

Tourism Impacts: A Study of Tourist Perception in Leh

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Abstract *This study is an attempt to understand the perceptions of impacts by tourists in Leh district of Ladakh region of Jammu and Kashmir. Tourists form one of the most important stakeholders and their opinions and perceptions are vital to understanding and sustaining the tourism industry. For this study, tourists were grouped into international and domestic; male and female; and their perceptions towards both positive and negative impacts as well as difference in perceptions (vis-a-vis. international vs. domestic and male vs. female) was studied. Results of the study indicated that the negative impact- 'increased accumulation of waste' and the positive impact - 'increased opportunities for shopping' found stronger opinion by tourists. As far as difference in perceptions of tourists was concerned, it was found that international tourists perceived more negative impacts than their domestic counterparts and domestic tourists perceived more positive impacts than international tourists. As far as difference in perceptions of male and female tourists was concerned, it was found that male tourists had a stronger perception than females for most of the impacts. However, male tourists perceived environmental impacts more strongly than their female counterparts and female tourists perceived socio-cultural impacts more strongly than male tourists.*

Keywords: Tourism, Impacts, Leh, Perceptions, Tourists

INTRODUCTION

Tourism is regarded by many countries as one of the best alternatives to induce economic growth of a destination by providing employment, income and foreign exchange. (WTO, 2017; Gurung & DeCoursey, 2000; Brohman, 1996). According to UNWTO (2019), international tourist arrivals have been growing at a fast rate with global tourist numbers touching 1.4 billion and India is certainly not lagging behind in terms of tourist arrivals. However, the growth of tourists has been associated with negative impacts observed at various destinations across the world. Destinations in developed countries such as Barcelona, Venice, Santorini, Dubrovnik been reeling under the pressures of over-tourism (Alexis, 2017) and resulting negative impacts.

International tourist arrivals to India stood at 11 million in January 2019 and India plans to attract 15 million tourists by 2025 (World Economic Forum, 2017). As tourist arrivals

continue to increase in most popular destinations across the world, India too has witnessed negative impacts due to mass arrival of tourists. Places like Manali, Shimla, Mussoorie, Goa have felt the adverse impacts in the form of damage to their socio-cultural fabric as well as to their environment (Kuniyal, Jain & Shannigrahi, 2003; Madan & Rawat, 2000; Kumar, 2006; Wilson, 1997). This plan of attracting as many as tourists as possible should be reviewed by countries as mass tourism brings with itself negative socio-cultural and environmental impacts (Choi & Sirakaya, 2006) along with economic development. These negative impacts have led to a pressing need for conservation and management of natural resources (Haralambopoulos & Pizam, 1996; Richard & Hall, 2000) which are essential if the tourism industry is to become sustainable in the future (Hammitt, Bixler & Noe, 1996).

The aim of this paper is to study the perceptions of tourists who visited Leh in the summer of 2018 (May and June) with respect to both positive and negative impacts. Tourists from

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one of the most important stakeholders in the tourism system. They travel to different destinations as brand ambassadors, stimulate economic growth, bring employment and create demand for goods and services required by them (Dwyer & Forsyth, 1997). When they go back to their countries, they carry back with them images and perceptions of the places they have visited and share it with friends and family. Thus, they are the main drivers of the tourism industry and their opinions and perceptions matter the most to other stakeholders. It is imperative that we take into account their thoughts and opinions on the growing rate of negative impacts in destinations and see how they are affected by the impacts. This will help in understanding their perceptions towards the destination and help in finding ways to reduce the negative impacts and enhancing the positive aspects of tourism.

As tourist perceptions are so important for understanding perceptions about the impacts of tourism (both positive and negative), Leh in the Indian Himalaya region, was chosen for this study. Located in Ladakh region of Jammu and Kashmir, Leh is one such destination in India which has become very popular with both foreign and domestic tourists and has seen a drastic increase in tourist arrivals in the past couple of decades. Tourists in this destination outnumber the residents in the peak summer season. On top of this, the destination is situated in the fragile mountain ecosystem of the Himalayas and tourism development here has been very unplanned (Geneletti & Dawa, 2009). There are issues of seasonality, increased construction of hotels, employment of outsiders, environmental degradation and outside influence and adoption of outside culture by locals. The negative impacts are evident now and only handful studies are available which directly deal with the concept of tourism impacts in Leh.

The main objective of the study is to provide an understanding of perceived impacts of tourism in Leh from the tourists' point of view and to explain if there is any significant difference in the perceptions of tourists-international and domestic and male versus female.

REVIEW OF LITERATURE

Studies focused on understanding tourist perceptions deal with a wide variety of subjects including tourism impacts. Literature specifically on perceptions of tourism impacts is majorly skewed towards residents and that too on socio-cultural impacts. Also, numbers of studies on tourist perceptions of impacts are very less in number as compared to those on resident perceptions. The reason seems to be the fact that most tourists stay for a short period at the destination and are generally unlikely to perceive or notice impacts of tourism the way residents do. This trend will change in the future as researchers will feel the need to study perceptions of tourists as they continue to be one of the most important agents influencing tourism and impacts.

The studies of perceptions of tourists towards impacts were studied in different perspectives. With regards to environmental impacts, Hillery, Nancarrow, Griffin and Syme (2001) conducted a study in Australia and a positive relationship was found between an annual number of tourist arrivals and environmental impacts. However, they found that tourists did not differentiate environmental impacts between the site they were at and other sites despite increased deterioration at sites with high tourist numbers. They concluded that tourists were aware of environmental threats from tourism and majority of them suggested track spreading as a management option. Similarly, Buzinde, Manuel-Navarrete and Morasi (2009) discussed tourist perceptions of a coastal destination in Mexico which suffered beach erosion and found that tourists communicated their perceptions of the landscape as positive, negative and reconciliatory views. Tourists, who had positive views, were ignorant of the beach restoration but found ways to enjoy it. The ones, who had negative views, were displeased with the restoration and those who had reconciliatory views, were also displeased but they could rationalize the effort taken for environmental impact. Similar work was carried out by Puczko and Ratz (2000) investigated both resident and tourist perceptions of impacts and observed that locals blamed tourists for the negative impacts of tourism and not themselves. It was also found that locals perceived negative impacts but strongly supported expansion of tourism and economic benefits were the most important for the residents.

Taking a different subject for understanding tourist perceptions, Ballantyne, Packer & Hughes (2009) focused on tourist support for conservation messages and sustainable management practices in wildlife tourism. They observed that visitors strongly support conservation issues and give importance to minimizing impacts, if needed, at the expense of their comfort. The tourists suggested that reasons for management actions should be communicated to them through visitor displays and during their wildlife experience as this will help in achieving greater control in the management of tourist experiences. Another study on wildlife tourism by Priskin (2003) highlighted the perceptions of wildflower nature-based tourists of Australia and found that such tourists were not homogenous and that their group characteristics varied seasonally. Tourists in summer were more casual and their activities were limited along the coast in the form of recreation whereas those in spring, travelled to hinterland areas and they more concerned about nature appreciation.

Few authors studied tourist perceptions with respect to their willingness to pay fees. In this aspect, a research conducted on the tourists' perceptions Moremi Game Reserve of northern Botswana revealed that non-resident and overseas tourists were willing to pay higher than the prevailing fee. A majority of them found the camping and entrance fee quite

right as compared to residents who suggested a lower fee. Likewise, Mmopelwa, Kgathi and Molefhe, (2007) found a significant difference in the entrance fees suggested by South African and overseas tourists. They conclude that more facilities are needed to increase the satisfaction of tourists.

Some authors paid attention to the importance of demographic factors and their association with tourist perceptions. In this regard, Yankholmes and Akyeampong (2010) showed that socio-demographic factors affect tourist perceptions. They investigated tourists' perceptions of heritage tourism development at Danish, Osu Ghana using a sample of institutionalized and non-institutionalized tourists and found that tourist perceptions whether positive or negative, were influenced by their socio-demographic factors. Differences in their perceptions were directly related to their educational qualification. Similarly, Priskin (2003) studied tourist perceptions of environmental degradation with respect to nature-based tourism activities and observed that demographic factors affected tourist perceptions. Age, level of education and origin of visitors affected perceptions but seasonality did not significantly contribute to difference in perceptions except for activities like fishing, sand boarding and four-wheel driving. Both these studies signify the importance of education and visitor information in awareness of environmental issues. Building on the same premise of importance of education, Kerley, Geach and Vial (2003) evaluated perceptions of bio diversity by tourists and found that tourists underappreciated biodiversity and were more focused on viewing larger animals while giving less importance to smaller animals. They suggested that wildlife viewing experience could be improved by using guides and providing tourist education.

Therefore, it can be inferred from the above review of literature that tourist perceived negative impacts of tourism in the destinations that they visited and their perceptions were influenced by various factors. However, some tourists supported further expansion of tourism even after being aware of the existence of negative impacts and some supported conservation of natural resources and minimizing adverse impacts of tourism in the tourist destinations. Thus, with this background this study aimed to fulfil following research objective and hypotheses.

OBJECTIVES

To find out differences in the perceptions of domestic and international travelers and Male and female tourist towards tourism impacts in Leh.

Hypothesis

H₀₁: There is no significant difference in the perceptions of domestic and international tourists towards tourism impacts in Leh.

H₁₁: There is a significant difference in the perceptions of domestic and international tourists towards tourism impacts in Leh.

H₀₂: There is no significant difference in the perceptions of male and female tourists towards tourism impacts in Leh.

H₁₂: There is a significant difference in the perceptions of male and female tourists towards tourism impacts in Leh.

STUDY AREA

Leh in Ladakh region of Jammu and Kashmir is one of the most popular tourist destinations of India today. It is one of the most sought after destinations of foreign tourists as well owing to its cold desert-like terrain and Buddhist culture which is so distinctive from other parts of India. The district has a desert type climate where summer temperatures can go up to 36 degrees (summer temperatures vary significantly during day and night but is extremely cold in winters with temperatures going to -32 degrees (Jina, 1994). The high altitude climate and landscape makes it an ideal destination for adventure tourism like trekking, river rafting, mountain biking, camping and skiing. Leh is also endowed with pristine lakes like the famous Pangong Lake (made famous by the Bollywood movie 3 Idiots), Tsomo riri and Tso kar. Besides these, Leh is famous for its Buddhist culture, monasteries (Hemis Monastery, Alchi Chhoskor, Chemde monastery, Tsemo, Thiksey monastery, Lamayuru monastery etc.) and festivals (Hemis festival, Sindhu Darshan festival) which are hugely popular with tourists.

Leh has evolved tremendously as a tourist destination in the last few decades and has undergone a lot of changes in all spheres of life- be it socio-cultural, economic, environmental and political. Unplanned tourism, seasonality, fragile ecosystem (Geneletti & Dawa, 2009), increased construction of hotels, inadequate sewerage systems etc have been some of the major pitfalls of tourism in Leh. There is no doubt that tourism is responsible to a great extent for the changes caused by these problems- both positive and negative. Increased tourist arrivals have only added to the adverse impacts in Leh is experiencing some serious negative impacts of tourism in the past two decades and this need to be checked.

This research aims to study perceived impacts of tourism in Leh from all angles-socio-cultural, economic, environmental and political from the tourists' point of view. Tourists form the most important component of the industry and without them tourism would cease to exist. They are the main power players in the tourism process and it is important to study their perceptions from time to time. The present study aims to understand if there are any significant differences in their perceptions of impacts by tourists-international versus domestic and male versus female. Such a study has so far not been conducted in Leh.

RESEARCH METHODOLOGY

The study was aimed at conducting a survey to understand perceptions of impacts by tourists-both foreign and domestic who visited Leh during the summer (May and June) of 2018. The primary data collection method was a structured questionnaire which had close-ended questions on tourism impacts to be filled by the respondents. A convenience sampling method was employed to obtain responses from tourists from locations such as markets, restaurants, cafes and hotels in Leh (wherever tourists were easily available) using a sample of 60 respondents. The data were analyzed using the Statistical Package for Social Sciences (SPSS) and descriptive statistics were used to profile the respondents and to understand the perceptions of tourists towards the impacts of tourism in Leh. The means were analyzed using a scoring (from 1 until 1.80 represents strongly disagree, from 1.81 until 2.60 represents do not agree, from 2.61 until 3.40 represents true to some extent, from 3.41 until 4.20 represents agree and from 4.21 until 5.00 represents strongly agree) as used by Sarrafzadeh, Martin and Hazeri (2009). Independent samples T-test and difference in means were employed to understand the difference in perceptions of tourists-domestic versus international and male versus female.

The first part of the questionnaire dealt with perceptions of impacts by tourists where respondents were asked to rate some statements (both negative and positive) on a 5 point Likert scale. The responses were assessed using the scale where 5-completely agree, 4-agree, 3-neutral, 2-disagree and 1-completely disagree. The second part involved socio-economic factors such as age, gender, nationality, number of people travelling together, number of visits to the destination etc. Secondary data was collected from research articles, books and websites.

RESULTS AND DISCUSSIONS

Demographic Profile of Tourists

The demographic profile of tourists is shown in Table 1. Both foreign and domestic tourists were surveyed and the sample size was 60. Majority of the respondents were international tourists comprising 53.3% and domestic comprising 46.6%. International tourists were mostly from countries like Canada (13.3%), followed by Thailand, France and Malaysia (6.66% each). Domestic tourists were from states of Bangalore, Mumbai, Delhi, McLeodganj etc. A few tourists had not mentioned their country of origin. Majority of the respondents were female tourists who comprised 63.3% and the rest were male tourists who formed 36.7% of the total number of respondents. With regards to their age groups, majority of tourists fell in the category '26-36 years' comprising 46.7%, followed by 16.7% falling in the age

group of 15-25 years, 13.3% of tourist were from the age group of 37-47 years' and 59 and above', then 10% in the group '48-58 years'.

With respect to number of people travelling together, the responses highlighted that 36.7% tourists fell in the category 'more than 10 people travelling together', followed by 30% in the category '3-6 people travelling', then 13.3% in the category 'group of 2 travelling' and 10% each in the categories 'travelling solo' and '7-10 people travelling'. Tourists were asked about their duration of stay in Leh and it was found that majority of respondents stayed in Leh at an average of 10 days. Question was also asked to respondents about their visit counts for Leh and it was found that majority of tourists (70%) were first time visitors, followed by 20% who visited Leh for the second time and 10% tourists who visited Leh for the third time.

Table 1: Demographic Profile of Tourists

(N=60)	Number	Percent
Type of tourist		
Domestic	28	46.7
International	32	53.3
Gender of tourist		
Male	22	36.7
Female	38	63.3
Age of tourist		
15-25	10	16.7
26-36	28	46.7
37-47	8	13.3
48-58	6	10.0
59 and above	8	13.3
Number of people travelling		
Travelling solo	6	10
Group of 2	8	13.3
3-6 people	18	30
7-10 people	6	10
More than 10	22	36.7
Visit of the tourist		
First	42	70
Second	12	20
More than second	6	10

Based on the above demographic details of tourists, it can be concluded that there are still a good number of international tourists visiting Leh and not just domestic tourists as opposed to claims of reduced foreign tourist arrivals to Leh in the last two decades. The data also shows that more females are travelling to Leh which is a very positive trend suggested by this data. Tourists in the age group of 26-36 (which is the youth) are travelling more which suggests that youth are more inclined towards visiting Leh as it is an adventure tourist destination famous for mountain biking expeditions. The data on demographics also shows that tourists travelling

to Leh like to travel in groups of more than 10. This could be due to the reason that tourists can avail cheap packages as air tickets to Leh can be exorbitantly priced in the peak season (May-August). Also, most people surveyed for this study were first-time visitors which suggests that awareness about Leh as a tourist destination can be increased and more pocket friendly packages can be promoted by travel agents. Also, care should be given to tourist satisfaction and feedback as it can help in getting more repeat visits by tourists in the future.

Descriptive Statistics for Perception of Tourists Regarding Impacts of Tourism

To better understand the mean and standard deviation values, variables in the study were grouped into positive and negative impacts.

Negative Tourism Impacts

For most of the variables had above-average mean values which suggested that tourists agreed that there are negative impacts of tourism. Out of all the negative impacts, tourists had a strong opinion for one impact -‘increased waste accumulation in Leh’ (mean = 4.00, SD = 1.050) because of tourism. Similarly, they agreed that there was traffic congestion in Leh (mean = 3.97, SD = 1.189) as well as a shortage of water in Leh (mean = 3.90, SD = 1.094) due to tourism. Tourists also agreed to the negative impact of increase in cost of transportation for tourists (mean = 3.77, SD = .971) due to tourism as they would have experienced it when they booked their transportation modes to reach Leh. ‘Positioning of monasteries as tourist attractions’ was another impact of tourism which was agreed by tourists (mean = 3.73, SD = .980). They also agreed that tourism in Leh was responsible for ‘crowded streets and markets’ (mean = 3.70, SD = 1.236 and that tourism has lead to ‘destruction of wildlife’ (mean = 3.47, SD = 1.008) and ‘destruction of vegetation’ (mean = 3.43, SD = 1.006). However, for negative impacts like ‘disrespect and damage to monasteries and monuments’ (mean = 3.30, SD = 1.055) and ‘Increased adoption of outside culture by locals of Leh and outside influence in customs, rituals and clothing of Ladakhi people’, tourists agreed to some extent. Whereas respondents did not agree on one negative impact i.e. ‘Neglect of Ladakhi culture, traditions and language by Ladakhi people and corruption of Ladakhi values (Table 2).

Standard deviations for almost all the negative impacts were close to 1 (see Table 2) suggesting responses of tourists were polarized. This was due to the fact that tourists belonged to different nationalities and came from different backgrounds and as such had different perspectives. Also the sample size for this study was small which might have contributed to

standard deviations being close to 1.

Table 2: Negative Impacts of Tourism

Sr. No.	Variable	Mean	Standard Deviation
1.	Accumulation of waste	4.00	1.050
2.	Traffic congestion	3.97	1.189
3.	Shortage of water	3.90	1.094
4.	Increased cost of transportation for tourists	3.77	.971
5.	Positioning of historical monuments as tourist attractions	3.73	.980
6.	Crowded markets and streets	3.70	1.236
7.	Increase in price of goods and services for tourists	3.57	.971
8.	Destruction of wildlife	3.47	1.008
9.	Destruction of vegetation	3.43	1.006
10.	Disrespect and damage to monasteries and monuments	3.30	1.055
11.	Increased adoption of outside culture by locals of Leh and outside influence in customs, rituals and clothing of Ladakhi people	3.03	.999
12.	Neglect of Ladakhi culture, traditions and language by Ladakhi people and corruption of Ladakhi values and customs	2.67	1.028

Positive Impacts of Tourism in Leh

Most of the positive impacts had above-average mean values. This suggests that tourists agreed that there were positive impacts of tourism in Leh. Out of all the positive impacts, tourists had a strong opinion for one impact -‘increased opportunities for shopping’ in Leh (mean=4.07, SD = .740) because of tourism. Similarly, they agreed with the fact that there has been an ‘improvement in the facilities for tourists’(mean = 3.87, SD = .571) as the local government aims to boost more tourism in Leh through various initiatives. Tourists also agree with the impacts ‘increased hospitality of tourists by locals’ (mean = 3.83, SD = .874), improved appearance of Leh city(mean = 3.70, SD = .794), ‘greater acceptance of tourists by locals’(mean = 3.57, SD = .774) and ‘improvement in infrastructure’ (mean = 3.47, SD = .819) except for one impact ‘provision of more parks and recreational areas’ (mean = 3.30, SD = 1.022) to which most tourists responded as somewhat agree as they did not find this positive impact variable connected to tourism in Leh (See Table 3).

As far as the standard deviation of these values were concerned, it was found that almost all the positive impact

variables had standard deviation values lower than one suggesting that the responses were closer to the mean values and thus, there was more homogeneity in tourist perceptions towards positive tourism impacts. The only exception was the case of 'provision of more parks and other recreation areas' which had a standard deviation value higher than 1 suggesting that the responses for this impact variable were more polarized and thus, heterogeneous (see Table 3).

Table 3: Positive Impacts of Tourism

Sr. No.	Variable	Mean	Standard Deviation
1.	Increased opportunities for shopping	4.07	.740
2.	Improvement in tourist facilities	3.87	.571
3.	Increased hospitality of tourists by locals	3.83	.874
4.	Improved appearance of the city	3.70	.794
5.	Greater acceptance of tourists by locals	3.57	.774
6.	Improvement in infrastructure	3.47	.819
7.	Provision of more parks and other recreational areas	3.30	1.022

Reliability Test for Perceptions of Tourists Regarding Impacts of Tourism

The variables of the study were subjected to a reliability test to check consistency of the scale. In this study, the value of Cronbach's Alpha (α) shows overall reliability of variables and their impact perception scores. According to Kline (1999) and Field (2013), a value of .7 is regarded as an acceptable value for Cronbach's Alpha (α) as values lower than this can indicate an unreliable scale. The Cronbach's α value for the variables in this study was .708 which is equal to the acceptable value and this shows that the scale used for this impact study is consistent and reliable.

Tests of Normality for Perceptions of Tourists Regarding Impacts of Tourism

To test the normality of the sample of this study, a Shapiro Wilk's test ($p > 0.05$) (Shapiro & Wilk, 1965; Razali & Wah, 2011) was applied and a visual inspection of their histograms and normal Q-Q plots showed that the tourism impact perception scores were approximately normally distributed with a skewness of .182 (SE = .427) and a kurtosis of -.347 (SE = .833) (Cramer, 1998; Cramer & Howitt, 2004; Doane & Seward, 2011). Thus, the data was found to be normal

which supported the use of parametric test- Independent Samples T-test.

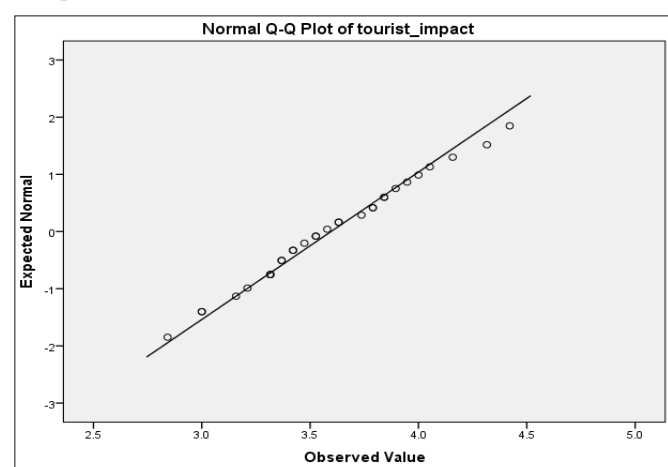


Fig. 1: Normal Q-Q Plot of Tourist Perceptions of Impacts

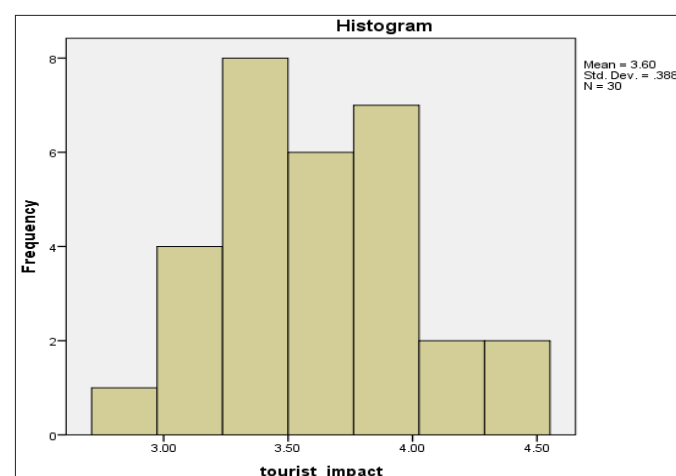


Fig. 2: Normally Distributed Histogram of Tourist Perceptions of Impacts

Difference in the Perception of Domestic Tourist and International Tourist Towards the Impact of Tourism in Leh

Difference in perception of domestic and international tourists regarding tourism impacts.

The variables of the study were also checked for the difference in their means. Here only those impacts have been discussed which had a greater difference in means. Upon visual inspection of the means, it was found that there was a greater difference in the means of the negative impact 'traffic congestion' among domestic and international tourists. International tourists (mean = 4.38) had a relatively stronger perception that there was traffic congestion in Leh due to

tourism than domestic tourists (mean = 3.50). Similarly, there was a greater difference in the means of the negative impact ‘increased adoption of outside culture due to tourism’ among domestic and international tourists. International tourists (mean = 3.38) had a relatively stronger opinion that there was increased adoption of outside culture by locals than their domestic counterparts (mean = 2.64). Same was

with the case of the impact ‘increased accumulation of waste’ where again international tourists (mean = 4.25) had a stronger perception that there was waste accumulation in Leh than their domestic counterparts (3.71). This suggests that international tourists perceive negative impacts relatively strong than domestic tourists.

Table 4: Difference in Means of Domestic vs. International Tourists

Variable	Type of Tourist	N	Mean	Std. Deviation
Tourism in Leh is Responsible for				
Increase in price of goods and services for tourists	Domestic	14	3.43	1.089
	International	16	3.69	.873
Increased cost of transportation for tourists	Domestic	14	3.93	.997
	International	16	3.63	.957
Increased adoption of outside culture by locals	Domestic	14	2.64	1.008
	International	16	3.38	.885
Neglect of Ladakhi culture	Domestic	14	2.43	1.222
	International	16	2.88	.806
Increased traffic congestion	Domestic	14	3.50	1.286
	International	16	4.38	.957
Crowded markets and streets	Domestic	14	3.64	1.393
	International	16	3.75	1.125
Increased accumulation of waste	Domestic	14	3.71	.994
	International	16	4.25	1.065
Shortage of water	Domestic	14	3.86	1.027
	International	16	3.94	1.181
Improved appearance of the city	Domestic	14	3.93	.616
	International	16	3.50	.894
Destruction of vegetation	Domestic	14	3.71	.914
	International	16	3.19	1.047
Destruction of wildlife	Domestic	14	3.57	1.016
	International	16	3.38	1.025
Positioning of historical monuments as tourist attractions	Domestic	14	3.64	1.082
	International	16	3.81	.911
Disrespect and damage to monuments by tourists	Domestic	14	3.64	1.008
	International	16	3.00	1.033
Improvement in tourist facilities	Domestic	14	4.00	.555
	International	16	3.75	.577
Improvement in infrastructure	Domestic	14	3.50	.855
	International	16	3.44	.814
Increased opportunities for shopping	Domestic	14	4.14	.535
	International	16	4.00	.894
Provision of parks and other recreational areas	Domestic	14	3.29	1.069
	International	16	3.31	1.014
Increased acceptance of tourists by locals	Domestic	14	3.79	.893
	International	16	3.38	.619
Increased Hospitality of tourists	Domestic	14	4.00	1.109
	International	16	3.69	.602

A reverse case was seen in the mean of some of the positive impacts with respect to international and domestic tourists wherein domestic tourists had a stronger perception. For example, the positive impact 'improvement in tourist facility' had domestic tourists (mean = 4.50) with a higher mean (suggesting a stronger perception) than their international counterparts (mean = 3.75). Similarly, in the case of the positive impact 'improvement in infrastructure', it was found that domestic tourists (mean = 3.50) had a stronger perception than their international counterparts (mean = 3.44). 'Increased hospitality of tourists' was another impact wherein domestic tourists (mean = 4.00) had a stronger perception than international tourists (mean = 3.69). This suggests that domestic tourists had a relatively strong perception about the positive impacts of tourism than their international counterparts.

Difference in the Perception of Male Tourist and Female Tourist Towards the Impact of Tourism in Leh

Difference in perception of Male and Female Tourists regarding impacts of tourism.

On the basis of the data given in the table, it can be seen that with respect to most of the impact variables, male tourists

have a stronger perception than females. It was observed that for most variables such as 'increased cost of transportation for tourists', 'accumulation of waste', 'shortage of water', 'destruction of vegetation', 'destruction of wildlife' and 'improvement in tourist facility' male tourists have relatively stronger perception than their female counterparts. These impact variables where males had a relatively stronger perception were mostly environmental impact variables barring a few economic impact variables. The reason for a stronger perception of environmental impact variables could be due to males travel more frequently than females.

With respect to variables like 'adoption of outside culture', 'provision of parks and other recreational areas', 'opportunities for shopping', 'positioning of monuments as historical attractions' and 'neglect of Ladakhi culture by locals' had more female tourists having a stronger perception than their male counterparts. Most female tourists perceived that there was increased adoption of outside culture by locals. Similarly, more females felt Ladakhi culture was neglected by locals due to the tourism and that monasteries were positioned as tourist attractions. This means that females felt more strongly about socio-cultural impacts. The reason could be attributed to the fact that women, in general, feel more strongly about their society and culture.

Table 5: Difference in Means of Male vs Female Tourists

Variable	Gender of the Tourist	Mean	Std. Deviation
Tourism in Leh is Responsible for			
Increase in price of goods and services for tourists	Male	3.73	1.104
	Female	3.47	.905
Increased cost of transportation by tourists	Male	4.00	.894
	Female	3.63	1.012
Increased adoption of outside culture by locals	Male	2.55	.934
	Female	3.32	.946
Neglect of Ladakhi culture by locals	Male	2.64	1.206
	Female	2.68	.946
Increased traffic congestion	Male	4.00	1.342
	Female	3.95	1.129
Crowded markets and streets	Male	3.82	1.328
	Female	3.63	1.212
Increased accumulation of waste	Male	4.09	1.044
	Female	3.95	1.079
Shortage of water	Male	4.00	1.095
	Female	3.84	1.119
Improved appearance of Leh city	Male	3.73	.905
	Female	3.68	.749
Destruction of vegetation	Male	4.18	.603
	Female	3.00	.943

Variable	Gender of the Tourist	Mean	Std. Deviation
Destruction of wildlife	Male	4.00	.894
	Female	3.16	.958
Positioning of historical monuments as tourist attractions	Male	3.55	.934
	Female	3.84	1.015
Disrespect and damage to monuments by tourists	Male	3.45	1.036
	Female	3.21	1.084
Improvement in tourist facilities	Male	4.09	.539
	Female	3.74	.562
Improvement in infrastructure	Male	3.55	1.036
	Female	3.42	.692
Opportunities for shopping	Male	4.00	.775
	Female	4.11	.737
Provision of parks and other recreational areas	Male	2.91	1.136
	Female	3.53	.905
Increased acceptance of tourists by locals	Male	3.73	.905
	Female	3.47	.697
Increased Hospitality of tourists by locals	Male	4.09	.539
	Female	3.68	1.003

To further corroborate the difference in perceptions of domestic and international tourists, an independent samples T-test was also applied.

Independent Samples T-Test for Significant Difference in Perceptions of Impacts (Domestic vs. International and Males vs. Females)

An independent samples T-test was applied to further support the difference in perceptions of tourists-domestic and international as well as male and female tourists. To check whether there was a significant difference among the variances, first, the Levene's Test for equality of variances was checked. If the Levene's test is significant (the value under "Sig" is less than .05), the two variances are significantly different. If it is not significant (Sig is greater

than .05), the two variances are not significantly different; that is the two variances are approximately equal.

First, perceptions of domestic and international tourists were checked and it was found that only one impact variable had significant difference. This variable was 'Improved appearance of the city'. The significance value for this variable was found to be .042 (less than .05) which meant that the two variances were significantly different. Similarly, the T value was found to be 1.544 and degrees of freedom was 26.634. Thus, there was a significant difference in the perception of domestic and international tourists with respect to the variable 'Improved appearance of the city'. This means that domestic and international tourists had very different perceptions about the positive impact -improved appearance of Leh city due to tourism. For the rest of the variables, the significant value was less than 0.05 and hence, these are not shown here.

Table 6: Independent Samples T Test for Difference in Perceptions of Impacts of Tourists (Domestic vs International Tourists and Males vs Females Tourists)

Sr. No.		Variable	Levene's Test for Equality of Variances		Independent Samples T Test	
			T	Sig.	T	Df
1.	Domestic vs international tourists	Improved appearance of Leh city	4.537	.042	1.544	26.634
2.	Male vs female tourists	Increased hospitality of tourists by locals	5.040	.033	1.443	27.930

Next, perceptions of male and female tourists were checked and it was found that again only one impact variable had a significant difference. This variable was 'Increased hospitality of tourists by locals'. The significance value for this variable was found to be .033 (less than .05) which meant that the two variances were significantly different. Similarly, the T value was found to be 1.443 and degrees of freedom was 27.930. Thus, there was a significant difference in the perception of male and female tourists with respect to the variable 'Increased hospitality of tourists by locals'. This means that male and female tourists had very different perceptions with regards to the 'increased hospitality of tourists by locals due to tourism'. For the rest of the variables, the significant value was less than 0.05 and hence, these are not shown here.

Hypothesis Testing

On the basis of above analysis for most of the variables, there is no significant difference between the two groups i.e. domestic and international tourist towards tourism impacts in Leh. Only for one variable, there is a significance difference between this group i.e. 'Improved appearance of Leh city'. Hence, in the light of the findings, Hypothesis H_01 i.e. 'There is no significant difference in the perceptions of domestic and international tourists towards tourism impacts in Leh' is accepted for most of the variables and for one variable i.e. 'Improved appearance of Leh city', H_01 was not accepted and H_{a1} was accepted i.e. there is a significant difference in the perceptions of domestic and international tourists towards tourism impacts in Leh.

Further, on the basis of above analysis, for most of the variables, there is no significant difference between the two groups i.e. male and female tourist towards tourism impacts in Leh. Only for one variable, there is a significance difference between the groups i.e. male and female tourists towards tourism impacts in Leh i.e. 'increased hospitality of tourists by locals'. Hence, in the light of findings Hypothesis H_02 i.e. There is no significant difference in the perceptions of male and female tourists towards tourism impacts in Leh is accepted for most of the variables and only for one variable i.e. Increased hospitality of tourists by locals H_02 was not accepted and H_{a2} was accepted i.e. There is a significant difference in the perceptions of male and female tourists towards tourism impacts in Leh.

CONCLUSION

In conclusion, the research reported here threw light on the importance of tourist perceptions and impacts of tourism in Leh as perceived by the tourists. Based on the analysis of data, it can be stated firmly that there was a difference in perception of both groups of tourists-domestic vs

international and male vs female tourists regarding impacts of tourism in Leh. However, the difference in perceptions between the groups could not be proven statistically and it was found that both groups perceived impacts quite alike. There was not much difference in the perceptions of domestic vs international tourists except for one impact- 'improved appearance of Leh city' from the set of positive impacts and in the perceptions of male vs female tourists except for one impact 'increased hospitality of tourists by locals' again from the set of positive impacts. Nevertheless, both groups of tourists perceived impacts of tourism in Leh- both positive as well as negative.

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