



Determining the Market for Marine Wildlife Tourism in South Africa

Dr L Geldenhuys*

Boston City Campus and Business College, Stellenbosch
Affiliated with Tourism Research in Economic Environs and Society (TREES)
Faculty of Economic and Management Sciences
School for Tourism Management
North-West University, South Africa
Email: linda90@live.co.za
ORCID 0000-0003-2284-3714

Prof P van der Merwe

Tourism Research in Economic Environs and Society (TREES)
Faculty of Economic and Management Sciences
School for Tourism Management
North-West University, South Africa
ORCID 0000-0002-6640-4062

M Saayman (PhD) [RIP]

Tourism Research in Economic Environs and Society (TREES)
Faculty of Economic and Management Sciences
North-West University South Africa
ORCID 0000-0001-9991-0140

Corresponding author*

Abstract

Viewing and interacting with wildlife in their natural habitat has become an important component of the tourism industry. Shark cage diving and whale watching are two prominent activities in South Africa and are becoming an increasingly popular tourist attraction. Humans are fascinated with these animals and want to have a close-up experience. The literature clearly indicates an increase in the interest of tourists towards marine wildlife activities. The behaviour of these participants, referring specifically to the profile, reasons for participation, and experiences when participating in marine wildlife activities, needs clarification. If these behaviours are known, marketing can be done more effectively. Gaining an understanding of why these participants join in marine wildlife activities, the industry can hopefully be managed more effectively and efficiently. Therefore, the purpose of this research is to determine the market of marine wildlife tourists in terms of shark cage diving and whale watching. Quantitative, descriptive methods are employed in the form of a survey, where questionnaires were administered to participants of shark cage diving and whale watching. The profile of these tourists is indicative of mostly international participants who have never participated in similar activities before, between the ages of 35 and 40 years. The motives of tourists to participate indicate that an experience, being educated about marine wildlife, the feeling of success gained through the activity and being close to marine wildlife are all important motivations for certain tourists. Six market segments have been identified, namely thrill seekers, thalassophiles (from the Greek 'friends of the sea'), risk takers, adrenaline seekers, consorts and experience seekers (T²RACE). The results obtained from this research are hopefully going to be very useful for improving the understanding of the marine wildlife tourism market, development of marine wildlife tourism participation guidelines, and in enhancing quality of offerings and best practices.

Keywords: Travel behaviour, marine wildlife tourism, sustainability, marine ecotourism, wildlife viewing tourism

Introduction

The concept of marine tourism is not a new phenomenon, but one which has grown immensely over the past decade (Orams, 2013). Marine tourism has been defined by authors such as Basiron (1997), Orams (1999), and Foyle and Lough (2007). Basiron (1997) first defined marine tourism as a temporary short-term movement of people to destinations out of their normal environment, where the focus is placed on the marine environment. Orams (1999), on the other hand, built on this definition by stating that marine tourism includes 'recreational activities that involve travelling away from one's place of residence to a destination where tourists have, as their host or focus, the marine

environment.’ The marine environment, according to the definition established by Orams (1999), are those waters which are saline and affected by tides. Foyle and Lough (2007) further state that marine tourism can be classified as the tourism sector where tourists participate in either active (such as surfing and scuba diving) or passive (such as sunbathing) leisure activities, or they can undertake a journey on or in coastal waters and shorelines (such as yachting and cruising). With a coastline of approximately 3000 km in length, South Africa’s marine tourism sector is one of the largest tourism sectors in the country (SAMSA, 2015). This sector is multi-faceted and includes a wide variety of activities, such as sunbathing, diving, snorkelling, beach activities, surfing, sea kayaking, scuba diving, whale watching, shark cage diving, stand-up paddle boarding and deep sea fishing to name but a few. Two of the most popular marine activities in South Africa are whale watching and shark cage diving. South Africa boasts a vibrant whale watching and shark cage diving industry for the better part of the year. For six months of the year (from June to December) southern right whales (*Eubalaena australis*) migrate to the coast of South Africa where they mate and calf, while killer whales (*Orcinus orca*) have also been spotted. Great White Sharks (*Carcharodon carcharias*) on the other hand, congregate along the coast throughout the year, offering tourists equal opportunities of spotting great white sharks (Kock, Photopoulou, Durbach, Mauff, Meyer, Kotze, Griffiths & O’Riain, 2018).

Whale watching

Whale watching can take place in three forms, boat-based, land-based or aerial whale watching. Land-based whale watching involves the tourist standing on land, at a pier or a jetty, and viewing the whales from a distance. Aerial whale watching involves the tourist flying over the whales with a small aircraft or a helicopter, which has been speculated as stressful or perhaps harmful to whales, judging by the behaviour displayed as a result of the noise (O’Connor, Campbell, Cortez & Knowles, 2009; Laksenburg & Parsons, 2009; Hoyt & Parsons, 2014). For the purpose of this research, however, emphasis is placed on boat-based whale watching, which requires the tourist to board a boat (vessel) that will take them closer to the whales off the coast. In South Africa a variety of different whale species can be spotted on one of these trips, such as the humpback whale (*Megaptera novaeangliae*), southern right whale and bryde’s whale (*Balaenoptera brydei*) (Turpie, Savy, Clark & Atkinson, 2005). The peak season for this activity in South Africa ranges from August to November (early Southern Hemisphere summer), which coincides with the peak period for international visitors and the September/October holiday season (Turpie *et al.*, 2005; O’Connor *et al.*, 2009). However, the majority of boat-based whale watching operators commence their whale watching season in June when the whales start to arrive. Hot spots in South Africa for whale watching are Hermanus, Gans Bay, Mossel Bay and False Bay in the Western Cape. Figure 1 below shows these locations (FindTripinfo.com, 2014).



Figure 1. Location of Hermanus, Gans Bay and False Bay, Western Cape.
(Source: FindTripinfo.com, n.d.)



Shark cage diving

Great white sharks have been listed as vulnerable on the IUCN Red List of Threatened Species since 2009, due to the small populations identifiable along the South African coast (Kock *et al.*, 2018). However, these are also amongst the species that draw the greatest attention from tourists, along with seals, penguins and whales (Gallagher & Hammerschlag, 2011). Today, shark cage diving is one of the most popular marine wildlife activities in South Africa (Dicken & Hosking, 2006; Gallagher & Hammerschlag, 2011). The activity allows participants to observe, photograph and interact with these apex predators (Gallagher & Hammerschlag, 2011).

The majority of shark cage diving operations are found along the western and southern coast of South Africa, in Hermanus, Gans Bay, False Bay and Mossel Bay, as indicated on Figure 1, with few operators being located in KwaZulu-Natal along the warmer eastern coast (Johnson & Kock, 2006; Gallagher & Hammerschlag, 2011). These locations provide the best opportunities for shark cage diving because these are hunting grounds for great white sharks (oceansafrica.com, 2015).

Therefore, the aim of this research is to determine the market for marine wildlife tourism. This will be identified by analysing the different market segments of these tourists, drawing cross-tabulations between travel motives and demographic details and ultimately determining what this market looks like.

In light of this, market segmentation forms an important part of this research, which is a tool widely accepted and implemented by tourism companies wishing to allocate resources more effectively (Paker & Vural, 2016). A market is defined as people or organisations with needs and wants, the ability and the willingness to purchase a product or service (Lamb, Hair, McDaniel, Boshoff, Terblanche, Elliot & Klopper, 2015). Accordingly, George (2009), Lamb *et al.* (2015), Saayman (2006) and Van Raaij and Verhallen (1994) suggests that the purpose of market segmentation is to identify segments with varying levels of buying potential, based on the destination or product in question. From the just mentioned it can be concluded that the goal of market segmentation is to identify the submarket that suits a specific tourism product or service best and that will ensure maximum benefits and resource allocation (Saayman, 2006).

According to the extant literature, market segmentation has multiple benefits for an organisation (Saayman, 2008; Saayman & Slabbert, 2004). Firstly, a relationship between the organisation and the market can be established, resources are allocated effectively, differences in tourists are recognised and taken into account, while a competitive advantage can be gained (Saayman, 2008; Saayman & Slabbert, 2004). Secondly, if the owner or product manager is aware of the needs and wants of the market, the marketing communications and the product or service can be tailored in such a way to ensure that it addresses the needs of the market effectively (Nickerson, Jorgenson & Boley, 2016). By addressing the needs and wants of the market the product or service will enjoy increased benefits, including long-term relationships with tourists (Boley, 2015), an improved market position, detection of new markets and campaigns, decreased wastage of scarce resources and long-term growth can be established (Nickerson *et al.*, 2016).

Five bases of market segmentation can be considered, namely geographic, demographic, psychographic, behavioural and benefit segmentation (Lamb *et al.*, 2015; Saayman & Slabbert, 2004). These bases serve to identify exactly what is needed and wanted of the tourism product or service and will therefore aid the achievement of goal orientated advertising messages that will appeal to potential participants (George, 2009). The bases of segmentation selected will aid the identification of specific similarities amongst members of the target group, such as demographic details, geographical locations or behavioural characteristics. Therefore, each basis will require the marketer to identify specific elements or characteristics from the market. The focus of this research is placed on demographic segmentation as a means of establishing a profile for the various clusters. These different segmentation methods are briefly discussed below.

- *Geographic segmentation* is based on the area from which tourists originate (Kotler, Bowen & Makens, 2014). The variables used for geographic segmentation include country of origin,



region, state, city, neighbourhood, climate, transportation used for travelling, government ruling and mobility of the tourist (George, 2009; Saayman, 2006).

- *Demographic segmentation* incorporates the needs and wants of tourists and is based on the premise that these wants and needs are linked with certain variables, such as age, gender, lifecycle variables and income (George, 2015; Lamb *et al.*, 2015).
- *Psychographic, or lifestyle segmentation* divides the market into different segments based on psychological rather than physical variables (Ponsonby-McCabe, 2012). This includes characteristics relating to the personality, lifestyle and social class of the tourist (George, 2015; Lamb *et al.*, 2015).
- *Behavioural segmentation* involves the division of the market into different groups based on consumer knowledge and attitudes regarding a tourism product or service, as well as their response towards the product or service (George, 2015). The variables on which behavioural segmentation is based includes the benefits tourists seek from the product or service, occasions, user status, attitudes, buyer readiness and loyalty to the offering (George, 2015; Kotler *et al.*, 2014; Lamb *et al.*, 2015; Saayman, 2006).
- *Benefit segmentation* is the process of grouping tourists together according to the benefits they seek of a product or service (Lamb *et al.*, 2015).

Many studies have been conducted on the nature of shark cage diving and whale watching (Catlin & Jones, 2010; Dicken & Hosking, 2009; Johnson & Kock, 2006), the economic viability of the subsectors (Cisneros-Montemayor, Barnes, Al-Abdulrazzak, Navarro-Holm & Sumaila, 2013; Orams, 2013; Turpie *et al.*, 2005), and the conservation prospects (Chen, 2011; Wearing, Cunningham, Scweinsberg & Jobberns, 2014; Wilson & Tisdell, 2003). Only a few could be found focusing on marine tourism segmentation (Apps, Dimmock, Lloyd & Huveneers, 2016; Avila-Foucat *et al.*, 2017; Bentz, Lopes, Calado & Dearden, 2016a; Giddy, 2017; Malcolm & Duffus, 2008; Vianna, Meekan, Pannell, Marsh & Meeuwig, 2012). The table below provides a summary of the literature on these concepts.

Table 1: Summary of literature on market segmentation for marine wildlife tourism

| Author | Aim | Location | Findings | Segmentation basis used |
|-----------------------------------|--|----------------------------------|--|---|
| Apps <i>et al.</i> (2016) | To identify the demographic profile of shark cage diving participants in Australia | Port Lincoln, Australia | Factors that drive participation in shark cage diving include education and the perceived naturalness of the experience. The demographic profile was male, under the age of 40 and originating from UK or USA primarily. Primary reason for visiting: shark cage diving. | Demographic segmentation |
| Avila-Foucat <i>et al.</i> (2017) | To identify the socio-demographic characteristics, motives, attitudes and experiences of whale watching participants | Loreto bay National Park, Mexico | Gender influences the demand for, and motives for whale watching. Two markets were identified: first-time and recurrent whale watchers | Demographic and behavioural segmentation. |
| Bentz <i>et al.</i> (2016a) | To identify the profile of whale watchers in the Azores | Azores | Equal number of male and female participants between the ages of 26 and 35, with a monthly income of 2001 Euro to 3500 Euro (US\$ 2316,17 to US\$ 4051,28 at the | Demographic segmentation. |



| | | | | |
|-----------------------------|--|----------------------------|--|--|
| | | | time of this study) (R29 901 and R52 301 at the time of this study). | |
| Giddy (2017) | To identify the market for adventure tourists in South Africa, that included sectors such as sky diving, whale watching, shark cage diving, hiking, kloofing, scuba diving and swimming with seals | Garden Route, South Africa | Aged between 20 and 29 years, originating from international destinations and participants travel in larger groups. | Demographic segmentation |
| Malcolm and Duffus, (2008) | To identify the levels of specialisation of whale watchers | British Columbia | Three levels of specialisation were identified, namely novice, intermediate and advanced. The profile is mostly female, aged 30 to 39 years and originate from international destinations. Participants have tertiary education and agree that conservation and proper management of the whale watching industry is important. | Behavioural and demographic segmentation |
| Vianna <i>et al.</i> (2012) | To identify the market profile for shark tourism in Palau. | Palau | The profile is mostly European, British, East Asian, American and Australian participants, spending 8.1 days on the trip and the main reason for the visit is shark ecotourism. | Demographic segmentation. |

From the above literature it can be concluded that some areas within research on the market for whale watching and shark cage diving needs further clarification. Firstly, the literature does identify the profiles of various markets for shark cage diving and whale watching across the world, however only two were found that identified the market segments for marine tourism (Avila-Foucat *et al.*, 2017; Malcolm & Duffus, 2008). A better understanding of the market segments for marine tourism will aid operators in the sector to deliver a service that is customised to the needs and wants of the market and will therefore be highly recommended and sought after. This in turn, will lead to a growth in their operation, an improved competitive advantage, and ultimately lead to greater demand in the market.

Secondly, little evidence could be found as to the motives of participation for marine wildlife tourists, other than the element of nature and the animals itself (Vianna *et al.*, 2012; Apps, 2016; Avila-Foucat *et al.*, 2017). By determining the motives of the various markets for marine wildlife tourism the industry can focus on aspects important to participants and in so-doing, pay attention to other aspects important to the sustainability and proper management of the industry, such as environmental considerations.

In the following section a discussion will be conducted on the method of research, the results obtained and the findings and conclusions.

Methodology

In order to segment marine wildlife tourists, the research followed a quantitative approach with exploratory methods. The sampling method was non-probability in nature with convenience sampling



used. Convenience sampling is implemented when the researcher targets respondents that are readily available at a particular place and time (Wiid & Diggines, 2015). All shark cage divers and whale watchers present during the time of the survey had, therefore, an equal opportunity to form part of the survey (Bryman, Bell, Hirschohn, Dos Santos, Du Toit, Masenge, Van Aardt & Wagner, 2014).

The survey was conducted from 31 September 2016 to 13 January 2017 in Hermanus and Gans Bay along the western coast of South Africa. A total number of 303 useable questionnaires, out of a total of 350, were collected from participants of both shark cage diving and whale watching activities, indicating a response rate of 86%. The two groups were not surveyed in isolation and a combined dataset was generated, from which analyses were conducted, as the majority of the qualitative respondents offer both shark cage diving and whale watching activities at the same premises.

Respondents had to complete a self-administered questionnaire consisting of four sections, focussing on demographic details of participants, spending behaviour, motives to participate, and experiences. The questionnaire was based on previously used questionnaires for determining the travel behaviour of participants in nature-based tourism (Oberholzer, Saayman, Saayman & Slabbert, 2010; Reynolds & Braithwaite, 2001; Slabbert, Saayman & Van der Merwe, 2012; Van der Merwe & Saayman, 2008;). These questionnaires were administered by fieldworkers who were trained beforehand in the nature of the research. The data obtained from the questionnaires were analysed using the Statistical Package for Social Sciences, version 25 (IBM SPSS Software, 2017).

Descriptive statistics were employed to establish the profile of participants as well as their willingness to contribute towards conservation of whales and sharks. A Principal Axis Factoring analysis with Oblimin with Kaiser Normalisation was performed to obtain the motives to participate. A one-way analysis of variance (ANOVA) was conducted on the motives to participate, after which a hierarchical cluster analysis, with Ward's methods of Euclidian distances and Tukey's honest significance tests were performed to identify six clusters of marine wildlife participants (market segmentation). Cross-tabulations were drawn between the demographic details of participants and the six clusters in order to highlight the differences and similarities between the clusters.

Results

The results of this research is three-fold. Firstly, the profile of marine wildlife participants was determined by means of analysing demographic details of participants. Secondly, the motives to participate of marine wildlife tourists were determined by means of an exploratory factor analysis. Thirdly, market segmentation was conducted through identifying different clusters by means of a one-way ANOVA and cross-tabulations.

Profile of marine wildlife participants

The average marine wildlife tourist is female (57%), between the age of 35 and 40 (average age of 38 years) and have obtained a diploma or degree from a tertiary institute (37%). This is consistent with the findings from Catlin and Jones (2010) and Davis, Banks, Birtles, Valentine and Cuthill (1997) who identified females to be the prominent gender for whale watching activities. They originate from international destinations, such as Germany, Sweden, UK, and USA (62%), which is consistent with the findings of Apps *et al.* (2016) and Dicken and Hosking (2009). The native language of the majority of the respondents is English (57%) and they have an annual income of more than R672 001 (US\$ 50439,35 at the time of this study) (33%). For the majority of these visitors it is their first time to the area (Gans Bay and Hermanus) and they are spending an average of one day there (38%) while on holiday in the surrounding area, categorising them as day visitors. In general, these participants pay for two people to experience either shark cage diving or whale watching (33%). On average participants have never taken part in either shark cage diving or whale watching before (61%), proving the fact that these activities are once-in-a-lifetime or bucket list activities (Malcom & Duffus, 2008). They are, however, willing to pay for the conservation of sharks and whales, respectively (79% and 81%). The information regarding the demographic profile of marine adventure participants



can assist operators with gaining a deeper understanding of who the market is and therefore contribute to effective marketing activities.

Travel motives

Due to the nature of the research, it was deemed necessary to conduct a principal axis factor analysis with Oblimin-Kaiser Normalisation. The total variance of the factor analysis is 64.17%. The exploratory factor analysis, depicted in Table 2, used 16 motivational factors and yielded four factors. The Bartlett's test of Sphericity was significant ($p < 0.001$) and the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.784, which is highly acceptable (Field, 2009). The factors identified explained 64% of the variance and were labelled as follows; *experiences*, *marine species*, *lifestyle*, and *personal achievement* (Table 2). The Cronbach's alpha coefficient (α) for each of these factors range from 0.600 to 0.849, indicating that all four factors have above adequate construct reliability ($\alpha > 0.6$)

(Hair, Anderson, Tatham, & Black, 1998). The inter-item correlations range from 0.345 to 0.536, and mean values range from 2.34 to 3.95.

Factor one, labelled *adventure experiences*, included two aspects, namely *for new experiences* and *to experience thrill and excitement*. With a mean value of 3.93, this factor is ranked as the second most important factor for marine wildlife participants. This factor has been identified as a significant travel motive amongst many wildlife participants, including marine-based, and land-based wildlife activities (Bosch, 2015; Geldenhuys, Van der Merwe & Slabbert, 2014; Terblanche, 2011).

The second factor, labelled as *marine species*, has a mean value of 3.95 and is therefore ranked as the most important factor for participation in whale watching and shark cage diving. This factor included constructs such as the opportunity to see *sharks*, *seals*, *penguins*, *dolphins* and *whales*. Avila-Foucat *et al.* (2017), Geldenhuys *et al.* (2014) as well as Tiedt (2011) identified this factor previously for marine tourists.

The third factor is labelled as *lifestyle* and consists of aspects such as *for my well-being*, *it is part of my lifestyle*, *it is a spiritual experience*, *it is value for money*, and *primarily for educational reasons*. The mean value of this factor is 2.53, ranking it as the third most important factor for participants. It has been confirmed by Jeong (2014:02), Mehmetoglu and Normann (2013) and Petrick and Durko (2015) as a motive of marine tourists and adventure tourists alike.

Lastly, the fourth factor, labelled *personal achievement*, is ranked as the least important factor seeing as the mean value is 2.34. This factor consists of underlying aspects such as *the feeling of success after completing the activity*, *to overcome risks*, *to overcome a fear*, and *because it is challenging*. Geldenhuys *et al.* (2014) identified this factor as a travel motive amongst scuba divers at Sodwana Bay, South Africa, as well. Although these motives previously have been identified amongst other marine tourism activities, these have not been identified for

Personal achievement is identified as an important intrinsic motive for participation in hard adventure tourism activities (Buckley, 2010). However, whale watching and shark cage diving are both classified as wildlife tourism or soft adventure tourism (Van der Merwe, 2009:238), resulting in little importance assigned to this factor.



Table 2: Travel motives of marine wildlife tourists shark and whale watching.

| ASPECTS | Factor 1: ADVENTURE EXPERIENCES | Factor 2: MARINE SPECIES | Factor 3: LIFESTYLE | Factor 4: PERSONAL ACHIEVEMENT |
|--|---------------------------------------|-----------------------------|------------------------|--------------------------------------|
| For new experiences | 0.791 | | | |
| To experience thrill and excitement | 0.764 | | | |
| Sharks | | 0.535 | | |
| Seals | | 0.873 | | |
| Penguins | | 0.839 | | |
| Dolphins | | 0.821 | | |
| Whales | | 0.747 | | |
| For my well-being | | | 0.869 | |
| It is part of my lifestyle | | | 0.839 | |
| It is a spiritual experience | | | 0.630 | |
| It is value for money | | | 0.545 | |
| Primarily for educational reasons | | | 0.488 | |
| The feeling of success after completing the activity | | | | 0.780 |
| To overcome risks | | | | 0.778 |
| To overcome a fear | | | | 0.754 |
| Because it is challenging | | | | 0.711 |
| Cronbach's Alpha | 0.600 | 0.849 | 0.729 | 0.770 |
| Mean | 3.93 | 3.95 | 2.53 | 2.34 |
| Inter-item correlation | 0.443 | 0.536 | 0.345 | 0.453 |

Cluster analysis

A one-way ANOVA was conducted on the motives to participate of marine wildlife tourists. A hierarchical cluster analysis using Ward's method of Euclidian distances and Tukey's honest significance test was performed. A six cluster solution was selected as the most discriminatory, as depicted by Table 3. The results of the multivariate analysis indicated significant differences between the clusters ($p < 0.05$). The taxonomy for the six clusters is T²RACE, which indicates the names of the clusters; *thrill seekers*, *thalassophiles*, *risk takers*, *adventure junkies*, *consorts*, and *experience seekers*. One study was identified from the literature (Bentz *et al.*, 2016b) with which the below findings can be compared. This is indicative of the fact that there is a need for market cluster identification in marine wildlife tourism in both South Africa and the world.

Table 3: ANOVA and Tukey's post hoc multiple comparison results for marine wildlife tourists

| Motives to Participate | Thrill seekers | Risk takers | Thalassophiles | Consorts | Experience seekers | Adventure junkies | F-Ratio | Sig. Level |
|-----------------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|---------|------------|
| Experiences | 4.06 ^d | 4.56 ^b | 3.54 ^e | 2.54 ^f | 4.09 ^c | 4.67 ^a | 50.34 | <0.05 |
| Marine species | 4.34 ^c | 4.16 ^d | 4.42 ^b | 2.91 ^f | 3.52 ^e | 4.62 ^a | 36.78 | <0.05 |
| Lifestyle | 2.32 ^c | 3.09 ^b | 1.98 ^f | 2.06 ^d | 2.01 ^e | 3.96 ^a | 53.93 | <0.05 |
| Personal achievement | 3.55 ^b | 2.11 ^c | 1.11 ^f | 1.67 ^e | 2.05 ^d | 3.73 ^a | 95.85 | <0.05 |

The first cluster, named *thrill seekers*, rated the motivational factor *experiences* as the most important factor for participating in whale watching and shark cage diving, while *lifestyle* was rated as the lowest influencing factor, as indicated by Table 4. This suggests that these participants are partaking in the activity for the thrill of seeing or being close to whales or sharks, thus aptly named. This cluster of marine wildlife participants is aged 31 years, originate from international destinations (56%), such as Germany, UK and Sweden, and are day visitors (56%). They spend an average of



R3656.44 (US\$ 273,62 at the time of this study) during the trip. These participants indicated that they have not participated in similar activities previously, but will participate again in the future (79%). In terms of experiences, the thrill seekers indicated that being satisfied with the operator (4.35), being close to marine nature (4.08) and being educated about the marine environment, have the greatest influence. These participants will make use of any opportunity to achieve personal growth, such as overcoming a fear, as indicated by their preference for *experiences* and *personal growth*, being another reason for the name given to this cluster.

The second cluster, named *risk takers*, have once again indicated that *experiences* are the most important motivational factor for participation. *Personal achievement* was rated as the lowest factor. These participants are on average 36 years old, they are male (61%), originate from international destinations (69%), such as USA (Table 4). While on holiday in Cape Town or surroundings, they tend to visit Gans Bay or Hermanus for the day to participate in the activity (52%) while on holiday in the surrounding area. They spend more per trip than any of the other clusters, with R5732.71 on average (US\$ 426,90 at the time of this study). Almost all risk takers have indicated that they will indeed participate in whale watching or shark cage diving again in the future (95%), while also having strong inclinations toward contributing to shark- (90%) and whale conservation (90%). Risk takers were thus named because of the high value they place on experiences gained and the influence which such experiences have on their lives. *Satisfaction with the operator* (4.45) were identified as the most important influencing factor to the experience, while *sea conditions* had the least influence (2.79).

The third cluster, named thalassophiles, indicated that *marine species* have the most influence on their motives to participate, while *personal achievement* was rated as least influential. The thalassophiles have an equal amount of male and female participants (50% each), with an average age of 34.32 years, and they are mostly from international destinations (Table 4). These visitors tend to stay overnight (55%), but they have the lowest score of all clusters for participating again in the activity in the future (64%), which suggests that they participate in various marine activities (as indicated by Table 4). They have, however, indicated a positive inclination towards conservation of whales (79%) and sharks (78%). The thalassophiles rated *satisfaction with the operator* (4.13) as most important for having a good experience, while *sea conditions* were rated as least important (2.79). This cluster feels comfortable on a boat and in the marine environment, thus aptly named.

The fourth cluster, named the *consorts*, indicated the lowest scores for all factors, suggesting that this cluster comprises of people who are either acting as a companion or are neutral about the activity. This also serves as the reason for the name given to this cluster. Consorts is the cluster with the most members per group participating in the activity (5.21) and members of this cluster pay for an average of 2.04 people, which serves as further evidence for the fact that they are merely companions. This cluster ranked *marine species* highest, while *personal achievement* was ranked the lowest. This contributes to the idea that they value the activity itself as less important and are therefore there on behalf of their companions. The average age of the consorts are 42.74 years, which indicates that they are the oldest participating cluster (Table 4). The majority of participants are female (56%), from international countries, they spent the least on extra services and products while on the trip (R2122.00) (US\$158,67 at the time of this study), and they are either day visitors or overnight visitors (50% each). The consorts have indicated they will, indeed, participate in the activity again in the future (97%), even though the motivational scores indicated otherwise. They have also indicated a positive inclination towards conservation of whales (83%) and sharks (80%)

Consorts rated aspects such as *satisfaction with the operator*, *client service delivered*, and *closeness to nature* lower than all other clusters, but as important to having a good experience. This serves as further evidence of the fact that they were not participating in the activity because of their own will. The fact that the consorts have the lowest motivational scores, but indicated a positive attitude towards participating again and contributing to conservation, suggests that their participation in the activity has had a positive effect on the attitudes and potentially the behaviour, of this cluster.

The fifth cluster, *experience seekers*, ranked the motivational factor *experiences* as the most important factor, while *lifestyle* was ranked as lowest. This cluster places high value on gaining



experiences from various activities, including whale watching, shark cage diving, snorkelling (2.07) and scuba diving (1.60), thus making the name of the cluster appropriate (as indicated in Table 4). The majority of the experience seekers are 37.58 years of age, female (55%), originating from international destinations once again (73%), and spent an average of R4169.36 (US\$ 312,01 at the time of this study) on additional services and products during the trip. They are day visitors (68%) to the area while on holiday in the surrounding area, with a strong inclination to participate in the activity again in the future (95%). The experience seekers will also contribute towards the conservation of whales (82%) and sharks (80%). This cluster indicated that *satisfaction with the operator* (4.19) and *being close to nature* (3.66) are the most important aspects for a good experience. This finding is in correspondence with that of Bentz, *et al.* (2016b) who suggests that *passionate new whale watchers*, *committed whale watchers*, as well as *new whale watchers* indicated that the experience is very important to them.

The last cluster, *adventure junkies*, ranked all motivational factors with the highest scores, suggesting their excitement and eagerness to participate in the activity is high (Table 4). The two factors that stood out as most important motivational factors are *experiences* and *marine species*. This cluster is devoted to participating in activities involving marine species such as whales and sharks. Furthermore, they participate in other marine activities involving adventure as well, such as *surfing* (1.74), *scuba diving* (1.91), *wave rider* (1.68), and *fishing* (1.82) (Table 5). This therefore suggests their thirst for adventure, making the name given appropriate. They are also the people who will return for another activity in the future (88%). The adventure junkies have an average age of 35.27 years, they are mostly female (58%), with international origins, and they are mostly day visitors (56%) while on holiday in the surrounding area. This cluster spent an average amount of R3558.43 (US\$ 264,99 at the time of this study) during the trip, and will contribute towards the conservation of whales (74%) and sharks (73%), even though they represent the lowest scores from all clusters. This cluster rated *client service delivered*, *sea conditions*, *being educated on the marine environment*, *experiencing closeness to nature* and *add-ons on the trip* as having a big influence on the overall experience of the trip. The adventure junkies are thus highly motivated to participate in activities such as shark cage diving and whale watching for the adventure and experience derived from it, but are less inclined to contribute to the conservation of the species on which these activities focus.

Table 4: Cross-tabulation with Ward's Method results for marine wildlife tourists

| | Cluster 1: Thrill Seekers | Cluster 2: Risk takers | Cluster 3: Thalassophiles | Cluster 4: Consorts | Cluster 5: Experience seekers | Cluster 6: Adventure junkies | Chi- square |
|---------------------------------|--|-----------------------------------|--------------------------------------|-------------------------------------|--|---|------------------------|
| Gender | Female (70.06%) | Male (60.8%) | Male/Female (50%) | Female (55.9%) | Female (55%) | Female (57.7%) | 0,083 |
| Language | English (64.7%) | English (56%) | Other (50%) | English (42.5%) | English (72.5%) | English (62.5%) | 0,094 |
| Origin | International (79.4%) | International (68.6%) | International (80%) | International (73.5%) | International (75.6%) | International (65.4%) | 0,382 |
| Education | Diploma/degree (55.9%) | Diploma/degree (40%) | Diploma/degree (33.3%) | Diploma/degree (41.2%) | Diploma/degree/post-graduate (33.3%) | Diploma/degree (50%) | 0,593 |
| Type of visitor | Day visitor (55.9%) | Day visitor (52%) | Overnight visitor (55%) | Day visitor/overnight visitor (50%) | Day visitor (67.5%) | Day visitor (56%) | 0,009~ |
| Heard about the operator | Office signage (48.5%) | Website (36.2%) | Website (50%) | Website (42.4%) | Office signage (39.5%) | Website (44%) | 0,735 |
| Participate again | Yes (79.3%) | Yes (95.1%) | Yes (64.3%) | Yes (96.8%) | Yes (95.2%) | Yes (88.4%) | 0,000~ |



| | | | | | | | |
|-------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------|
| Conservation of whales | Yes (75%) | Yes (90.2%) | Yes (78.9%) | Yes (83.3%) | Yes (82.1%) | Yes (73.9%) | 0,466 |
| Conservation of sharks | Yes (71.9%) | Yes (90%) | Yes (78.4%) | Yes (80%) | Yes (79.5%) | Yes (72.7%) | 0,387 |
| Experiences | 4.06 ^d | 4.56 ^b | 3.54 ^e | 2.54 ^f | 4.09 ^c | 4.67 ^a | 0,00 |
| Marine species | 4.34 ^c | 4.16 ^d | 4.42 ^b | 2.91 ^f | 3.52 ^e | 4.62 ^a | 0,00 |
| Lifestyle | 2.32 ^c | 3.09 ^b | 1.98 ^f | 2.06 ^d | 2.01 ^e | 3.96 ^a | 0,00 |
| Personal achievement | 3.55 ^b | 2.11 ^c | 1.11 ^f | 1.67 ^e | 2.05 ^d | 3.73 ^a | 0,00 |

Table 5: One-way ANOVA with Tukey's post hoc test results for marine wildlife tourists

| | Cluster 1: Thrill Seekers | Cluster 2: Risk takers | Cluster 3: Thalas-sophiles | Cluster 4: Consorts | Cluster 5: Experience seekers | Cluster 6: Adventure junkies | F-Ratio | Sig. Level |
|--|--------------------------------------|-----------------------------------|---------------------------------------|--------------------------------|--|---|----------------|-------------------|
| Age | 31.67 | 36.65 | 34.32 | 42.74 | 37.58 | 35.27 | 2.39 | <0.05 |
| Spending | R3656.44 | R5232.71 | R3531.18 | R2122.00 | R4169.36 | R3558.43 | 1.21 | <0.05 |
| Size of the travelling group | 4.58 | 5.08 | 2.8. | 5.21 | 2.93 | 4.19 | 1.19 | <0.05 |
| Previously participated in the activity | 0.31 | 1.36 | 1.13 | 0.96 | 0.55 | 1.85 | 1.79 | <0.05 |
| Satisfaction with the operator | 4.35 | 4.45 | 4.13 | 3.38 | 4.19 | 4.35 | 9.66 | <0.05 |
| Client service | 3.67 | 3.93 | 3.60 | 3.16 | 3.64 | 4.01 | 5.69 | <0.05 |
| Sea conditions | 3.29 | 2.79 | 2.81 | 2.70 | 2.75 | 3.36 | 3.52 | <0.05 |
| Education | 3.49 | 3.66 | 3.31 | 3.12 | 3.48 | 4.10 | 7.70 | <0.05 |
| Closeness to nature | 4.08 | 3.99 | 3.72 | 3.27 | 3.66 | 4.43 | 9.65 | <0.05 |
| Add-ons | 3.43 | 3.06 | 2.60 | 2.57 | 3.02 | 3.64 | 7.74 | <0.05 |
| Surfing | 1.19 | 1.60 | 1.45 | 1.21 | 1.32 | 1.74 | 2.13 | <0.05 |
| Scuba diving | 1.53 | 1.84 | 1.35 | 1.39 | 1.60 | 1.91 | 2.35 | <0.05 |
| Sea kayaking | 1.34 | 1.54 | 1.64 | 1.39 | 1.33 | 1.36 | 1.37 | <0.05 |
| Wave rider | 1.45 | 1.48 | 1.34 | 1.48 | 1.34 | 1.68 | 0.75 | <0.05 |
| Snorkel | 2.00 | 2.48 | 2.18 | 2.00 | 2.07 | 2.26 | 1.34 | <0.05 |
| Fishing | 1.28 | 1.48 | 1.21 | 1.25 | 1.34 | 1.82 | 2.20 | <0.05 |

Conclusion

The purpose of this research was to determine the clusters of marine wildlife participants, with specific reference to shark cage diving and whale watching, because this is an area which lacks information in a South African context. The behaviour of marine wildlife tourists was determined by



identifying the profile, motives to participate and market clusters of the marine wildlife participants. Thereby, contributing to the literature on marine wildlife tourism along with suggesting practical ways of utilising the information for marine wildlife tourism operators.

The findings from this research, and thus the management implications, are unique and can assist operators greatly in gaining insights into the market for marine wildlife tourism, what motivates them and what factors contribute to a great experience. These aspects can be implemented by the operator to gain a competitive advantage by offering the market what they want. The information obtained can also be used for the purposes of conducting effective marketing in terms of highlighting aspects of the activity which will motivate potential participants to take action, such as the possibility of spotting marine life, and offering participants the chance to photograph these animals. Three findings are discussed below, of which the second finding identifies two possible strategies for using the information on the market clusters effectively.

Firstly, the profile of marine wildlife tourists indicate that these participants are willing to contribute to conservation of sharks and whales. Operators should therefore make use of the opportunity to educate participants in ways that they can make a contribution, such as monetary or non-monetary contributions. Guides should emphasise the importance of conservation of these species during the debrief session and highlight ways that participants can become involved. A good option is to have an 'adopt-a-shark' or 'adopt-a-whale' campaign, where participants can donate a certain amount of money to be used for research purposes. In addition, the finding concerning the profile can be used by marketers to identify and attract potential marine wildlife tourists.

Secondly, marine wildlife tourists are highly motivated by the close proximity of the animals, such as whales, sharks, seals, penguins and dolphins. It is clear that marine wildlife participants do not only want to experience closeness with the animal on which focus is placed, such as sharks during a shark cage dive, but rather want to observe other marine species as well. The factor labelled *education* can be linked with this finding. Participants are seeking an opportunity to increase their knowledge and understanding of the marine environment, therefore proper interpretation of the activity is important. According to Voase (2008) tourists are much more sophisticated and have shifted their focus from passive fun to active learning. This is evident amongst marine wildlife tourists as well. Operators should therefore ensure that guides on the trip are trained properly to offer effective interpretation of the activity by pointing out various marine species to participants and providing additional information, such as the nature of the animal, habitat, conservation status and threats. Furthermore, part of education and interpretation is educating participants on ethical issues pertaining to the sector. This includes informing participants beforehand that they are not allowed to touch the animals, to throw litter into the ocean, the boat is not allowed closer than 50 meters to whales and the boat is not allowed to stay with a whale for longer than twenty minutes. This will provide participants with additional information, and understanding of the ethical issues of the sector, therefore enhancing their experience while on-board the vessel.

Thirdly, the research identified six distinct market segments for the first time, named the T²RACE taxonomy for marine wildlife tourists as participants. Clusters for marine wildlife tourism are necessary for both management and marketing purposes of such operations. Operators should realise the differences in market segments and these differences should be used to enhance marketing material and management of the operation. Marketers should consider using the motives which were identified as the most influential to establish marketing strategies that will attract attention and raise awareness for the marine environment.

Substantial differences have been identified between the clusters, but based on motives to participate, similarities can be highlighted that can be used to develop two different marketing strategies applicable to the various segments.

The first strategy should incorporate the factors of *experiences* and *marine species*. This strategy is applicable to the risk takers, adventure junkies and thalassophiles. They are all motivated by the concept of new experiences, thrill, excitement and the variety of marine animals that can be spotted on a trip. Operators should guard against false advertising by avoiding promises made on definite sightings. Marine wildlife is not available on demand and this needs to be communicated with



participants. Marketing tools should therefore be used in such a way to convey a strong message of the activity, behaviour of the animals and information about the experience. The information posted on these tools should correspond to a central theme of thrill, excitement and the marine species that can be seen. Such marketing tools include a website, a social media presence (Facebook, Instagram and Twitter) and a blog. Offering participants the opportunity to interact with the operator via comments on social media posts or reviews on the website, can enhance the element of word of mouth.

The second strategy that can be developed should focus on the thrill seekers and experience seekers. This strategy should therefore highlight the factor of *experiences* from another angle. Thrill seekers and experience seekers are constantly in search of new and different experiences. Whale watching and shark cage diving might represent a bucket list experience for these market segments. This should be addressed by operators in marketing material by emphasising the uniqueness of the activity. A further part of the entire experience for these participants is the additional services provided during the trip (ranked second highest, as depicted in Table 3). The operator should include information on add-ons offered, such as breakfast before the trip and lunch after the trip, provision of snacks and water on-board and provision of windbreakers while on-board. This information should be communicated on all marketing communication platforms, such as the website and Facebook page. This will enhance tourist satisfaction further seeing as operators are not focussing on elements of the activity which cannot be ensured, such as the availability of wildlife, but rather focusses on those that can be ensured.

Lastly, conservation practices have been identified as a high ranking construct amongst all six clusters (as depicted in Table 3). Not only does this indicate that operators should pay attention to contributing towards the conservation of whales and sharks, but opportunities for participants to contribute as well should be communicated. Operators should make use of the debriefing session after the trip to communicate ways in which participants can also contribute to the conservation of whales and sharks by, for example an 'adopt-a-shark-or-whale campaign' or an in-kind contribution. When participants are made aware of the opportunities that exist for them to contribute to conservation and the ways in which the operator is contributing, awareness can be created for need for conservation of the animals. These contributions should then be put towards research and understanding the marine environment, the species, the marine tourism industry and the improvement of the sustainability of the marine adventure tourism industry.

This research contributes greatly to the literature and knowledge on marine wildlife tourism in South Africa. It is clearly indicated that various market segments and a taxonomy can be identified for this sector, each with its own set of desires. The information should be used in order to develop and implement effective and focussed marketing strategies to attract the correct market, provide in their wants and needs and ensure the sustainability of the industry. Future research is necessary though, to ensure sufficient information is gathered on the sector of marine wildlife tourism. Future research should be conducted on other marine wildlife activities, such as swimming with seals, marine ecotours and snorkelling, in order to gain a holistic view of the sector. Lastly, researchers should consider identifying the decision-making factors of marine wildlife participants to further enhance excellent service delivery.

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