

Investigating tourists' satisfaction with infrastructures located proximal to attractions

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Abstract

There is limited information concerning relationship between tourists' satisfaction and awareness of infrastructure locations, particularly with regard to associated impacts to the Outstanding universal values (OUVs). The study was conducted in the Ngorongoro Conservation Area (NCA) World Heritage Site (WHS) in Tanzania employing a quantitative research approach. Theoretically, the study employed Expectancy-Disconfirmation model and Dissonance Theory on customer satisfactions. The study was guided by two null hypotheses: H01: Demographic characteristics (age, education, nationality and sex) do not influence tourist's satisfactions with infrastructures located proximal to attractions; and H02: Tourists' awareness of potential consequences of infrastructures located proximal to attractions do not influence their satisfactions. A multivariate logistic regression analysis was performed on the 210 responses to investigate the relationships between tourists' demographic characteristics and awareness of potential consequences and satisfactions. Both hypotheses (H01 and H02) were rejected, indicating that tourists are satisfied with infrastructures located proximal to attractions despite being aware of the potential consequences. In addition, tourists who were aware were twice as likely as those who were not to be satisfied. However, highly educated tourists (Masters and PhD) were less likely to be satisfied of infrastructures located proximal to attractions compared to tourists with lower education levels. This study recommends that infrastructure developers and NCA WHS conservators collaborate to develop monitoring and evaluation strategies to constantly balance conservation and tourism objectives because tourists are more satisfied with infrastructure proximal to attractions. Future research should focus on new construction materials, designs and technology to safeguards WHS OUVs.

Keywords: Tourists, Satisfactions, OUV, Infrastructure, Impacts.

INTRODUCTION

Tourism is one of the world's fastest growing and most important economic sectors in most countries. The number of international tourist arrivals was 25 million in the 1950s but increased to 1.18 billion in 2015 (International Tourist Arrivals, 2015). International tourist arrivals worldwide in 2019 reached 1.5 billion (UNWTO, 2020) and Tovmasyan (2016) predicts that there will be 1.87 billion tourists in the world by 2050. This worldwide increase in tourist's numbers is also reflected by those visiting the Ngorongoro Conservation Area World Heritage Site (NCA WHS) as shown in Table 1. Because of the economic potential of the tourism industry, the Tanzania ruling party's 2020-2025 Election Manifesto urges NCA to host more than 2.0 million tourists per year by 2025 (CCM, 2020). This is especially likely given the NCA's international recognition as a UNESCO Man and Biosphere Reserve, a UNESCO Mixed World Heritage Site (Mixed-Natural and Cultural), a UNESCO Global Geopark, (WHC, 2023) and one of Africa's seven Natural Wonders (<http://sevensnaturalwonders.org/africa/>). All of these distinctions elevate NCA to a world-class tourists' destination.

Nevertheless, the rise in tourist numbers and tourism-related endeavors predominantly have adverse impacts on the atmosphere, water, soil, geological features, flora, fauna, microorganisms, landscapes, and culture (Zhao and Li, 2018; Pratama and Mandaasari, 2020). Throughout the world, the rise in numbers of tourists has also necessitated an increase in the development of tourism infrastructures, particularly, in Protected Areas (PAs) and WHS. Various scholars have investigated the links between tourism and infrastructure development (Andrea et.al. 2012; Marion, 2019; Nguyen, 2021). These researchers have demonstrated the importance of infrastructures such as information centers, hotels, motels, campsites, restaurants, transportation, communications, water, and electricity in supporting tourism. Although infrastructure development is necessary for tourism, conservation and management activities; it remains a contentious issue, particularly in PAs and WHSs (Harris et al., 2021; Feiden and Jokilehto, 1998; Alberts and Brinda, 2005, as cited in Alberts and Hazen, 2010). These researchers emphasized the significance of infrastructures in the operations of WHS, increasing tourist's experiences and satisfaction and OUV protection. However, it should be noted that massive infrastructure development may have negative impacts on the intrinsic values of cultural and natural heritages (Harris et al., 2002;

Sharma et al., 2018) and Buckley (2002, 2003, 2005) observed that there has been little research on the effects of tourism infrastructures in Pas. As a result, PAs, including WHSs like NCA, are increasingly threatened by tourism and related infrastructure developments (Sharma et al., 2018). Although conservators and developers have made significant efforts to promote tourism, including the construction of tourism infrastructures in NCA, there is limited knowledge regarding the relationship between tourists' contentment and their understanding of the effects of infrastructures located close to attractions. According to Bogoro et al. (2013), a major challenge faced by tourism managers is the task of ensuring customer satisfaction. Hence, understanding this subject is crucial for grasping the intricacies of safeguarding Outstanding Universal Values (OUVs) and carrying out tourist endeavors in PAs, including WHSs.

Thus, this study investigated how a) tourism infrastructures located proximal to attractions affected tourist satisfaction, as well as how b) awareness of potential repercussions of tourism infrastructures near attractions affected their satisfaction. This information is crucial for adopting a balanced approach to tourist infrastructure development that safeguards NCA's OUVs while also assuring tourist satisfactions. Therefore, this research hypothesized that:

H₀₁: Demographic characteristics (age, education, nationality and sex) do not influence tourist's satisfactions of infrastructures located proximal to attractions and H₀₂: Awareness of potential consequences of infrastructures located proximal to attractions do not influence tourists' satisfactions.

METHODOLOGY

Background to the study area

The NCA WHS is situated between 3.2279° S, 35.5075° E, in Arusha Region, Tanzania (Figure 1). It was established in 1959 by the NCA Ordinance as a multiple use with objectives of conserving natural heritage, promotion interests of the safeguard natural and cultural heritages, protect the interests of the local inhabitants and promote tourism (NCAA, 2021).

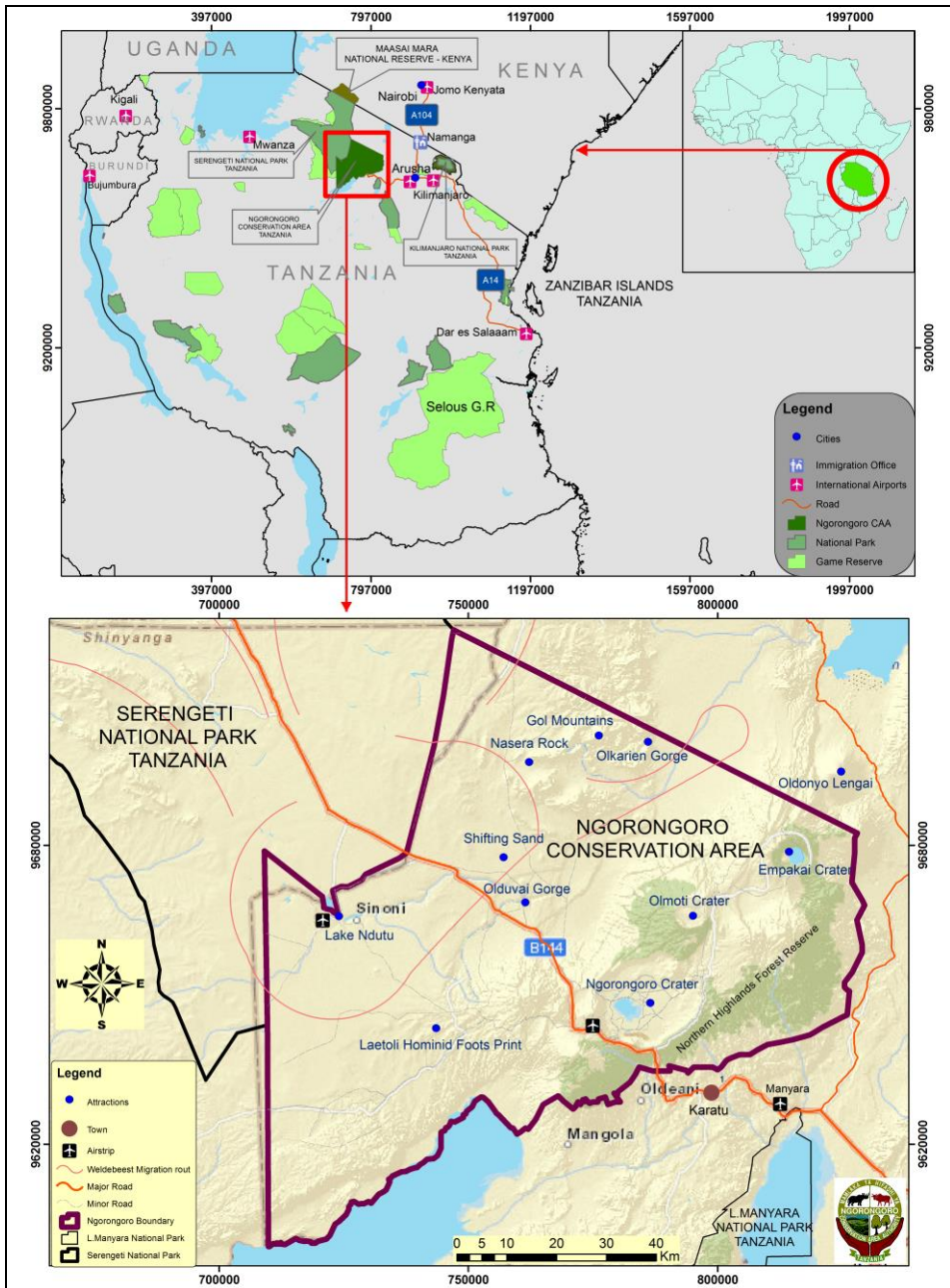


Figure 1: Location of NCAWHS (Courtesy: NCAA, 2022).

The NCA has an area of 8,292 km² and is home to 100,793 Maasai, Datoga, and Hadzabe communities (NBS, 2022). It includes highland plains, savannah, woodlands and forests (NCAA, 2021). It stretches from

the plains of the Serengeti National Park in the north to the Great Rift Valley's eastern arm (Hay, 1976). The NCA has many tourist attractions, such as craters (Ngorongoro, Olmoti, and Empakaai), about 25,000 large wild animals (including the big five: lion, leopard, black rhinoceros, African bush elephant, and African buffalo), significant paleoanthropological sites (such as the Olduvai Gorge and its museum, Laetoli and Ndutu), and cultural experiences of locals. Additionally, NCA is a gateway to famous Serengeti World Heritage Site (Figure 1).

Approximately 80% of developers in NCA seek to develop tourist infrastructure in ecological and paleoanthropological sensitive areas (MZP, 2021). These include the crater rims, the Ndutu wildebeest migration area, and the Olduvai Gorge (Figure 1). Developers and tourism companies believe that these places are crucial to satisfying and maintaining tourists (NCAA, 2021). According to Lache and Trifu (2011), customer satisfaction is crucial in the tourism sector. As a result, the development of tourism infrastructures in NCA has put NCA conservators and developers at loggerheads over where to build tourism infrastructures. On the one hand, developers want sensitive areas to locate their infrastructures because they want higher and faster returns, as well as to keep tourists in their respective infrastructures for longer periods of time. Conservators, on the other hand, want to preserve the ecological and paleoanthropological integrity of the areas, thereby, protecting the NCA WHS OUVs. Meanwhile, NCA management needs tourism revenue to support conservation and management activities. Yet, infrastructure development is critical in the operation of WHSs and when carefully planned and well designed, infrastructures can sustainably enhance the values and significance of WHSs (Pedersen, 2002).

Theoretical and conceptual frameworks

This study employed Expectancy-Disconfirmation model and Dissonance Theory on customer satisfactions. Expectancy-Disconfirmation model developed by Oliver (1977, 1980) generally suggests that there is a conscious comparison between a cognitive state prior to an event and a subsequent cognitive state that is experienced after the event. That is to say, customers' expectations will determine their satisfactions after consuming the product (Oliver, 1980; Yüksel and Yüksel, 2008). Dissonance Theory is based in the concept that a person who expected a high-value product but received a low-value product would notice the difference and suffer from cognitive dissonance (Cardozzo, 1965; Yi,

1990). According to this theory, the presence of dissonance creates pressures to reduce it, which could be accomplished by adjusting the perceived disparity (Yüksel and Yüksel, 2008). The theory assumes that, should there be any disparity between product expectations and the real product, the consumer may suffer psychological discomfort and therefore, change their attitude towards that product (Yi, 1990; Yüksel and Yüksel, 2008). Product developers always wishes to satisfy their customers by adding credibility to their brand and retain their customers. Dongkoo and Sungsoo (2016) affirm that tourists' future perceptions and attitudes are dependent to the outcome of their experiences with tourism products when measured versus the prior expected desires. These theories are relevant to this study since they may illustrate the influence of tourists' expectations as customers on the choice of tourism infrastructures. Studying the relationship between destination's products and tourists' preconceptions would enable us to determine tourists' perceptions of satisfaction, quality and value (tourism infrastructures proximity to attractions), as well as how these factors interact to influence future behavioral intentions (Opperman, 2000).

Methods

This study employed a quantitative research design. Data were collected at the Loduare and Naabi entry/exit gates, Olduvai Gorge Museum, Maasai cultural bomas and at tourists' lodgings (campsites, hotels, lodges). The Taro Yamane Formula (Yamane, 1970) was used to calculate the study sample size, $n = N / (1 + Ne^2)$, where n = sample size, N = population under study, which in our case is 705,207 tourists (NCAA, 2019), and e = margin of error, which in our case is 7%. This formula is used because the population is finite, hence: $n = 705,207 / (1 + 705,207 * (0.07)^2)$; $n = 204.023$ and therefore, estimated to 205 respondents. However, 210 randomly selected participants completed the questionnaires, yielding a sample size of 210 for this study.

Study participants were guaranteed of anonymity and were requested to provide demographic information (sex, age, education and nationality) as well as to circle tourism infrastructures they have used or visited (such as roads, aerodromes, lodges, hotels, campsites, museums, and information centers). The data was collected during tourists' high season, from 10th to 20th December 2022. Collected data was then cleaned, coded and verified for completeness.

Tourists' satisfaction was measured using three different questions, including: 1) are you satisfied with lodging infrastructures located proximal to wildlife areas?; 2) are you satisfied with roads/airstrips located proximal to wildlife areas?; 3) are you satisfied with museums and information centers located proximal to paleoanthropological sites or cultural heritage sites? Tourists were asked to answer whether they were satisfied, not satisfied, or not sure. Based on total responses, two cut-off points were used to determine tourists' satisfaction: if the tourist responded "Satisfied" to two or more of the three questions then he or she was rated "Satisfied," otherwise rated "Not satisfied."

Regarding tourists' awareness of potential consequences of infrastructures located proximal to NCA attractions and its effect to tourists' satisfactions, was firstly tested by asking five different questions: 1) do roads and airstrips prevent/disturb wildlife lifeways? 2) do lodgings located proximal to attractions destructs the aesthetic of the area? 3) do museums and information centers located proximal to paleoanthropological sites obstructs archaeological and other heritage research operations? Two cut-off points were used to determine tourist's awareness based on total responses. If tourist scored correctly to two out of three questions, then he/she rated to have "Awareness of the potential consequences of infrastructures located proximal to attractions" and otherwise, was rated "Not having awareness".

Then, a multivariate logistic regression, using tourists' demographic characteristics (sex, age, nationality and education) was performed to test the relationships between tourists' awareness of potential consequences of tourism infrastructures located proximal to attractions and their satisfactions on the use of those infrastructures; using the expression $TS = \beta_0 + \beta_1 D1 + \beta_2 D2 + \dots + \mu$ where TS = tourists' satisfaction, βD = demographic characteristics and μ is the error term which represents the effect of the variables that were omitted from the regression equation (Freedman, 2005). Also, a Chi square was performed to test whether there are statistical relationships among tourists' demographic characteristics with tourists' satisfactions. Then for all tourists' demographic characteristics that were found to have significant relationships with satisfactions, a multivariate logistic regression was performed to further investigate how the relationships behave with each other. The expression $TS = \beta_0 + \beta_1 AI + \mu \dots$ was used, where TS = tourists' satisfaction (dependent variable), βD = demographic characteristics (Independent

variable), β_0 , 1, 2, 3 and 4 are predicting variables (Independent variables), and μ is the error term which represents the effect of the variables that were omitted from the regression equation (Freedman, 2005).

Conceptually, the study independent and dependent variables are presented in Figure. 2

Independent Variables

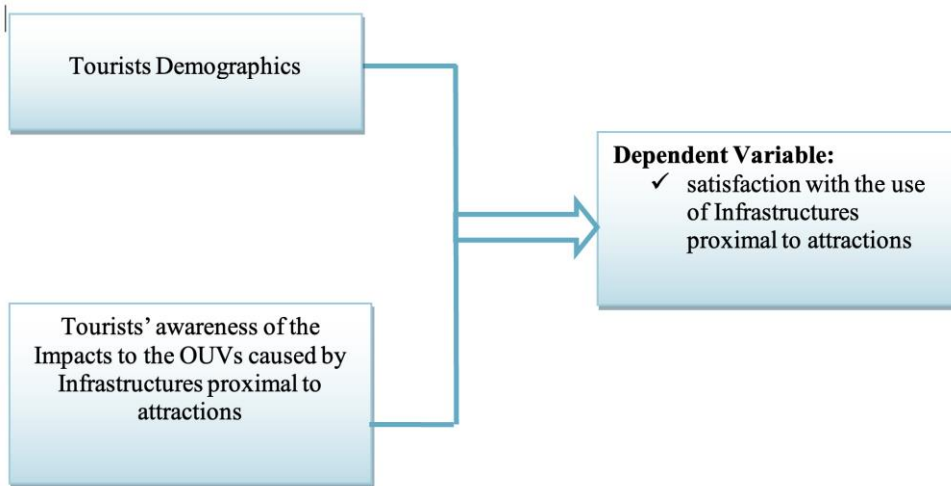


Figure 2: Conceptual Framework (Field data, 2023)

FINDINGS

Respondents' demographic characteristics

Males made up 61% of all respondents, while females made up 39%. Respondents aged 30 to 39 years had the highest proportion (32.4%). This was followed by those aged 20 to 29 years (22.4%), 50 to 59 years (19.1%), 40 to 49 years (13.8%) and those ≥ 60 years were 12.6%. The highest proportion of respondents had a high school diploma (27.1%). This was followed by those with a bachelor's degree (23.3%), a master's degree (21%), a doctorate degree (10%), a certificate (9.5%), and a secondary education (9.1%). In terms of nationality, Americans comprised the largest proportion (36.7%). This was followed by Britons (19.1%), Tanzanians (11.9%), Indians (5.2%), French (4.3%), Canadians (3.8%), Germans (3.8%) and Russians (1.1%). Nations with fewer tourists were categorized as "other nationalities," which cumulatively made up 7.1% of the population (Table 1).

Table 1: Respondents' demographic characteristics (n =210)

Characteristic		Frequency	Percentage
Sex	Male	128	61.0
	Female	82	39.0
Age	20–29	47	22.4
	30–39	68	32.4
	40–49	29	13.8
	50–59	40	19.1
	60 years and above	26	12.6
	Education Level	Secondary school education	19
	Certificate	20	9.5
	Diploma	57	27.1
	Bachelor's degree	49	23.3
	Master's degree	44	21.0
	PhD	21	10.0
Nationality	American (USA)	77	36.7
	British (UK)	40	19.1
	Tanzanian	25	11.9
	Russian	17	8.1
	Indian	11	5.2
	French	9	4.3
	Canadian	8	3.8
	German	8	3.8
	Other nationalities	15	7.1

Tourists' satisfaction with the use of infrastructures located proximal to attractions

Out of 210 tourists, males were 81.3% and females were 57.3%. the study found that 71.9% were satisfied using infrastructures located proximal to attractions while 28.1% were not satisfied. This suggests that more males were satisfied with infrastructures located proximal to attractions (Figure 3)

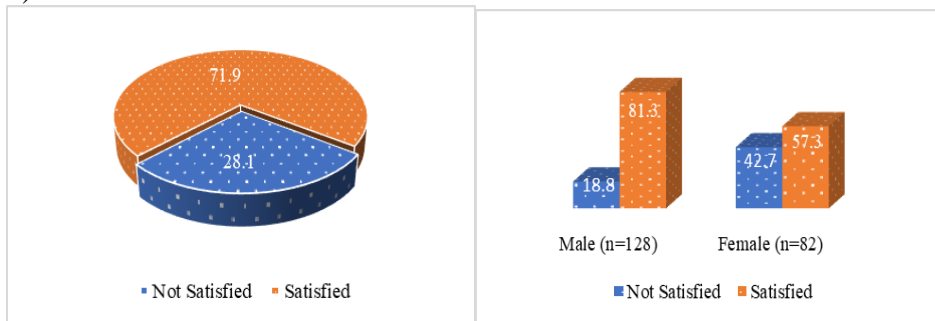


Figure 3: Tourists' satisfaction with the use of infrastructures located proximal to attractions

The study found significant proportions of tourists with various education levels were satisfied with infrastructures located proximal to attractions. These, include, diploma (91.2%), secondary education (89.5%), certificates (80.0%), a bachelor degree (67.4), master's (50.0%) and doctoral degrees (52.4%, Figure 4).

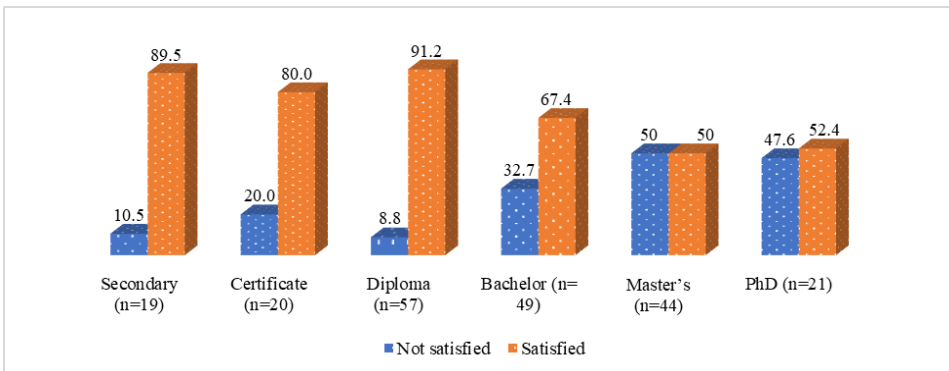


Figure 4: Tourists' satisfactions of infrastructures located proximal to attractions based on education levels.

As regards to age, significant proportions of tourists aged 20 to 29 years old (87.2%), 30 to 39 years (82.4%), 40 to 49 years (65.5%) and 50 to 59 years (57.5%) were satisfied with infrastructures located proximal to attractions. However, a small proportion of tourists aged ≥ 60 years (46.2%) were also satisfied (Figure 5).

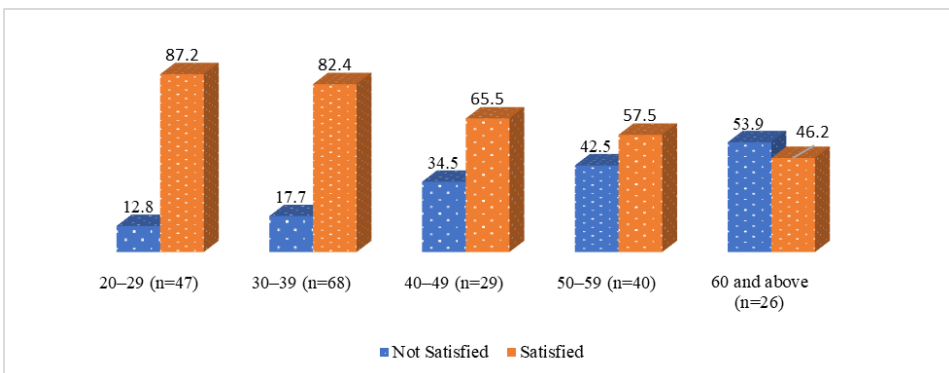


Figure 5: Tourists' satisfactions of infrastructures located proximal to attractions based on age

Large proportions of tourists from the United States (84.4%), Russia (82.4%), the United Kingdom (77.5%), "other nations" (73.3%), Canada

(62.5%), India (54.6%) and Germany (50.0%) were satisfied with infrastructure located proximal to attractions. However, a small proportion (36.0%) of Tanzanian tourists were satisfied (Figure 6).

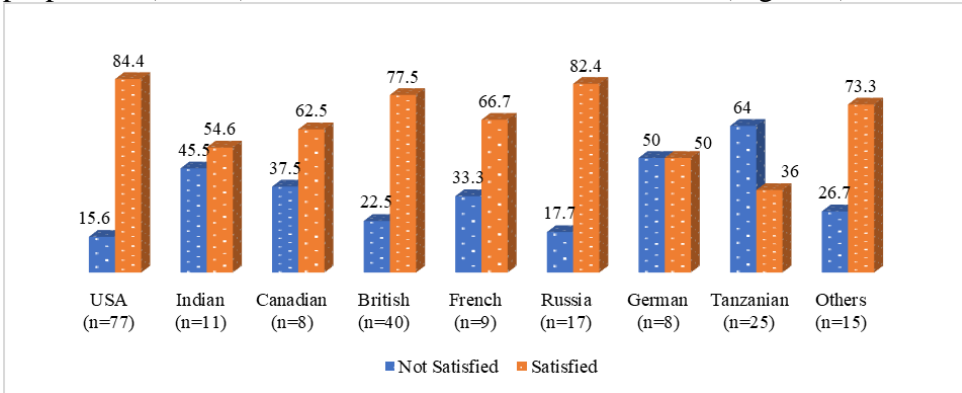


Figure 6: Tourists' satisfactions with infrastructures located proximal to attractions based on nationalities.

Tourists' Awareness of potential consequences of infrastructures located proximal to attractions

About 51.9% of 210 tourists were aware of the potential consequences of infrastructures located proximal to attractions. Of this, 50% were males and 54.9% were females. About 48.1% of tourists were not aware, of which 50% were males and 45.1% were females (Figure 7). This suggests that more females are aware of potential consequences of infrastructures located proximal to attractions.

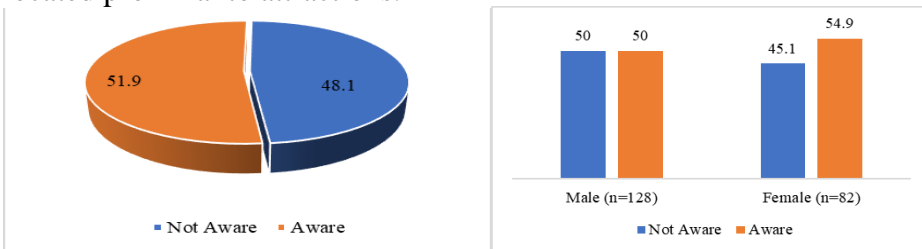


Figure 7: Tourists' awareness of potential consequences of infrastructures located proximal to attractions.

The study found that large proportions of tourists aged 50 to 59 years (62.5%), aged ≥ 60 years (53.9%) and 20 to 29 years (51.1%) were aware of potential consequences of infrastructures located proximal to attractions. However, small proportions of tourists aged 40 to 99 years (44.8%) and tourists aged 30 to 39 years (48.5%) are aware (Figure 8).

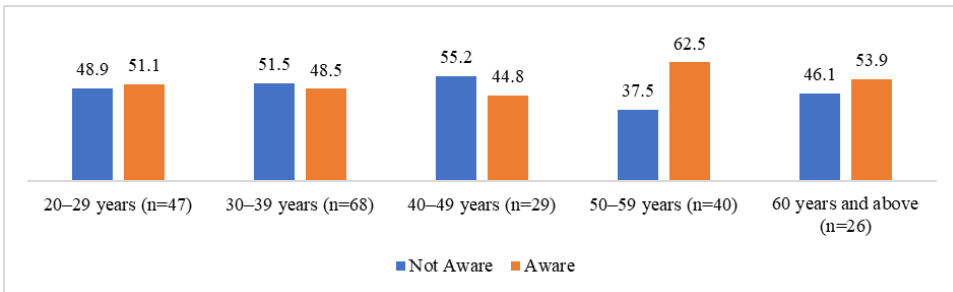


Figure 8: Tourist's awareness of the potential impacts of infrastructures located proximal to attractions based on age.

In general, all education levels of tourists are aware of the potential consequences of infrastructures located proximal to attractions. These include, master's degree (59.1%), certificates (55%), bachelor's degree (53.1%), secondary education (52.6%), PhD (47.6%), and diploma (45.6%: Figure 9).

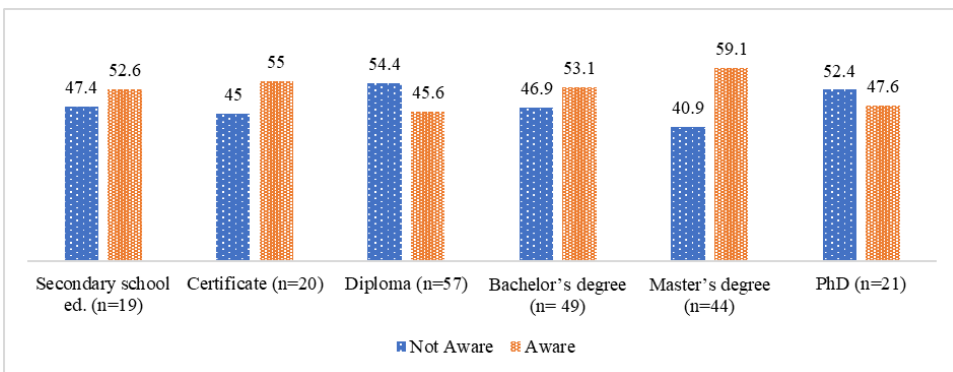


Figure 9: Tourist's awareness of potential consequences of infrastructures located proximal to attractions based on education.

Large proportions of tourists from all studied nationalities are aware of the potential consequences of infrastructures located proximal to attractions. These include Britons (75.0%), French (66.7%), Canadians (62.5%), Germans (62.5%), Russians (58.8%), Americans (57.1%) and Indians (54.6%). A small proportion (12.0%) of Tanzanian tourists are aware while all tourists from "other nationalities" were not aware (Figure 10).

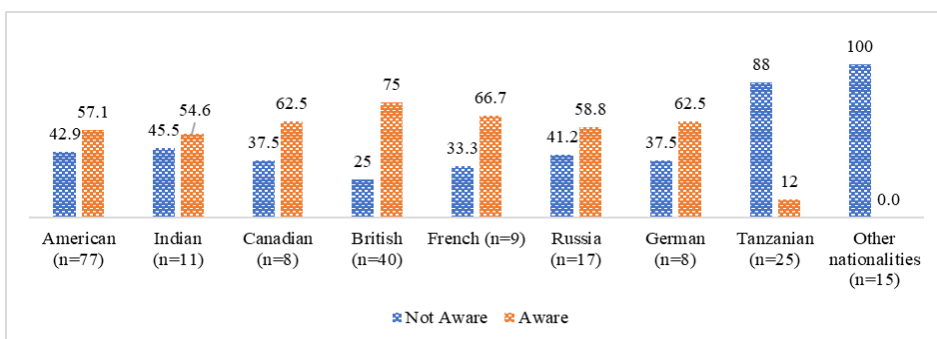


Figure 10: Tourist's awareness of potential consequences of infrastructures located proximal to attractions based on nationalities.

Hypothesis testing

This section tests the proposed null hypotheses in light of the field results that have been presented.

H₀₁: Demographic characteristics (age, education, nationality and sex) do not influence tourist's satisfactions of infrastructures located proximal to attractions.

H₀₁ is tested using Pearson Chi-square by comparing the independent variables (sex, age, education and nationality) to the dependent variable (tourists' satisfactions). The results indicate that only education, nationality and sex have statistically significant relationship with tourists' satisfactions as their associated p-values are less than 0.05 (Table 2). This result rejects the H₀₁ null hypothesis and supports the H₁ alternative hypothesis that *Demographic characteristics (sex, age, education and nationality) do influence tourist's satisfactions of infrastructures located proximal to attractions.*

Table 2: Pearson Chi-Square test of the relationship between tourists' demographic characteristics and satisfaction

Variable	Pearson Chi square	P value
Age group	2.055	0.363
Education	29.004	0.000
Nationality	27.4864	0.001
Sex	14.1712	0.000

H₀₂: Tourists' awareness of potential consequences of infrastructures located proximal to attractions does not influence their satisfactions

H₀₂ is tested using Pearson Chi-square by comparing the independent variable (tourists' awareness of the potential consequences of infrastructures located proximal to attractions) to the dependent variable (tourist satisfaction). The result indicates that tourists' awareness of the potential consequences of infrastructures located proximal to attractions have statistically significant relationship with tourists' satisfaction as their associated p-values are less than 0.05 (Table 3). This result rejects the null H₀₂ hypothesis and supports the alternative hypothesis H₂ that *Tourists' awareness of potential consequences of infrastructures located proximal to attractions do influence their satisfactions.*

Table 3: Pearson Chi-Square test of the relationship between tourists' awareness of the potential consequences of infrastructures located proximal to attractions on tourists' satisfactions

Variable	Pearson Chi-square	P value
Tourist's awareness of the potential consequences of infrastructures proximal to tourism attractions	4.1428	0.042

Evaluating the extent of relationships of the null H₀₁ hypothesis

Independent variables with statistically significant relationships are subjected to a multivariate logistic regression model to test the extent of relationships between tourists' demographic characteristics (sex, nationality, and education) and satisfactions of infrastructures located proximal to attractions (Table 4). The study found that, American tourists are about 18 times more satisfied of infrastructures located proximal to attractions than Tanzanian tourists ($p < 0.05$). Furthermore, the study discovered that Russian and Briton tourists are about ten times more satisfied of infrastructures located proximal to attractions than Tanzanian tourists ($p < 0.05$), while tourists from "other nationalities" are about 6 times more satisfied than Tanzanian tourists ($p < 0.05$, Table 4).

Tourists with higher levels of education are less likely to be satisfied with infrastructures located proximal to attractions than those with lower levels of education. For example, tourists with Masters and PhDs degrees are about 0.03 times less likely to be satisfied than tourists with Secondary education ($p < 0.05$). Nonetheless, sex has no statistical significance to satisfaction ($p \geq 0.05$), indicating that it has no influence on tourists' satisfactions (Table 4).

Table 4: Extent of relationships between tourists' demographic characteristics and satisfaction with infrastructures located proximal to attractions

	Odds Ratio	Std. Err	Z	P> Z	[95%Conf. Interval]	
Nationality						
Tanzanian	1.000					
Indian	1.8902	1.61805	0.74	0.457	0.3531	10.1193
Canadian	3.3782	3.28129	1.25	0.210	0.50337	22.6710
British	10.3470	6.93134	3.49	0.000	2.78360	38.4614
French	5.9233	5.5867	1.89	0.059	0.9327	37.6174
Russia	10.1730	8.7797	2.69	0.007	1.87425	40.2164
German	3.5501	3.5055	1.28	0.199	0.5125	24.5897
American	17.6198	11.0385	4.58	0.000	5.1610	46.1541
Other nationalities	6.0816	5.0905	2.16	0.031	1.17904	29.3694
Education level						
Secondary school ed.	1.000					
Certificate	0.4153	0.4213	-0.87	0.386	0.0568	3.0331
Diploma	1.3442	1.2713	0.31	0.754	0.2106	8.5803
Bachelor's degree	0.1463	0.1330	-2.11	0.055	0.0246	0.8699
Master's degree	0.0308	0.0365	-2.94	0.003	0.0030	0.3135
PhD	0.0308	0.0384	-2.80	0.005	0.0026	0.3536
Sex						
Male	1.000					
Female	2.6214	2.0010	1.26	0.207	0.5872	11.7025
Constant	1.5808	1.4068	0.51	0.607	0.2763	9.0448

Evaluating the extent of relationships of null Ho2hypothesis

From the logistic output in Table 6, the study found that there is statistically significant relationship between tourists' awareness of the potential consequences of infrastructures proximal to tourism attractions and satisfaction with the use of the infrastructure proximal to NCA tourism attractions. That is tourists who are aware of the potential consequences of infrastructures on tourism attractions are about 2 times more satisfied with the use of infrastructures proximal to the attractions than tourists who are not aware of the potential consequences of infrastructures to tourism attractions ($p < 0.05$).

Further analysis using a multivariate logistic regression model shows that tourists who are aware of the potential consequences of infrastructures located proximal to attractions are about twice as much satisfied than tourists who are not aware ($p < 0.05$: Table 5).

Table 5: Extent of relationships between tourists' awareness of the potential consequences of infrastructures located proximal to attractions on tourists' satisfaction

	Odds Ratio	Std. Err	Z	P> Z	[95% Conf. Interval]	
Awareness of potential consequences						
Not Aware	1.0000					
Aware	1.8782	0.5854	2.02	0.043	1.0196	3.4598
Constant	1.8857	0.3943	3.03	0.002	1.2517	2.8409

DISCUSSION

This study has found that tourists are satisfied of infrastructures located proximal to attraction despite being aware of their potential consequences. In NCA WHS, large number of tourists desire and expect to lodge, camp, and do game driving proximal to attractions such as crater rims, Ndotu wildebeest migratory routes, scenic landscapes, wildlife habitats and the archaeological site of Olduvai Gorge and Laetoli hominid footprints. These infrastructures are located in most of the ecologically, geologically and paleoanthropological sensitive areas of NCA WHS. Yet, they are mostly favored by both tourists and infrastructure developers. Tourists would pay more to be in such infrastructures because their desires, expectations and experiences are satisfied. Infrastructure developers in NCA WHS always request to construct their facilities in such sensitive areas in order to attract and satisfy tourists and therefore, get a premium out it. Such findings have also been reported by Ramyar and Halim (2020) in Iran's Golestan National Park and Marion (2019) in his review and discussion of recreation impacts to wildlife in PAs. Similarly, de Oliveira et al. (2021) noted that tourists with positive environmental awareness had higher levels of satisfactions when they visited PAs.

However, the study found that highly educated tourists (Masters and PhDs degrees) are less likely to be satisfied of infrastructures located proximal to attractions when compared to tourists with lower education levels. This is possibly due to their increased knowledge about potential adverse impacts of infrastructures to the attractions and consequently OUVs. While proximity of infrastructures to attractions in PAs helps to satisfy tourists and provide them with the best experiences, yet, it is a contested issue from a conservation point of view as it threatens the

OUVs of sites, particularly, those with World Heritage status (Buckley, 2004; Marion, 2019). Because of these two competing interests in PAs, such as the NCA WHS; conservators and infrastructure developers should work together to find ways to reduce the negative effects of tourism infrastructures located proximal to attractions while attaining tourists' satisfaction (Pedersen, 2002). One way is to restrict tourism activities and infrastructure development to areas with minimal negative impacts (Pickering and Hill, 2007; Worboys et al., 2005).

CONCLUSION AND RECOMMENDATIONS

Tourists' preferences for using infrastructures located proximal to attractions influence developers' requests to build tourist infrastructures in ecologically and culturally sensitive areas within NCA WHS and other PAs. This is done, among other things, to satisfy tourists and sustain the tourism industry. This is an ongoing conflict in NCA WHS between conservation and the tourism industry in terms of locating tourist infrastructure proximal to attractions. At some point, the requests made by infrastructure developers go beyond what is allowed under the Management Plan's conservation guidelines, endangering the NCA OUVs.

This study recommends that tourism infrastructure developers and NCA conservators to work together in order to achieve a balance of conservation and tourism objectives. This balance can be achieved through candid collaborations between tourism infrastructure developers and conservators by conceiving the best strategies for constructing the most environmentally friendly infrastructures. Along with this, monitoring and evaluation tools that continuously strike a balance between tourism-related activities and PAs conservation should be developed. The primary goal should be to protect all of the values that attract tourists (OUVs) in order to provide long-term tourist satisfaction and experience, while also assisting PAs in obtaining financial resources to protect and preserve OUVs. Furthermore, education programs should be integrated into tourist itineraries and activities to remind tourists of the importance of preserving the values that drew them to PAs and WHS. Need to provide direction for future research.

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