

An Exploratory Study of Adventure Tourism Activity Preferences in Gauteng, South Africa

Abstract

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This paper sought to explore the adventure tourism activities that are preferred by adventure tourists in Gauteng, South Africa. The research data were collected quantitatively through a self-administered questionnaire. 206 Respondents were chosen utilizing a snowball sampling technique. Descriptive and inferential statistics, the Mann-Whitney, and Kruskal-Wallis tests, were applied and the results were presented using tables, figures, and charts. Based on the results presented, adventure tourists in Gauteng have certain adventure activities they prefer more than others. They prefer participating in hard adventure activities that are land-based. The results further indicate that gender, age, highest qualification, and income significantly affect the level of preference for adventure tourism activities. These findings will help adventure tourism organizations plan and develop adventure activities according to the participants' preferences.

Keywords: Activity preference, adventure activities, adventure tourism, adventure tourist, demographic profile

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Introduction

Adventure tourism or adventure travel is among the fastest-growing industries in the biosphere (Giddy, 2016; Janowski et al., 2021; Makunyi, 2023). Initially, adventure tourism was a small, inaccessible tourism sector. However, since it was commercialised, the demand for the product has increased year after year. As a result, suppliers are providing adventure products to satisfy this demand (Albayrak, 2022; Giddy & Webb, 2018; Ungureanu, 2014; Varley & Taylor, 2014). The success of adventure tourism in Africa is promising. For instance, in 2009, a prediction was made that adventure travel was expected to increase by 70% in the coming years (Christie et al., 2014). According to Future Market Insights (2023), the adventure tourism market in Africa is estimated to exceed US\$ 115.1 Million in 2023 and is projected to reach US\$ 187.4 million by 2033. Another example is Victoria Falls in Zimbabwe, which experienced an 8% increase in adventure tourism in 2013 (Adventure Travel News, 2013). The adventure tourism market study of 2013 (Adventure Travel Trade Association, 2013a), quoted by Michela et al. (2017), states that American and European adventure tourism is worth US\$263 billion, demonstrating a 63% increase from 2009 to 2012. In 2018, the global adventure tourism market was estimated at US\$683 billion, excluding domestic travel and outbound Asian travel (Janowski et al., 2021). According to Ungureanu (2014:45), adventure tourism makes a yearly gross revenue of about US\$1 trillion worldwide. The success and sustainability of adventure tourism comes with understanding activity preferences (Kovačić et al., 2022). Studying the activity preferences of the participants assist the adventure tourism destinations in the development of the personalised adventure tourism packages, the improvement of the product offering, effective destination marketing and vital components of a sustainable adventure tourism destination (Carvache-Franco et al., 2022; Kovačić et al., 2022). According to Gaffar et al. (2019), most tourist motivation studies focus less on activity preferences and more on the influences of destination choice. This study sought to contribute to the body of knowledge of adventure tourism activity preferences by exploring various influences that shape the choices of adventure tourists. The findings from this study will assist adventure tourism service providers in developing adventure products according to the preferences of the adventure tourists (Carvache-Franco et al., 2022).

Literature review

Adventure tourism defined

Many definitions have been proposed for adventure tourism. However, according to Duffy & Overholt (2013), no specific or universal definition has been adopted in defining adventure tourism. Diverse definitions for adventure tourism demonstrate authors' different understandings and perspectives of this phenomenon.

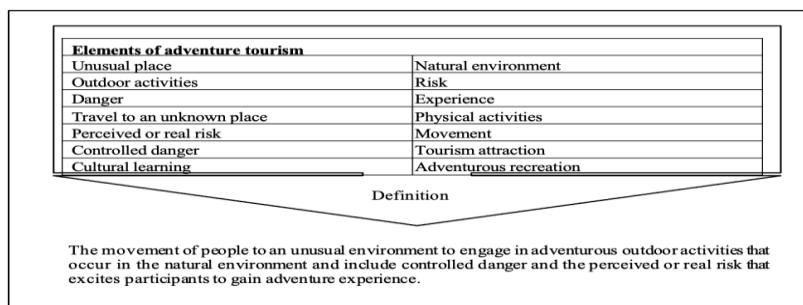


Figure 1: Elements of adventure tourism. Source: Author's own illustration



Figure 1 illustrates the elements of adventure tourism as adopted from the definitions of adventure tourism from the studies of Jennings (2007), Swarbrooke et al. (2012), Van Onselen (2010), Beckman (2013), Duffy & Overholt (2013), Ungureanu (2014), Giddy (2016), Michela et al. (2017), Beckman et al. (2017). The elements highlighted in Figure 1 were used to propose the novel definition for the purpose of this study. According to Duffy & Overholt (2013), the elements listed in Figure 1 depend on the level of skill possessed by the adventure tourist. For instance, what is risky for one person may not necessarily be risky for another (Ungureanu, 2014). Also, the element of a new experience applies only to the participant who participates in the activity for the first time. Adventure activities take place in various settings based on their typology. Some activities occur on land, others take place in water or the air and some take place in all the settings simultaneously (Bentley et al., 2001; Michela et al., 2017). Table 1 presents the categories of adventure activities in their typologies.

Table 1: Conventional contemporary adventure tourism activities

Land-based	Abseiling, Mountaineering, Backpacking, Orienteering, Bicycling, Quad biking, Caving, Scrambling, Climbing, Skiing, Dog sledging, Snowboarding, Hunting, Snowshoeing, Horseback riding, Via Ferrata, Safaris – jungle exploring, Wilderness experience, Motorcycling, Mountain biking
Water-based	Body boarding, Windsurfing, Canyoning, Cruise expeditions, Kayaking, Sailing, Scuba diving, Snorkelling, Surfing, Water skiing, White-water rafting, Windsurfing
Air-based	Ballooning, Bungee jumping, Cliff jumping, Gliding, Hang gliding, Micro-lighting, Paragliding, Parachuting, Skydiving
Mixed (land, water and air)	Adventure racing, Charity Challenge, Conservation expeditions, Cultural experiences, Gap year travel, Hedonistic Experiences, Spiritual enlightenment, Wildlife watching

Source: Michela et al. 2017

Adventure activities may differ in terms of names, but they possess the same elements of adventure (Tshipala, 2013). These activities can be classified as hard adventure activities or soft adventure activities based on the experience of the adventure tourist (Van Onselen, 2010).

Soft and hard adventure activities

Soft adventure activities have less risk than hard adventure activities (Beckman et al., 2017). Adventure tourists participate in these activities under the guidance/supervision of adventure professionals, hence the minimum risk. These activities do not need set skills to participate but safety equipment is required. According to Beckman (2013), tour operators can change hard adventure activities into soft adventure activities by minimizing their level of risk. Hard adventure activities, also known as pure adventure activities, are activities that take tourists out of their comfort zones by physically challenging them by way of personal risk and danger. Participation in these activities requires skill and good physical training (Michela et al., 2017; Ungureanu 2014). Beckman et al. (2017) assert that before one can participate in these activities, a warning must be given of the high level of risk involved and that one should be highly skilled to minimise the chance of being injured. These activities are not always supervised by tour guides or experts and thus, a great deal of responsibility lies with the participants.

Demographic profiles of adventure tourists

Adventure tourism practitioners must understand adventure tourists and differentiate them from the general population of tourists in order to supply products and services that are reasonable for them. For example, Lötter et al. (2014) highlight that it is simple to coordinate the products and services to visitors if the target market is identified and segmented. Therefore, adventure tourism practitioners must know and understand adventure tourist profiles in order to market their products and services (Lötter et al., 2012). Demographic factors influence the process of making decisions for adventure tourists (Gross et al., 2023). These factors include age, gender, sexual orientation, occupation, education, income, race, family life-cycle stage, marital status and household size (Lötter et al., 2014; Terblanche, 2012). Demography is the study of the structures of a population such as the gender segment, income segment, age, and family life cycle (Pissoort & Saayman, 2007). Terblanche (2012) denotes that participants in contemporary adventure tourism are youthful in age, educated, princely and dynamic thrill searchers who spend an awesome bargain of cash to gain the adventure experience. Most of these tourists have a college degree, have professional or special training and their average age is between 25 years and 55 years. Adventure tourists have better than normal pay, are for the most part married and more often than not travel with their companions or friends, with the number of guys and females being similarly spoken to (Albayrak, 2022; Gross et al., 2023; Terblanche, 2012).

Methodology

The quantitative research methodology was applied to this study. The researcher used a self-administered questionnaire as a research instrument for this study. The study was approved by the Tshwane University of Technology (TUT) Ethics Committee (Reference number: FCRE2018/FR/05/010-MS). Data was collected through primary and secondary sources. Primary sources are the data that was collected from the empirical survey during the research study using questionnaires and secondary sources refer to data that is not created in this study but is available in other studies and literature. The primary data was collected among adventure tourists in Gauteng. Secondary sources include published and unpublished theses, the internet, newspapers/magazines, journals, textbooks, Library books, and academic articles. The survey was administered by the researcher whereby a total of N=300 respondents was anticipated but only N=206 was achieved. According to Flick (2011), data analysis involves filing responses into categories defined in advance or allocated numerical values. Raw collected data is given meaning by means of performing several interrelated procedures to bring order and structure to the data (Lötter, 2016). The collected data were coded in Excel and analysed at the Tshwane University of Technology using Stata V15 statistical analysis software. The data analysis is divided into two categories, namely descriptive statistics, and inferential statistics (Hon,



2013). Descriptive statistics describe the collected data in numerical terms (Lötter, 2016). This is a simple way of summarising the collected data. Inferential statistics include methods for making conclusions about the entire population based on sample data collected during the fieldwork (Kaushik & Mathur, 2014). According to Hon (2013) and Gibbs, Shafer, & Miles (2017), “inferential statistics involve using a descriptive statistic for a sample to make inferences or estimates about the value of a corresponding population parameter”. Gibbs et al. (2017) further state that descriptive statistics alone do not convey much confidence regarding the sample matching the population and hence the need for inferential statistics. The Mann-Whitney and Kruskal-Wallis tests were applied for the purpose of this study and the results were presented using tables, figures, and charts.

Results

This section presents the analysis of adventure tourism activities that are preferred by adventure tourists in Gauteng. Firstly, the demographic descriptions of the respondents are discussed. Followed by water, land and air-based adventure activities, hard/soft adventure activities, the two-sample Wilcoxon rank-sum (Mann-Whitney) test and The Kruskal-Wallis test.

Demographic profile

As indicated in Table 2, most of the respondents were between the ages of 21 and 29 years (39.32%) and 54.37 percent were males.

Table 2: Demographic profile

Variable	%	Province of residence	%
Age		Eastern Cape	0.49
18 – 20 years	16.50	Mpumalanga	3.40
21 – 29 years	39.32	Free State	0.49
30 – 39 years	27.18	Northern Cape	0.49
40 – 49 years	11.65	Gauteng	75.73
50 years and above	5.34	North West	6.80
Gender		KwaZulu-Natal	2.43
Male	54.37	Western Cape	1.94
Female	45.63	Limpopo	8.25
Home language		Marital status	%
Afrikaans	17.55	Single	63.59
English	12.23	Married/living with a partner	32.52
Tsonga	12.77	Divorced/separated	1.94
Ndebele	3.19	Widowed	1.94
Venda	7.98	Gross annual income	%
Sepedi	10.64	Less than R50 000	48.06
Xhosa	6.91	R50 001-R100 000	9.71
Southern Sotho	5.32	R100 001-R150 000	9.10
Northern Sotho	6.38	R150 001-R200 000	11.17
Zulu	14.89	R200 000 and above	21.36
Swati	2.13	Where did you hear about	%
Other languages		The last adventure Destination you went to?	
Setswana	89.47	Brochures	4.00
Portuguese	5.26	Friends and Family	14.00
English	5.26	Guide books	4.00
Highest qualification		Magazines	1.00
High school	11.65	Newspapers	1.50
Certificate	41.75	Previous visits	8.00
First degree/ Diploma	30.58	Radio	1.00
Honours degree/ Postgraduate Diploma	11.65	Shows (getaways)	3.50
Masters degree	3.40	Television	4.00
Doctoral Degree	0.97	Website	31.00
South African Citizenship		Word of mouth	28.00
Yes	100		
No	0		

Of these respondents, 18 (17.55) percent were Afrikaans-speaking. Most respondents (41.75%) were educated with a certificate from a tertiary institution and all the respondents were South African citizens. Almost all the respondents (75.73%) were residing in Gauteng and 63.59 % were single. About 51.34 percent of the respondents earned more than R50 000 a year and 31% heard about their last adventure destination on the website. These results agree with Terblanche (2012). In his research, he stated that most adventure tourists have a college degree, and their average age is between 25 years and 55 years. Adventure tourists have better than normal pay, are for the most part married and often travel with their companions or friends, with the number of males and females being similarly spoken to. According to Gaffar et al. (2019), most respondents are males (71%) compared to 29% of females. Most of these respondents were between 18 and 30 years of age, 47% being students, 32% employees, entrepreneurs, and government officers (8%) and others amounting to 5%. This confirms that the sample is a good representation of the profile of adventure tourists.

Adventure activities

Water, land and air-based adventure activities

The results presented in Figure 2 show that 48.09% (n=189) of the respondents prefer to participate in land-based activities and 33.08% (n=130) prefer participating in water-based activities. Lastly, 18.83% (n=74) indicated air-based adventure activities as the type of activities that they prefer.

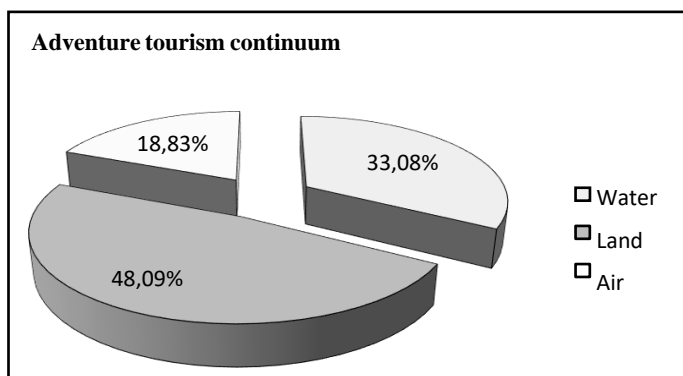


Figure 2: Adventure tourism continuum

Hard/soft adventure activities

According to the results accumulated in the fieldwork (see Figure 3), most of the respondents (64.08%, n=132) preferred participating in hard adventure activities (high-risk activities), whereas 75 (35.95%) respondents preferred low-risk activities (soft adventure activities). These results agree with that of the study of Gross et al. (2023), which states that 68% of adventure tourists are men and they prefer participating in hard adventure activities.

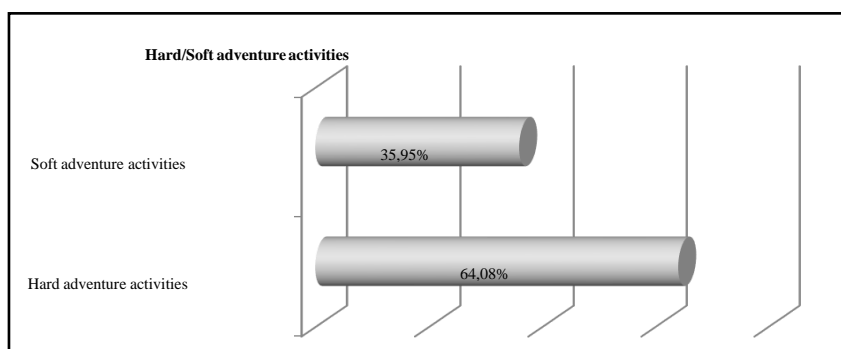


Figure 2: Hard/soft adventure activities

Two-sample Wilcoxon rank-sum (Mann-Whitney) test

The Mann-Whitney test was used to compare the level of preference for adventure tourism activities by gender. The results presented in Table 3 indicate that gender has a significant effect on the preference for abseiling, climbing, kayaking, mountaineering, skydiving, mountain biking, white-water rafting, hunting, water skiing, scuba diving, bungee jumping, canyoning, cliff jumping, and parachuting with their P-value less than 0.05 ($P < 0.05$). The results further show that males prefer participating in the listed activities compared to females with a rank mean of males more than that of females in all the activities. This research confirms the previous study by Kruger et al. (2018). In their research, they found that males participate in adventure tourism activities more than females. Therefore, when adventure tourism activities are developed and marketed in Gauteng, male adventure tourists should be put in mind.

Table 3: Level of preference for adventure tourism activities by gender

Activity	Gender	Rank mean	P-value	Activity	Gender	Rank mean	P-value
Abseiling	F	95.03	0.0195*	White-water rafting	F	90.65	0.0005*
	M	113.60			M	118.91	
Climbing	F	95.87	0.0322*	Hunting	F	95.41	0.0299*
	M	112.59			M	113.14	
Backpacking	F	99.50	0.2603	Safari jungle exploring	F	101.43	0.5679
	M	108.26			M	105.96	
Hiking	F	98.89	0.1726	Quad Biking	F	98.063	0.138
	M	108.99			M	109.98	
Kayaking	F	89.96	0.0002*	Water skiing	F	95.11	0.0241*
	M	119.64			M	113.50	
Adventure racing	F	102.40	0.7625	Scuba Diving	F	92.93	0.0044*
	M	104.81			M	116.10	
Mountaineering	F	94.98	0.0185*	Horseback riding	F	98.65	0.1779
	M	113.65			M	109.28	
Skydiving	F	95.92	0.0415*	Bungee jumping	F	96.19	0.0491*
	M	112.54			M	112.21	
Wildlife watching	F	101.11	0.4847	Canyoning	F	92.39	0.0026*
	M	106.35			M	116.73	
Mountain Biking	F	91.07	0.0007*	Cliff jumping	F	89.86	0.0002*
	M	118.31			M	119.76	
Wilderness experience	F	100.18	0.3381	Parachuting	F	95.13	0.0230*
	M	107.46			M	113.47	

Footnotes: (*) = $P < 0.05$; Female (F), Male (M)



The Kruskal-Wallis test

The Kruskal-Wallis Test was performed to test the effects of age group, highest qualification by income, and income on the level of preference for adventure tourism activities. All the multiple comparisons between groups that had no significant effect on the level of preference for adventure tourism activities were removed from the tables because of their inconsequentiality in the analysis. The results as shown in Table 4 indicate that age has a significant effect on the level of preference for abseiling, climbing, backpacking, kayaking, adventure racing, skydiving, wilderness experience, white water rafting, water skiing, scuba diving, horseback riding, bungee jumping, and parachuting with a P-value of less than 0.05. According to the results, there is a significant relationship between age group and level of preference for mountaineering, quad biking, canyoning and cliff jumping, $p < 0.05$. However, the multiple comparisons between the group results indicate that the differences are marginal.

Table 4: Relationship between age groups and the level of preference for adventure tourism activities

Activity	p-value	Chi-Square	DF	Rank mean difference
Abseiling	0.00853*	13.643	4	3-5* (58.79) 30-39 years
Climbing	0.00471*	14.998	4	1-5* (58.28), 3-5* (62.92) 18-20 years, 30-39 years
Backpacking	0.00153*	17.527	4	1-3* (43.97), 2-3* (33.43) 30-39 years, 30-39 years
Kayaking	0.01597*	12.194	4	3-5* (59.77) 30-39 years
Adventure racing	0.00010*	23.885	4	1-5* (87.22), 2-5* (83.80), 3-5* (71.50), 4-5* (61.56) 18-20 years, 21-29 years, 30-39 years, 40-49 years
Mountaineering	0.04291*	9.857	4	
Skydiving	0.00010*	24.645	4	1-5* (63.54), 2-5* (82.91) 18-20 years, 21-29 years
Wilderness experience	0.00010*	40.576	4	1-3* (63.02), 1-4* (64.65), 1-5* (79.28), 2-3* (30.60) 30-39 years, 40-49 years, 50 and above, 30-39 years
White water rafting	0.00022*	21.808	4	1-2* (35.00), 1-3* (53.50) 21-29 years, 30-39 years
Quad Biking	0.02754*	10.915	4	
Water skiing	0.02097*	11.557	4	2-5* (58.92) 21-39 years
Scuba diving	0.02361*	11.278	4	1-4* (46.79) 18-20 years
Horseback riding	0.00501*	14.855	4	1-4* (50.69) 40-49 years
Bungee jumping	0.00010*	26.637	4	1-5* (68.48), 2-4* (44.48), 2-5* (78.71) 18-20 years, 21-29 years, 21-29 years
Canyoning	0.04226*	9.894	4	
Cliff jumping	0.04627*	9.675	4	
Parachuting	0.02850*	10.834	4	2-5* (57.55) 21-29 years

Footnotes: 1. (18-20 years), 2. (21-29 years), 3. (30-39 years), 4. (40-49 years), 5. (50 years and above). (*) = $P < 0.05$.

Table 5 deliberates the relationship between the highest qualification by income and the level of preference for adventure tourism activities.

Table 5: Relationship between highest qualification by income and level of preference for adventure tourism activities

Activity	p-value	Chi-Square	DF	Rank mean difference
Backpacking	0.00010*	24.493	4	1-2* (43.17), 1-4* (31.88), 1-5* (38.26) R100 001 – R150 000, R200 001 and above, R50 001 – R100 000
Hiking	0.00488*	14.918	4	1-5* (37.46) R50 001 – R100 000
Kayaking	0.01642*	12.128	4	
Mountaineering	0.03648*	10.246	4	
Mountain Biking	0.06863	8.715	4	
Wilderness experience	0.00010*	32.616	4	1-3* (38.57), 1-4* (40.48), 1-5* (45.04) R150 001 – R200 000, R200 001 and above, R50 001 – R100 000
White water rafting	0.00079*	18.981	4	1-5* (42.07) R50 001 – R100 000
Horseback riding	0.00904*	13.508	4	
Bungee jumping	0.00695*	14.111	4	1-4* (39.60) Less than R50 000
Canyoning	0.00607*	14.419	4	1-5* (41.24) R50 001 – R100 000

Footnotes: 1. Less than R50 000 p.a. 2. R100 001 – R150 000 p.a. 3. R150 001 – R200 000 p.a. 4. R200 001 and above p.a. 5. R50 001 – R100 000 p.a. (*) = $P < 0.05$.

According to the results presented in Table 5, the highest qualification by income has a significant effect on the level of preference for backpacking, hiking, wilderness experience, white water rafting, bungee jumping and canyoning, $P < 0.05$. Although there is a significant relationship between the highest qualification by income and the level of preference for kayaking, mountaineering, mountain biking and horseback riding, the multiple comparisons between the group results indicate that the differences are marginal. The results that are presented in Table 6 discuss the relationship between income and the level of preference for adventure tourism activities.

Table 6: Relationship between income and level of preference for adventure tourism activities

Activity	p-value	Chi-Square	DF	Rank mean difference
Backpacking	0.00010*	26.987	4	1-2* (48.21), 1-4* (33.93), 1-5* (46.11) R100 001 – R150 000, R200 001 and above, R50 001 – R100 000
Hiking	0.00198*	16.944	4	1-5* (42.88) R50 001 – R100 000
Kayaking	0.01672*	12.086	4	
Mountaineering	0.01342*	12.598	4	
Mountain Biking	0.01539*	12.279	4	
Wilderness experience	0.00010*	42.982	4	1-2* (49.38), 1-3* (49.08), 1-4* (49.86), 1-5* (53.48) R100 001 – R150 000, R150 001 – R200 000, R200 001 and above, R50 001 – R100 000
White water rafting	0.00129*	17.900	4	1-2* (41.11), 1-5* (41.26) R100 001 – R150 000, R50 001 – R100 000
Horseback riding	0.00191*	17.028	4	1-3* (43.12), 1-4* (31.81) R150 001 – R200 000, R200 001 and above
Bungee jumping	0.00484*	14.934	4	1-4* (39.25) Less than R50 000
Canyoning	0.02394*	11.245	4	4-5* (45.44) R50 001 – R100 000

Footnotes: 1. Less than R50 000 p.a. 2. R100 001 – R150 000 p.a. 3. R150 001 – R200 000 p.a. 4. R200 001 and above p.a. 5. R50 001 – R100 000 p.a. (*) = $P < 0.05$



The results indicate that income has a significant effect on the level of preference for backpacking, hiking, wilderness experience, white water rafting, horseback riding, bungee jumping and canyoning. There is a significant relationship between income and the level of preference for kayaking, mountaineering and mountain biking. However, the multiple comparisons between the group results indicate that the differences are marginal.

Conclusions and recommendations

The adventure tourism industry is one of the fastest growing industries with the demand for the product increasing year after year. As a result, suppliers are providing adventure products to satisfy this demand. Adventure tourism stakeholders should understand adventure tourists and differentiate them from the general population of tourists in order to supply products and services that are reasonable for them. Hence, to successfully market adventure tourism products and services, one should know and understand the relationship between the demographic profiles of adventure tourists and the level of preference for adventure tourism activities. Through research, an exploratory study of adventure tourism activity preferences was done. Based on the findings of this research regarding the demographic profile of the respondents, a conclusion can be drawn that the middle-aged (21-39) are more inclined to participate in adventure tourism activities. Gauteng adventure tourism stakeholders should market the products more to the younger tourists (39 and younger) as confirmed by Kruger et al. (2018). Both males and females are almost equally represented with males slightly higher than females. There is also good evidence that single people prefer participating in adventure tourism activities, followed by married couples. Most adventure tourists have a qualification and a source of income. A large number of participants in adventure tourism activities in Gauteng are local or from within the vicinity of Gauteng. Regarding the adventure tourism activities, respondents participated more in hard adventure tourism activities, and they preferred land-based activities, followed by water-based activities. Concerning the multiple comparisons between the level of preference for adventure tourism activities by gender, age, highest qualification, and income, it can be concluded that adventure tourism participation is more skewed to males than it is to females. Young people prefer more thrilling and risky adventure tourism activities, whereas older participants prefer less risky activities. The highest qualification and income significantly affect the level of preference for adventure tourism activities. For instance, according to the results of this research, the participants who prefer participating in complex adventure tourism activities are those with a form of qualification and a source of income. This correlates with previous research findings by Slabert (2015) who stated that over the years, studies agreed that adventure tourists spend a lot of money on adventure tourism activities and these tourists are mostly educated. Gross et al. (2023) also concur that typical adventure tourists would possess a higher education background with an above-average gross net income.

Furthermore, according to the results, a conclusion can be drawn that the participants with less financial capabilities would rather participate in less complex/simple adventure tourism activities or less expensive adventure tourism activities. These results agree with that of the study of Gross et al. (2023). The authors found that adventure tourists with higher income tend to participate in hard adventure activities. The findings of this research should contribute towards responsible stakeholders to understand better the adventure tourist activity preferences. Understanding the activity preferences will enable the adventure service providers with the ability to provide different activities to adventure tourists, improve adventure facilities for the purpose of activity participation, and design promotions that are effective and create visitor experiences (Gaffar et al., 2019). More research should be conducted to investigate the least preferred activities in Gauteng and ways to ensure their attractiveness towards participants, thus ensuring further adventure tourism development in Gauteng.

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