communities and tourists. The goals of the research were to describe the findings of the study, highlight the sampling used as well as the data collection method and to discuss issues of construct measurement. Most previous studies, related to these two constituencies, show that tourism experiences and activities have a significant effect on both the tourists' overall satisfaction with life and well-being of the residents. Thus, tourists' experiences and the tourism activities that they partake in tend to contribute to positive affects in a variety of different domains in life such as family, leisure, social and cultural life.

Kim, Lee, Uysal, Kim and Ahn (2015) explored the behaviour of hiking tourists' motivation, their personal values, subjective well-being and revisit intention among South Korean tourists. The results suggested that the revisit intention was affected by

tourist motivation and subjective well-being. Hiking-tourists' motivation and personal values are also effective predictors of subjective well-being.

Carrus et al. (2015) argued that literature on human experience in green environments widely shows positive outcomes when people get in contact with nature. The study addressed the issue of whether urban residents' evaluations of peri-urban and urban natural settings are derived from contact with these settings or if it varies as a function of their biodiversity. The field study evaluated benefits and subjective well-being as reported by the urban residents visiting four different typologies of green spaces. Typologies used, included parks, pinewood forest plantations and peri-urban natural settings. A questionnaire measured items such as the length and frequency of the visit, self-reported benefits and perceived restoration of the visit to the green spaces. These questionnaires were administered in situ to 569 residents of four Italian medium-to-large sized cities: Bari, Florence, Rome, and Padua. Results showed the positive role of biodiversity upon perceived restorative properties and self-reported benefits for urban and peri-urban green spaces.

Quality of life has become a dominant issue and concern in people's lives and the research on this topic has largely increased in the past decades. Only limited studies on quality-of-life research occur in the field of tourism. A study by Carneiro and Eusebio (2011) measured visitors' perceptions of tourism impact on their quality of life and revealed that visitors perceived more positive tourism impact on their quality of life from several features such as motivations to travel, travel group, satisfaction with the visit and interaction with local residents.

Lafortezza et al. (2009) reported that urban green spaces provide greater capacity, compared to built-up areas to promote human health and well-being. A questionnaire was administered to visitors at selected green spaces in Italy and the United Kingdom. The findings indicated that longer and frequent visits to green spaces generate significant improvements of the benefits perceived and the well-being amongst the users.

A summary of the two themes (Theme 1: *Quality of life* and Theme 2: *General well-being)* that can be used to measure subjective well-being of visitors to urban green spaces are presented chronologically. The items identified by various authors are also provided in Table 2.3. The table's layout is presented in a horizontal continuous format as indicated in Table 2.3.

Table 2.3: Summary of the literature on and items used to measure visitors' subjective well-being

Saayman et al. (2018)	Loncaric et al., (2018)	Reitsamer & Brunner-Sperdin (2017)	Mathis et al. (2016)	Uysal, Sirgy, Woo & Kim (2015)
Theme1: Quality of life				
				Well-being
My satisfaction with life in general has increased with this trip.	My satisfaction with life in general has increased shortly after this trip.	I was satisfied when staying at this destination.	My satisfaction with life in general was increased shortly after the trip.	Satisfaction / Life satisfaction
Overall, I feel happy after this trip.	Overall, I feel happy after this trip.	I was happy when staying at this destination.	Overall, I felt happy upon my return from that trip.	Happiness
My experience with this trip was memorable having enriched my quality of life.	Overall, my experience with this trip was memorable, having enriched the quality of my life.		Overall, my experience with this trip was memorable, having enriched my quality of life	
		I was pleased when staying at this destination.		
Theme 2: General well-being				
				Frequency of physical activity.
Table 2.3 continued after author Uysal, Sirgy, Woo & Kim (2015) with Kim, Woo and Uysal (2015).				

Kim, Woo & Uysal (2015)	Kim, Lee, Uysal, Kim & Ahn (2015)	Carrus et al. (2015)	Carneiro & Eusebio (2011)	Lafortezza et al. (2009)
Theme 1: Quality of life				
After visiting the attraction, I feel I lead a meaningful life		Helps me to relax		
	Although I have ups and downs, in general, I feel good about life.			
	Satisfaction with life.			Satisfaction with life
Although I have ups and downs, in general, I feel good about life.	Feeling of happiness upon return from the attraction.			Happiness
My satisfaction with life in general has increased shortly after this trip				
Overall, I felt happy upon my return from that trip.				
Overall, my experience with this trip was memorable, having enriched the quality of my life.				
Theme 2: General well-being				
	Felt better physically.	Physical activity Feel better than before.		Felt better physically.
		I feel psychological benefits after visiting the attraction.		
	Felt better mentally.	Psychological benefits		Felt better mentally, psychological benefits
		Being here helps me to focus on getting things done		

		Being here suits my personality		
		Perceived restorativeness		
			Visiting the attraction decreased my negative feelings	
			I feel positive after visiting the attraction.	
				Ability to be proactive
				Ability to be self-sufficient

From the preceding discussion as reflected in Table 2.3, Theme 1: *Overall quality of life* includes items such as “my satisfaction with life in general increased with this trip and overall”, and “I feel happy after my trip”. Theme 2: *General well-being* includes items such as “helps me to relax”, “satisfaction with life and although I have ups and downs”, and “in general I feel good about life”.

Urban dwellers often return to their favourite urban green space (Reitsamer & Brunner-Sperdin, 2017), as such revisit intention of visitors to urban green spaces is discussed next.

2.7. REVISIT INTENTION TO URBAN GREEN SPACES

For the management of the urban green spaces, it is important to determine if the visitors intend to revisit the urban green space, and determine the reasons for the decision not to revisit. Revisit intention has been identified as a key topic in tourism literature (Viet, Dang & Nguyen, 2020). Revisit intention is defined as “behavioural intention to revisit a destination” (Kim et al., 2015:81). Baker and Crompton (2000) defined it as “a visitor repeating an activity or revisiting a destination”. Repeat visitors participate more intensively in activities and are more satisfied and spread positive word-of-mouth advertising of the spaces visited (Lehto, O’Leary & Morrison, 2004; Li, Wen & Ying, 2018; Viet, Dang & Nguyen, 2020:3).

Various researchers (Kim, Lee, Uysal, Kim & Ahn, 2015; Kim, Woo & Uysal, 2015; Murphy et al. 2007; Reitsamer & Brunner-Sperdin, 2017) have explored the revisit concept in tourism:

- Reitsamer and Brunner-Sperdin (2017) investigated the impact of place perception on the well-being of the tourists to provide an understanding of how the attributes at a destination influence a tourist’s response behaviour. Data was collected through a self-administered survey from respondents at three different tourism destinations in Austria. Results showed that tourists’ well-being has a substantial, positive impact on their intention to return to the specific destination.

- Kim, Lee, Uysal, Kim and Ahn (2015) explored the behaviour of hiking tourists' motivation, their personal values, subjective well-being and revisit intention among South Korean tourists. The results suggested that the revisit intention was affected by tourist motivation and subjective well-being.
- Kim, Woo and Uysal (2015) examined the relationship between the travel behaviour of elderly tourists in South Korea and their overall quality of life and found that overall quality of life has a positive influence on revisit intention among the elderly.
- Murphy et al. (2007) investigated the relationship between tourists' motives, tourist self-image and destination brand personality. Data was collected by means of a survey in Queensland Australia – the Whitsunday Islands. Results showed that were tourists can make an association between a destination and a destination brand personality, and where this association is consistent with their desired holiday experience a high level of congruity will exist between tourists' self-image and their perceptions of the destination. In turn this self-congruity was related to satisfaction with a visit to the destination but not to intention to travel to the destination.

The intention to revisit a particular urban green space is highly likely if it was a positive experience.

2.8. CONCLUSION

"Urban tourism research is of growing importance in the global South and research in South Africa is best documented" (Rogerson & Rogerson, 2014:199). Cities are growing tourism destinations in both developing and developed countries and for policymakers the promotion of tourism is a vital issue (Rogerson & Rogerson, 2014).

Chapter 2 comprised the secondary research conducted for the current study. The structure of this chapter is outlined in Figure 2.1. The process flow addressed tourism, consisting of urban and rural tourism. Since the focus of this study is on urban green spaces, the literature elaborated on this topic. Furthermore, the theoretical concepts of

the study, travel motivation, environmental awareness, subjective well-being and return intention of visitors in urban green spaces, were discussed. The next chapter covers the research design and methodology that were used to address the research objectives of this study.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1. INTRODUCTION

The research problem, research objectives and secondary research were introduced in chapters 1 and 2. The secondary research (literature review) built an understanding of the fundamental concepts of urban tourism, urban green spaces, visitor motivation, environmental awareness, subjective well-being and revisit intention.

This chapter explains the research design and method as applied in this study in order to address the research objectives (see section 1.3). The main focus of this chapter is to expain the research method applied to profile visitors of four selected urban green spaces in the City of Tshwane. The steps of the primary research process as well as the application to this study are illustrated in Figure 3.1.

STEPS		PRIMARY RESEARCH PROCESS BY MEANS OF A QUANTITATIVE STUDY		APPLICATION TO THE STUDY
STEP 1	→	Select a research design (Section 3.3)	→	Quantitative cross-sectional survey design
STEP 2	→	Selecting the sample (Section 3.4)	→	Non-probability sampling method, Purposive sampling
STEP 3	→	Select and develop the research instrument (Section 3.5)	→	Self-administered questionnaire
STEP 4	→	Conduct a pilot test (Section 3.6)	→	A pilot test was undertaken including visitors to each of the four selected urban green spaces in the City of Tshwane.
STEP 5	→	Data collection (Fieldwork) (Section 3.7)	→	Data collection at the four urban green spaces: Rietvlei Nature Reserve, Pretoria National Botanical Gardens, National Zoological Garden

				(Pretoria Zoo) and Austin Roberts Bird Sanctuary
STEP 6	→	Data processing (Section 3.8)	→	Data cleaning, data coding and data capturing
STEP 7	→	Data analysis (Section 3.9)	→	Statistical methods: Descriptive statistics, EFA, ANOVAs and correlations.
STEP 8		Present the research results of the study and make recommendations		Chapters 4 and 5

Figure 3.1: The primary research process (Source: Adapted from De Vos et al. 2015; Wagner et al., 2015; Leedy & Ormrod, 2014)

Firstly, this chapter describes the study sites where the primary data was collected. Each step of the primary research process is then outlined in the sections that follow. Lastly, the research ethics considerations as relevant to this study are discussed.

3.2. STUDY SITES: FOUR URBAN GREEN SPACES IN THE CITY OF TSHWANE

The City of Tshwane is a metropolitan city in the province of Gauteng, South Africa. Although the city has several urban green spaces, this research was conducted at the four selected urban green spaces, namely Rietvlei Nature Reserve, Pretoria National Botanical Gardens, National Zoological Garden (Pretoria Zoo) and the Austin Roberts Bird Sanctuary (See section 3.4 for the sample selection). Figure 3.1 provides a map of the City of Tshwane, indicating the location of the study sites.

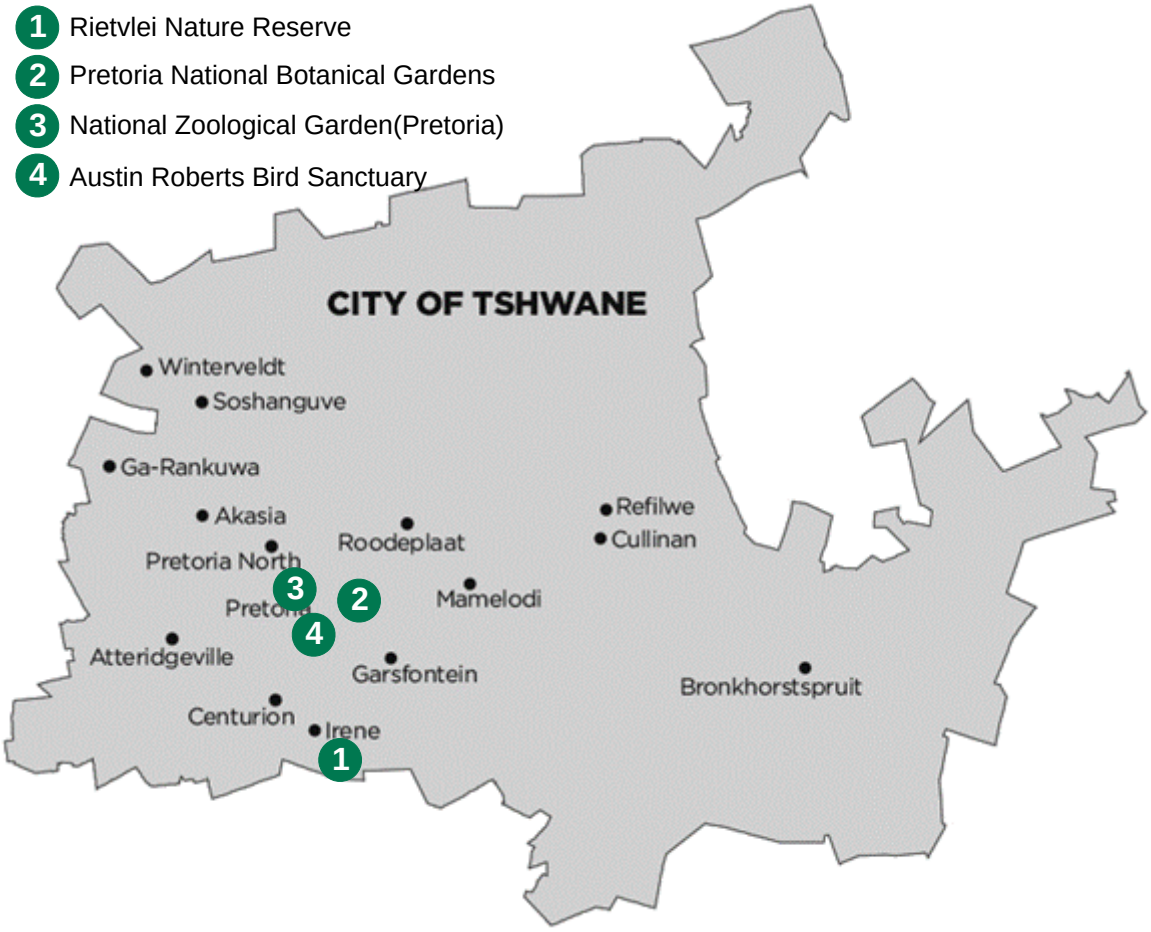

Figure 3.2: Four selected urban green spaces in the City of Tshwane (Source: Adapted from Municipalities of South Africa, 2021)

Table 3.1 outlines the identifying characteristics – the name, date established, location, operating hours and size – of each of the selected urban green spaces for this study.

Table 3.1: Identifying characteristics of the selected urban green spaces – Rietvlei Nature Reserve, Pretoria Botanical Gardens, SANBI National Zoo Gardens of South Africa and the Austin Roberts Bird Sanctuary.

Urban green spaces	Rietvlei Nature Reserve	Pretoria National Botanical Gardens	National Zoological Garden (Pretoria Zoo)	Austin Roberts Bird Sanctuary
Date established	1934	1958	1899	1956
Mission / Purpose	To conserve, preserve and protect certain fauna and flora, the animal populations and their habitats.	The South African National Biodiversity Institute (SANBI) contributes to South Africa's sustainable development by facilitating access to biodiversity data, generating information and knowledge, building capacity, providing policy advice, showcasing and conserving biodiversity in its national botanical and zoological gardens.	To champion the exploration, conservation, sustainable use, appreciation and enjoyment of South Africa's exceptionally rich biodiversity for all South Africans.	Refuge for birds, to breed in a safe, undisturbed habitat. Educational and recreational public attraction for avitourists.
Location	Rietvallei, Pretoria. (see Appendix D: Maps of the study sites)	Daspoort, Pretoria, (see Appendix D: Maps of the study sites)	Brummeria, Pretoria, 0186 (see appendix D: Maps of the study sites)	Muckleneuk, Pretoria (see Appendix D: Maps of the study sites)
Opening hours	Monday – Sunday (5am – 7pm)	Monday – Sunday (8am – 6pm)	Monday – Sunday (9am – 5:30pm)	Monday – Sunday (7am – 6pm)
Size of the urban green space	3800 hectares	76 hectares	85 hectares	12 hectares
Activities	Game viewing Fresh water fishing Picnic sites Bird hide for bird viewing Non-motorised water sports Hiking trips Horse riding Guided game trips Camping Night drives	Viewing birds and other animals Viewing trees and wild flowers Picnic sites Educational programmes Visitor centre Park runs Attending a concert	Viewing birds and other animals Viewing trees and wild flowers Picnic sites Educational tours Sunset walking safari Guided tours Zoo camp Night run Zoo holiday courses Animal feeding	Bird hide for bird viewing Guided walks Exhibition hall

	Mountain biking Educational programmes 4 x 4 route Horse riding Vewing birds and other animals Viewing trees and wildflowers	Viewing birds and other animals Viewing trees and wildflowers Guided tours SANBI Bookshop Self-guided tree route Pathways Pretoria African Pride Café Milkplum Café: Tea Garden Restaurant Cultural Mokha Restaurant	Walkways Educational tours Rhino encounter Elephant encounter Adopt a wild animal Children's party Wedding Restaurant	

(Source: Birds.com, n.d.; City of Tshwane, 2021; National Department of Tourism, 2012; Nkoana, 2017; Song, Mi, Yang, Sun, Sun & Xu, 2020)

From Table 3.1, a comparison of Rietvlei Nature Reserve, Pretoria National Botanical Gardens, National Zoological Gardens (Pretoria Zoo) and Austin Roberts Bird Sanctuary reflects key similarities such as educational programmes, guided trips, picnic sites, viewing of fauna and flora, and significant differences in the form of the size of the urban green space and adventure activities offered. The National Zoological Garden (Pretoria Zoo) is the oldest urban green space (122 years old), followed by the Rietvlei Nature Reserve (87 years old). The Austin Roberts Bird Sanctuary (65 years old) and the Pretoria Botanical Garden (63 years old) were established 2 years apart. The Rietvlei Nature Reserve is the largest urban green space, followed by the National Zoological Garden (Pretoria Zoo), the Pretoria Botanical Garden, and Austin Roberts Bird Sanctuary is the smallest.

Typical visitors to the Rietvlei Nature Reserve are nature lovers, outdoor enthusiasts, and those interested in the numerous activities offered at the reserve. Fishermen can relax on the banks of the dam, partake in water sports, horse riding and guided walks, make use of the picnic sites, 4x4 routes and mountain biking trails and go on night drives (City of Tshwane, 2021; Song et al., 2020).

The Pretoria National Botanical Gardens attract visitors that enjoy the outdoors especially visiting gardens and learning about indigenous plants through the various educational programmes offered and taking a self-guided tree route or a simple walk on the pathways. Often, events such as park runs, concerts and picnics are also held at this site (City of Tshwane, 2021; Nkoana, 2017).

At the National Zoological Gardens (Pretoria Zoo) visitors can spend time outdoors, have a picnic, learn about the animals through the educational programmes or participate in an elephant or rhino encounter (City of Tshwane, 2021).

The Austin Roberts Bird Sanctuary attracts bird lovers who can spend time in the bird hide viewing the birds and taking pictures. Visitors can participate in a guided walk or visit the exhibition centre. The sanctuary offers peace and tranquillity within the city of Tshwane. Visitors can also visit the Blue Crane restaurant which is also in the vicinity (Birds.com, n.d.).

3.3. RESEARCH DESIGN OF THE STUDY

The *first* step of the primary research process was to select a research design. The research design provides the overall structure for the procedures the researcher follows, the data the researcher collects, and the data and analysis the researcher conducts (Leedy & Ormrod, 2014). Accordingly, the research design is the general plan of how the research objectives will be addressed (Blumberg, Cooper & Schindler, 2014; Saunders, Lewis & Thornhill, 2016). For the purpose of this empirical study, a survey was used to collect primary data. The research design underlying the choice of the data collection technique is explained in the following order: the research paradigm and approach (3.3.1), the methodological choice (3.3.2), research strategy and time horizon (3.3.3), and purpose of the study (3.3.4) are outlined (Saunders et al., 2016).

3.3.1. Research paradigm

A research paradigm refers to the framework of values and beliefs to investigate a specific topic (Wagner et al., 2012). This study's research paradigm reflects the principles of positivism. "Positivism holds that the scientific method is the only way to establish

objective reality and truth and is the only foundation to true knowledge" (Wagner et al., 2012:53). Previous research studies (Donaldson et al., 2016; Saayman et al., 2018) of similar nature made use of a quantitative study and proofed to be valid and reliable and therefore was also applied in this study.

3.3.2. Methodological choice

A quantitative method was chosen since an empirical study was conducted to collect primary data by means of a self-administered questionnaire. Quantitative research is defined as a formal, objective, systematic process in which numerical data is used to obtain information about the world (Burns & Grove, 2005 in De Vos et al., 2015). The data can be quantified, verified and is amenable to statistical manipulation. Within a quantitative approach numbers are used to express data in a more structured manner as the data provided by participants can be compared easily. The use of this approach ensured that the information obtained was reliable and suitable to obtaining answers that address the aims and objectives of the research in an unbiased way (De Vos et al., 2015; Kumar, 2005; Leedy & Ormrod, 2005).

3.3.3. Research strategy and time dimension

The research strategy refers to "a general plan of how a researcher will go about answering the research questions" (Saunders et al., 2016:726). A survey is described as an instrument "used to gather data from large groups of people in a relatively short time using questionnaires or interviews (Wagner et al., 2012:22). "In a cross-sectional study, people from different age groups are sampled and compared (Leedy & Ormrod, 2014:194). This study's research strategy was a cross-sectional survey as a single measurement was carried out and not repeated over a period of time.

3.3.4. Purpose of the study

Research is designed to fulfil in useful purposes such as exploration, description, explanation, evaluation or a combination of these (Saunders et al., 2016). The purposes of this study were exploration and description. Firstly, exploratory research was conducted to gain insight into a situation, phenomenon, community or individual when the

problem has not been clearly defined (Wagner et al., 2012). The need for such a study could arise out of a lack of basic information on a new area of interest or to get acquainted with a situation so as to formulate a problem or develop a hypothesis (De Vos et al., 2015). In the current study, exploratory research was used as outlined in the literature review (Chapter 2). In addition, descriptive research sketches a detailed picture of a relationship or social situation (Wagner et al., 2012). The researcher attempts to describe the subject by creating a profile of the visitors to the four urban green spaces.

3.4. SELECTING THE SAMPLE

The next step in the research process was to select the sample. The sampling process included defining the target population, determining the sample frame, selecting the sample methods and determining the sample size (Quinlan, Babin, Carr, Griffin & Zikmund, 2015; Tustin et al., 2010).

The *target population* for this study comprised visitors, 18 years and older, to urban green spaces in the City of Tshwane (Gauteng, South Africa) during January and February 2020. Sample units and sample elements were used to describe the target population (Tustin et al., 2010). A sampling unit is the basic level of investigation and contains the sample elements of the target population (Malhotra, 2015). In the current study, the sample units included the urban green spaces in the City of Tshwane, while the sample elements were the visitors to the urban green spaces in the City of Tshwane.

A *sampling frame* is a list or set of directions for identifying the target population (Malhotra, 2015). A complete list of all urban green spaces in the City of Tshwane was unavailable, therefore a non-probability *sampling method*, purposive sampling was applied to draw the sample. Purposive sampling is considered the most valuable type of non-probability sampling since the researcher relies on experience and previous research to find participants most suitable and representative of the population (Wagner et al., 2012). The primary consideration in purposive sampling is the judgement of the researcher as to who can provide the best information to achieve the objectives of the study (Kumar, 2005). Four urban green spaces in the City of Tshwane (sample unit) were purposively selected, namely the Rietvlei Nature Reserve, Pretoria National Botanical Garden, the National Zoological

Garden (Pretoria Zoo) and Austin Roberts Bird Sanctuary. These spaces were chosen for the specific purpose of selecting visitors to urban green spaces in the City of Tshwane. The reasons for selection were:

- They represent different types of urban green spaces, namely a nature reserve, a botanical garden, a zoo and a bird sanctuary.
- They attract both local and international visitors; therefore, the target population for this study was likely to be found at the four urban green spaces in the City of Tshwane.
- The sample distribution represents different geographical areas in the City of Tshwane (see the map in Figure 3.1).

The City of Tshwane municipality was contacted to obtain permission to conduct the research as they are responsible for the Rietvlei Nature Reserve and Austin Roberts Bird Sanctuary. The South African National Botanical Institute (SANBI) manages the National Botanical and Zoological Gardens in South Africa; they were also contacted for permission to conduct research at the Pretoria National Botanical Garden and the National Zoological Garden (Pretoria Zoo).

The population comprised visitors to urban green spaces in the City of Tshwane which is open to the public. As such, a complete sample frame was unavailable and an infinite population size was assumed. Krejcie and Morgan's guidelines (1970) were followed as they illustrate the relationship between sample size and total population. The table for determining the sample size from a given population shows that for a population (N) > 1 000 000, the recommended sample size is 384 (Krejcie & Morgan, 1970). Based on Krejcie and Morgan's (1970:608) work, the recommended sample size (n) of 384 was appropriate.

A total of 400 respondents completed questionnaires at the four urban green spaces in the City of Tshwane during January and February 2020. However, eight questionnaires were deemed invalid due to the number of missing values rendering them unusable. The

data from a total of 392 (98.0%) valid questionnaires was used for statistical analysis. The actual sample size (392) was larger than the recommended sample size (384).

Recommendations regarding the sample size for the statistical data analysis to be used in the study were also considered. In general, when conducting a factor analysis, a larger sample size is recommended (Pallant, 2016). Tabachnick and Fidell (2007) suggest at least 300 cases to conduct a factor analysis. The sample size of the current study (n = 392) can, therefore, be considered suitable for factor analysis.

3.5. THE RESEARCH INSTRUMENT: QUESTIONNAIRE

The *third* step in the primary research process was to select and develop the research instrument. A self-administered questionnaire was developed, linking questions to each secondary objective. The questionnaire was developed from previous research and the literature review.

To arouse the respondents' interest in participating in the study, a cover page capturing the topic was designed. The participant information sheet described the aim of the study, the time that it would take to complete the questionnaire, anonymity of respondents and voluntary participation, confirmation that completing the question would not result in any harm to the participants, voluntary withdrawal at any point in time, information on data protection and reporting as well as the permissions obtained to conduct the study (see section 3.10). Informed consent to participate in the study was obtained before the respondents completed the questionnaire.

A screening question was included where participants were asked to "indicate the urban green space that you are currently visiting". The questionnaire was designed to answer the research objectives and consisted of six sections. The construction of the questionnaire is outlined in Table 3.2. Refer to Appendix A for the questionnaire.

Table 3.2: Construction of the questionnaire

Section of questionnaire	Type of questions	Questions based on the work of the following authors
A1: Information about your current visit	A1:1 – 2 Close-ended questions.	Ballantyne et al. (2007a); Botha (2011); Iversen et al. (2016); Kim, Lee, Uysal, Kim & Ahn (2015); Lafortezza, Carrus, Sanesi &

		Davies (2009); Loncaric et al., (2018); Milliken (2015); Murphy et al. (2007); Saayman et al. (2018); Yousefi & Marzuki (2012).
A2: Revisit Intention to this urban green space	A2:1-3 Closed-ended, Likert scale	Kim, Lee, Uysal, Kim & Ahn (2015); Kim, Woo & Uysal (2015); Murphy et al. (2007); Reitsamer & Brunner-Sperdin (2017).
B: Visitor motivation to urban green spaces	Question B1 – 34 Closed-ended, Likert scale	Beh & Bruyere (2007); Botha (2011); Chiesura (2003); Donaldson et al. (2016); Jönsson & Devonish (2008); Lianouridis (2010); Milliken (2015); Ward et al., (2010).
C: Activities at the urban green space	Question C1:1 – 16 Question C2: 1 – 17 Question C3: 1 – 17 Closed-ended, Likert scale	Beh & Bruyere (2007); Botha (2011); Chen et al. (2016); Donaldson et al. (2016); Reitsamer & Brunner-Sperdin (2017); Ward, Parker & Shackleton (2010).
D: Environmental awareness of visitors at the urban green space	Question D1 – 10 Closed-ended, Likert scale	Ballantyne et al. (2007a); Balantyne et al. (2011); Ballantyne et al. (2007b); Bulatovic & Rajovic, (2018); Goyal & Grewal, (2017); Groff, Lockhart, Ogden & Dierking (2005); Rawles & Parsons, (2005); Yu & Kim, (2018); van Loggenberg, (2015).
E: Subjective well-being of visitors at the urban green space	Question E1 – 20 Closed-ended, Likert scale	Carrus et al. (2015); Kim et al. (2015); Loncaric et al. (2018); Kim & Ahn (2015); Kim, Woo & Uysal (2015); Lafortezza et al. (2009); Reitsamer & Brunner-Sperdin (2017); Saayman et al. (2018); Seligman (2011); Uysal, Sirgy, Woo & Kim (2015).
F: Biographic information	Question B1 – 34 Closed-ended	Botha (2011), Donaldson et al. (2016); Jönsson & Devonish (2008); Milliken (2015); Ward et al. (2010).

Section A1 included questions on information about the visitors' current visit which was obtained from similar research (Ballantyne et al., 2007a; Lafortezza et al., 2009; Loncaric et al., 2018; Murphy et al., 2007, Saayman et al., 2018). Section A2 comprised questions on the revisit intention that were based on previous literature (Kim, Lee, Uysal, Kim & Ahn, 2015; Kim, Woo & Uysal, 2015; Murphy et al., 2007; Reitsamer & Brunner-Sperdin, 2017).

In Section B, the questions on the motivations of visitors to urban green spaces were derived from similar research done by various authors (Beh & Bruyere, 2007; Botha, 2011; Chiesura, 2003; Donaldson et al., 2016; Jönsson & Devonish, 2008; Lianouridis, 2010; Milliken, 2015; Ward et al., 2010).

Section C included questions on activity preferences at the each of the four urban green spaces (City of Tshwane, 2021; National Department of Tourism, 2012). Activities offered

at the Rietvlei Nature Reserve include game viewing, freshwater fishing, picnic sites, bird hide for bird viewing, non-motorised water sports, hiking trips, horse riding, guided game trips, camping, night drives, mountain biking, educational programmes, 4 x 4 route, viewing trees and wildflowers (City of Tshwane, 2021). The Pretoria Botanical Garden offers the activities such as viewing birds and other animals, viewing trees and wildflowers, picnic sites, educational programmes, visitor centre, park runs, attending a concert, guided tours, SANBI bookshop, self-guided tree route, pathways, and restuarants and cafés (Nkoana, 2017; SANBI, 2021). Activities offered at the National Zoological Garden (Pretoria Zoo) include picnic sites, educational tours, sunset walking safari, guided tours, zoo camp, night run, zoo holiday courses, animal feeding, walkways, educational tours, rhino and elephant encounters, adopt a wild animal, events such as children's parties and weddings, and a restaurant (SANBI, 2021). Austin Roberts Bird Sanctuary offers a bird hide for bird viewing, guided walks and an exhibition centre (City of Tshwane, 2021).

Section D included questions on the level of environmental awareness of visitors to urban green spaces in the City of Tshwane (Beh & Bruyere, 2007; Botha, 2011; Chen et al., 2016; Donaldson et al., 2016; Reitsamer & Brunner-Sperdin, 2017; Ward et al., 2010).

Section E comprised questions on the subjective well-being of visitors to urban green spaces in the City of Tshwane. The items used in these questions were derived from a combination of previous studies (Carrus et al., 2015; Kim, Lee, Uysal, Kim & Ahn, 2015; Kim, Woo & Uysal, 2015; Loncaric et al., 2018; Reitsamer & Brunner-Sperdin, 2017; Saayman et al., 2018; Seligman, 2011; Uysal, Sirgy, Woo & Kim, 2015).

Section F determines the biographic information of visitors to urban green spaces in the City of Tshwane, including the respondents' gender, age, ethnicity, highest level of qualification, marital status, place of residence (Gauteng, other province in RSA or outside RSA borders), (Botha, 2011; Donaldson et al., 2016; Jönsson & Devonish, 2008; Milliken, 2015; Ward et al., 2010).

A Likert scale was used in sections A2, B, C, D and E in the questionnaire (refer to Appendix A). A Likert response scale may be used to measure multi-dimensional attitudes

by using a series of statements and asking respondents to indicate their response on a scale that usually runs from 1 – 5 (Struwig & Stead, 2004; Wagner et al., 2012). Leedy and Ormrod (2005:185) concur with the aforementioned statement and add that this type of question is used when a phenomenon of interests needs to be evaluated on a continuum. According to Cooper and Schindler (2006), the participants are then asked to agree or disagree with each statement made. The respondents were asked to relate their views regarding visitation to the Rietvlei Nature Reserve, the Pretoria National Botanical Gardens, the National Zoological Garden (Pretoria Zoo) and the Austin Roberts Bird Sanctuary in the City of Tshwane by answering each specific question provided in the questionnaire.

Once the research instrument (questionnaire) was developed, it was tested prior to undertaking the actual data collection. The next section describes the pilot testing conducted.

3.6. PILOT STUDY

The *fourth* step in the research process was to conduct a pilot test. The purpose of the pilot test is to refine the questionnaire so that respondents will have no problems in recording the data (Saunders et al., 2016). Furthermore, it is essential to determine the content validity of a measurement instrument and the likely reliability of the data that will be collected (Creswell & Creswell, 2018; Saunders et al., 2016). For this study, a pilot study was conducted to ensure that questions are understood consistently by all participants in this study. Two academics / experts in Tourism Management were asked to examine and provide their opinions on the questionnaire (Hattingh, 2019; Myburgh, personal communication, 2019). Based on their feedback, minor modifications to the questionnaire were made. The researcher selected 25 visitors to each urban green space to complete the questionnaire during November 2019. The respondents' feedback and the data analysis based on the pilot test was considered to modify the final questionnaire. When a questionnaire is designed, pilot tested and amended, it can be used to collect data (Saunders et al., 2016). The data collection procedure is described in the next section.

3.7. DATA COLLECTION (FIELD WORK)

The *fifth* step was to conduct the fieldwork for the study. Fieldwork management and administration are of utmost importance for a research project as it depends on the data collected in the field (Quinlan et al., 2015; Tustin et al., 2010). The four urban green spaces selected for data collection were based on the sampling plan and the permission that was granted by the City of Tshwane municipality and SANBI. Fieldworkers was appointed and briefed on the purpose of the study, the questionnaire content, and how to assist respondents where necessary.

Data collection took place during January and February 2020. Self-administered questionnaires were distributed to visitors at Rietvlei Nature Reserve, Pretoria National Botanical Gardens, the National Zoological Garden and the Austin Roberts Bird Sanctuary in the City of Tshwane. The field workers were situated close to the entrance/exit to request all departing passers-by to take part in the survey. A total of 400 respondents completed the questionnaires at the four urban green spaces (see section 4.2.1 for the sample distribution). The rationale for this request to departing visitors is that the they should have already visited the urban green space since once of the questions were about return intention.

3.8. DATA PROCESSING

The *sixth* step in the research process, data processing, included editing, coding and capturing the data. Data editing consists of inspecting all completed questionnaires to identify and minimise errors, incompleteness, and misclassification (Kumar, 2005). Data coding was done using pre- and post-coding. Data capturing took place as each variable in the questionnaire was entered into a database, using Microsoft Excel®.

3.9. DATA ANALYSIS

Data analysis is the *seventh* step in the primary research process. It is the process used to examine and make sense of the data to answer the research questions (Wagner et al., 2012) and involves the measurement and identification of variation within a set of variables (Hair et al., 2014). The data of the current study was analysed using the

Statistical Package for the Social Sciences (SPSS 26.0). Before the data was analysed, the data set was cleared from possible coding and data capturing errors (Tustin et al., 2010). The following sections will detail the descriptive statistics, (3.9.1), the validity and reliability of the research instrument (3.9.2) and the statistical methods applied in this study.

3.9.1. Descriptive statistics

Descriptive statistics provided an indication of the spread of the data such as the major features including the mean, mode, median, standard deviation and range (Wagner et al., 2012). Descriptive statistics such as a frequency, measures of central tendency and measures of spread were used.

3.9.2. Validity and reliability of the research instrument

The validity and reliability of the research instrument were determined. According to Babbie, Mouton, Vorster and Prozesky (2007), validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration. According to Salkind, (in De Vos et al., 2015) accuracy, truthfulness, genuine, authentic and soundness as synonyms for validity. In the current study, content analysis and statistical evidence were used to establish the trustworthiness of the results. Content validity was established in that two academics (experts in the field of Tourism Management) (see section 3.6) reviewed the questionnaire, and their recommendations were implemented. All sections in the questionnaire were derived from previous literature (see Table 3.2). To establish validity with statistical evidence, a factor analysis was performed in section B of the questionnaire. A factor analysis is a procedure used to determine the underlying factors in a questionnaire from the data (De Vos et al., 2017).

Reliability occurs when an instrument measures the same thing more than once and the same outcome is received (Salkind in De Vos et al., 2015). This study used internal consistency to measure the reliability of the questionnaire. An item analysis was performed on the questions in sections B, D and E to determine Cronbach's alpha values to test the reliability of the questionnaire.

3.9.3. Statistical methods applied in this study

The statistical techniques applied in this study includes exploratory factor analysis (EFA), group differences (ANOVAs) and correlations. The procedure followed for each statistical method are discussed.

3.9.3.1. Exploratory factor analysis

Exploratory factor analysis (EFA) is a method used to reduce data to identify constructs (Wiid & Diggines, 2015). According to Hair et al. (2014:146), the primary purpose of EFA is "to define the underlying structure among variables in the analysis. As an interdependence technique, factor analysis attempts to identify groupings among variables based on relationships represented in a correlation mix". With EFA, all variables that have been measured are related to every factor by a factor loading estimate. A simple structure will result when the variables measured loads highly on one factor and smaller loadings are on the other factors (for example, loadings < 0.4) (Hair et al., 2014). A distinctive feature of EFA is that the factors are not derived from theory, but from statistical results. The factors can thus only be named after the factor analysis was performed (Hair et al., 2014). EFA can be applied without knowing how many factors exist or which factors belong with which variables (Hair et al., 2014).

The procedure followed in the EFA was (Pallant, 2011):

- Step 1: Assessment of the suitability of the data for factor analysis

The variables were measured with a Likert scale in section B of the questionnaire. The relationship between the variables was investigated using Pearson's correlation coefficient. Two statistical measures, namely Kaiser-Meyer-Olkin (KMO) measure of sample adequacy (Kaiser 1970, 1974), and the Bartlett's Test of sphericity (Bartlett 1954) was used to assess the data's factorability (Pallant, 2011). The Bartlett's test of sphericity should be significant ($p < 0.5$) for the factor analysis to be considered appropriate. The KMO index (ranges from 0 to 1) with 0.6 suggested as the minimum value for an adequate factor analysis (Tabachnick & Fidell, 2007). These measures were used to assist in identifying the factorability of the correlation matrix.

- Step 2: Factor extraction

The patterns of correlation among variables were examined by subjecting the items to principal axis factoring (PAF). Communality increases when a variable correlates more highly with one or more variables.

- Step 3: Factor rotation and interpretation

A rotated factor matrix was performed to assist with interpreting what the components represent. The Cronbach's alpha coefficient was used to determine the internal consistency reliability of each factor. A Cronbach's alpha value greater than 0.60 is considered as containing good internal consistency. The inter-item correlation was also performed, where values between 0.2 and 0.4 as recommended by Briggs and Cheek (1986) indicate that items correlate well. Descriptive statistics were calculated for each factor and was subsequently interpreted.

3.9.3.2. Analysis of variance (ANOVA)

The analysis of variance (ANOVA) was used to determine differences between the four urban green spaces. ANOVA is a statistical technique that considers the relationship between continuous dependent variables (Wiid & Diggines, 2015). According to Hair, et al. (2014), ANOVA is a statistical method used to determine, based on a dependent measure, if the samples from multiple groups are from populations with equal means. A post-hoc analysis, in this case the Post-Hoc (Games-Howell) test, is done to compare the different means.

The sample results were examined to verify whether there are differences between the visitors to the four urban green spaces. The ANOVA test was performed to determine the difference between the visitors to Rietvlei Nature Reserve, the Pretoria National Botanical Gardens, the National Zoological Garden (Pretoria Zoo) and the Austin Roberts Bird Sanctuary. The ANOVA test indicated that there were significant differences between the visitors of the four urban green spaces between visitor motivation, environmental awareness, and subjective well-being (see sections 4.6, 4.7 and 4.8).

In the case of significant differences, a 1% level of significance were indicated (p-value < 0.01), an additional Post-Hoc (Games-Howell) test was done to determine where significant differences existed in the four urban green spaces. The Robust Tests of Equality of Means confirmed significant differences (unequal variance) between the means with respect to the four urban green spaces. The effect size was calculated using Eta squared (i.e. effect size) and gave an indication of the extent (i.e. small, medium or large) of the differences between the groups. In the case where equal variances were confirmed, results from Tukey's Honestly Significant Difference (HSD) test were reported (Pallant, 2016).

3.9.3.3. Correlations

The relationships among the constructs of this study (i.e. travel motivations, environmental awareness and subjective well-being) were determined by means of the Pearson's product-moment correlation (Pearson's *r*). Pearson's correlation is a statistical test most widely used to determine correlations and "tells us how much of a variance is accounted for by the correlation" (Leedy & Ormrod, 2014:303). "Pearson correlation is used when you want to explore the strength of the relationship between two continuous variables" (Pallant, 2016:122). The correlation coefficient constantly lies between +1 (perfect positive correlation) and –1 (perfect negative correlation).

Cohen (1988) stated that the values of *r* for small, medium, and large effects, respectively, are .1, .3, and .5. The following guidelines, from Cohen (1988), will help determine the practical importance of correlation coefficients for this study: any score between .1 but < .3 = small, between .3 but < .5 = medium, ≥ .5 = large.

3.10. RESEARCH ETHICS

Strydom (2005:69) defines research ethics as "a set of widely accepted moral principles or codes that offer rules for, and behavioural expectations of, the most correct conduct towards experimental subjects and respondents, employers, sponsors, other researchers, assistants and students."

Prior to the start of the study, official permission from the City of Tshwane municipality (for Rietvlei Nature Reserve and Austin Roberts Bird Sanctuary) and the SANBI (for Pretoria National Botanical Garden, the National Zoological Garden (Pretoria Zoo)) was obtained to conduct the study at the four urban green spaces.

The ethical guidelines prescribed by the University of South Africa (UNISA) was adhered to. The study was approved by the College of Economic and Management Sciences DESTTL Ethics Review Committee (University of South Africa) (2017_CEMS_ESTTL_020).

Approval to conduct the study necessitated efforts to obtain the relevant permissions from the participants (visitors to the four urban green spaces). Respondents were ensured of their anonymity before obtaining their informed consent. A letter of informed consent detailing the nature of the study, the research objectives, the anonymity and confidentiality was provided to the participants to read and sign if they agreed to form part of the study. The ethical principles of voluntary and informed participation, confidentiality, anonymity and non-harm were considered in conducting the research (De Vos et al., 2012).

3.11. CONCLUSION

This chapter addressed the research method used in this study. The chapter explained the steps in the primary research process and how it was applied to this study. A quantitative cross-sectional survey design was chosen for this research; a self-administered questionnaire was developed as a research instrument. Since a sample frame was unavailable, a non-probability sampling method, purposive sampling was used. Data was collected at the four urban green spaces in the City of Tshwane. Data was coded, captured and analysed. Chapter 4 outlines the research results, followed by Chapter 5 that presents the conclusions and the recommendations of the study.

CHAPTER 4: ANALYSIS OF DATA AND DISCUSSION OF RESULTS OF FOUR URBAN GREEN SPACES IN THE CITY OF TSHWANE

4.1. INTRODUCTION

This chapter presents the results pertaining to the analysis of the primary data collected during the fieldwork at four urban green spaces in the City of Tshwane. The primary objective of this study was to profile visitors of four selected urban green spaces in the City of Tshwane: Rietvlei Nature Reserve, Pretoria National Botanical Gardens, the National Zoological Garden (Pretoria Zoo), and the Austin Roberts Bird Sanctuary.

The results presented in this chapter address the following secondary research objectives to profile the urban green spaces:

- Objective 2: To determine the motivations of visitors to four urban green spaces in the City of Tshwane. Section 4.5 reports on the exploratory factor analysis performed to identify emerging themes of visitor motivation in the context of urban green spaces.
- Objective 3: To compare visitor's motivational factors within and between the four urban green spaces in the City of Tshwane. Section 4.6 outlines descriptive statistics and ANOVAs comparing motivational factors for each study site.
- Objective 4: To examine the visitors' environmental awareness at the urban green spaces in the City of Tshwane. These results are reported in section 4.7.
- Objective 5: To determine the subjective well-being of visitors to the urban green spaces in the City of Tshwane. These results are provided in section 4.8.
- Objective 6: To determine the intention to revisit the four urban green spaces in the City of Tshwane. These results are provided in section 4.3.
- Objective 7: To identify preferences regarding activities at four urban green spaces in the City of Tshwane. The results on activity preferences are given in section 4.4

The chapter is structured to address each of the secondary objectives of the study. The biographic information of the participating visitors to the four urban green spaces in the City of Tshwane (sample profile) is reported next.

4.2. BIOGRAPHIC INFORMATION OF RESPONDENTS AT THE FOUR URBAN GREEN SPACES IN THE CITY OF TSHWANE

In this section, descriptive statistics is presented to describe the respondents' profile of each urban green space. Typical biographic information such as gender, age, ethnicity, level of qualification, marital status and origin of visitors was obtained to characterise and profile the visitors at the four urban green spaces.

4.2.1. Participating visitors at urban green spaces

A total of 400 respondents completed questionnaires at the four urban green spaces in the City of Tshwane during January and February 2020. However, eight questionnaires were deemed invalid due to the number of missing values and were omitted from the study. The data from a total of 392 (98.0%) valid questionnaires were used for statistical analysis. Figure 4.1 illustrates the sample distribution of participating visitors at the four urban green spaces in the City of Tshwane.

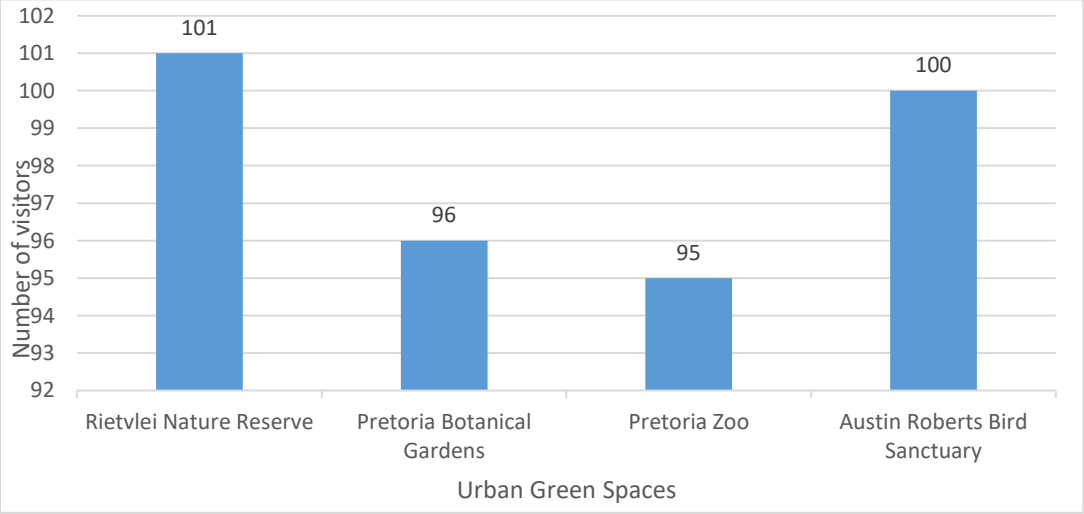

Figure 4.1: Sample distribution of participating visitors at urban green spaces in the City of Tshwane (n = 392)

Figure 4.1 indicates a relative equal sample distribution between the four urban green spaces: Rietvlei Nature Reserve (101), the Pretoria National Botanical Garden (96), the National Zoological Garden (Pretoria Zoo) (95) and the Austin Roberts Bird Sanctuary (100).

4.2.2. Biographic profile of respondents

Table 4.1 provides a summary of the biographic information of the respondents that visited the four urban green spaces.

Table 4.1: Biographic information of the respondents to four urban green spaces (n = 392)

	Category	Rietvlei Nature Reserve (n=101)		Pretoria National Botanical Garden (n=96)		National Zoological Garden (Pretoria Zoo) (n=95)		Austin Roberts Bird Sanctuary (n=100)		Total Sample	
		Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Gender	Male	46	45.5%	44	45.8%	41	43.1%	51	51.5%	182	46.5%
	Female	55	54.5%	52	54.2%	54	56.8%	48	48.5%	209	53.5%
	Total	**101**	**100.0%**	**96**	**100.0%**	**95**	**100.0%**	**99**	**100.0%**	**391**	**100.0%**
Age	Up to 25	0	%	16	16.8%	16	16.8%	2	2.0%	34	8.7%
	26 – 34	25	25.0%	27	28.4%	24	25.2%	27	27.3%	103	26.5%
	35 – 44	39	39.0%	23	24.2%	21	22.1%	24	24.2%	107	27.5%
	45 – 54	17	17.0%	12	12.6%	18	18.9%	20	20.2%	67	17.2%
	55 – 63	13	13.0%	10	10.5%	9	9.5%	11	11.1%	43	11.1%
	64 and older	6	6.0%	7	7.4%	7	7.4%	15	15.2%	35	9.0%
	Total	**100**	**100.0%**	**95**	**99.9%**	**95**	**100.0%**	**99**	**100.0%**	**389**	**100.0%**
Ethnicity	African	9	8.9%	27	28.1%	55	57.9%	2	2.0%	93	23.7%
	White	77	76.2%	59	61.5%	29	30.5%	83	83.0%	248	63.3%
	Other	15	14.9%	10	10.4%	11	11.6%	15	15.0 %	51	13.0%
	Total	**101**	**100.0%**	**96**	**100.0%**	**95**	**100.0%**	**100**	**100.0%**	**392**	**100.0%**
Highest level of education	Matric/ Grade 12	10	10.1%	20	21.5%	23	24.5%	7	7.0%	60	15.5%
	National diploma	27	27.3%	40	43.0%	39	41.5%	38	38.0%	144	37.3%
	Undergraduate degree	36	36.4%	28	30.1%	28	29.8%	46	46.0%	138	35.8%
		26	26.3%	5	5.4%	4	4.3%	9	9.0%	44	11.4%

	Postgraduate degree										
	Total	**99**	**100.0%**	**93**	**100.0%**	**94**	**100.1%**	**100**	**100.0%**	**386**	**100.0%**
Marital Status	Single	10	9.9%	26	27.4%	29	30.9%	17	17.5%	82	21.2%
	Married / living together	82	81.2%	62	65.3%	53	56.4%	73	75.3%	270	69.8%
	Divorced/ Widowed/ Separated	9	8.9%	7	7.4%	12	12.8%	7	7.2%	35	9.0%%
	Total	**101**	**100.0%**	**95**	**100.1%**	**94**	**100.1%**	**97**	**100.0%**	**387**	**100.0%**
Province	Gauteng	81	80.2%	90	93.8%	77	81.1%	92	92.9%	340	87.0%
	Other provinces in RSA	10	9.9%	3	3.1%	8	8.4%	3	3.0%	24	6.1%
	Outside RSA borders	10	9.9%	3	3.1%	10	10.5%	4	4.0%	27	6.9%
	Total	**101**	**100%**	**96**	**100%**	**95**	**100%**	**99**	**100**%	**391**	**100%**

As indicated in Table 4.1, a slightly larger number of female respondents is noticeable in the sample distribution (Male 46.5%; Female, 53.5%). However, male (51.5%) respondents were slightly more than the females (48.5%) at Austin Roberts Bird Sanctuary. This overall result corroborates the findings of the study by Murphy et al. (2007:53) where the female sample distribution was also slightly higher at the Whitsunday Islands in Queensland, Australia. Contrary results were found in Kim, Lee, Uysal, Kim and Ahn (2015) where the female (60,4%) sample distribution was significantly more than male (39.5%) at a nature trail in South Korea. Conversely, the gender distribution in a study by Yousefi and Marzuki (2012), showed that male visitors (59.2%) were more than female visitors (40.8%) in Penang, Malaysia, which is an urban area. Saayman et al. (2018: 392) also found the male distribution (62.1%) higher than the female (37.9%) distribution in Johannesburg, South Africa.

For all four study sites, most of the visitors participating in the study were aged between 35 and 44 years old (27.5%) and 26 to 34 years (26.5%), while only the 8.7% of visitors were 25 years and younger and 9.0% were aged 64 and older. At Rietvlei Nature Reserve, the majority (39.0%) of visitors were between the age of 35 to 44 years old with no participants (0.0%) in the younger age group (up to 25 years). Saayman et al. (2018) correspond with the age category results found at Rietvlei Nature Reserve.

Most of the visitors at the Pretoria National Botanical Garden (52.6%) and the Pretoria Zoo (47.3%) were between the age of 26 and 36 years old (28.4%; 25.3%) as well as 35 to 44 years old (24.2%; 22.1%) respectively. Most of the visitors (51.5%) to the Austin Roberts Bird Sanctuary were also between the ages of 26 to 34 years old (27.2%) and 35 to 44 years old (24.2%). Interestingly, more respondents (42.9%) in the older age group (64 years and older) visited Austin Roberts Bird Sanctuary when compared to the other study sites. This result is in congruent with previous research studies where older age groups prefer attractions with less physical activities and relaxation-based motivations (Jönsson & Devonish, 2008), for example, bird viewers tend to be relatively older (Conradie, 2010). Jönsson and Devonish's (2008) study contradicted this study's results since most of the visitors from their study were in the age category 18-35 years,

whereas in Kim, Lee, Uysal, Kim and Ahn's (2015) study, the majority of the visitors were in the age category 31-40 years.

Most of the respondents were white (63.3%) followed by African (23.7%) and other race groups (13.0%). The racial distribution spread at Rietvlei Nature Reserve, the Pretoria Botanical Garden and Austin Roberts Bird Sanctuary was predominantly white followed by Africans and the other racial groups (76.2%; 61.5%; 83.0% respectively). However, a majority of visitors to the Pretoria Zoo where African (57.9%).

In terms of qualifications, most visitors held a National Diploma (37.3%) or an undergraduate degree (35.8%). Most respondents with post graduate degrees visited Rietvlei Nature Reserve (26.3%). Consistent with Iversen et al. (2016), Yousefi and Marzuki (2012) and Saayman et al. (2018) most of the visitors to urban green spaces were well educated and obtained a qualification.

Regarding the respondents' marital status, a significant majority were either married or living together (69.8%), followed by those who were single (21.2%) and a small percentage (9.0%) falling under the category divorced, widowed or separated. Conversely, Yousefi and Marzuki's (2012) study, found that many visitors were single (71.8%) as opposed to married (28.2%).

A large proportion of the visitors were residents of the Gauteng province (87.2%), followed by visitors from outside South African borders (6.9%) and from other provinces in South Africa (6.1%).

4.3. RESULTS OF REVISIT INTENTION OF VISITORS TO URBAN GREEN SPACES IN THE CITY OF TSHWANE

This section relates to secondary objective 6, namely, to determine the intention to revisit the four urban green spaces in the City of Tshwane. Table 4.2 provides results revisit intention of visitors to the four urban green spaces.

Table 4.2: Revisit intention of visitors to urban green spaces in the City of Tshwane (n = 392)

Urban green space	Rietvlei Nature Reserve	Pretoria National Botanical Garden	National Zoological Garden (Pretoria Zoo)	Austin Roberts Bird Sanctuary	Total Sample (n=392)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Revisit Intension	4.63 (0.504)	4.64 (0.484)	4.63 (0.485)	4.63 (0.485)	4.63 (0.488)

Table 4.2 indicates that most visitors strongly intended to revisit the four urban green spaces: Rietvlei Nature Reserve (4.63), Pretoria National Botanical Garden (4.64), National Zoological Garden (4.63) and Austin Roberts Bird Sanctuary (4.63). This finding corresponds with the Kim et al. (2015) study where most visitors indicated that they intended to return to the urban green space.

4.4. RESULTS OF PREFERENCES FOR ACTIVITIES AT URBAN GREEN SPACES IN THE CITY OF TSHWANE

This section links to secondary objective 7, namely, to identify preferences regarding activities at four urban green spaces in the City of Tshwane. Visitors to the four urban green spaces were asked to indicate their preference for the activities offered at these sites. This was measured by means of a Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). The mean score for the respondents' preference at each urban green space was calculated for every activity at the particular urban green space.

4.4.1. Preferences for activities at Rietvlei Nature Reserve

Figure 4.2 presents the mean scores of the visitors' preferred activities at Rietvlei Nature Reserve.

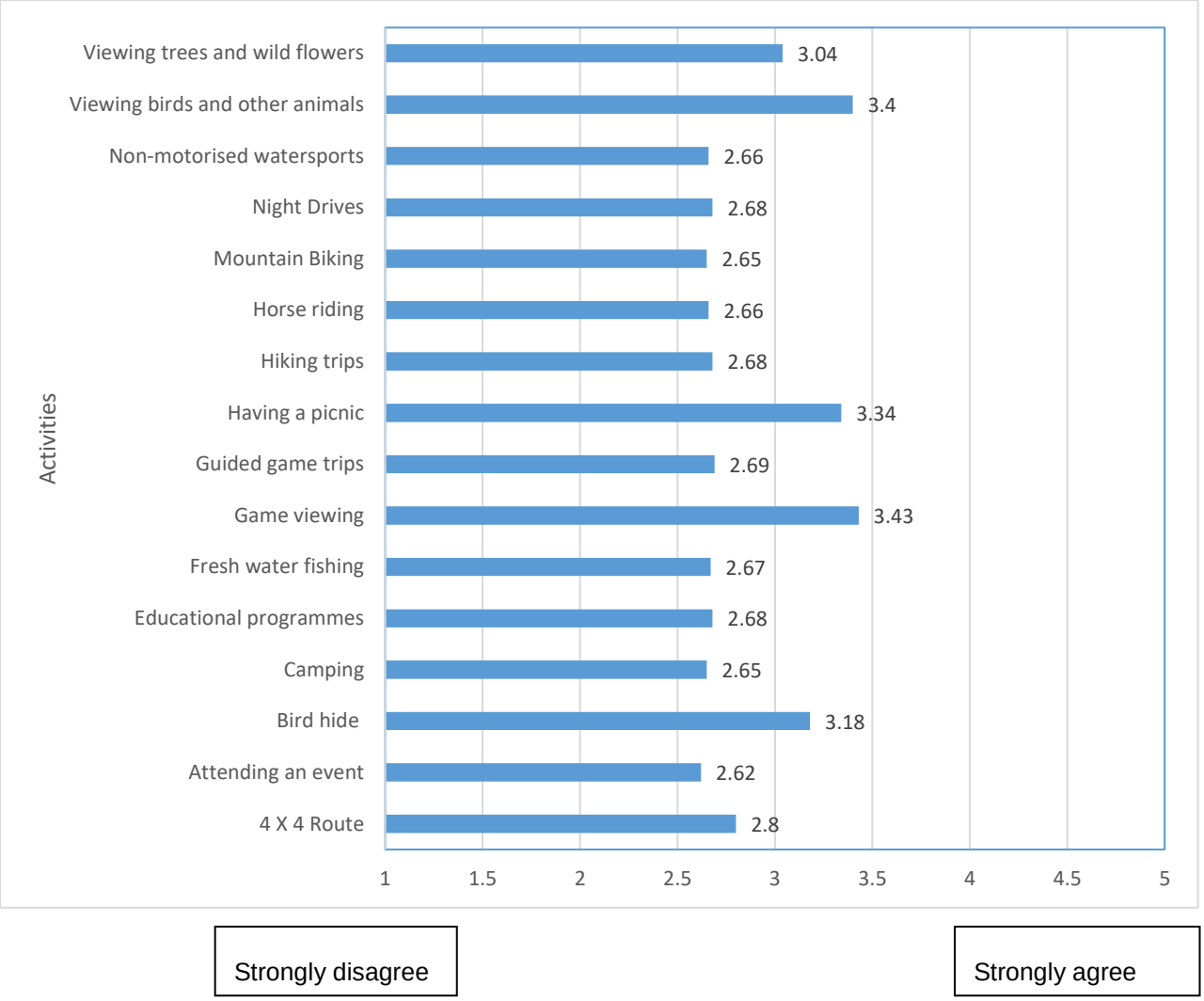

Figure 4.2: Mean scores of visitor preferences for activities at Rietvlei Nature Reserve

Figure 4.3 shows that visitors to Rietvlei Nature Reserve indicated that *game viewing* was the preferred activity with a mean score of 3.43, followed by *viewing birds and other animals* (3.40), *having a picnic* (3.34), and *visiting the bird hide* (3.18).

The visitors indicated a lower preference for the activities such as attending an event, camping, educational programmes, freshwater fishing, guided game trips, hiking, horse riding, mountain biking, night drives and non-motorised water sports.

4.4.2. Preferences for activities at Pretoria National Botanical Garden

Figure 4.3 displays the results of the mean scores of visitors' preferred activities at Pretoria National Botanical Garden.

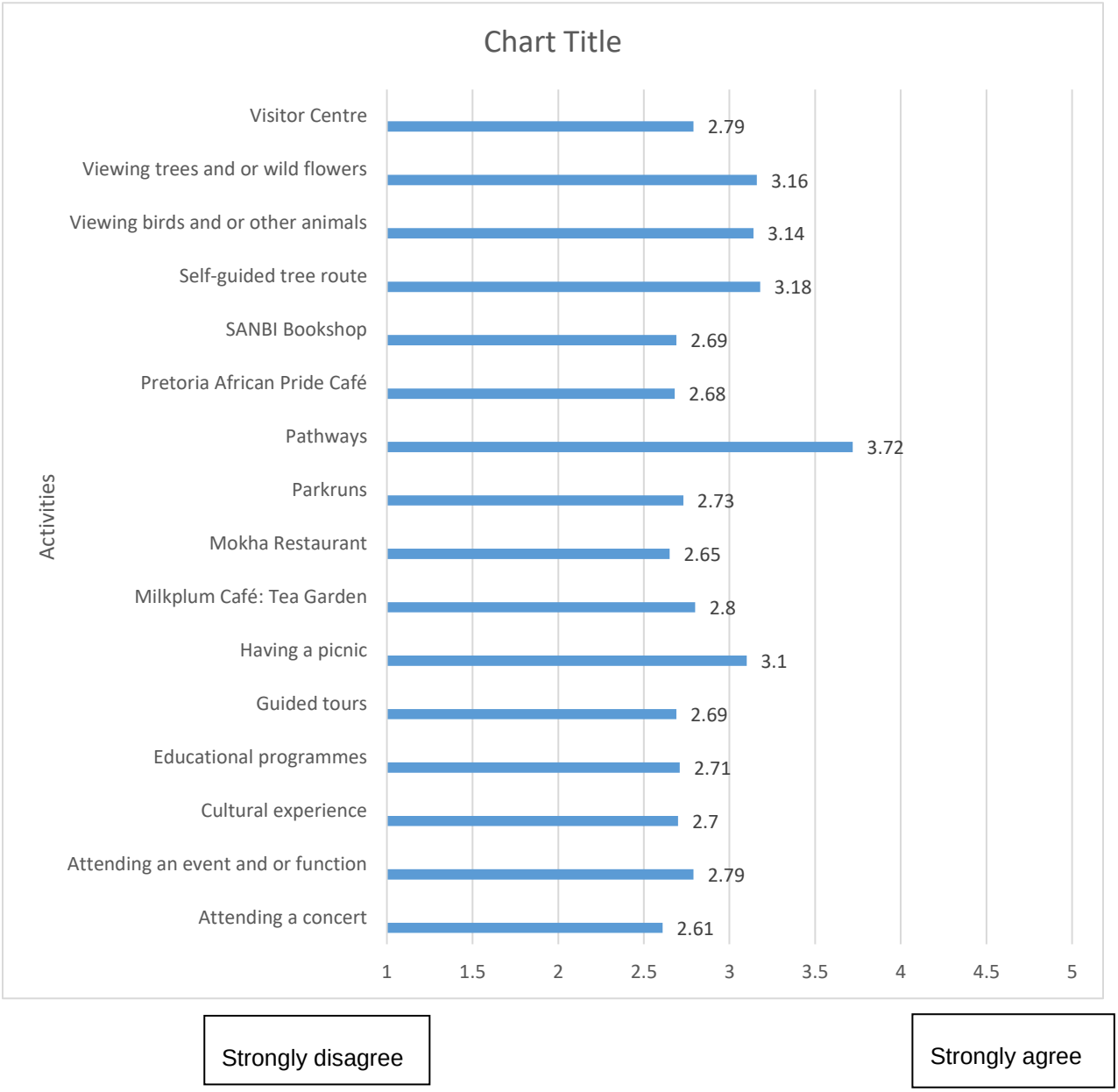

Figure 4.3: Mean score of visitor preferences for activities at Pretoria National Botanical Garden

Figure 4.3 shows that visitors to the Pretoria National Botanical Garden had a high preference for *pathways* (3.72), followed by the self-guided tree route (3.18), *viewing trees or wildflowers* (3.16), *viewing birds and other animals* (3.14), and *having a picnic* (3.10).

Activities with a lower visitor preference included attending a concert, attending an event, cultural experience, educational programmes, guided tours, Milkplum Café, Mokha Restaurant, park runs, Pretoria African Pride, SANBI Bookshop and the visitor centre.

4.4.3. Preferences for activities at the National Zoological Garden (Pretoria Zoo)

In Figure 4.4, the mean agreement scores of the visitors' preferred activities whilst visiting the National Zoological Garden (Pretoria Zoo) are displayed.

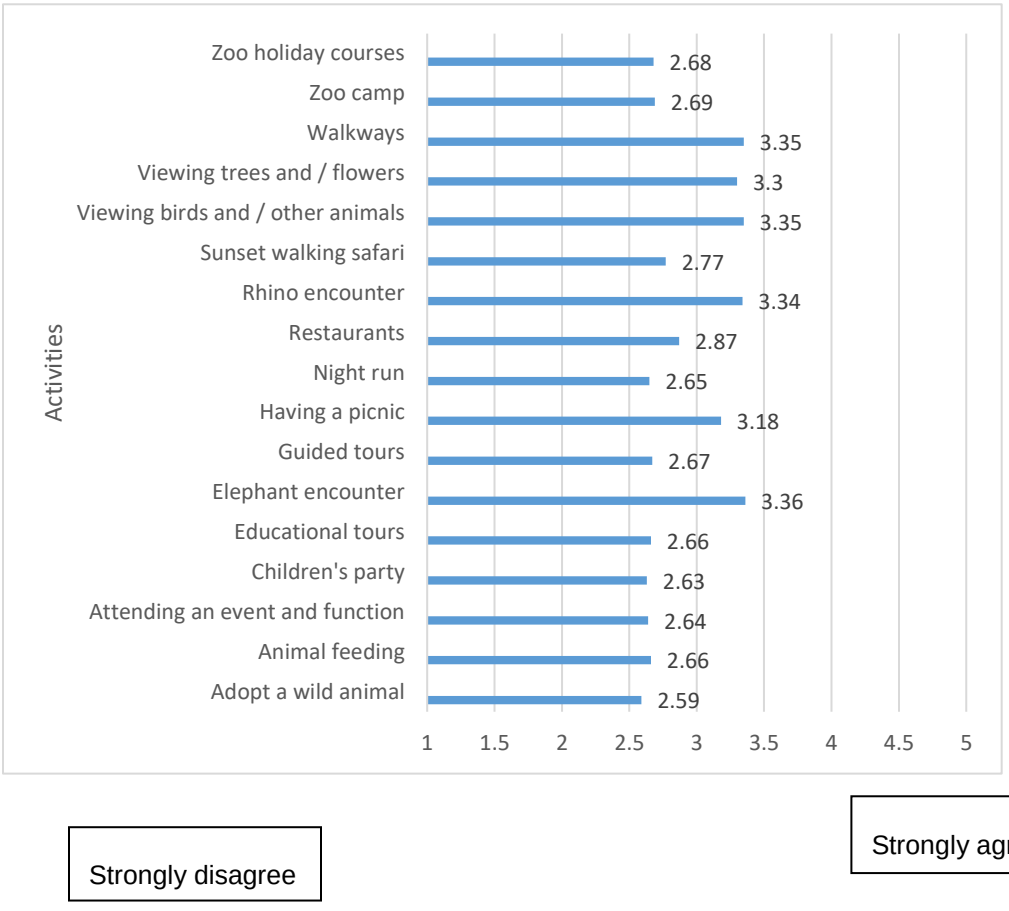

Figure 4.4: Mean scores of visitor preferences for activities at Pretoria Zoological Garden (Pretoria Zoo)

Figure 4.4 shows that visitors to Pretoria Zoological Garden (Pretoria Zoo) preferred the *elephant encounter* (3.36), followed by *viewing birds and other animals* (3.35), the *rhino encounter* (3.34), *viewing trees or wildflowers* (3.30), and *having a picnic* (3.18) the most.

The least preferred activities by the visitors were attending an event, children's party, educational tours, guided tours, night runs, restaurants, sunset walking safari, zoo camp and zoo holiday courses.

4.4.4. Preferences for activities at Austin Roberts Bird Sanctuary

The mean scores of the visitors' preferred activities at the Austin Roberts Bird Sanctuary are displayed in Figure 4.5.

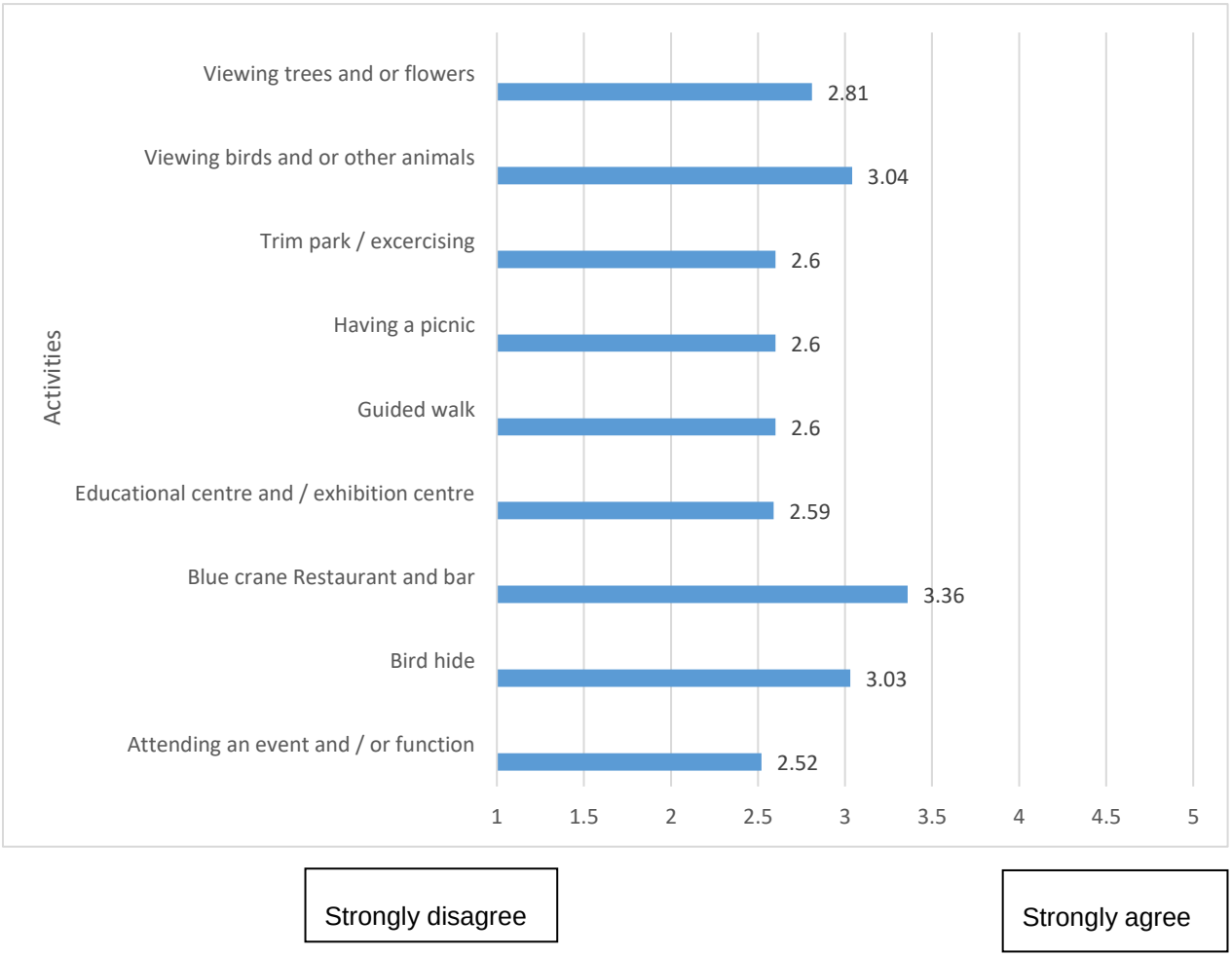

Figure 4.5: Mean score for visitor preferences for activities at Austin Roberts Bird Sanctuary

According to Figure 4.5, the visitors' most preferred activities at the Austin Roberts Bird Sanctuary were the *Blue Crane Restaurant and bar* (3.36*), viewing birds and other animals* (3.04) and the *bird hide* (3.03).

On the contrary, the visitors indicated a lower preference activities such as attending an event and or function, educational centre and or exhibition centre, guided walk, having a picnic, trim park / exercising and viewing trees and/or flowers.

The management of the four urban green spaces could use this information in developing activities or improving on current activities at the attractions.

4.5. RESULTS PERTAINING TO MOTIVATION OF VISITORS TO URBAN GREEN SPACES IN THE CITY OF TSHWANE

This section relates to secondary research objective 2 – to determine the motivations of visitors to the four urban green spaces in the City of Tshwane. An exploratory factor analysis (EFA) was applied to identify the themes for the visitor motivation to the four urban green spaces in the City of Tshwane.

The variables of interest included 34 items (see Section B of the questionnaire) relating to visitor motivation to urban green spaces (refer to section 3.5). These variables were measured using a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). To assess the appropriateness of the EFA, the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy and the Bartlett's test of sphericity were considered. The KMO was 0.931 and Bartlett's test of sphericity revealed statistical significance of $p = 0.000$. This suggests that the data matrix was suitable for applying EFA.

Applying Principal Axis Factoring (PFA), using Obliman oblique rotation, resulted in the identification of five factors from the initial 34 motivation variables. The Kaiser normalisation and eigenvalues were above 1 (see Table 4.2), while the total variance explained was 56.51%.

All the factor loadings were equal to or higher than 0.30. The factors were labelled according to similar characteristics among variables. Factor 1 was labelled "Active and

physical in nature", since these items indicated physical activities, "exercising in open spaces and/or outdoors" and "to improve health and/or well-being". Factor 2 was labelled "Learning, knowledge and education" as this factor contained variables such as "the opportunity to develop and learn", and "explore and improve knowledge". Factor 3, "Rest, relaxation and escape", contained variables such as "getting out in the fresh air", "getting away from stress and daily routines", and "to spend time in nature". Factor 4 was labelled **"**Social interaction" and consisted of "spending time with family and friends" and "meeting new people". Factor 5 was labelled "Pleasure seeking" and contained variables such as "having a picnic", "participate in experiences and activities" and "photographing birds, animals and plants". Table 4.3 outlines the factors, number of items, factor loadings, inter-item correlations, reliability statistics, the mean score and standard deviation for each factor.

Table 4.3: Results of the EFA on motivation of respondents to visit urban green spaces in the City of Tshwane

Items retained for visitor motivation		**Number of items**	**Item Mean (SD)**	**Factor loading**	**Inter item Correlations**	**Cronbach Alpha**	**Construct Mean (SD)**
Factor 1: Active and physical in nature		3			0.453	0.708	3.02 (0.999)
B1	Being physically active		2.80 (1.372)	0.573			
B14	To exercise in an open space and/or outdoors		3.29 (1.269)	0.487			
B20	To improve my health and/or well-being		2.96 (1.121)	0.704			
Factor 2: Learning, knowledge and education		11			0.457	0.903	3.03 (0.839)
B2	For educational purpose		1.84 (1.057)				
B5	Go to places that I can talk about when I get home		2.84 (1.203)	0.682			
B6	Opportunity to develop and learn new skills, e.g. bird watching		3.59 (1.202)	0.772			
B8	Opportunity to learn about different people and/or places		3.01 (1.221)	0.675			
B17	To explore a new attraction		3.18 (1.238)	0.726			
B21	To improve my knowledge		3.19 (1.144)	0.745			
B22	To learn about nature		3.34	0.721			

			(1.181)				
B23	To learn more about fauna and/or flora		3.13 (1.147)	0.777			
B24	To learn new things		3.20 (1.121)	0.779			
B33	To view cultural heritage		2.34 (1.085)	0.555			
B34	To view wildlife		3.69 (1.334)	0.551			
Factor 3: Rest, relaxation and escape		9			0.374	0.803	3.97 (0.595)
B4	Getting out in the fresh air		4.47 (0.852)	0.658			
B7	Opportunity to get away from the stress of normal duties		4.32 (0.825)	0.674			
B10	Renewing or refreshing my spiritual self		3.95 (1.028)	0.547			
B13	To escape from daily stress		4.39 (0.808)	0.692			
B16	To experience outdoors		4.41 (0.759)	0.664			
B18	To get away from routine		4.17 (0.965)	0.662			
B29	To rest physically		3.75 (1.056)	0.636			
B30	To relax in a natural environment		4.18 (0.814)	0.734			
B32	To spend time alone in nature		2.06 (1.129)	0.517			
Factor 4: Social interaction		4			0.262	0.564	2.98 (0.779)
B3	For the benefit of my children		2.72 (1.554)	0.428			
B9	Opportunity to meet new people		2.49 (1.016)	0.705			
B25	To meet people with similar interests		2.61 (1.048)	0.685			
B31	To spend time with my family and/or friends		4.10 (1.025)	0.497			
Factor 5: Pleasure seeking and activities		5			0.455	0.285	3.30 (0.922)
B12	To eat at the restaurant		2.79 (1.546)	-0.593			
B19	To have a picnic at the attraction		3.39 (1.417)	0.669			
B26	To participate in new experiences		2.93 (1.108)	0.863			
B27	To participate in recreation activities at the attraction		3.18 (1.172)	0.719			

B28	To photograph animals, birds and/or plants		3.70 (1.131)	0.745	

In Table 4.3, the descriptive statistics (items mean) indicates that, in terms of motivation, visitors were more in agreement with the following individual items:

- Getting out in the fresh air (4.47)
- To experience the outdoors (4.41)
- To escape from daily stress (4.39)
- To spend time with my family and/or friends (4.10)
- To photograph animals, birds and/or plants (3.70)
- To view wildlife (3.69)

Table 4.3 further indicates that Factors 1, 2 and 3 (Active and physical in nature – 0.708; Learning, knowledge and education – 0.903; and Rest, relaxation and escape – 0.803, respectively) demonstrated acceptable internal consistency as illustrated by Cronbach's alpha coefficients above 0.7. Nunally (1978) recommends a minimum level of 0.7. Factors 4 and 5 (Social Interaction – 0.564 and Pleasure Seeking – 0.285, respectively) have Cronbach's alpha coefficients less than 0.7. However, the inter-item correlations were acceptable (i.e. 0.262 and 0.455, respectively) (Briggs & Cheek, 1986 in Pallant, 2011:20). This is in line with previous studies (Sickler & Fraser, 2009:323-324) which indicated that visitors attended green spaces for the social experience and spending time with their children and families, being entertained through shows and demonstrations, cognitive stimulation, enjoyed the peace and tranquillity of the outdoor setting as well as seeing the wildlife.

A higher mean score indicates a stronger agreement with the factor. The respondents were neutral to factors "Active and physical in nature" (3.02) and "Learning, knowledge and education" (3.03). Factor 3 – Rest, relaxation and escape – had a mean score of (3.97), which indicates that the visitors are motivated to rest, relax and escape to the urban green spaces. Jönsson and Devonish (2008:404) found that visitors in the oldest

age category had significantly stronger relaxation-based motivations and wanted to increase their learning and knowledge of local places.

4.6. VISITORS' MOTIVATIONAL FACTORS OF URBAN GREEN SPACES IN THE CITY OF TSHWANE: A COMPARISON BETWEEN AND WITHIN GREEN SPACES

This section relates to secondary research objective 3 – to compare visitor's motivational factors within and between the four urban green spaces in the City of Tshwane. Table 4.4 provides a comparison *between and within* the four urban green spaces in terms of visitor's motivational factors. The table indicates the results of the ANOVA test, which tests for significant differences between the four groups. The partial Eta squared effect size statistic indicates the strength of the association.

Table 4.4: A comparison of visitors' motivational factors within and between the four urban green spaces

Visitor motivation	Rietvlei Nature Reserve (n=101)	Pretoria National Botanical Garden (n=100)	National Zoological Garden (Pretoria Zoo) (n=99)	Austin Roberts Bird Sanctuary (n=100)	Hypothesis test Equality of means	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	F-value Sig.	(Eta Squared)
Factor 1: Active in nature / Physical	3.17 (0.770)	3.06 (1.070)	3.70 (0.797)	2.18 (0.682)	F (3, 212.44) = 73.118 p = 0.000 *	0.299
Factor 2: Learning / Knowledge / Education	3.37 (0.679)	2.96 (0.813)	3.57 (0.554)	2.25 (0.618)	F (3, 213.85) = 90.632 p = 0.000 *	0.364
Factor 3: Rest and Relaxation / Escape	4.17 (0.373)	3.72 (0.853)	4.25 (0.313)	3.73 (0.508)	F (3, 207.74) = 32.383 p = 0.000 *	0.165
Factor 4: Social Interaction	3.26 (0.710)	2.90 (0.722)	3.41 (0.658)	2.38 (0.589)	F (3, 214.40) = 53.047 p = 0.000 *	0.262
Factor 5: Pleasure seeking / Activities	3.74 (0.688)	3.18 (0.919)	3.91 (0.560)	2.40 (0.635)	F (3, 213.03) = 117.331 p = 0.000 *	0.410

*Significant at 1% level of significance (p <0.001); measured on a 5-point Likert scale where 1 = Strongly Disagree to 5 = Strongly Agree

The approach followed and the discussion of the visitor motivation factors (Table 4.4) are outlined in two parts. Firstly, differences *between* each urban green space are discussed according to the five motivational factors (4.6.1). Secondly, the differences *within* the four urban green spaces are discussed (4.6.2) using the descriptive statistics (i.e. mean and standard deviation). A higher mean score indicates a stronger agreement to the factor.

4.6.1. Differences between the motivation of factors of urban green spaces

Comparisons are made *between* the motivation factors of the four urban green spaces to determine the similarities and differences that exist and to further profile the unique characteristics for each group. The ANOVA test was applied to determine the significant differences between the means of the four urban green spaces (see section 3.6). A Post Hoc (Games-Howell) test was used to determine where significant differences existed in the four urban green spaces.

The results in Table 4.4 indicate that for Factor 1, Active in nature / Physical, the visitors to the National Zoological Garden (Pretoria Zoo) agree that being active and physical activities (3.70) motivate them to visit the attraction. For example, this is seen by the following items: to improve my health and/or well-being (0.70), being physically active (0.57), and to exercise in an open space and/or outdoors (0.48). The visitors to the Rietvlei Nature Reserve (3.17) also leaned more towards agreement that being active and physical in nature motivates them to visit the urban green space (if the 95% confidence interval is considered, ranging from 3.01 – 3.32).

The visitors to the Pretoria Botanical Garden (3.06) neither agreed nor disagreed (neutral), while visitors to Austin Roberts Bird Sanctuary (2.18) do not agree that being “Active and physical in nature” motivates them to visit the urban green space. Respondents at Austin Roberts Bird Sanctuary disagreed to the factor of being “Active and physical in nature” (2.18), which can be explained since the urban green space only offers a bird hide and limited space is available for walking while bird watching, thus making it less possible to be “active and physical in nature”. The Robust Tests of Equality of Means confirmed significant differences between the means with respect to the four

urban green spaces for the Active in nature / Physical factor (F = 73.118, p = 0.000). The effect size, calculated using Eta squared, was 0.299, indicating that the relative difference in mean scores between the four groups was large. The Post Hoc (Games-Howell) test was used to determine where significant differences existed and indicated a significant difference between the four urban green spaces, but there was no significant difference between Rietvlei Nature Reserve and the National Botanical Garden for the **"**Active in nature / Physical" factor (mean = 0.106, p = 0.857). There was a significant difference between Rietvlei Nature Reserve and the National Zoological Garden (mean = -0.536, p = 0.000) as well as the Rietvlei Nature Reserve and the Austin Roberts Bird Sanctuary (mean = 0.985, p = 0.000) for the Active in nature / Physical factor. Regarding this factor, the National Botanical Gardens differ significantly with the National Zoological Gardens (mean = -0.643, p = 0.000) as well as the Austin Roberts Bird Sanctuary (mean = 0.879, p = 0.000). The National Zoological Gardens differs significantly to the Austin Roberts Bird Sanctuary (mean = 1.522, and p = 0.000) for the **"**Active in nature / Physical" factor. Research from Jönsson and Devonish (2008:404) showed that visitors in the age category (36-55 years) were more likely to travel to a destination or attraction to be "physically refreshed". They also concluded that visitors in the youngest age category (18-35 years) were more likely to visit an attraction to "engage in sports".

Regarding Factor 2, "Learning, knowledge and education", the visitors to the National Zoological Garden (Pretoria Zoo) (3.57) and Rietvlei Nature Reserve (3.37) agreed that visiting the zoo provided an opportunity to learn or improve knowledge. For instance, the items ranked: to learn new things (0.78), the opportunity to develop and learn new skills, birdwatching (0.77), and to learn more about fauna and flora (0.78). However, the visitors to the Pretoria Botanical Gardens (2.96) and the Austin Roberts Bird Sanctuary (2.25) were neutral (neither agreed, nor disagreed) to "Learning, knowledge and education", since they, for example, preferred to sit in the bird hide, have a picnic or watch the birds, flowers and trees. Significant differences were confirmed between the four urban green spaces for the "Learning/Knowledge/Education" factor (F = 90.632, p = 0.000). The effect size (0.364) indicates that the difference in mean scores between the four groups was very large. The result of the Post Hoc (Games-Howell) test indicated a significant

difference between the four urban green spaces, but there was no significant difference between the Rietvlei Nature Reserve and the National Zoological Garden (Pretoria Zoo) for the “Learning/Knowledge/Education” factor. There was a significant difference between the Rietvlei Nature Reserve and the Pretoria National Botanical Gardens (mean = 0.414, p = 0.001) as well as the Rietvlei Nature Reserve and the Austin Roberts Bird Sanctuary (mean = 1.121, p = 0.000) for the “Learning/Knowledge/Education” factor. There was a significant difference between the Pretoria National Botanical Gardens and the National Zoological Gardens (Pretoria Zoo) (mean = -0.609, p = 0.000) as well as the Austin Roberts Bird Sanctuary (mean = 0.706, p = 0.000). The National Zoological Garden (Pretoria Zoo) differs significantly from the Austin Roberts Bird Sanctuary (mean = 1.316, p = 0.000) for the “Learning/Knowledge/Education” factor.

For Factor 3, “Rest, relaxation and escape”, visitors to the Rietvlei Nature Reserve (4.17), Pretoria Botanical Garden (3.72), the National Zoological Garden (Pretoria Zoo) (4.25) as well as Austin Roberts (3.73) all agreed that rest and relaxation was a motivational factor. Statements to this effect include “to relax in a natural environment” (0.73), “to escape from the daily stress” (0.69) and “the opportunity to get away from the stress of normal duties” (0.67). The Robust Tests of Equality of Means confirmed significant differences between the four urban green spaces for the “Rest and Relaxation/Escape” factor (F = 32.383, p = 0.000). The effect size (0.165) between the four groups was medium to large. The Post Hoc (Games-Howell) test indicated a significant difference between the four urban green spaces. However, for the “Rest and Relaxation/Escape” factor, there was no significant difference between the Rietvlei Nature Reserve and the National Zoological Garden (Pretoria Zoo) as well as between the Pretoria National Botanical Garden and the Austin Roberts Bird Sanctuary. There was a significant difference between the Rietvlei Nature Reserve and the Pretoria National Botanical Garden (mean = 0.446, p = 0.000) as well as Austin Roberts Bird Sanctuary (mean = 0.436 and p = 0.000). The Pretoria National Botanical Garden differs significantly from the National Zoological Garden (Pretoria Zoo) (mean = -0.533, p = 0.000). The National Zoological Garden (Pretoria Zoo) differs significantly from the Austin Roberts Bird Sanctuary (mean = 0.523, p = 0.000) for the “Rest and Relaxation/Escape” factor.

Regarding Factor 4, Social interaction, the visitors to the National Zoological Garden (Pretoria Zoo) had the highest mean score (3.41). Example statements to this effect include, “have the opportunity to meet new people” (0.70), “to meet people with similar interests” (0.69) and “are able to spend time with family and/or friends” (0.49). Visitors to the Rietvlei Nature Reserve were less motivated by interacting socially (3.26), whereas visitors to the Pretoria Botanical Garden were neutral (2.90) and visitors to Austin Roberts Bird Sanctuary disagreed (2.38) that social interaction motivated them to visit the urban green space. Significant differences were confirmed between the four urban green spaces for the “Social Interaction” factor ($F = 53.047$, $p = 0.000$) by the Robust Tests of Equality of Means. The effect size (0.262) indicates that the relative difference in mean scores between the four groups was large. The result of the Post Hoc (Games-Howell) test indicated a significant difference between the four urban green spaces, but there was no significant difference between the Rietvlei Nature Reserve and the National Zoological Garden (Pretoria Zoo) for the “Social Interaction” factor. The Rietvlei Nature Reserve differs significantly from the Pretoria National Botanical Garden (mean = 0.359, $p = 0.003$) and the Austin Roberts Bird Sanctuary (mean = 0.882, $p = 0.000$). The Pretoria National Botanical Garden differs significantly from the National Zoological Garden (Pretoria Zoo) (mean = -0.507, $p = 0.000$) and the Austin Roberts Bird Sanctuary (mean = 0.523, $p = 0.000$). The National Zoological Garden (Pretoria Zoo) differs significantly from the Austin Roberts Bird Sanctuary (mean = 1.030, $p = 0.000$) for the “Social Interaction” factor.

For Factor 5, Pleasure seeking and activities, visitors to the National Zoological Garden (Pretoria Zoo) agreed that pleasure seeking and activities (3.91) such as “participating in new experiences” (0.86), “to photograph animals, birds and/or plants” (0.75) and “to participate in recreation activities at the attraction” (0.72) motivated them to visit the urban green space. Visitors to the Rietvlei Nature Reserve were also motivated by pleasure seeking and activities (3.74). Visitors to the Austin Roberts Bird Sanctuary disagreed with the view that they visited the bird sanctuary for pleasure seeking activities (2.40). Visitors to the Pretoria Botanical Garden were neutral (3.18) to pleasure seeking, motivating them to visit the urban green space. The Robust Tests of Equality of Means confirmed

significant differences between the four urban green spaces for the “Pleasure seeking/Activities” factor (F =117.331, p = 0.000). The effect size (0.410) between the four groups was very large. The Post Hoc (Games-Howell) test indicated a significant difference between the four urban green spaces, but there was no significant difference between Rietvlei Nature Reserve and the National Zoological Garden (Pretoria Zoo) for the “Pleasure seeking/Activities” factor. The Rietvlei Nature Reserve differs significantly with the Pretoria Botanical Garden (mean = 0.553, p = 0.000) as well as the Austin Roberts Bird Sanctuary (mean = 1.338, p = 0.000). The Pretoria Botanical Garden differs significantly to the National Zoological Garden (Pretoria Zoo) (mean = -0.726, p = 0.000) as well as the Austin Roberts Bird Sanctuary (mean = 0.785, p = 0.000). The National Zoological Garden (Pretoria Zoo) differs significantly to the Austin Roberts Bird Sanctuary (mean = 1.510, p = 0.000) for the “Pleasure seeking/Activities” factor.

4.6.2. Differences within the four urban green spaces

This section presents the differences *within* the four urban green spaces.

4.6.2.1. Rietvlei Nature Reserve

All the mean values of all five visitor motivation factors were above 3.00 (the 95% confidence interval ranged from 3.01 to 3.32). The motivational factor that obtained the highest rating was “Rest and relaxation/Escape” (mean = 4.17, SD = 0.37) followed by **“**Pleasure seeking/Activities” (mean = 3.74, SD = 0.69). The lowest rating is observed for “Active in Nature/Physical” (mean = 3.17, SD = 0.77) and “Social Interaction” (mean = 3.26, SD = 0.71).

The standard deviation for “Rest and Relaxation/Escape” (the dispersion of scores around the mean) was 0.37 which was the smallest compared to the other factors. This is indicative of more consensus amongst respondents in rating this factor. Therefore, these results indicate that the main motivational factor to visit the Rietvlei Nature Reserve was for rest and to relax or escape. This includes individual items (see Table 4.3) such as “to relax in a natural environment” (0.73), “to escape from daily stress” (0.69), “opportunity to get away from the stress of normal duties” (0.67). The respondents also agreed that

pleasure seeking or activities, such as “to participate in new experiences” (0.86), “to photograph animals, birds and/or plants” (0.75) and “to participate in recreation activities at the attraction” (0.72) are motivating them to visit the attraction.

4.6.2.2. Pretoria National Botanical Garden

The mean value was the highest for Factor 3, “Rest and Relaxation/Escape” (mean = 3.72, SD = 0.85) followed by Factor 5, “Pleasure seeking/Activities” (mean = 3.18, SD = 0.92), which indicates that visitors to the Pretoria National Botanical Garden were more in agreement with these two factors. The results indicate that the main motivational factor to visit the Rietvlei Nature Reserve was for rest and to relax or escape. This includes individual items such as “to relax in a natural environment” (0.73), “to escape from daily stress” (0.69), “opportunity to get away from the stress of normal duties” (0.67). The respondents also agreed that pleasure seeking or activities, such as “to participate in new experiences” (0.86), “to photograph animals, birds and/or plants” (0.75) and “to participate in recreation activities at the attraction” (0.72) are motivating them to visit the urban green space. For Factors 3 and 5, the standard deviation was 0.85 and 0.91 respectively, which indicates a marginally higher variation within the respondents visiting the Pretoria National Botanical Garden compared to the other urban green spaces (see section 4.6.1). Furthermore, the mean score for Factor 1, **“**Active in nature/Physical” was more neutral (3.06, neither agree, nor disagree), while the standard deviation of 1.07 indicates a relatively larger amount of variation in the group. This result suggests that respondents were more divided in terms of agreement versus disagreement as in the case of the other factors (see section 4.6.1). The visitors to the Pretoria National Botanical Garden (3.18) also leaned towards an agreement that “Pleasure seeking/Activities” motivates them to visit the urban green space (if the 95% confidence interval is taken into account, ranging from 3.00 to 3.37). For some of the other factors, the extent of disagreement was notably more and therefore results in a more dispersed distribution (flatter) across the range of 1 to 5. Ballantyne et al., (2007a: 443) concur that the most important reasons for visiting Botanic gardens, according to visitors, are to enjoy

themselves, spend quality time with family, admire the garden scenery, enjoy being outdoors and in nature and admire the garden scenery.

4.6.2.3. National Zoological Garden (Pretoria Zoo)

The mean values for all five visitor motivation factors were above 3.00, indicating that the respondents were leaning towards agreement to the five motivational factors. The results show that visitors to the National Zoological Garden were more in agreement with two of the five motivational factors: “Rest and relaxation/Escape” and “Pleasure seeking/Activities”. The respondents’ mean level of agreement in terms of the “Rest and relaxation/Escape” factor (mean = 4.25, SD = 0.31) and the “Pleasure seeking/Activities” factor (mean = 3.91, SD = 0.56) was at the agree level of the scale. The lowest mean rating is observed for “Social Interaction” (mean = 3.41, SD = 0.66) and “Learning/Knowledge/Education” (mean = 3.57, SD = 0.55). The standard deviation of the two factors, “Rest and relaxation/Escape” and “Pleasure seeking/Activities” were 0.31 and 0.56 respectively, indicating a small amount of variation within the group.

Similar to the other three urban green spaces, these results indicate that the main motivational factor to visit the National Zoological Garden was to rest and relax or escape. This includes individual items such as “to relax in a natural environment” (0.73), “to escape from daily stress” (0.69), “opportunity to get away from the stress of normal duties” (0.67). The respondents also agreed that pleasure seeking or activities were motivating them to visit the attraction, citing “to participate in new experiences” (0.86), “to photograph animals, birds and/or plants” (0.75) and “to participate in recreation activities at the attraction” (0.72) (see Table 4.3).

4.6.2.4. Austin Roberts Bird Sanctuary

The mean score of four out of the five motivational factors were below 3.00, indicating that the respondents disagreed with most of the motivational factors. The mean value for “Rest and relaxation/Escape” (mean = 3.73, SD = 0.51) indicates that the visitors to the Austin Roberts Bird Sanctuary agreed that “Rest and relaxation/Escape” motivates them to visit the attraction. The standard deviation was 0.51, indicating a small amount of

variation within the group. The lowest rating was observed for “Active in Nature/Physical” (mean = 2.18, SD = 0.68) and “Social Interaction” (mean = 2.38, SD = 0.59).

The “Rest and relaxation/Escape” factor includes individual items such as “to relax in a natural environment” (0.73), “to escape from daily stress” (0.69), “opportunity to get away from the stress of normal duties” (0.67) which motivates respondents to visit the attraction.

The main results are highlighted so as to synthesise the above comparison within each urban green space. Visitors to the Rietvlei Nature Reserve are motivated to visit the attraction to “Rest and relax or escape” and for **“**Pleasure seeking/Activities”. Visitors can relax in the natural environment and participate in activities such as fishing, game viewing, hiking, horse riding, mountain biking as well as non-motorised water sports. The respondents at the Pretoria National Botanical Garden agreed to only one motivational factor, namely “Rest and relax or escape”. However, the standard deviation indicates a large variation within the group for both **“**Active in nature/Physical” and “Pleasure seeking/Activities”. Some of the respondents agreed with these factors while others in the same group disagreed. These results indicate differences within the group and suggest that visitors to the Pretoria National Botanical Garden could be further divided into different market segments. Respondents at the National Zoological Garden (Pretoria Zoo) also indicated that “Rest and relax or escape” as well as “Pleasure seeking/Activities” motivated them to visit the zoo. Visitors could escape from daily stress and participate in activities offered at the zoo, such as taking part in an elephant or rhino encounter, a sunset walking safari, attending an event (for example, a children’s party or a work function), and having a picnic or a zoo camp. The respondents at the Austin Roberts Bird Sanctuary indicated that “Rest and relax or escape” was the only motivating factor to visit the attraction, owing to the nature of the attraction which is enjoying birds or birdwatching.

4.7. RESULTS: ENVIRONMENTAL AWARENESS OF VISITORS TO URBAN GREEN SPACES IN THE CITY OF TSHWANE

This section relates to secondary research objective 4, namely, to examine the visitors’ environmental awareness at the urban green spaces in the City of Tshwane. Ten variables relating to environmental awareness were derived from literature and grouped

into two themes, namely “Learning/Actions” and “Commitment”. Table 4.5 outlines the themes, number of items, inter-item correlations, reliability statistics, and the mean score and standard deviation for each item and theme.

Table 4.5: Results on validity and reliability for environmental awareness themes

Items retained for Environmental Awareness		Number of items	Item Mean (SD)	Inter-item Correlations	Cronbach Alpha	Mean (SD)
Theme 1: Learning / Actions		**5**		0.369	0.733	3.90 (0.528)
D1	I am interested in learning about environmental issues		4.29 (0.628)			
D2	I often think about whether my actions harm the natural world		4.26 (0.629)			
D4	I use environmentally friendly products		3.54 (0.884)			
D5	I recycle at home		3.18 (1.015)			
D10	I often think about the fragility of the environment		4.22 (0.528)			
Theme 2: Commitment		**5**		0.356	0.677	3.88 (0.494)
D3	I actively search for information about environmental conservation		3.76 (0.881)			
D6	I donate money to environmental organisations		3.06 (1.070)			
D7	I have a strong view on conservation issues		4.12 (0.504)			
D8	I encourage family and friends to be more conscious about conservation		4.18 (0.559)			
D9	I want to ensure a brighter future for my children		4.26 (0.538)			

As indicated in Table 4.5, themes 1 and 2 (Learning/Actions -- 0.733; Commitment -- 0.677) demonstrated acceptable internal consistency as illustrated by the Cronbach’s alpha coefficients of above or close to 0.7. The inter-item correlations were acceptable (i.e. 0.369 and 0.356, respectively) (Briggs & Cheek, 1986 in Pallant, 2011).

A higher mean score indicates a stronger agreement with the theme. The respondents agreed to both the “Learning/Actions” (3.90) and “Commitment” (3.88) themes.

In theme 1, **“**Learning/Actions”, the respondents were more in agreement with the following items:

- I am interested in learning about environmental issues (4.29)
- I often think about whether my actions harm the natural world (4.26)
- I often think about the fragility of the environment (4.22)

While in theme 2, “Commitment”, the respondents were more in agreement with:

- I want to ensure a brighter future for my children (4.26)
- I encourage family and friends to be more conscious about conservation (4.18)
- I have a strong view on conservation issues (4.12)

Contrary to a study by Ballantyne et al. (2007a), their visitors indicated that they have a low level of interest and commitment to conservation. The current study’s results are in agreement with previous studies such as those by Bulatovic and Rajovic (2018) and Han and Kim (2018) where the visitors had a high environmental awareness and that the green image as well as environmental awareness of a tourist destination or green space were critical triggers of the visitors’ attitude towards the environment (e.g. reducing waste).

Table 4.6 provides a comparison *between and within* the four urban green spaces in terms of the environmental awareness themes. The table reflects the results of the ANOVA test, which examines significant differences between the four groups. The partial Eta squared effect size statistics indicate the strength of the association.

Table 4.6: A comparison of visitor's environmental awareness within and between the four urban green spaces (n = 392)

Environmental Awareness	Rietvlei Nature Reserve	Pretoria National Botanical Garden	National Zoological Garden (Pretoria Zoo)	Austin Roberts Bird Sanctuary	ANOVA test	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	F-value Sig.	(Eta Squared)
Theme 1: Learning / Action	4.09 (0.448)	3.74 (0.509)	3.58 (0.504)	4.15 (0.424)	F (3, 214.01) = 33.502 p = 0.000 *	0.206
Theme 2: Commitment	4.00 (0.530)	3.75 (0.499)	3.57 (0.504)	4.15 (0.424)	F (3, 214.03) = 19.175 p = 0.000 *	0.129

*Significant at 1% level of significance (p <0.001); measured on a 5-point Likert scale where 1 = Strongly Disagree to 5 = Strongly Agree

The next two parts outline the approach followed with a discussion on visitor environmental awareness (Table 4.6). The differences *between* each urban green space are discussed first according to the two environmental awareness themes (4.7.1). Thereafter, the differences *within* the four urban green spaces are discussed (4.7.2) using descriptive statistics (i.e., mean and standard deviation). A higher mean score indicates a stronger agreement to the factor.

4.7.1. Differences between environmental awareness of visitors to the four urban green spaces

Regarding theme 1, “Learning/Action”, visitors to the Rietvlei Nature Reserve (4.09), Pretoria National Botanical Garden (3.74), the National Zoological Garden (Pretoria Zoo) (3.58) and Austin Roberts’ Bird Sanctuary (4.15) all agreed that “Learning/Action” contributes to their environmental awareness. The ANOVA test confirmed significant differences between the four urban green spaces for the “Learning/Action” theme ($F = 33.502$, $p = 0.000$). The effect size (0.206) indicates that the difference in mean scores between the four groups was large. The Post Hoc (Tukey) test indicated that there was no significant difference between the Rietvlei Nature Reserve and the Austin Roberts Bird Sanctuary (mean = -0.057, $p = 0.828$). There was a significant difference between the Rietvlei Nature Reserve and the Pretoria National Botanical Garden (mean = 0.353, $p = 0.000$) as well as the National Zoological Garden (Pretoria Zoo) (mean = 0.516, $p = 0.000$). There was a significant difference between the Pretoria National Botanical Garden and the National Zoological Garden (Pretoria Zoo) (mean = 0.162, $p = 0.082$) as well as the Austin Roberts Bird Sanctuary (mean = -0.410, $p = 0.000$). The National Zoological Garden (Pretoria Zoo) and Austin Roberts Bird Sanctuary differ significantly (mean = -0.573, $p = 0.000$) for the “Learning/Action” theme.

For theme 2, “Commitment”, visitors to the Rietvlei Nature Reserve (4.00), Pretoria National Botanical Garden (3.75), the National Zoological Garden (Pretoria Zoo) (3.57) as well as Austin Roberts Bird Sanctuary (4.15) agreed that “Commitment” contributes to their environmental awareness. For the “Commitment” theme ($F = 19.175$, $p = 0.000$) significant differences between the four urban green spaces were indicated by the

ANOVA test. The effect size (0.129) indicates that the difference in mean scores between the four groups was medium to large. The Post Hoc (Tukey) test indicated there was no significant difference between the Rietvlei Nature Reserve and Austin Roberts Bird Sanctuary (mean = -0.082, p = 0.589). There was a significant difference between the Rietvlei Nature Reserve and the Pretoria National Botanical Garden (mean = 0.249, p = 0.001) as well as the National Zoological Garden (Pretoria Zoo) (mean = 0.351, p = 0.000). The Pretoria National Botanical Garden differs significantly from the National Zoological Garden (Pretoria Zoo) (mean = 0.101, p = 0.425) and the Austin Roberts Bird Sanctuary (mean = -0.331, p = 0.000). The National Zoological Garden (Pretoria Zoo) differs significantly from the Austin Roberts Bird Sanctuary (mean = -0.433, p = 0.000) for the “Commitment” theme.

4.7.2. Differences within environmental awareness of visitors to the four urban green spaces

A discussion on the differences *within* the environmental awareness themes for the four urban green spaces follows.

4.7.2.1. Rietvlei Nature Reserve

The mean values for both themes were above 4.00 (the 95% confidence interval ranged from 4.00 to 4.18). The theme with the highest mean score was “Learning/Action” (mean = 4.09, SD = 0.448) followed by “Commitment” (mean = 4.00, SD = 0.530). The standard deviation for “Learning/Action” was (0.448) which was lower than “Commitment” (0.530). This result indicates that respondents agreed with the theme. Visitors to the Rietvlei Nature Reserve assented to learning about environmental issues, using environmentally friendly products and being conscious of actions harming the environment.

4.7.2.2. Pretoria National Botanical Garden

The visitors agreed that both the “Commitment” (mean = 3.75, SD = 0.499) and the “Learning/Action” (mean = 3.74, SD = 0.509) themes contribute to their environmental awareness (the 95% confidence interval ranged from 3.63 to 3.84). The “Commitment”

theme focuses on donating money to environmental organisations, encouraging family and friends to be more conscious of conservation and wanting to ensure a brighter future for their children.

4.7.2.3. National Zoological Garden (Pretoria Zoo)

The mean and standard deviations for both themes were nearly identical at the Pretoria Zoo. Theme 1, “Learning/Action”, has a slightly higher mean value (mean = 3.58, SD = 0.504) than “Commitment” (mean = 3.57, SD = 0.504), the 95% confidence interval ranged from 3.47 to 3.67. Visitors to the Pretoria Zoo indicated that both the “Learning/Action” and “Commitment” themes contributed to their environmental awareness.

4.7.2.4. Austin Roberts Bird Sanctuary

The mean values for both themes were above 4.00 (the 95% confidence interval ranged from 4.06 to 4.23). Regarding the “Learning/Action” (mean = 4.15, SD = 0.424) and “Commitment” (mean = 4.15, SD =0.424) themes, visitors to the Austin Roberts Bird Sanctuary showed similar agreement.

4.8. RESULTS: SUBJECTIVE WELL-BEING OF VISITORS TO URBAN GREEN SPACES IN THE CITY OF TSHWANE

This section relates to secondary research objective 5, namely, to determine the subjective well-being of visitors at the urban green spaces in the City of Tshwane. The 20 variables relating to subjective well-being were derived from literature (see Section 2.7) and were grouped into two themes, namely, “Quality of Life” and “General well-being”. Table 4.7 outlines the theme, number of items, inter-item correlations, reliability statistics, and the mean score and standard deviation for each item and theme.

Table 4.7: Results on construct validity and reliability for subjective well-being of visitor to four urban green spaces in the City of Tshwane

Items retained for subjective well-being		Number of items	Item Mean (SD)	Inter-item correlations	Cronbach Alpha	Mean (SD)
Theme 1: Quality of life		**9**		0.265	0.766	3.95 (0.447)
E1	After visiting the urban green space, I feel that I lead a meaningful and fulfilling life		4.08 (0.627)			
E2	Although I have ups and downs, in general, I feel good about life after visiting the urban green space		4.11 (0.655)			
E3	I feel better about life after visiting the urban green space		4.04 (0.771)			
E5	I feel happier after visiting the urban green space		4.00 (0.715)			
E14	My experience being in nature was memorable having enriched my quality of life		3.99 (0.651)			
E15	My general satisfaction with life has increased by visiting the urban green space		3.86 (0.765)			
E17	Visiting the urban green space decreased my negative feelings		3.71 (0.900)			
E18	Visiting the urban green space gives me a sense of freedom		3.42 (1.056)			
E20	Visiting the urban green space inspires me		4.36 (0.530)			
Theme 2: General well-being		11		0.312	0.827	3.90 (0.464)
E4	I feel better about myself after visiting the urban green space		4.05 (0.729)			
E6	I feel positive after visiting the urban green space		3.96 (0.767)			
E7	I feel psychological benefits after visiting the urban green space		3.95 (0.721)			
E8	I felt better mentally by visiting the urban green space		3.95 (0.745)			
E9	I felt better physically by visiting the urban green space		3.89 (0.808)			

E10	I gain perspective on life during my visits to the urban green space		3.95 (0.677)	
E11	I have many memorable experiences at the urban green space		4.03 (0.649)	
E12	My ability to be pro-active has increased after visiting the urban green space		3.81 (0.773)	
E13	My ability to be self-sufficient has increased after visiting the urban green space		3.73 (0.833)	
E16	Visiting the urban green space clears my head		3.97 (0.659)	
E19	Visiting the urban green space increased my ability to concentrate		3.63 (1.004)	

A high mean score indicates a strong agreement with the factor. The mean was 4.61 which is very close to 5; it suggests that the majority of the visitors strongly agreed that their subjective well-being improved after visiting the urban green space. These results correlate with a previous study by Kim, Lee, Uysal, Kim and Ahn (2015:86) where the majority of visitors indicated that they felt positive after visiting the urban green space and that the visit and experience in the green space increased their satisfaction with life.

As indicated in Table 4.7, themes 1 and 2 ("Quality of Life" -- 0.766; "General well-being" -- 0.827) demonstrated acceptable internal consistency as illustrated by the Cronbach's alpha coefficients being above or close to 0.7. The inter-item correlations were acceptable (i.e. 0.265 and 0.312 respectively) (Briggs & Cheek, 1986 in Pallant, 2011).

A higher mean score indicates a stronger agreement with the theme. The respondents agreed to both the "Quality of Life" (mean = 3.95, SD = 0.447) and the "General well-being" (mean = 3.90, SD = 0.464) themes.

In theme 1, "Quality of life", the respondents were more inclined and agreed with the following items:

- Visiting the urban green space inspires me (4.36)
- Although I have ups and downs, in general, I feel good about life after visiting the urban green space (4.11)

- I feel that I lead a meaningful and fulfilling life (4.08)

Regarding the items in theme 2, “Subjective well-being”, the respondents indicated a stronger agreement with:

- I feel better about myself after visiting the urban green space (4.05)
- I have memorable experiences at the urban green space (4.03)
- visiting the urban green space, clears my head (3.97)

Table 4.8 provides a comparison *between and within* the four urban green spaces in terms of subjective well-being themes. The table indicates the results of the ANOVA test, which examines significant differences between the four urban green spaces. The partial Eta squared effect size statistics indicate the strength of the association.

Table 4.8: A comparison of visitor's subjective well-being within and between the four urban green spaces (n = 392)

Subjective well-being	Rietvlei Nature Reserve	Pretoria National Botanical Garden	National Zoological Garden (Pretoria Zoo)	Austin Roberts Bird Sanctuary	Hypothesis test Equality of means	
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	F-value Sig.	(Eta Squared)
Theme 1: Quality of life	4.07 (0.446)	3.84 (0.516)	3.99 (0.338)	3.90 (0.437)	F (3, 213.53) = 4.489 p = 0.004 *	0.038
Theme 2: General well-being	3.99 (0.476)	3.80 (0.526)	3.93 (0.361)	3.89 (0.462)	F (3, 213.85) = 2.311 p = 0.077 *	0.021

*Significant at 1% level of significance (p <0.001); measured on a 5-point Likert scale where 1 = Strongly Disagree to 5 = Strongly Agree

The next section discusses, in two parts, the approach followed and a discussion of the visitors' subjective well-being (Table 4.8). The differences *between* each urban green space are firstly discussed according to the two subjective well-being themes followed by a discussion of the (4.8.1). The differences *within* the four urban green spaces in (4.8.2).

4.8.1. Differences between subjective well-being of visitors to the four urban green spaces

Regarding theme 1, the visitors agreed that their "Quality of life" was improved following a visit to the Rietvlei Nature Reserve (4.07), Pretoria National Botanical Garden (3.84), the National Zoological Garden (Pretoria Zoo) (3.99) and Austin Roberts Bird Sanctuary (3.90). Significant differences were confirmed by the Robust Tests of Equality of Means between the four urban green spaces for the "Quality of life" ($F = 4.489$, $p = 0.004$). The effect size (0.038), indicating that the difference in mean scores between the four groups, was small. The Post Hoc (Games Howell) test indicated there was no significant difference between the Rietvlei Nature Reserve and the National Zoological Garden (Pretoria Zoo) (mean = 0.071, $p = 0.580$). There was an insignificant difference between the Pretoria National Botanical Garden and Austin Roberts Bird Sanctuary (mean = - 0.061, $p = 0.802$). There was a significant difference between the Rietvlei Nature Reserve and Pretoria National Botanical Garden (mean = 0.249, $p = 0.001$) as well as the Austin Roberts Bird Sanctuary (mean = 0.164, $p = 0.045$). The Pretoria National Botanical Garden differs significantly from the National Zoological Garden (Pretoria Zoo) (mean = -0.153, $p = 0.074$), which also differs significantly from the Austin Roberts Bird Sanctuary (mean = -0.091, $p = 0.045$) for the "Quality of life" theme.

For theme 2, visitors agreed that their "General well-being" improved upon visiting the Rietvlei Nature Reserve (3.99), Pretoria National Botanical Garden (3.80), the National Zoological Garden (Pretoria Zoo) (3.93) and Austin Roberts Bird Sanctuary (3.89). Significant differences between the four urban green spaces for the "General well-being" theme ($F = 2.311$, $p = 0.077$) were confirmed by the Robust Tests of Equality of Means. The effect size (0.021), indicating the difference in mean scores between the four groups, was small. The Post Hoc (Games Howell) test indicates that there was no significant

difference between the Rietvlei Nature Reserve and the National Zoological Garden (Pretoria Zoo) (mean = 0.054, p = 0.802). The difference between the Pretoria National Botanical Garden and the Austin Roberts Bird Sanctuary was not significantly (mean = - 0.085, p = 0.626). There was a significant difference between the Rietvlei Nature Reserve and Pretoria National Botanical Garden (mean = 0.181, p = 0.058) as well as the Austin Roberts Bird Sanctuary (mean = 0.096, p = 0.465). The Pretoria National Botanical Garden differs significantly from the National Zoological Garden (Pretoria Zoo) (mean = -0.127, p = 0.212). The National Zoological Garden (Pretoria Zoo) differs significantly from the Austin Roberts Bird Sanctuary (mean = 0.042, p = 0.893) for the “General well-being” theme.

4.8.2. A comparison of differences within the subjective well-being of visitors to the four urban green spaces

4.8.2.1. Rietvlei Nature Reserve

“Quality of life” displayed the highest mean value (mean = 4.07, SD = 0.446) while “General well-being” (mean = 3.99, SD = 0.476) was slightly lower (the 95% confidence interval ranged from 3.97 to 4.15). Visitors to the Rietvlei Nature Reserve agreed that both the “Quality of life” (expressed as “their negative feelings decreased”, “they feel better about life” and “are happier after visiting”) and “General well-being” (expressed as “they felt better about themselves”, “they have memorable experiences” and “they felt positive after visiting”) themes contributed to subjective well-being.

4.8.2.2. Pretoria National Botanical Garden

“Quality of life” displayed the highest mean value (mean = 3.84, SD = 0.516) followed by “General well-being” (mean = 3.80, SD = 0.526). Visitors to the Pretoria National Botanical Garden agreed that the “Quality of life” and “General well-being” themes improved their subjective well-being.

4.8.2.3. National Zoological Garden (Pretoria Zoo)

The results indicate that visitors agreed that the “Quality of life” (mean = 3.99, SD = 0.338) and “General well-being” (mean = 3.93, SD = 0.361) themes improved their subjective well-being.

4.8.2.4. Austin Roberts Bird Sanctuary

“Quality of life” had the highest mean value (mean = 3.90, SD = 0.437) followed by “General well-being” (mean = 3.89, SD = 0.462). Visitors to the Austin Roberts Bird Sanctuary agreed that the “Quality of life” and “General well-being” themes improved their subjective well-being.

To determine any correlations among the three constructs, namely travel motivation, environmental awareness and subjective well-being, a Pearson product-moment correlation analysis was performed to determine the strengths of the association between the various constructs.

4.9. CORRELATIONS BETWEEN CONSTRUCTS

This section presents the relationships between the constructs of this study. Table 4.9 outlines the constructs and Pearson correlations for the four urban green spaces.

Table 4.9: The Pearson Correlations among the constructs for the four urban green spaces

Urban Green Space	Construct		Pearson correlation
Rietvlei Nature Reserve	Environmental Awareness	Subjective well-being	.304**
	Environmental Awareness	Visitor motivation	.209*
	Subjective well-being	Visitor motivation	.520**
Pretoria National Botanical Garden	Environmental Awareness	Subjective well-being	.305**
	Subjective well-being	Visitor motivation	.643**
SANBI National Zoological Garden	Environmental Awareness	Subjective well-being	.335**
	Environmental Awareness	Visitor motivation	.241*
	Subjective well-being	Visitor motivation	.237*
Austin Roberts Bird Sanctuary	Visitor motivation	Subjective well-being	.265**
	Environmental Awareness	Subjective well-being	.279**

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.9 depicts the relationships between the travel motivations, environmental awareness and subjective well-being. All the relationships were positive and were mainly to a small effect. The positive relationships with a medium-large effect are given below:

- Rietvlei Nature Reserve – the Pearson Correlation coefficient was the highest for the relationship between subjective well-being and visitor motivation (r = .520), indicating a positive (large) correlation. The result indicates that an increase in motivation to visit the Rietvlei Nature Reserve, will increase the subjective well-being of these visitors. Also, an increase in visitor's subjective well-being may increase their motivation to visit the Rietvlei Nature Reserve.
- Pretoria National Botanical Garden – the Pearson Correlation coefficient was the highest for subjective well-being and visitor motivation (r = .643), indicating a positive (strong) correlation. An increase in subjective well-being also increases the visitor motivation to the Pretoria National Botanical Garden, while an increase in visitor motivation would also improve subjective well-being.

- National Zoological Garden (Pretoria Zoo) – the Pearson Correlation coefficient was the highest for environmental awareness and subjective well-being (r = .335) indicating a positive (moderate) correlation between environmental awareness and subjective well-being. The result indicates that an increase in environmental awareness will increase the subjective well-being of visitors to the National Zoological Garden (Pretoria Zoo). If subjective well-being increases, the environmental awareness of the visitors to National Zoological Garden (Pretoria Zoo) also increases.
- Austin Roberts Bird Sanctuary – the Pearson Correlation coefficient was the highest for environmental awareness and subjective well-being (r = .279), indicating a positive (small) correlation. If subjective well-being increase, the environmental awareness of the visitors to Austin Roberts Bird Sanctuary also increases, while increased environmental awareness will increase subjective well-being.

4.10. CONCLUSION

Chapter 4 was organised to address the primary and secondary objectives of the study and was arranged as follows:

- Biographic information of respondents: A relative equal sample distribution was indicated between the four urban green spaces. A relatively even gender ration was observed as only a slightly larger proportion of female respondents was noticeable in the sample distribution. The majority of visitors were aged between 35 and 44 years old (27.5%). Most of the respondents were white (63.3%) and educated (73.1%). The majority of respondents were married or living together (69.8%) and an overwhelming majority resided in Gauteng (87.2%).
- Revisit intention: Many visitors at the four urban green spaces in the City of Tshwane indicated a strong intention to revisit the attraction.
- Preferences for activities: The most important activities at Rietvlei Nature Reserve were game viewing, viewing birds and other animals, having a picnic, the bird hide viewing trees and/or flowers. At the National Botanical Gardens visitors indicated

that the most important activities were the pathways, the self-guided tree route, viewing trees and/or flowers, viewing birds and other animals and having a picnic. Visitors to the National Zoological Gardens (Pretoria Zoo) indicated that the most important activities were the elephant and rhino encounter, viewing birds and other animals, the walkways and viewing trees and wildflowers. At the Austin Roberts Bird Sanctuary, the visitors preferred the Blue Crane Restaurant and Bar, viewing birds and other animals, the bird hide, viewing trees and wildflowers and the educational centre/exhibition centre.

- Visitor motivations: the EFA results revealed that five factors can explain the motivation of visitors to urban green spaces. These were “Active and physical in nature”, “Learning, knowledge and education”, “Rest, relaxation and escape”, “Social interaction” and “Pleasure seeking”. The results of a comparison of these factors within and between the four urban green spaces were presented.
- Environmental awareness: the results of the two themes, as identified from literature, “Learning/Action” and “Commitment”, were given.
- Subjective well-being: the results showed two themes (identified from literature) that describe the visitors’ subjective well-being: “Quality of life” and “General well-being”.

The conclusions and recommendations for tourism managers; limitations of the study and recommendations for future research are discussed in Chapter 5.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS OF FOUR URBAN GREEN SPACES IN THE CITY OF TSHWANE

5.1. OVERVIEW OF THE STUDY PROCESS

Urban green spaces are important visitor attractions for city dwellers who temporarily want to escape their everyday stressful lives or work pressure to relax and recuperate in a natural environment or green space. Visitor profiles regarding visitor motivation, environmental awareness, and subjective well-being in the context of urban green spaces are relatively unreported in modern day literature (Carrus, et al., 2015; Saayman et al., 2018; Uysal et al., 2016; Ward et al., 2010).

The purpose of this exploratory research was to establish a profile of visitors to four urban green spaces by investigating their motivational factors, environmental awareness, and subjective well-being to promote visits to four urban green spaces in Tshwane, namely Rietvlei Nature Reserve, Pretoria National Botanical Garden, National Zoological Garden (Pretoria Zoo) and Austin Roberts Bird Sanctuary, within South Africa.

Figure 5.1. illustrates the primary and secondary research objectives and highlights key achievements from each chapter. Next is an outline of the study's research methodology, which touches on the literature used in the design of the questionnaire and the process followed in the empirical part of the study. The conclusions drawn from the data analysis and the resulting recommendations made, lead to a visitor profile for each of the four urban green spaces in the City of Tshwane.

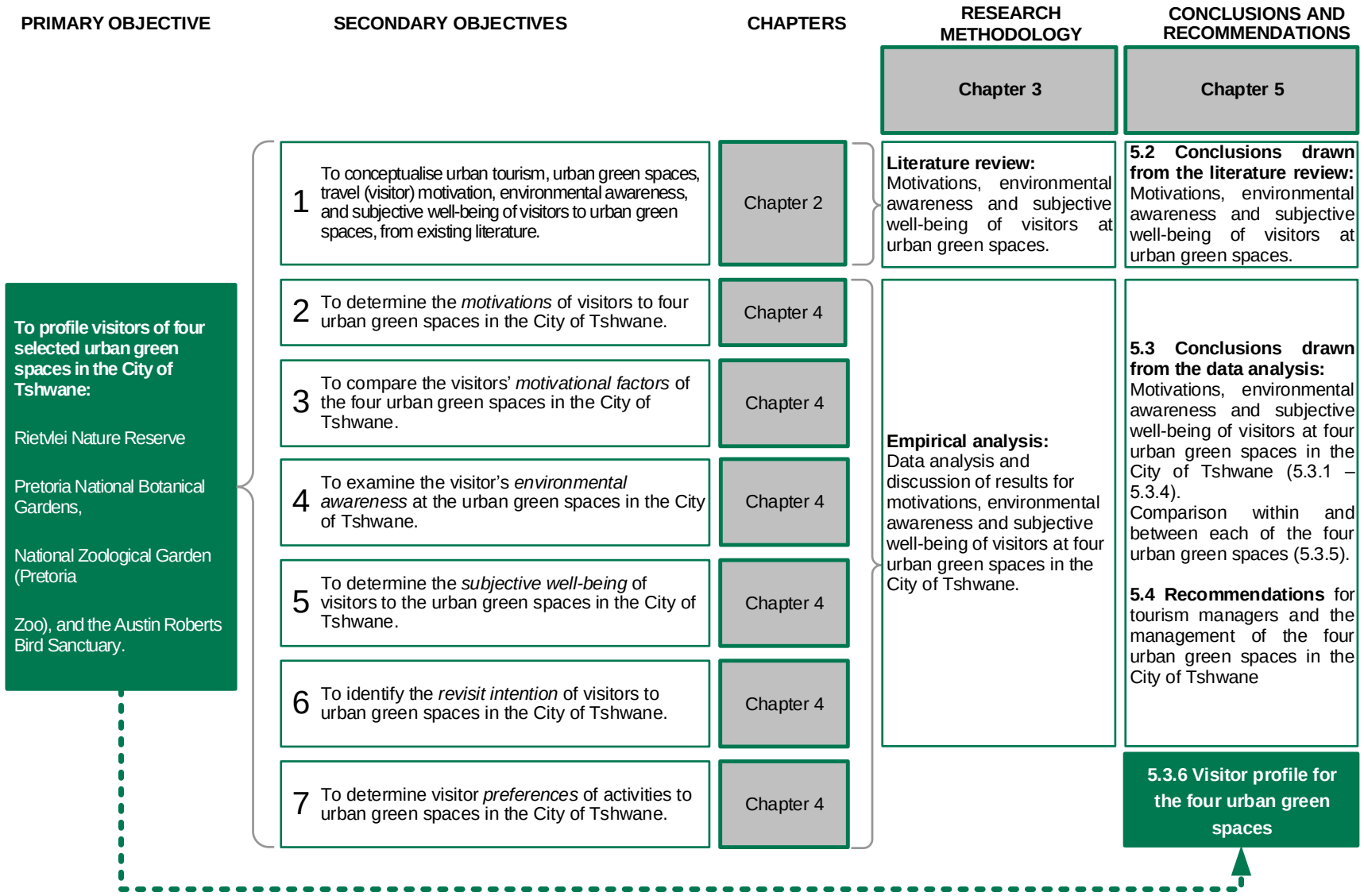

Figure 5.1: Layout diagram on the achievement of the primary and secondary research objectives

As illustrated in Figure 5.1, the primary objective of the study was to the profile visitors to the four selected urban green spaces in the City of Tshwane: Rietvlei Nature Reserve, Pretoria National Botanical Gardens, the National Zoological Garden (Pretoria Zoo), and the Austin Roberts Bird Sanctuary. To achieve this objective, seven secondary objectives were established and operationalised by means of the research methodology (Chapter 3). A literature review was conducted which enabled the realisation of the first secondary objective (see Chapter 2). Empirical research was conducted to accomplish secondary objectives 2-7; the results are presented in Chapter 4. The information used in this empirical study was collected from respondents who visited the four urban green spaces between the months of January and March 2020. Questionnaires were used to collect data on:

- Revisit intention
- Visitor motivation
- Preferences of activities at the urban green spaces
- Environmental awareness of visitors
- Subjective well-being of visitors
- Biographic information of the visitors.

To collect the data, the following methodological procedure was used: the nature of the research is empirical using a survey tool to collect primary data. The population of the study comprised visitors to four urban green spaces in the City of Tshwane. A total sample of n = 392 respondents was obtained at these sites using purposive sampling. Questionnaires were distributed to visitors at the four urban green spaces. Descriptive statistics and inferential statistics, namely, EFA, ANOVA and correlations, were applied to the data. Based on the results, recommendations are made for consideration by stakeholders of urban green spaces (i.e., managers, marketers, municipalities, private sector, general public).

Conclusions drawn from the literature review are presented in section 5.2, while the conclusions drawn from the data analysis are provided in section 5.3. Sections 5.3.1-

5.3.4 provide a summary for each of the four urban green spaces. In section 5.3.5, a comparison within and between each of the four urban green spaces is made. A synthesis of the visitor profile for each of the four urban green spaces is reflected in section 5.3.6 and illustrated in Figure 5.2. The main contribution of this study's results is hereby displayed.

A discussion of the recommendations made to tourism managers and the management of the four urban green spaces (Rietvlei Nature Reserve, Pretoria National Botanical Gardens, the National Zoological Garden (Pretoria Zoo), and the Austin Roberts Bird Sanctuary) in the City of Tshwane ensues in section 5.4. Section 5.5 summarises the limitations of the study and section 5.6 provides recommendations for future research. The conclusion is given in section 5.7.

5.2. CONCLUSIONS DRAWN FROM THE LITERATURE REVIEW

This section links to the secondary objective 1, namely, to conceptualise urban green spaces, visitor motivation, environmental awareness, subjective well-being and visitor preferences. The main findings and conclusions derived from the literature review are:

- Tourism is defined by George (2015) as an activity taking place away from a person's home. Tourism can be further divided into urban and rural tourism.
- Urban tourism (section 2.2) is referred to as city tourism and is known as one of the fastest-growing types of tourism (George, 2015). Key elements of urban tourism include festivals and events, shopping malls, waterfront developments, historical districts, convention centres and exhibitions.
- Urban green spaces (section 2.3) are referred to as "tourism that is simply nature travel and conservation in a city environment" (Wu et al., 2009). These include, amongst others, botanical gardens, nature reserves, zoological gardens, parks, and bird sanctuaries. Urban green spaces are also considered as "places of social interaction and education, cultural identity, tourist destinations, and important for property development" (Milliken, 2015).

- To serve visitors better, an understanding of what motivates them to visit urban green spaces is needed (section 2.3).
- Visitor motivation (section 2.4) is defined by Dileep (2019) as “the different reasons why people choose to travel or take part in different tourism activities”.
- There are numerous visitor motivational factors associated with urban green spaces. The seven main factors gleaned from literature include social interaction, novelty, relaxation, status, learning and discovery, escape and pleasure seeking (See Table 2.2).
- Environmental awareness is described as understanding the fragility of the environment and the importance of its protection (Bulatovic & Rajovic, 2018) (section 2.5.1).
- The two factors measuring environmental awareness in the context of urban green spaces included learning/action and commitment.
- Subjective well-being is described as a feeling that individuals have about their lives or perceptions of what the individuals want to achieve in their lives (Kim et al., 2015). The literature indicated that visiting urban green spaces influenced the subjective well-being of visitors.
- The two factors measuring subjective well-being in the context of urban green spaces that derived from the literature review included quality of life and general well-being (section 2.6.2). These factors were incorporated into the questionnaire.
- Revisit intention is defined as a person revisiting a destination or repeating a tourist activity (Baker & Crompton, 2000; Viet, Dang & Nguyen 2020) (see section 2.7). A positive intention to revisit an attraction indicates an enjoyable experience at the destination or attraction (Lehto et al., 2004; Zhang, Wu, & Buhalis, 2014, 2018). Repeat visitors are inclined to stay longer at a destination, are more satisfied, participate more intensively in activities and spread a positive word of mouth recommendation while also requiring much less marketing costs than first-time visitors (Viet et al., 2020).

- Visitor preferences relates to the preferred activities by visitors at the four selected urban green spaces or the activities that motivate them to visit that specific green space.

5.3. CONCLUSIONS DRAWN FROM THE DATA ANALYSIS OF THE FOUR URBAN GREEN SPACES

Based on the results, conclusions and recommendations can be drawn which may assist managers with planning, marketing and promoting the urban green spaces in the City of Tshwane to ensure that the visitors have a pleasurable experience.

Conclusions for each urban green space are presented in the following order: Rietvlei Nature Reserve (5.3.1), Pretoria National Botanical Garden (5.3.2), National Zoological Garden (Pretoria Zoo) (5.3.3), and Austin Roberts Bird Sanctuary (5.3.4). Following this, the differences *between* visitor motivational factors, environmental awareness and subjective well-being of visitors to the four urban green spaces are presented in section 5.3.5. Prior to concluding the section with correlations between the constructs (visitor motivation, environmental awareness and subjective well-being), a detailed synthesis of the visitor profile for the four urban green spaces is provided in section 5.3.6. Conclusions on the correlations between the constructs (visitor motivation, environmental awareness and subjective well-being) are given in section 5.3.7.

5.3.1. Rietvlei Nature Reserve

To profile visitors to the Rietvlei Nature Reserve, the following categories are reported on: (a) biographical information, (b) revisit intention, (c) preferences for activities, (d) visitor motivation, (e) environmental awareness, and (f) subjective well-being.

The following can be concluded based on the results of the (a) *biographic information* of visitors to Rietvlei Nature Reserve (section 4.2):

- A relatively even gender ratio was observed as only a slightly larger proportion of female respondents are noticeable in the sample distribution (Male 45.5%; Female, 54.5%).

- Most visitors participating in the study were aged 35 to 44 years old (39%) and 26 to 34 years old (25%) with no participants (0.0%) in the younger age group (up to 25 years).
- A majority of the respondents were white (76.2%), followed by other race groups (14.9%) and African (8.9%).
- Respondents are mostly educated, with the highest number of visitors holding an undergraduate degree (36.4%), followed by national diploma (27.3%) and a postgraduate degree (26.3%).
- The majority of respondents were married or living together (81.2%). A few respondents were single (9.9%) while only 8.9% were divorced, widowed, or separated.
- Many of the respondents resided in Gauteng (80.2%), followed by an equal split (9.9%) of visitors from other South African provinces and outside the borders of South Africa.

In terms of (b) *revisit intention*, (section 4.3.), most visitors to the Rietvlei Nature Reserve indicated that they strongly intended (4.63) that they will revisit the attraction on a scale of 1 = Strongly Disagree to 5 = Strongly Agreed.

Regarding visitors' (c) *preferences for activities (*section 4.4.1*)*, most visitors to Rietvlei Nature Reserve mostly preferred the following activities in order of importance:

- Game viewing (3.43)
- Viewing birds and other animals (3.40)
- Having a picnic (3.34)
- Bird hide (3.18).

From the results on (d) *visitor motivation* to Rietvlei Nature Reserve, (section 4.6.1) the EFA for the 33 items in the questionnaire were grouped into five factors that were labelled: (1) Active in nature/physical, (2) Learning/knowledge/education, (3) Rest and relaxation/escape, (4) Social interaction and (5) Pleasure seeking/activities (section 4.5). The mean scores for the five visitor motivation factors were above 3.00 (Neutral),

indicating agreement amongst the respondents. Respondents were mostly motivated by the following factors:

- Rest and Relax/ Escape (4.17),
- Pleasure Seeking/Activities (3.74).
- Respondents were least motivated to be Active in Nature / Physical (3.17).

Regarding (e) *environmental awareness* (section 4.7*)*, ten variables were derived from literature and were grouped into two themes: Learning/Actions and Commitment. Based on the results, the following can be concluded:

- Reliability was confirmed for both themes.
- The visitor's agreed with the themes -- Learning/Action (4.09) and Commitment (4.00).

In terms of (f) *subjective well-being* (section 4.8*),* the 20 variables were grouped into two themes, namely Quality of life and General well-being. The following can be concluded from the results:

- Reliability was confirmed for both themes.
- Most visitors agreed that their quality of life (4.07) and general well-being (3.99) improved after visiting the Rietvlei Nature Reserve.

5.3.2. Pretoria National Botanical Garden

In order to profile visitors to the Pretoria National Botanical Garden, the following categories are reported on: (a) biographical information, (b) revisit intention, (c) preferences for activities, (d) visitor motivation, (e) environmental awareness, and (f) subjective well-being.

From the results on the (a) *biographic information* of visitors to Pretoria National Botanical Garden, (section 4.2) the following can be concluded:

- More female visitors responded (Male 45.8%; Female, 54.2%). This is consistent with studies at botanical gardens as urban green spaces in South Africa (Ward et al., 2004:52) where females were also more than the male visitors.
- Most visitors participating in the study were 26 to 34 years old (28.4%), 35 to 44 years old (24.2%) with 16.8% falling within the younger age group (up to 25 years).
- Most of the respondents were white (61.5%), followed by African (28.1%) and other race groups (10.4%).
- Most respondents were educated since they held a national diploma (43.0%) followed by an undergraduate degree (30.1%).
- Most respondents were married or living together (65.3%); few respondents were single (27.4%) while only 7.4% were divorced, widowed, or separated.
- Most respondents were residents of Gauteng (93.8%), 3.1% of the visitors came from other provinces in South Africa and 3.1% outside the borders of South Africa.

In terms of (b) *revisit intention* (section 4.3), most visitors to the Pretoria National Botanical Garden indicated that they strongly agreed (4.64) that they will revisit the attraction.

At the Pretoria Botanical Gardens, visitors (c) *preferred* the following *activities* in order of importance (section 4.4):

- Pathways (3.72),
- The self-guided tree route (3.18),
- Viewing trees and or wildflowers (3.16)
- Viewing birds and or other animals (3.14),
- Having a picnic (3.10)

From the results on (d) *visitor's motivational factors* within Pretoria National Botanical Garden (section 4.6), the EFA for the 33 items in the questionnaire were grouped into five factors that were labelled, (1) Active in nature/Physical, (2) Learning/Knowledge/Education, (3) Rest and Relaxation/Escape, (4) Social Interaction and (5) Pleasure seeking/Activities (section 4.5). Respondents were mostly motivated by the following factors:

- Rest and Relax/ Escape (3.72) and Pleasure Seeking/Activities (3.18).
- Respondents were least motivated to be to take part in Social Interaction (2.90).

Regarding (e) *environmental awareness* at the Pretoria National Botanical Garden, the following can be concluded (section 4.7*)*:

- Reliability was confirmed for both themes.
- Visitors agreed that both the Commitment (3.75) and the Learning/Action (3.74) themes, contribute to their environmental awareness.

In terms of (f) subjective well-being, (section 4.8) the 20 variables derived from literature were grouped into two themes, namely Quality of life and General well-being. The following can be concluded from the results:

- Reliability was confirmed for both themes.
- Most visitors strongly agreed that their Quality of life (3.84) and General well-being (3.80) improved after visiting the Pretoria National Botanical Garden.

5.3.3. National Zoological Garden (Pretoria Zoo)

In order to profile visitors to the National Zoological Garden (Pretoria Zoo), the following categories are reported on: (a) biographical information, (b) revisit intention, (c) preferences for activities, (d) visitor motivation, (e) environmental awareness, and (f) subjective well-being.

From the results on the (a) *biographic information* of visitors to National Zoological Garden (Pretoria Zoo) (section 4.2) the following can be concluded:

- More females responded (Male 43.1%; Female, 56.8%).
- Most visitors participating were 26 to 34 years old (25.2%), followed by 35 to 44 years old (22.1%) and those in the age group 45 – 54 years old (18.9%).
- Most respondents were African (57.9%) and white (30.5%) and other race groups (11.6%) followed.
- Most respondents were qualified at a national diploma (41.5%) level and at the level of an undergraduate degree (29.8%).

- Many respondents were married or living together (56.4%), with significantly fewer respondents being single (30.9%) or identifying as divorced, widowed, or separated (12.8%).
- Most of the respondents resided in Gauteng (81.1%), with visitors from outside the borders of South Africa accounting for 10.5% and 8.4% from other provinces in South Africa.

In terms of (b) *revisit intention* (section 4.3.), most visitors to the National Zoological Gardens (Pretoria Zoo) indicated that they strongly agreed (4.63) that they will revisit the zoo.

Visitors to the National Zoological Gardens (Pretoria Zoo) indicated the following (c) *preferred activities* in order of importance:

- Elephant encounter (3.36)
- Viewing birds and/or other animals (3.35)
- Walkways (3.35)
- Rhino encounter (3.34)
- Viewing trees and or wildflowers (3.30)
- Having a picnic (3.18).

Based on the EFA, the 33 items in the questionnaire were grouped into five factors that were labelled, (1) Active in nature/Physical, (2) Learning/Knowledge/Education, (3) Rest and Relaxation/Escape, (4) Social Interaction and (5) Pleasure seeking/Activities (section 4.5). The mean score of all five visitor motivation factors were above 3.00 (Neutral), indicating agreement amongst the respondents.

From the results on (d) *visitor's motivational factors* within National Zoological Gardens (Pretoria Zoo), the respondents were mostly motivated by (section 4.6):

- Rest and Relaxation / Escape (4.25) and Pleasure Seeking / Activities (3.91).
- Respondents were least motivated to take part in any Social Interaction (3.41).

Based on the results on (e) *environmental awareness* of visitors to the National Zoological Gardens (Pretoria Zoo) (section 4.7), the respondents agreed that both the Learning/Action (3.58) and (2) Commitment (3.57) themes contributed to their environmental awareness.

The results in terms of (f) *subjective well-being* (section 4.8)*,* indicated that:

- Both themes, (1) Quality of life and (2) General wellbeing were reliable.
- Most visitors agreed that their Quality of life (3.99) and General well-being (3.93) improved after visiting the National Zoological Gardens (Pretoria Zoo).

5.3.4. Austin Roberts Bird Sanctuary

In order to profile visitors to the Austin Roberts Bird Sanctuary, the following categories are reported on: (a) biographical information, (b) revisit intention, (c) preferences for activities, (d) visitor motivation, (e) environmental awareness, and (f) subjective well-being.

From the results on the (a) *biographic information* of visitors to Austin Roberts Bird Sanctuary, (section 4.2) the following can be concluded:

- Slightly more male respondents responded (Male 51.5%; Female, 48.5%).
- Most visiting participants were between 26 and 34 years old (27.3%), followed by those 35 to 44 years old (24.2%) and in the age group 45-54 years old (20.2%).
- Most of the respondents were white (83.0%) followed by other race groups (15.2%) and African only (2.0%).
- Most respondents had obtained an undergraduate degree (46.0%), followed by a national diploma (38.0%) and a postgraduate degree (9.0%).
- Most respondents were married or living together (75.3%), fewer were single (17.5%) while others were divorced, widowed, or separated (7.2%).
- Most respondents resided in Gauteng (92.9%), followed by 4.0% visitors from outside the border of South Africa and 3.0% from other provinces in South Africa.

In terms of (b) *revisit intention* (section 4.3.), the bulk of visitors to Austin Roberts Bird Sanctuary indicated that they strongly agreed (4.63) that they will revisit the attraction.

The results relating to the visitors' (c) *preferences of activities* at the Austin Roberts Bird Sanctuary indicate that, in order of importance, they opted for:

- Blue Crane Restaurant and Bar (3.36)
- Viewing birds and other animals (3.04)
- Bird hide (3.03)

Conclusions emanating from (d) *visitor motivation* within Austin Roberts Bird Sanctuary are reported (section 4.6). Based on the EFA the 33 items in the questionnaire were grouped into five factors that were labelled, (1) Active in nature/Physical, (2) Learning/Knowledge/Education, (3) Rest and Relaxation/Escape, (4) Social Interaction and (5) Pleasure seeking/Activities (section 4.5). Four out of the five motivational factors mentioned were below 3.00 (Neutral), indicating that the respondents disagreed to most of the motivational factors. Respondents were mostly motivated by the following factors:

- Rest and Relaxation / Escape (3.73).
- Respondents were not motivated by Pleasure Seeking/Activities, Learning/Knowledge/Education, Active in Nature/Physical or Social Interaction.

Regarding (e) *environmental awareness* of visitors to the Austin Roberts Bird Sanctuary, the respondents agreed that both Learning/Action (4.15) and Commitment (4.15) contributed to their environmental awareness (section 4.7).

The results in terms of (f) *subjective well-being* (section 4.8), indicated:

- Both themes, Quality of life and General wellbeing were reliable.
- Most visitors agreed that their Quality of life (3.90) followed by General well-being (3.89) improved after visiting Austin Roberts Bird Sanctuary.

5.3.5. Differences between visitor motivational factors, environmental awareness and subjective well-being of visitors to each of the four urban green spaces

Comparisons were made *between* the (a) visitor motivational factors, (b) environmental awareness, and the (c) subjective well-being of the visitors to each of the four urban green spaces to determine the similarities and differences that exist and to further profile the unique characteristics for each group. Conclusions are made based on the results of the ANOVA test on (a) visitors' motivational factors (section 4.6.1):

In comparing the agreement of respondents to motivational factors between the four urban green spaces, it was noteworthy that agreement scores were the highest for all five factors for those visiting the National Zoological Garden (Pretoria Zoo) followed by the Rietvlei Nature Reserve.

National Zoological Garden

- Rest and Relaxation (4.25)
- Pleasure seeking/Activities (3.91)
- Active in nature/Physical (3.70)

Rietvlei Nature Reserve

- Rest and Relaxation (4.17)
- Pleasure seeking/Activities (3.74)
- Learning/Knowledge/Education (3.37)

The Pretoria National Botanical Garden (3.72) and the Austin Roberts Bird Sanctuary (3.73) had a relatively high score for Rest and Relaxation/Escape.

Significant differences were found between the five motivational factors as indicated by the Robust Tests of Equality of Means (see Table 4.4). Amongst these differences, the effect size between the four urban green spaces was very large: the Pleasure seeking/Activities (0.410), Learning/Knowledge/Education (0.364) and the Active in nature/Physical (0.299) factors,.

In terms of Pleasure seeking/Activities, the Post Hoc (Games-Howell) test indicated where significant differences existed in agreement of the visitors to the four urban green spaces:

- Visitors' agreement regarding Pleasure seeking/Activities at the Rietvlei Nature Reserve (Agree) differed significantly with visitors to the Pretoria National Botanical Garden (Neutral) and Austin Roberts Bird Sanctuary (Disagree).
- Visitors to the Pretoria National Botanical Garden (Neutral) differed significantly with the National Zoological Garden (Pretoria Zoo) (Agree) and the Austin Roberts Bird Sanctuary (Disagree).
- The National Zoological Garden (Pretoria Zoo) (Agree) differed significantly with Austin Roberts Bird Sanctuary (Disagree) for the Pleasure seeking/Activities factor.
- The Rietvlei Nature reserve (Agree) did not differ significantly from the National Zoological Garden (Pretoria Zoo) (Agree). Visitors agreed that Pleasure seeking/Activities motivated them to visit these two urban green spaces.

These results indicate that only the respondents visiting the Rietvlei Nature reserve and the Zoological Garden (Pretoria Zoo) considered Pleasure seeking/Activities as a motivation to visit.

In terms of Learning/Knowledge/Education, the Post Hoc (Games-Howell) test indicated a significant difference in the visitors' agreement to the four urban green spaces:

- Visitors' agreement regarding Learning/Knowledge/Education at the Rietvlei Nature Reserve (Agree) differed significantly with the visitors to the Pretoria National Botanical Garden (Neutral) and the Austin Roberts Bird Sanctuary (Disagree).
- Visitors to the Pretoria National Botanical Garden (Neutral) differed significantly with the National Zoological Garden (Pretoria Zoo) (Agree) and the Austin Roberts Bird Sanctuary (Disagree).

- The National Zoological Garden (Pretoria Zoo) (Agree) differed significantly with the Austin Roberts Bird Sanctuary (Disagree) for the Learning/Knowledge/Education factor.
- The Rietvlei Nature Reserve did not differ significantly from the National Zoological Garden (Pretoria Zoo). Visitors agreed that Learning/Knowledge/Education motivated them to visit these two urban green spaces.

These results indicate that only the respondents visiting the Rietvlei Nature Reserve and the National Zoological Garden (Pretoria Zoo) considered Learning/Knowledge/Education as a motivating factor to visit.

In terms of Active in nature/Physical, the Post Hoc (Games-Howell) test indicated a significant difference in the visitors' agreement:

- The agreement regarding Active in nature/Physical at the Rietvlei Nature Reserve (Neutral) differed significantly with visitors to the National Zoological Garden (Pretoria Zoo) (Agree) and Austin Roberts Bird Sanctuary (Disagree).
- Visitors to the Pretoria National Botanical Garden (Neutral) differed significantly with the National Zoological Garden (Pretoria Zoo) (Agree) and the Austin Roberts Bird Sanctuary (Disagree).
- The National Zoological Garden (Pretoria Zoo) (Agree) differed significantly with the Austin Roberts Bird Sanctuary (Disagree) for the Active in nature/Physical factor.
- The Rietvlei Nature reserve did not have a significant difference to the Pretoria National Botanical Garden. Visitors were neutral about the Active in nature/Physical as a motivational factor to visit these two urban green spaces.

The above results indicate that only the respondents visiting the Zoological Garden (Pretoria Zoo) considered Active in nature/Physical as a motivation to visit this urban green space, while visitors to the Austin Roberts Bird Sanctuary do not consider this factor as a motivation.

Based on the results of the ANOVA test on (b) *environmental awareness* (section 4.7.1) and (c) *subjective well-being* (section 4.8.1), the following can be concluded:

- The respondents agreed to both the Learning/Actions and the Commitment themes.
- The respondents agreed to both the Quality of Life and the General well-being themes.
- The effect size indicated that the difference in mean scores between the four groups was small and thus do not warrant further discussion.

5.3.6. A synthesis of the visitor profile for each of the four urban green spaces

A synthesis of the visitor profile highlights a comparison between the four urban green spaces in Figure 5.2.

Figure 5.2: Visitor profile for the four selected urban green spaces

Urban green space	Rietvlei Nature Reserve	Pretoria National Botanical Garden	National Zoological Garden (Pretoria Zoo)	Austin Roberts Bird Sanctuary
(a) Biographic information				
Gender	Male (45.5%) Female (54.5%)	Male (45.8%) Female (54.2%)	Male (43.1%) Female (56.8%)	Male (51.5%) Female (48.5%)
Age	35 to 44 years (39%) 26 to 34 years (25%) up to 25 years (0.0%)	26 to 34 years (28.4%) 35 to 44 years (24.2%) up to 25 years (16.8%)	26 – 34 years (25.2%) 35-44 years (22.1%) 45 – 54 years (18.9%)	26 – 34 years (27.3%) 35-44 years (24.2%) 45 – 54 years 20.2%
Ethnicity	African (8.9%) White (76.2%) Other (14.9%)	African (28.1%) White (61.5%) Other (10.4%)	African (57.9%) White (30.5%) Other (11.6%)	African (2.0%) White (83.0%) Other (15.0%)
Highest level of education	Undergraduate degree (36.4%) National Diploma (27.3%) Postgraduate degree (26.3%)	National Diploma (43.0%) Undergraduate degree (30.1%) Matric (21.5%) Postgraduate degree (5.4%)	National Diploma (41.5%) Undergraduate degree (29.8%) Matric (24.5%) Postgraduate degree (4.3%)	Undergraduate degree (46.0%) National Diploma (38.0%) Postgraduate degree (9.0%) Matric (7.0%)
Marital status	Married or living together (81.2%) Single (9.9%) Divorced / widowed / separated (8.9%)	Married or living together (65.3%) Single (27.4%) Divorced / widowed / separated (7.4%)	Married or living together (56.4%) Single (30.9%) Divorced / widowed / separated (12.8%)	Married or living together (75.3%) Single (17.5%) Divorced / widowed / separated (7.2%)
Province	Gauteng (80.2%) Other provinces in RSA (9.9%) Outside RSA borders (9.9%)	Gauteng (93.8%) Other provinces in RSA (3.1%) Outside RSA borders (3.1%)	Gauteng (81.1%) Other provinces in RSA (8.4%) Outside RSA borders (10.5%)	Gauteng (92.9%) Other provinces in RSA (3.0%) Outside RSA borders (4.0%)
(b) Revisit intention	Strongly agreed (4.63)	Strongly agreed (4.64)	Strongly agreed (4.63)	Strongly agreed (4.63)
(c) Preferences for activities	Game viewing (3.43) Viewing birds and other animals (3.40) Having a picnic (3.34), Bird hide (3.18)	Pathways (3.72) Self-guided tree route (3.18) Viewing trees or wildflowers (3.16) Viewing birds and other animals (3.14) Having a picnic (3.10)	Elephant encounter (3.36) Viewing birds and other animals (3.35) Rhino encounter (3.34), Viewing trees or wildflowers (3.30)	Blue Crane Restaurant and bar (3.36) Viewing birds and other animals (3.04) Bird hide (3.03)
(d) Visitor motivation	Agree to the factors: Rest and Relax/ Escape (4.17) Pleasure Seeking / Activities (3.74)	Agree to the factors: Rest and Relaxation / Escape (3.72) Pleasure seeking / Activities (3.18)	Agree to the factors: Rest and relaxation / Escape factor (4.25) Pleasure seeking / Activities factor (3.91)	Agree to the factor: Rest and relaxation / Escape (3.73)
(e) Environmental awareness	Agree to the themes: Learning / Action (4.09) Commitment (4.00)	Agree to the themes: Learning / Action (3.74) Commitment (3.75)	Agree to the themes: Learning / Action (3.58) Commitment (3.57)	Agree to the themes: Learning / Action (4.15) Commitment (4.15)
(f) Subjective well-being	Agree to the themes: Quality of life (4.07) General well-being (3.99)	Agree to the themes: Quality of life (3.84) General well-being (3.80)	Agree to the themes: Quality of life (3.99) General well-being (3.93)	Agree to the themes: Quality of life (3.90) General well-being (3.89)

5.3.7. Conclusion on correlations between constructs

Based on the results on the correlation analysis (Pearson product-moment correlation analysis) among the three constructs, namely visitor motivation, environmental awareness and subjective well-being, the following can be concluded (Section 4.9):

- A positive strong correlation indicates that an increase in motivation to visit the Rietvlei Nature Reserve, will increase the subjective well-being of these visitors. Also, an increase in visitors' subjective well-being may increase their motivation to visit Rietvlei Nature Reserve.
- Likewise, an increase in the subjective well-being also increases the visitor motivation at the Pretoria National Botanical Garden, while an increase in visitor motivation would also improve subjective well-being.
- A positive moderate correlation indicates an increase in environmental awareness which will also increase the subjective well-being of visitors to the National Zoological Garden (Pretoria Zoo). If subjective well-being increases, the environmental awareness of the visitors to National Zoological Garden (Pretoria Zoo) also increases.
- A positive small correlation indicates that if subjective well-being increase, the environmental awareness of the visitors to Austin Roberts Bird Sanctuary also increases, while increased environmental awareness will increase subjective well-being.

5.4. RECOMMENDATIONS FOR TOURISM MANAGERS AND THE MANAGEMENT OF THE FOUR URBAN GREEN SPACES IN THE CITY OF TSHWANE

For effective future planning and management, an understanding of the visitors to urban green spaces are needed. Understanding the visitors' profile, motivations and needs may assist managers to provide tailormade product offerings for an enjoyable experience at these urban green spaces. Recommendations are individually made for Rietvlei Nature Reserve (5.4.1), Pretoria National Botanical Garden (5.4.2), National Zoological Garden

(Pretoria Zoo) (5.4.3), and the Austin Roberts Bird Sanctuary separately in the sections that follow (5.4.4).

5.4.1. Recommendations for tourism managers and the management of Rietvlei Nature Reserve

- Since most visitors participating in the study were aged between 35 and 44 years (39%) as well as 26 and 34 years (25%), the activities offered should accommodate these age groups.
- There were no respondents under 25 years old, therefore marketing efforts towards attracting the younger age group could be implemented. Activities targeted towards the younger age group could be further developed, for example, guided hiking or cycling trails and photography competitions for young people.
- As only 8.9% of the visitors were African, a marketing campaign to attract more African visitors is recommended.
- Since most respondents had a degree or a diploma and are well educated, the educational programmes should be targeted to include rich information (for example bird lists or list of indigenous plants) for these visitors. They could also cater for special interest tourism groups, such as stargazers. Rietvlei Nature Reserve might also consider further investment into interpretive services, such as local field guides well-trained in ecological systems, plants, game and birds.
- Other interpretation methods for self-guided game and bird trails, interpretative signs or symbols, exhibits and visitor centres can also be considered (Chen et al. 2006). Tourism attractions should concentrate as many interpretative services as with other aspects of their business (in Lee et al., 2009).
- Since most of the respondents reside from Gauteng, a promotional drive to other provinces or cities in South Africa and outside the country's borders could increase visitor numbers.
- As most visitors indicated that they would revisit Rietvlei Nature Reserve, management should continue to provide enjoyable and informative visitor experiences.

- As picnic sites and the bird hide were preferred activities for visitors, these should be well-maintained and could be increased or expanded.
- Since Rest and Relax/ Escape and Pleasure Seeking / Activities were strong motivational factors to visit Rietvlei Nature Reserve, it is recommended that reserve management focus on these motivations in their marketing strategies.
- Since a participating visitor indicated that their Quality of life and General well-being improved after visiting the urban green space, the City of Tshwane's managers must realise that providing well-cared and well-maintained urban green spaces are an important asset for the city and the citizens.
- Since the visitors indicated a strong environmental awareness, the reserve management should pay special attention to aspects such as waste management, water conservation, eradication of alien and invasive plants, erosion control and animal health.

5.4.2. Recommendations for tourism managers and the management of Pretoria National Botanical Garden

- Since many visitors participating in the study were 35 to 44 years old (28.4%) and 26 to 34 years old (24.2%), activities offered should accommodate these age groups. There were few respondents under 25 years old (16.8%), therefore marketing efforts towards attracting the younger age group could be implemented. Activities to attract the younger age group could be furthered developed, for example, more regular park runs or applicable concerts.
- As only 28.1% of the visitors were African, a marketing campaign to attract more African visitors are recommended.
- Since most respondents were well-educated – holding a degree or a diploma – the management of Pretoria National Botanical Garden could include information on a cognitively demanding level for the more educated visitors.
- Because most respondents resided in Gauteng, marketing effort could be increased to attract visitors from the other provinces and foreign visitors.

- As most visitors indicated that they would revisit Pretoria National Botanical Garden, the management should continue to provide enjoyable and informative visitor experiences.
- As pathways, the self-guided tree route and picnicking were preferred activities for visitors, these facilities should be well-maintained and could be increased or expanded.
- Since Rest and Relax/Escape and Pleasure Seeking/Activities were strong motivational factors, they factors should be included in marketing material.
- Visitors indicated that their Quality of life and General well-being improved after visiting the garden, therefore SANBI managers should sustain the attraction as it is an important asset for the city and the citizens.
- Since the visitors indicated a strong environmental awareness, the garden management should pay special attention to aspects such as waste management, water conservation, eradication of alien and invasive plants.

5.4.3. Recommendations for tourism managers and the management of National Zoological Garden (Pretoria Zoo)

- The visitors participating in the study were 35 to 44 years old (28.4%) and 26 to 34 years old (24.2%); therefore, activities offered at National Zoological Garden (Pretoria Zoo) should accommodate these age groups. There were fewer respondents under 25 years old (16.8%); as such, marketing efforts towards attracting the younger age group could be implemented.
- Activities to attract the younger age group could be furthered developed, for example, the elephant and rhino encounter.
- As most respondents had a degree or a diploma, the management of National Zoological Garden (Pretoria Zoo) could include information on a cognitive demanding level for the more educated visitors.
- Marketing initiatives must be geared towards attracting foreign visitors and those from the other provinces in South Africa since most respondents were residents of the Gauteng province to increase visitor numbers.

- As most visitors indicated that they would revisit National Zoological Garden (Pretoria Zoo), the management should continue to provide enjoyable and informative visitor experiences.
- As the elephant and rhino encounter, walkways and picnicking were the visitors' preferred activities, these facilities should be well-maintained and could be increased or expanded.
- The marketing material should highlight Rest and Relax/Escape and Pleasure Seeking/Activities as these were strong motivational factors to visit National Zoological Garden (Pretoria Zoo).
- Visitors to the National Zoological Garden (Pretoria Zoo) indicated that their Quality of life and General well-being improved after visiting the garden, therefore SANBI managers should sustain the attraction as it is an important asset for the city as well as the citizens.
- The garden management should pay special attention to aspects such as waste management, water conservation, and eradication of alien and invasive plants because visitors indicated a strong environmental awareness.

5.4.4. Recommendations for tourism managers and the management of Austin Roberts Bird Sanctuary

- Since the majority of visitors participating in the study were aged 26 to 34 years old (27.3%), 35 to 44 years old (24.2%) and in the age group 45-54 years old (20.2%), activities offered at Austin Roberts Bird Sanctuary should accommodate these age groups.
- Since most respondents were well educated, the management of Austin Roberts Bird Sanctuary could include information on a higher level for the more educated visitors. To cater for the needs of the more educated market, stimulating exhibits and interesting information (for example about endangered bird species) could be added to the visitor centre.

- Since most visitors indicated that they would revisit Austin Roberts Bird Sanctuary, the City of Tshwane municipality should continue to promote and maintain this urban green space.
- The Blue Crane Restaurant and Bar was the most preferred activity. Therefore, the relationship of the sanctuary management with the private sector should be cherished and harnessed. The private sector can be encouraged to contribute to birdlife conservation. Viewing birds and other animals and the bird hide were also preferred activities for visitors, thus the facilities should be well-maintained and could be increased or expanded. Improved facilities for bird photography could be provided.
- Because Rest and Relax/Escape was the strongest motivational factor to visit the Austin Roberts Bird Sanctuary, the municipality should continue to promote and maintain this urban green space as it provides opportunities for visitors to relax in a natural environment or to escape from their daily stress.
- Visitors to the Austin Roberts Bird Sanctuary indicated that their Quality of life and General well-being improved after visiting the garden, therefore the City of Tshwane should sustain the attraction as it is an important asset for the city and the citizens.
- The sanctuary management should pay special attention to aspects such as waste management, water conservation, and eradication of alien and invasive plants especially because the visitors indicated a strong environmental awareness as a motivating factor.

5.5. LIMITATIONS OF THE STUDY

This study was limited to data collection during the late summer months (January – March 2020), therefore visitor's experiences during winter were not captured. Due to time and money constraints the study was limited to only one city in one province, namely the City of Tshwane (Gauteng) in South Africa and the results cannot be generalised to other cities or provinces.

5.6. RECOMMENDATIONS FOR FUTURE RESEARCH

The following recommendations are made with respect to future research:

- This study investigated visitor motivation, environmental awareness, preferences for activities and subjective well-being. Other constructs that may perhaps influence their decisions to visit a specific urban green space could be investigated further (Kotler & Keller, 2013:137) such as the characteristics affecting tourists' behaviour (social, cultural, and personal).
- The current research was conducted in only in one city in Gauteng and this could be extended to more cities and provinces in South Africa.
- Since various special interest tourism groups, for example, adventure tourists, avitourists and photography tourists, also visit urban green spaces it could be interesting to compare their visitor profiles. This information could assist managers and marketers to target different market segments and promote the urban green spaces per city.

5.7. CONCLUSION

Urban green spaces are being recognised as an integral part of urban tourism and have a high potential to stimulate social and environmental benefits to the urban dwellers. The role played by urban green spaces in urban tourism is not as recognised in the various provinces of South Africa. The general well-being of society has seen a gradual decline with urbanisation, lack of natural surroundings and residents' busy time schedules being listed as some the contributors to this decline. Research was conducted to profile visitors at four urban green spaces in the City of Tshwane.

Based on the results obtained from questionnaires completed at the four urban green spaces in the City of Tshwane, this study has provided insight on visitor motivation, environmental awareness, subjective well-being and preferences of activities for each urban green space.

The results of the analysis addressed each of the secondary objectives and highlighted:

- Visitors indicated that rest, relaxation, escape, pleasure seeking, and activities were factors that motivated them to visit urban green spaces.
- In terms of the environmental awareness of visitors to urban green spaces, the results indicated that the visitors mostly agreed to the themes of learning/action and commitment.
- Regarding the subjective well-being of visitors to urban green spaces, visitors agreed with the themes relating to quality of life and general well-being.
- The majority of respondents at the four urban green spaces indicated that they intended to revisit the attractions at the urban green spaces.

Stakeholders and marketers involved in urban green spaces at the City of Tshwane could benefit from the results of this study, which could possibly be used in other cities as well, depending on the urban green space under investigation. These findings may assist city management to gain insight into strategies for future marketing and communication. As urban nature fulfils a prominent role in most inhabitants' well-being especially in relation to their psychological needs and social functions, it can be concluded that urban nature is a key ingredient for city dwellers. In essence, urban green spaces need to be protected for future generations.

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APPENDICES

APPENDIX A: QUESTIONNAIRE – PROFILING VISITORS OF FOUR SELECTED URBAN GREEN SPACES IN THE CITY OF TSHWANE

Selected urban green spaces in the City of Tshwane

Conducted by

THE DEPARTMENT: APPLIED MANAGEMENT

UNIVERSITY OF SOUTH AFRICA

Participant information sheet

As a Master's degree student in Commerce at the University of South Africa, I am doing research on selected urban green spaces in the City of Tshwane. The reason for undertaking this study is to establish motivations, environmental awareness and subjective well-being of visitors to urban green spaces in order to enhance visits to Tshwane's urban tourism attractions.

You have been selected to participate in this survey because you are a visitor at one of the selected urban green spaces in the City of Tshwane. By completing this questionnaire, you agree that the information you provide may be used for research purposes. You are, however, under no obligation to complete the survey and can withdraw from the study prior to submitting the survey.

I value your participation and would appreciate it if you could spare about 15 minutes of your time to complete this questionnaire. Also, note that the survey is developed to be anonymous and we as researcher(s) will have no way of connecting the information you provide to you personally. We do not foresee that you will experience any negative consequences by completing this questionnaire. Nevertheless, the researcher(s) undertake to keep any individual information provided herein confidential, not to let it out of their possession, and to analyse the feedback received only at a group level.

For publication purposes, the records will be kept for five years whereafter it will be permanently destroyed (hard copies will be shredded and electronic versions will be permanently deleted from the hard drive of the computer. It is hoped that information gained from this survey will assist us in determining visitor's motivations to these urban eco-tourism attractions in order to provide information to all relevant stakeholders. You will not be reimbursed or receive any incentives for your participation in the survey.

The survey is conducted with the permission of the management of Rietvlei Nature Reserve, Pretoria Botanical Gardens, SANBI National Zoological Garden and Austin Roberts Bird Sanctuary. Ethical clearance was obtained from Unisa's Ethical Clearance committee (Carmen Poole, loedoc@unisa.ac.za). Should you require any further information, want feedback on the study or need to contact the primary researcher about any aspect of this study, please contact Magdelyn Erasmus, magdelyn.erasmus@gmail.com or Dr Nicolene Conradie, conran@unisa.ac.za.

Selected urban green spaces in the City of Tshwane

CONSENT TO PARTICIPATE IN THIS STUDY

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I read (or had explained to me) and understood the study as explained in the information sheet.

I had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the questionnaire.

I received a signed copy of the participation information sheet.

Participant Name & Surname…… (please print)

Participant Signature……Date……

Researcher's Name & Surname: Magdelyn Erasmus

Researcher's signature……Date……

Selected urban green spaces in the City of Tshwane

Conducted by

THE DEPARTMENT: APPLIED MANAGEMENT

THE UNIVERSITY OF SOUTH AFRICA

Please complete this survey on urban green spaces in the City of Tshwane by circling your choice, or fill the numbers in the space provided.

For office use only

Four green urban spaces in the City of Tshwane were selected for this study.
Indicate the urban green space that you are currently visiting. Please indicate by circling your choice.

Rietvlei Nature Reserve	1
Pretoria National Botanical Gardens	2
SANBI National Zoological Garden	3
Austin Roberts Bird Sanctuary and/or Blue Crane Restaurant	4

A1: INFORMATION ABOUT YOUR CURRENT VISIT

1. Please indicate how often do you visit this urban green space that you are visiting?

First-time visit	1
Once a week	2
Once a month	3
Once in three months	4
Once in six months	5
Once a year	6

2. With whom are you visiting the urban green space? (Please indicate Yes OR No next to each option)

	Yes	No
Alone	1	2
Friends	1	2
Family/Relatives	1	2
Special interest group (e.g. a club, society)	1	2
Colleague/s or work	1	2
Other (please specify)		

A2 REVISIT INTENTION TO THIS URBAN GREEN SPACE Please read each statement below and circle the number that best reflects your view.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I would like to visit this urban green space more often	1	2	3	4	5
2. I will recommend other people to visit this urban green space	1	2	3	4	5
3. I have the intention to revisit this urban green space	1	2	3	4	5

B:	VISITOR MOTIVATION TO URBAN GREEN SPACES Please indicate your reasons for visiting this specific urban green space (Rietvlei Nature Reserve, Pretoria National Botanical Gardens, National Zoo Gardens of South Africa or Austin Roberts Bird Sanctuary) Circle the number that best reflects your choice.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	Being physically active	1	2	3	4	5
2.	For education purpose.	1	2	3	4	5
3.	For the benefit of my children	1	2	3	4	5
4.	Getting out in the fresh air	1	2	3	4	5
5.	Go to places that I can talk about when I get home	1	2	3	4	5
6.	Opportunity to develop and learn new skills, e.g. birdwatching	1	2	3	4	5
7.	Opportunity to get away from the stress of normal duties	1	2	3	4	5
8.	Opportunity to learn about different people and/or places	1	2	3	4	5
9.	Opportunity to meet new people	1	2	3	4	5
10.	Renewing or refreshing my spiritual self	1	2	3	4	5
11.	To attend an event at the attraction	1	2	3	4	5
12.	To eat at the restaurant	1	2	3	4	5
13.	To escape from daily stress	1	2	3	4	5
14.	To exercise in an open space and/or outdoors	1	2	3	4	5
16.	To experience outdoors	1	2	3	4	5
17.	To explore a new attraction	1	2	3	4	5
18.	To get away from routine	1	2	3	4	5
19.	To have a picnic at the attraction	1	2	3	4	5
20.	To improve my health and/or well-being	1	2	3	4	5
21.	To improve my knowledge	1	2	3	4	5
22.	To learn about nature	1	2	3	4	5
23.	To learn more about fauna and.or flora	1	2	3	4	5
24.	To learn new things	1	2	3	4	5
25.	To meet people with similar interests	1	2	3	4	5
26.	To participate in new experiences	1	2	3	4	5
27.	To participate in recreation activities at the attraction	1	2	3	4	5
28.	To photograph animals, birds and/or plants	1	2	3	4	5
29.	To rest physically	1	2	3	4	5
30.	To relax in a natural environment	1	2	3	4	5
31.	To spend time with my family and/or friends	1	2	3	4	5
32.	To spend time alone in nature	1	2	3	4	5
33.	To view cultural heritage	1	2	3	4	5
34.	To view wildlife	1	2	3	4	5

C:	ACTIVITIES AT THE URBAN GREEN SPACE Please read each statement below and indicate your preferences regarding your activities at the urban green space. Answer only the section of the attraction that you are currently visiting. Please circle the number that reflects your view.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
C1:	RIETVLEI NATURE RESERVE					
1.	4 x 4 Route	1	2	3	4	5
2.	Attending an event and/or function	1	2	3	4	5
3.	Bird hide	1	2	3	4	5
4.	Camping	1	2	3	4	5
5.	Educational programmes	1	2	3	4	5
6.	Fresh water fishing	1	2	3	4	5
7.	Game viewing	1	2	3	4	5
8.	Guided game trips	1	2	3	4	5
9.	Having a picnic	1	2	3	4	5
10.	Hiking trips	1	2	3	4	5
11.	Horse riding	1	2	3	4	5
12.	Mountain biking	1	2	3	4	5
13.	Night drives	1	2	3	4	5
14.	Non-motorised water sports	1	2	3	4	5
15.	Viewing birds and / or other animals	1	2	3	4	5
16.	Viewing trees and / or wild flowers	1	2	3	4	5
C2:	PRETORIA NATIONAL BOTANICAL GARDENS					
1.	Attending a concert	1	2	3	4	5
2.	Attending an event and/or function	1	2	3	4	5
3.	Cultural experience	1	2	3	4	5
4.	Educational programmes	1	2	3	4	5
5.	Guided tours	1	2	3	4	5
6.	Having a picnic	1	2	3	4	5
7.	Milkplum Café: Tea Garden	1	2	3	4	5
8.	Mokha Restaurant	1	2	3	4	5
9.	Park runs	1	2	3	4	5
10.	Pathways	1	2	3	4	5
11.	Pretoria African Pride Café	1	2	3	4	5
12.	SANBI Bookshop	1	2	3	4	5
13.	Self-guided tree route	1	2	3	4	5
14.	Viewing birds and / or other animals	1	2	3	4	5
15.	Viewing trees and / or wild flowers	1	2	3	4	5
16.	Visitor centre	1	2	3	4	5

C3:	SANBI NATIONAL ZOOLOGICAL GARDEN					
1.	Adopt a wild animal	1	2	3	4	5
2.	Animal feeding	1	2	3	4	5
3.	Attending an event and/or function	1	2	3	4	5
4.	Children's party	1	2	3	4	5
5.	Educational tours	1	2	3	4	5
6.	Elephant encounter	1	2	3	4	5
7.	Guided tours	1	2	3	4	5
8.	Having a picnic	1	2	3	4	5
9.	Night run	1	2	3	4	5
10.	Restaurants	1	2	3	4	5
11.	Rhino encounter	1	2	3	4	5
12.	Sunset walking safari	1	2	3	4	5
13.	Viewing birds and / or other animals	1	2	3	4	5
14.	Viewing trees and / or flowers	1	2	3	4	5
15.	Walkways	1	2	3	4	5
16.	Zoo camp	1	2	3	4	5
17.	Zoo holiday courses	1	2	3	4	5
18.	Monthly fun runs	1	2	3	4	5
19.	Behind the scenes tours	1	2	3	4	5
20.	Enrichment days	1	2	3	4	5
21.	Cable car	1	2	3	4	5
22.	Movie night	1	2	3	4	5
C214:	AUSTIN ROBERTS BIRD SANCTUARY / BLUE CRANE RESTAURANT					
1.	Attending an event and/or function	1	2	3	4	5
2.	Bird hide	1	2	3	4	5
3.	Blue Crane Restaurant and bar	1	2	3	4	5
4.	Educational centre and/or exhibition centre	1	2	3	4	5
5.	Guided walk	1	2	3	4	5
6.	Having a picnic	1	2	3	4	5
7.	Trim park / exercising	1	2	3	4	5
8	Viewing birds and / or other animals	1	2	3	4	5
9.	Viewing trees and / or flowers	1	2	3	4	5

C5. Other activities not specified here (Only the urban green space that you are currently visiting)

D:	**ENVIRONMENTAL AWARENESS: VISITORS TO URBAN GREEN SPACES** **Please read each statement below and circle the number that best reflects your view.**	Strongly Disagree	Disagree	Neural	Agree	Strongly Agree
1.	I am interested in learning about environmental issues	1	2	3	4	5
2.	I often think about whether my actions harm the natural world	1	2	3	4	5
3.	I actively search for information about environmental conservation	1	2	3	4	5
4.	I use environmentally friendly products	1	2	3	4	5
5.	I recycle at home	1	2	3	4	5
6.	I donate money to environmental organisations	1	2	3	4	5
7.	I have a strong view on conservation issues	1	2	3	4	5
8.	I encourage family and friends to be more conscious about conservation	1	2	3	4	5
9.	I want to ensure a brighter future for my children	1	2	3	4	5
10.	I often think about the fragility of the environment	1	2	3	4	5

E:	**SUBJECTIVE WELL-BEING: VISITORS TO URBAN GREEN SPACES** **Please read each statement below and express your feeling DURING this visit.** **Circle the number that best reflects your view.**	Strongly Disagree	Disagree	Neural	Agree	Strongly Agree
1.	After visiting the urban green space, I feel that I lead a meaningful and fulfilling life	1	2	3	4	5
2.	Although I have ups and downs, in general, I feel good about life after visiting the urban green space	1	2	3	4	5
3.	I feel better about life after visiting the urban green space	1	2	3	4	5
4.	I feel better about myself after visiting the urban green space	1	2	3	4	5
5.	I feel happier after visiting the urban green space	1	2	3	4	5
6.	I feel positive after visiting the urban green space	1	2	3	4	5
7.	I feel psychological benefits after visiting the urban green space	1	2	3	4	5
8.	I felt better mentally by visiting the urban green space	1	2	3	4	5
9.	I felt better physically by visiting the urban green space	1	2	3	4	5
10.	I gain perspective on life during my visits to the urban green space	1	2	3	4	5
11.	I have many memorable experiences at the urban green space	1	2	3	4	5
12.	My ability to be pro-active has increased after visiting the urban green space	1	2	3	4	5
13.	My ability to be self-sufficient has increased after visiting the urban green space	1	2	3	4	5
14.	My experience being in nature was memorable having enriched my quality of life	1	2	3	4	5
15.	My general satisfaction with life has increased by visiting the urban green space	1	2	3	4	5
16.	Visiting the urban green space clears my head	1	2	3	4	5
17.	Visiting the urban green space decreased my negative feelings	1	2	3	4	5

18.	Visiting the urban green space gives me a sense of freedom	1	2	3	4	5
19.	Visiting the urban green space increased my ability to concentrate	1	2	3	4	5
20.	Visiting the urban green space inspires me	1	2	3	4	5

F: BIOGRAPHIC INFORMATION

1. Please indicate your gender.

Male	1	Female	2

2. Please indicate your age in years.

_____ years

3. Please indicate your ethnicity.

African	1
Asian	2
Coloured	3
Indian	4
White	5
Other (Specify)	6

4. Please indicate your highest level of qualification.

No schooling	1
Primary school completed	2
Matric/Grade 12	3
National Diploma Certificate	4
Undergraduate degree	5
Postgraduate degree	6
Other (Specify)	7

5. Please indicate your marital status.

Single	1
Married/Living together	2
Divorced/Widowed/Separated	3

6. Please indicate the province in which you live.

Gauteng	1
Other province in RSA (Please specify)	2
Outside RSA borders (Please specify)	3

Thank you for your time and for participating in this survey!

APPENDIX B: ETHICS CERTIFICATE

UNISA university of south africa

UNISA COLLEGE OF ECONOMIC AND MANAGEMENT SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

15 December 2017 (**Date of issue**)

24 February 2022 (**Date of amendment**)

Ref #:2017_CEMS_DAM_020

Staff number # 46976450

Dear Mrs AMM Erasmus

Supervisor: Dr N Conradie, Conran@unisa.ac.za , (012) 433 4618

Co-Supervisor: Prof C van Zyl, vzylc@unisa.ac.za , (012) 433 4615

College of Economic and Management Sciences

Department Applied Management

University of South Africa

Decision: Ethics Approval Extended to 31 December 2023

Working title of research:

"Profiling visitors of four selected urban green spaces in the City of Tshwane"

Qualification: MCom Business Management (Tourism Management)

Thank you for the application requesting **amendments** to the original research ethics certificate issued by CEMS Department of Applied Management for the above mentioned research 15th December 2017. The approval of the requested amendment is granted/extended for the study for the period 24 February 2022 until 31st December 2023.

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

*The **low risk application** was reviewed by the departmental CRERC in compliance with the Unisa Policy on Research Ethics by the University of South Africa using the expedited method.*

The proposed research may now continue with the proviso that:

1. *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*
2. *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the UNISA Research Ethics Review Committee. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*
3. *The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

Kind regards,

Prof Nisha Sewdass
CRERC Chair
012 429-2795
sewdan@unisa.ac.za

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APPENDIX C: LANGUAGE EDITING

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Editing Certificate Date: 23 February 2022

Dear Author,

The journal article titled **"PROFILING VISITORS OF FOUR SELECTED URBAN GREEN SPACES IN THE CITY OF TSHWANE"** was edited by **Mr. Khomotso Moses Leshaba**, a member of the Professional Editor's Guild (Membership number: LES003), European Association of Science Editors (Membership number: 5471), and the South African Translator's Institute (Membership number: 1003722). **Mr. Leshaba** is an independent contractor at the **University of South Africa**, where he provides academic editing in the College of Economic and Management Sciences and Unisa Press. He has an NQF Level 8 certificate in Editing: Principles and Practice from the University of Pretoria and Professional Editing Standards Certificate from Queen's University in Canada.

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Leshaba Khomotso Moses
Associate Member

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APPENDIX D: TURNITIN REPORT

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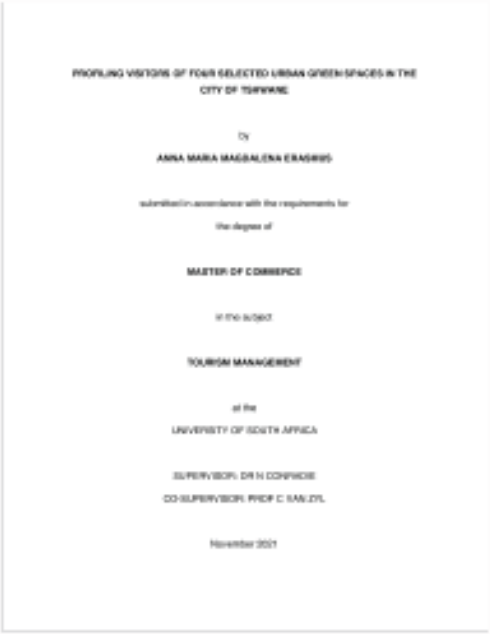


PROFILING VISITORS OF FOUR SELECTED URBAN GREEN SPACES IN THE CITY OF TSHWANE

By

ANNA MARIA MAGDALENA ERASMUS

submitted in accordance with the requirements for the degree of

MASTER OF COMMERCE

in the subject

TOURISM MANAGEMENT

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: DR N CONRADIE

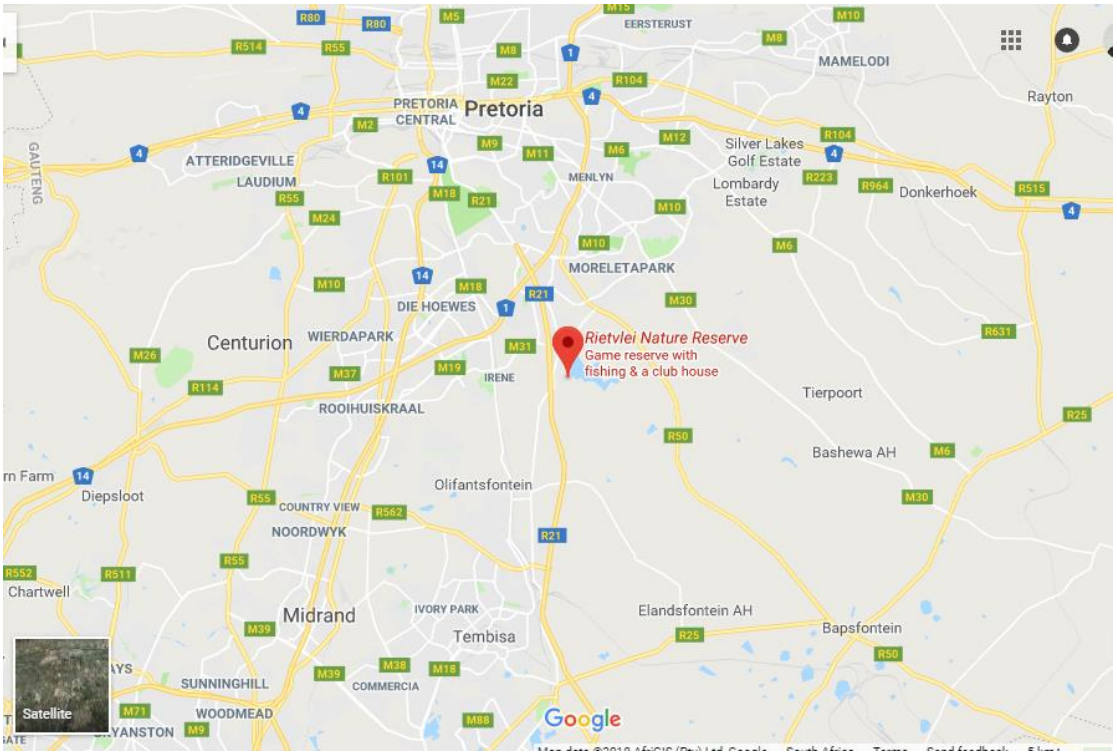
CO-SUPERVISOR: PROF C VAN ZYL

November 2021

APPENDIX E: MAPS OF FOUR URBAN GREEN SPACES

APPENDIX **E** Maps of the four urban green spaces in the City of Tshwane

E1: A map of Rietvlei Nature Reserve



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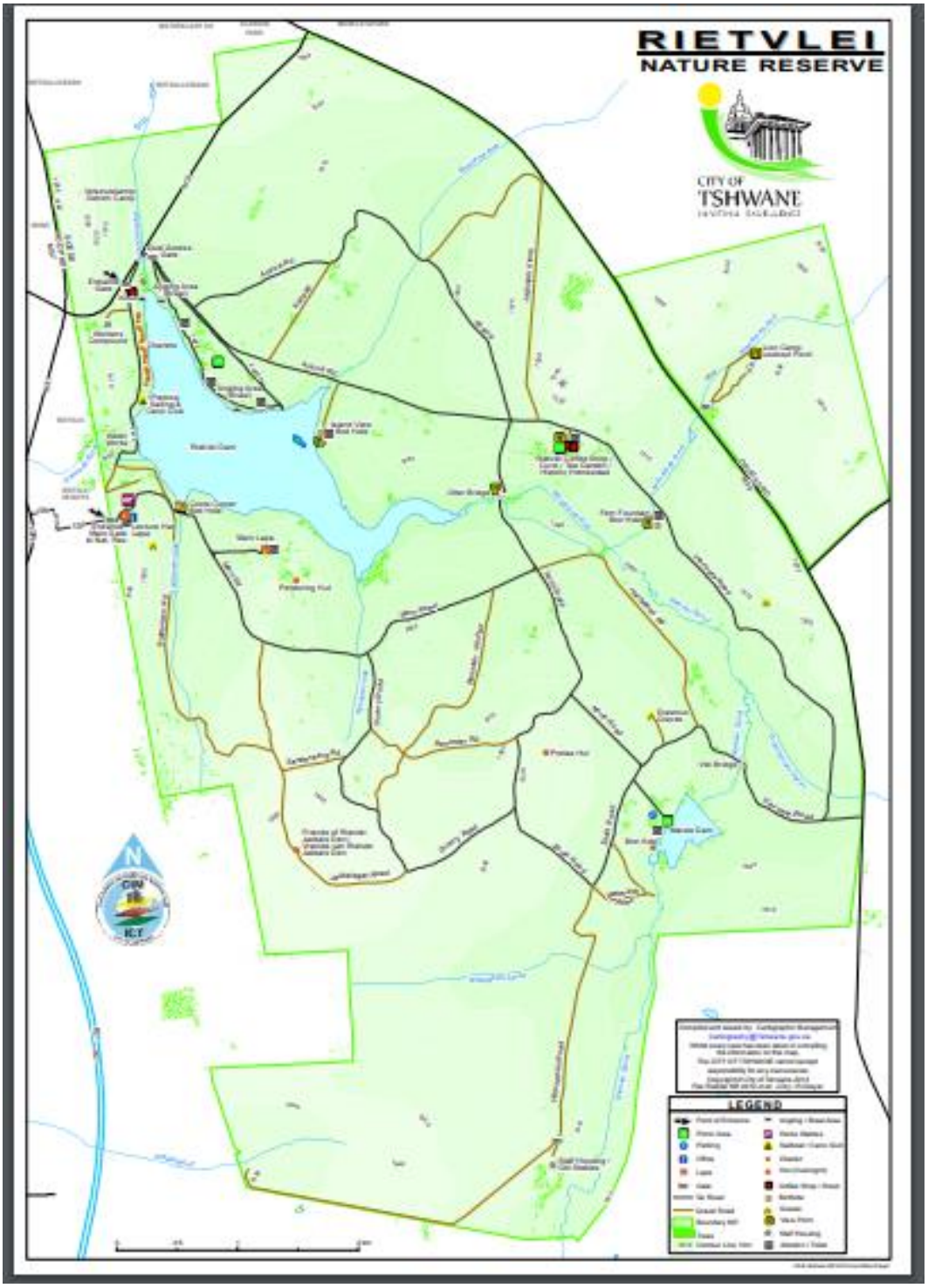
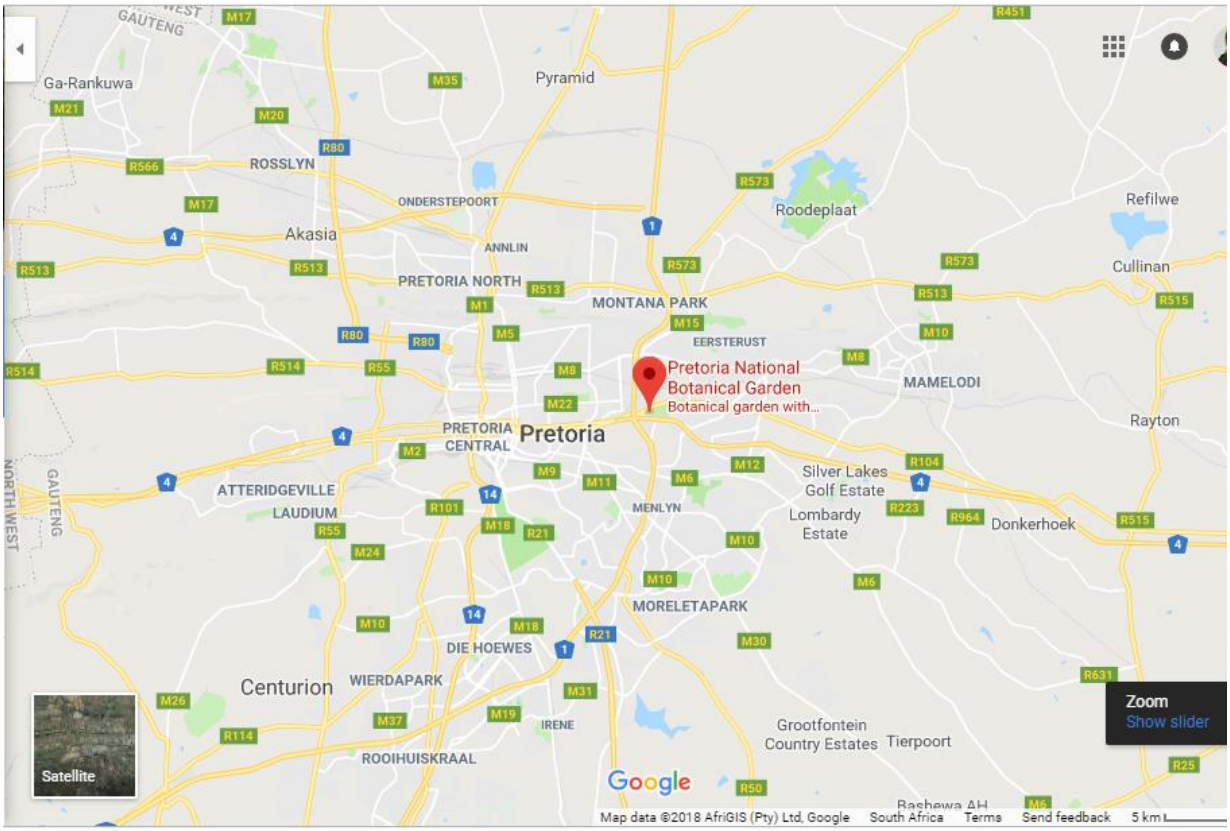


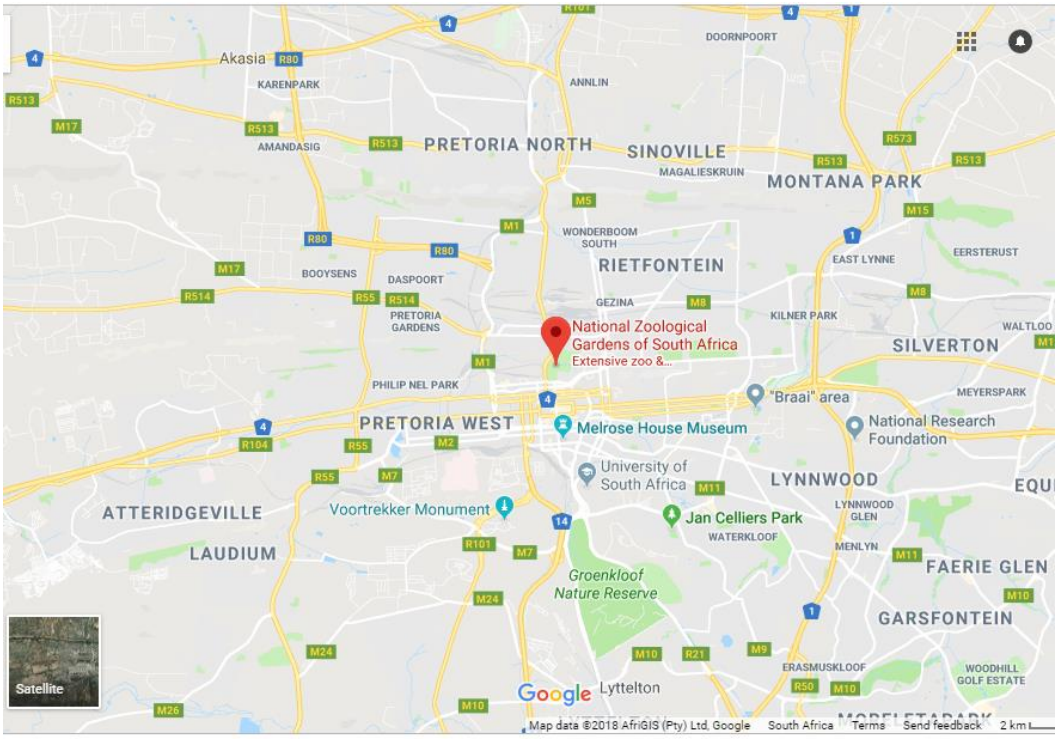
Source: http://www.tshwane.gov.za/sites/tourism/NatureConservation/Documents/Rietvlei_NR.pdf

E3: Pretoria Botanical Gardens



Source: https://www.google.co.za/maps/place/Pretoria+National+Botanical+Garden/@-25.7394706,28.1331908,11z/data=!4m5!3m4!1s0x1e95601538bd0e07:0xdce8ac75d6f61010!8m2!3d-25.7394706!4d28.2732665

E4: National Zoo Gardens of South Africa



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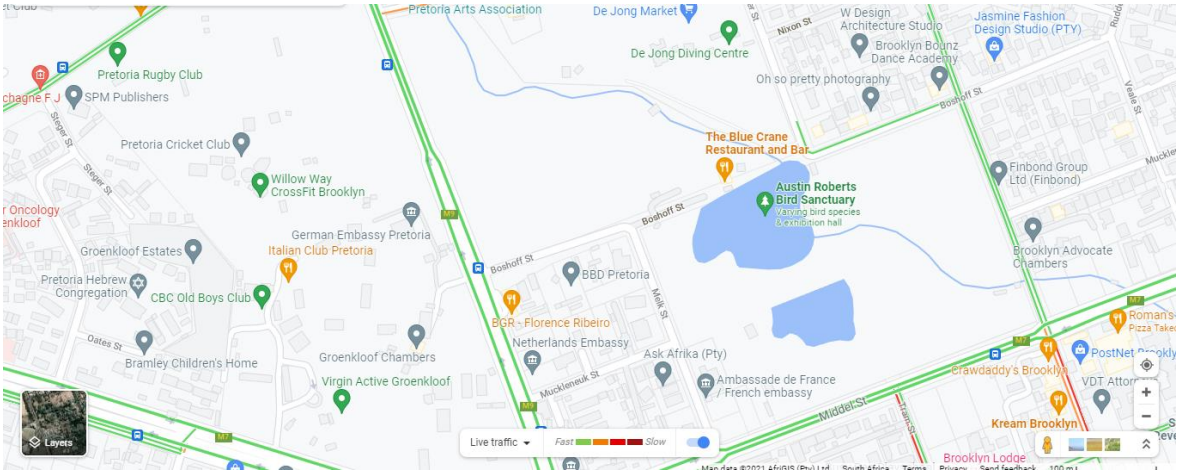
E5: Austin Roberts Bird Sanctuary



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Source: https://www.google.co.za/maps/@-25.7703476,28.2248834,17z