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Destination Choice, Satisfaction and Loyalty of Ski Tourists in the Indian Himalayas

Abstract

Indian Himalayas are famous for natural resources and attractiveness for leisure, religious, and adventure tourism. Gulmarg is a unique site in this region selected for this study to explore the behaviour of ski tourists. The objective was to understand if ski tourists behave differently in the Himalayan settings concerning skiing destination choice factors with satisfaction and loyalty compared to similar resorts worldwide. The study found that skiing destination choice factors positively impact tourist satisfaction and loyalty, while tourist satisfaction was found to impact loyalty. The study's main contribution lies in establishing the choice factors of ski tourist destinations in the Indian region and the relationship between ski tourism destination factors and tourist satisfaction and loyalty. Finally, unlike other analyzed examples from European and other ski resorts worldwide, sustainability is not a decisive factor in the selection, satisfaction, and loyalty of tourists in Gulmarg resort.

Keywords: Indian Himalayas, Kashmir Valley, Gulmarg, skiing, tourist satisfaction, tourist loyalty

1. Introduction

The Himalayas are noted for their unique geomorphological feature of soaring height and many of the earth's premier snow-covered peaks, including 10 of the 14 over 8000 meters worldwide (Roy & Purohit, 2018). The Indian Himalayan Region (IHR) contributes about 16.2 per cent of India's total geographical area, and most of the site is covered by snow-clad peaks, glaciers of higher Himalayas, and dense forest cover of mid-Himalaya (Alam et al., 2022; Tripathi et al., 2022). The physical features of the Indian Himalayas are popular among tourists for religious, leisure, and adventure activities. The adventure activities in the Indian Himalayas include mountaineering, trekking, paragliding, and skiing. Here, skiing was introduced by Europeans in the early 1970s, and its popularity has increased over time, leading to the development of modern ski areas, which are also among the least expensive in the world (Vanat, 2020). The famous ski areas in the Indian Himalayas are Manali in Himachal Pradesh, Auli in Uttarakhand, and Gulmarg in Kashmir. Out of these, Gulmarg is unique in many ways.

Gulmarg "Meadow of Flowers" is the largest skiing resort in India and the highest in the world, located on the Western side of the Kashmir Valley in the Pir Panjal mountain range of the Indian Himalayas (Dar & Malik, 2017). Initially, the British used the resort for holidaying and golfing and was later developed into

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a ski resort for the British Army. Present-day Gulmarg is known for winter sports, offering pristine skiing slopes and the highest ski lift in the world (Bhat et al., 2020; Dar et al., 2014). The ski area is segmented into two parts: Gulmarg to Kangdori at an elevation of 2545 meters and Kangdori to Apharwatat at a height of 3746 meters. The skiing season at Gulmarg starts mainly in November and lasts until mid-April (Ahsan et al., 2022). The resort receives heavy snowfall, with an annual average snowfall of 14 meters, making it one of the few places with two weeks of continuous snowfall.

Ski tourism is a well-researched subject in the Alps region and other areas of the world, and many studies delve into its different aspects (Alexandris et al., 2006; Davras, 2021; Hall et al., 2017; Konu et al., 2011; Matzler et al., 2008; Mazanec, 2007; Matzler et al., 2007; Siomkos et al., 2006). All these studies identify ski tourism's differential nature and stress the need for systematic exploration and better management of ski destinations for the satisfaction of all stakeholders. Nowadays, modern researchers progressively focus their research in ski tourism on the effects of climate change, duration of snow, and the like (Abbeg et al., 2021; Bausch et al., 2019; Heimerl & Steiger, 2019; Ogrin et al., 2011), and due to the lower altitude of ski resorts in Europe and Australia are too large extent topics discuss in papers focused on those regions. Research on ski tourism in Asia has not got attention yet.

In general, there is very little research on ski tourism in India and Asia, adversely affecting the options of informed choices by ski destination managers (Dar, 2015). The unique character of Gulmarg as a ski destination can be better understood through systematic studies, and the learning can be used better to manage all ski destinations of the Indian Himalayas.

Therefore, the main research problem is to understand the reasons behind tourists' visits to Gulmarg and the behavioural choices of tourists during their stay. The paper gives an overview of destination selection, loyalty, and satisfaction of tourists in a resort in the Himalayas. Moreover, it compares these elements with existing conclusions in the other ski tourism regions worldwide.

2. Literature review

Skiing as an adventure sport and a tourism attraction has received very little academic attention in India and Asia (Li et al., 2016; Fang et al., 2021). However, studies on it were available from other countries on skiing destination choice factors, tourist satisfaction, loyalty, and the intervening role of demographics.

2.1. Skiing destination choice factors (SDCF)

Studies on the skiing destination choice factors identified several factors ranging from core ski facilities to peripheral services. Hudson and Shephard (1998) identified tourist information services, accommodation, ski shops, ski slopes, ski slope services, and tour operator services in the alpine ski resort Verbier, Switzerland, as choice factors. Godfrey (1999) noted snow quality and diversity of the skiing terrain as the two most essential features of ski destination choice factors for British skiers in Canada, wherein snow quality related more to intermediate skiers and diversity of landscapes to advanced skiers and the demographics of ski tourists influenced their preferences; men, young-middle aged and repeat visitors preferred slopes and ski lifts whereas women, old aged and first-time visitors preferred restaurant and bars. Siomkos et al. (2006) developed visitor segmentation in eleven ski resorts in Greece. Access, price of lunch, price of lifts, quality services, facilities, and organizational and morphological characteristics of the resort were identified as important considerations when choosing a ski resort. Won et al. (2008) noted Midwestern university students' perception of prioritized choice factors (snow condition, variety of trails, travel time, cost, and amenities) in the Korean skiing area using a hypothetical situation. The results indicate that this priority depends on recreation specialization and consumption. Jacobsen et al. (2008), while studying tourists' preference towards Norway as a skiing destination, categorized choice attributes into the ski, price, and facility and inferred that

skiers' destination preferences and information sources depend on expertise in skiing. Konu et al. (2011) studied the perception of destination choice of ski tourists at five Finnish ski resorts using a means-end approach factorized attributes into downhill skiing services, cross-country ski services, restaurant and social life, and spa services. The variables of gender, age, visitor type, and travelling partner influenced different tourist segments. Holmgren and McCracken (2014) analyzed the impact of income, the price at other ski resorts, and the cost of transportation in Utah. They found price effects on visiting frequency and ski resort selection. The study by Komppula and Laukkanen (2016) at five Finnish ski destinations to identify perceived images by visitors and projected images by destination management organizations applied the four-factor framework of Konu et al. (2011) to differentiate the ski destinations. They found that these factors dominated the resort perception and were congruent with information offered by the DMOs and the perceived image by tourists. In all the above-cited research, the core, peripheral, and augmented layers of ski tourism products are given varying weightage by different market segments.

The relationship between ski destination choice factors and the satisfaction of tourists is another critical area of research on ski tourism. Matzler et al. (2007) explored tourist satisfaction in fifty-one alpine ski areas in Australia, Germany, Italy, and Switzerland. Findings show that the quality of slopes and snow, restaurants and bars, ski lifts, variety of slopes and ride employees were found to be associated with tourist satisfaction, which tourist groups moderate; male and repeat tourists give importance to slopes and ski lifts whereas females and one-day visitor prefer restaurants and bars. Miragaia and Martins (2014) identified accommodation, facilities, ski services quality, proximity, access, and price in choosing a winter sports destination and satisfaction in the ski resort of Portugal. Hall et al. (2017) worked on ski tourist satisfaction at nine Australian ski resorts. They identified destination attributes of ski slopes, snow conditions, crowd level, and terrain quality as pull factors. Among these attributes, slopes were found to impact tourist satisfaction more substantially.

Similarly, Davras (2021) classified the destination attributes of ski destinations into three categories using the three-factor satisfaction theory. The data was collected at Davraz ski resort, Turkey, on thirty items classified into tourism elements, ski elements, protection-information, ski support elements, and price. The study viewed protection-information and ski support elements as basic factors, tourism and skiing elements as performance factors, and price as excitement factors.

The above and some other studies suggest that preferences of choice factors in choosing a ski destination vary across destinations and tourist segments, and these also relate to tourist satisfaction, which can be seen in the summarized overview in Table 1.

Table 1
Choice, satisfaction, and loyalty factors in ski resorts worldwide

Author(s)	Choice factors
Godfrey (1999)	Canada ski resorts-snow quality and diversity of the skiing terrain, highly depending on demographic
Hudson & Shephard (1998)	Alpine ski resort Verbier- tourist information services, accommodation, ski shops, ski slopes, ski slope services, and tour operator services
Siomkos et al. (2006)	Greece ski resorts- access, price of lunch, price of lifts, quality services, facilities, and organizational and morphological characteristics of the resort
Dickson & Faulks, (2007)	Australian skiers-snow reliability, powder snow, safe country, low cost, new destination, different cultural experiences, English language availability, and travel time as essential features in the choice of adventure travel destination
Won et al. (2008)	Korean skiing area - snow condition, variety of trails, travel time, cost, and amenities
Jacobsen et al. (2008)	Norway ski resorts- ski, price, facility, and inferred that skiers' destination preferences and information sources
Konu et al. (2011)	Finnish ski resorts - downhill skiing services, cross-country ski services, restaurant and social life, and spa services
Holmgren & McCracken (2014)	Utah ski resorts- the price at other ski resorts and the cost of transportation

Table 1 (continued)

Satisfaction and loyalty factors	
Alexandris et al. (2006)	Greece ski resorts - place attachment, place dependence, and loyalty
Matzler et al. (2007)	Australia, Germany, Italy, and Switzerland ski resorts-quality of slopes and snow, restaurants and bars, ski lifts, variety of slopes and lift employees
Mazanec (2007)	Austrian ski resorts- access, ticket, prices, lifts, area, ski runs, services, and restaurants. The domains of access, ticket, fees, and services
Matzler et al. (2008)	Austria, Switzerland, and Italy ski resorts- fun, information, price-quality ratio, kids' slope, slopes, and accessibility
Miragaia & Martins (2014)	Portugal ski resorts-accommodation, facilities, ski services-slope quality, proximity, access, and price
Hall et al. (2017)	Australian ski resorts- ski slopes, snow conditions, crowd level, and terrain quality
Davras (2021)	Davraz ski resort, Turkey -protection-information and ski support elements, tour price

Most of the analyzed studies emphasized the role of certain socio-economic variables of visitors in shaping the importance of the underlying utilities. Finally, Bauch et al. (2019) demonstrated that climate change influences destination choice, while enjoyment of the natural environment is an essential motivator for tourists. Moreover, climate change adaptation measures, such as snowmaking, could be counterproductive to tourist loyalty because they could spoil the natural scenery and raise prices.

2.2. Tourist satisfaction and loyalty

Customer satisfaction is defined as customers' perceptions of the product or service's performance to their expectations (Schiffman et al., 2011). McDowall (2010) states that satisfaction is a valuable concept in understanding the performance of a destination. If a destination could identify the attributes that satisfy tourists, it increased its chance of attracting loyal tourists. Moreover, tourist loyalty refers to tourists' attitude toward revisiting a destination and their word of mouth (Chen & Phou, 2013; Sánchez-Sánchez et al., 2021; Vigolo, 2015; Woodside & Dubelaar, 2002) and is dependent on tourist satisfaction (Liu et al., 2020; Qu et al., 2011). It was viewed that good experiences of tourists positively enhance attitudes toward revisiting a destination and word-of-mouth intentions (Baker & Crompton, 2000). In general, tourist satisfaction significantly impacts tourist loyalty (Bhat & Darzi, 2018; Jeong & Kim, 2019; Martín et al., 2019; Saayman et al., 2018). Few studies on ski tourism have also established this relationship (Alexandris et al., 2006; Matzler et al., 2007). Furthermore, recent research noted that tourist satisfaction in activity-based tourism, such as water-based adventure activities (Beckmen et al., 2017; Cater et al., 2021; Sato et al., 2018; Triantafyllidou & Petala, 2016) and land-based adventure activities (Tapar et al., 2017) had a significant impact on their loyalty.

2.3. The moderating role of demographics

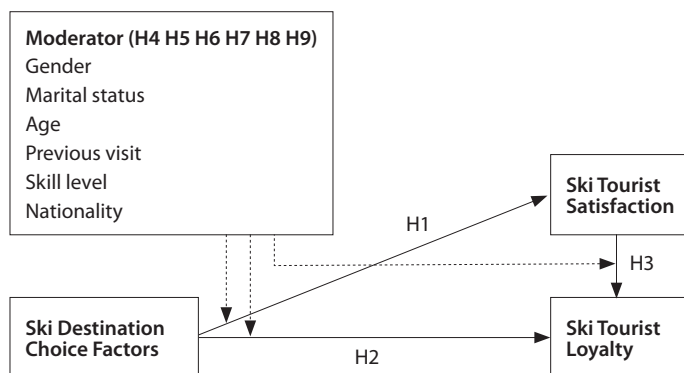
Studies in tourism identified the role of demographic variables on tourist behaviour towards destination attributes, satisfaction, and retention (Middleton & Clark, 2001; Pearce, 2005; Swarbrooke & Horner, 2007). Rather (2020) noted a significant difference between first-time and repeat tourists towards destination engagement, satisfaction, and behavioural intentions. Similarly, few research works indicated that first-time tourists were more satisfied with a destination than repeat customers (Liu et al., 2012; Shavanddasht & Allan, 2019). Others found repeat tourists more satisfied (Fakeye & Crompton, 1991; Petrick, 2004). Suki (2014) and Walsh et al. (2008) supported the moderating role of gender and confirmed that men and women appear to respond differently to product attributes, satisfaction, and loyalty. Gender was noted to moderate the relationship between tourist satisfaction and retention (Swart & Roodt, 2014). Age was viewed as a moderator in the relationship between satisfaction and behavioural intention. Han and Ryu (2006) found an insignificant moderating impact of age between tourist satisfaction and repurchase intention, while Chua et al. (2019)

found age moderating the relationship between travel attributes and satisfaction. Ragavan et al. (2014) conducted a study to explore the difference between the satisfaction of single and married tourists. They found that single tourists perceived the destination as good and were more satisfied than married tourists. Hwang et al. (2013) concluded that there were no differences in tourist satisfaction between single and married tourists. In adventure activities, the skill level is considered necessary because it impacts tourist satisfaction and helps tourists avoid potential adverse outcomes related to adventure tourism (Su et al., 2021; Tsaur et al., 2020). The skill level for skiing was a moderator (Richards 1996), and few studies found its moderating role on ski tourists (Jacobsen et al., 2008; Matzler et al., 2008). Pantouvakis (2013) studied the moderating impact of nationality on servicescape satisfaction and satisfaction-loyalty. Foreign tourists were more satisfied than national tourists regarding perceived experiences (Zgolli & Zaiem, 2017).

2.4. Destination choice and behaviour of ski tourists - Conceptual model

Studies on ski tourism in the Indian Himalayas or the nearby areas were not available, and reference for this study was drawn from the literature on ski tourism from faraway places in the West to prepare a conceptual model for 'ski tourism in Gulmarg, Indian Himalayas'. It was assumed that tourists' skiing destination choice factors influence ski tourists' satisfaction, which in turn impacts their loyalty, wherein various demographic factors acted as moderators to ski destination choice factors, tourist satisfaction, and loyalty (see Figure 1). The hypothesized relationships were explored through field study.

Figure 1
Conceptual model of destination choice and behaviour of ski tourists in Gulmarg, Indian Himalayas



H1: SDCF had a significant impact on ski tourist satisfaction

H2: SDCF had a significant impact on ski tourist loyalty

H3: Ski tourist satisfaction had a significant impact on their loyalty

H4: Gender moderated the impact of SDCF on ski tourist satisfaction and loyalty

H5: Age moderated the impact of SDCF on ski tourist satisfaction and loyalty

H6: Marital status moderated the impact of SDCF on ski tourist satisfaction and loyalty

H7: Previous visit moderated the impact of SDCF on ski tourist satisfaction and loyalty

H8: Skill level moderated the impact of SDCF on ski tourist satisfaction and loyalty

H9: Nationality moderated the impact of SDCF on ski tourist satisfaction and loyalty

3. Research methodology

3.1. Research plan

A research plan was devised to capture the opinions of ski tourists at Gulmarg using a structured questionnaire. The variables for the construct were based on earlier research. Ski destination choice factors were obtained from the works of Davras (2021), Hall et al. (2017), Konu et al. (2011), and Klenosky et al. (1993). Tourist behaviour was measured on items adapted from Bhat and Darzi (2018). Items were operationalized through a 5-point Likert-type scale varying from 1 (strongly disagree) to 5 (strongly agree). Five domain experts, two tourism academicians, and three ski tourist guides verified the questionnaire, after which some modifications were made to the wording of items.

3.2. Pilot testing of the questionnaire and data collection

The pilot study of the questionnaire was conducted on fifty ski tourists at Tangmarg (base camp to Gulmarg), and the results were satisfactory, with no significant issues in the content and design of the questionnaire. (Hill, 1998; Isaac & Michael, 1995; Memon et al., 2017). The final data was collected during the ski season in January-March 2022 at Gulmarg. The study adopted a purposive sampling method used by researchers in tourist behaviour studies due to the non-availability of the sampling frame (Bhat & Darzi, 2018). Two hundred fifty questionnaires were distributed according to COVID-19-related restrictions, out of which 230 were received back. Forty questionnaires were eliminated because of incomplete responses, and 190 were considered fit for analysis. The data analysis was conducted using SPSS and AMOS (Appendix).

4. Results

4.1. Profile of respondents

Table 2 shows the percentage distribution of ski tourists' demographic profile.

Table 2
Profile of respondents

Variables		Number	Per cent
Gender	Male	110	57.9
	Female	80	42.1
Marital status	Single	135	71.1
	Married	55	28.9
Age	Below 40	169	89
	Above 40	21	11
Visit status	First visit	65	34.2
	Repeat visit	125	65.8
Skill level	Beginner	118	62.1
	Advanced	72	37.9
Nationality	Indian	151	79.5
	Foreign	39	20.5

The sample showed a higher number of males (57.9 per cent), single (71.1 per cent), young (89 per cent), repeat (65.8 per cent), and beginner skiers (62.1 per cent). Furthermore, a significantly higher percentage of skiers were from India (79.5 per cent).

4.2. Skiing destination choice factors

The probable choice variables of ski tourists were identified from the earlier studies, and data collected on these were clustered using factor analysis to know the substantive choice factors behind the selection of Gulmarg. The results of the factor analysis are presented in Table 3.

Table 3
Factor analysis of attributes for choosing a ski destination

Choice factor	FL	EV	VE	CA
F1-Ski Lift		6.299	21.719	0.880
L11	0.874			
L12	0.827			
L13	0.635			
L14	0.878			
F2- Skiing activity		2.896	9.985	0.845
AC1	0.669			
AC2	0.794			
AC3	0.773			
AC4	0.769			
F3-Slope quality		2.440	8.413	0.811
SL1	0.851			
SL2	0.637			
SL3	0.751			
SL4	0.912			
F4-Reasonable price		2.299	7.927	0.775
PI1	0.595			
PI2	0.871			
PI3	0.857			
PI4	0.726			
F5-Supporting elements		1.914	6.599	0.801
SU1	0.784			
SU2	0.824			
SU3	0.699			
F6- Ski track		1.676	5.778	0.806
TR1	0.758			
TR2	0.878			
TR3	0.863			
F7- Resort safety		1.459	5.032	0.802
PR1	0.721			
PR2	0.775			
PR3	0.770			
F8- Snow quality		1.265	4.361	0.712
SN1	0.510			
SN2	0.818			
SN3	0.695			
SN4	0.835			

Note. FL: factor loading; EV: eigenvalue; VE: variance explained; CA: coefficient alpha.

The results of factor analysis showed Kaiser–Meyer–Olkin (KMO) of 0.726 and significant Bartlett’s test of sphericity ($p < 0.001$, $\chi^2 = 3140.309$, $DF = 406$). Twenty-nine variables were clustered into eight choice factors. The reliability of factors was obtained through factor loading and coefficient alpha that was above 0.50 and 0.70 for all the elements, respectively (Hair et al., 2010).

The validity (convergent and discriminant) of choice factors was obtained through confirmatory factor analysis (CFA) following Anderson and Gerbing's (1988) approach. CFA showed acceptable model fit values $\chi^2 = 658.65$, $DF = 348$, $\chi^2/DF = 1.89$, $TLI = 0.89$, $CFI = 0.90$, $RMSEA = 0.07$ (Hair et al., 2010).

Table 4
Convergent validity of attributes for choosing a ski destination

Choice factors	FL	CR	AVE	MSV
F1		0.930	0.771	0.193
LI1	0.983***			
LI2	0.780***			
LI3	0.725***			
LI4	0.966***			
F2		0.854	0.594	0.386
AC1	0.692***			
AC2	0.782***			
AC3	0.783***			
AC4	0.689***			
F3		0.898	0.692	0.03
SL1	0.934***			
SL2	0.704***			
SL3	0.770***			
SL4	0.963***			
F4		0.851	0.594	0.072
PI1	0.631***			
PI2	0.865***			
PI3	0.886***			
PI4	0.728***			
F5		0.806	0.581	0.334
SU1	0.738***			
SU2	0.747***			
SU3	0.728***			
F6		0.850	0.656	0.099
TR1	0.706***			
TR2	0.869***			
TR3	0.865***			
F7		0.806	0.580	0.386
PR1	0.748***			
PR2	0.763***			
PR3	0.735***			
F8		0.725	0.398	0.073
SN1	0.628***			
SN2	0.728***			
SN3	0.687***			
SN4	0.689***			
TS		0.961	0.925	0.109
TS1	0.999***			
TS2	0.923***			
TL		0.737	0.584	0.148
TL1	0.782***			
TI2	0.743***			

Note. CR: composite reliability; AVE: average variance extracted; MSV: maximum shared variance.
 ***p<0.001.

The results of the confirmatory analysis were presented in Table 4, showing factor loading (>0.50), composite reliability (>0.70), and average variance extracted (>0.50) above the benchmark level (Hair et al., 2010). The AVE for factor F8 is slightly low and would increase if items SN1 and SN3 are removed. However, the decision to retain them was based on their importance in the study. Further, Malhotra and Dash (2011) state that AVE is often too strict, and reliability can be established through CR alone.

Discriminant validity was used to compare correlations between constructs and the square root of AVE. The diagonals in Table 5 represented the square root of AVE, and the values of diagonals represented intercorrelations among constructs.

Table 5
Discriminant validity of factors for choosing a ski destination

Construct	Mean (SD)	F1	F2	F3	F4	F5	F6	F7	F8	TS	TL
F1	3.620 (0.930)	0.878									
F2	3.370 (1.020)	0.440	0.771								
F3	3.960 (0.960)	0.173	0.096	0.832							
F4	3.380 (0.930)	0.232	0.234	-0.043	0.770						
F5	2.890 (1.220)	0.405	0.578	0.121	0.145	0.762					
F6	3.530 (1.030)	0.107	0.315	0.015	0.269	0.213	0.810				
F7	3.610 (0.920)	0.341	0.621	0.015	0.177	0.514	0.221	0.762			
F8	4.130 (0.910)	0.207	0.198	-0.063	0.157	0.169	0.006	0.234	0.631		
TS	4.940 (0.250)	0.064	0.121	0.083	0.120	0.185	0.067	0.105	0.037	0.962	
TL	4.660 (0.800)	0.273	0.384	0.136	0.267	0.257	0.224	0.216	0.271	0.331	0.760

The intercorrelations among constructs were less than the square root of AVE, demonstrating that constructs were significantly different from one another (Fornell & Larcker, 1981). Convergent and discriminant validity indicated that the model was valid, reliable, and appropriate for hypotheses testing.

4.3. Model testing

Model fit indices were under the limits ($\chi^2=899.640$, $DF=491$, $\chi^2/DF=1.832$, $TLI=0.87$, $CFI=0.89$, $RMSEA=0.06$).

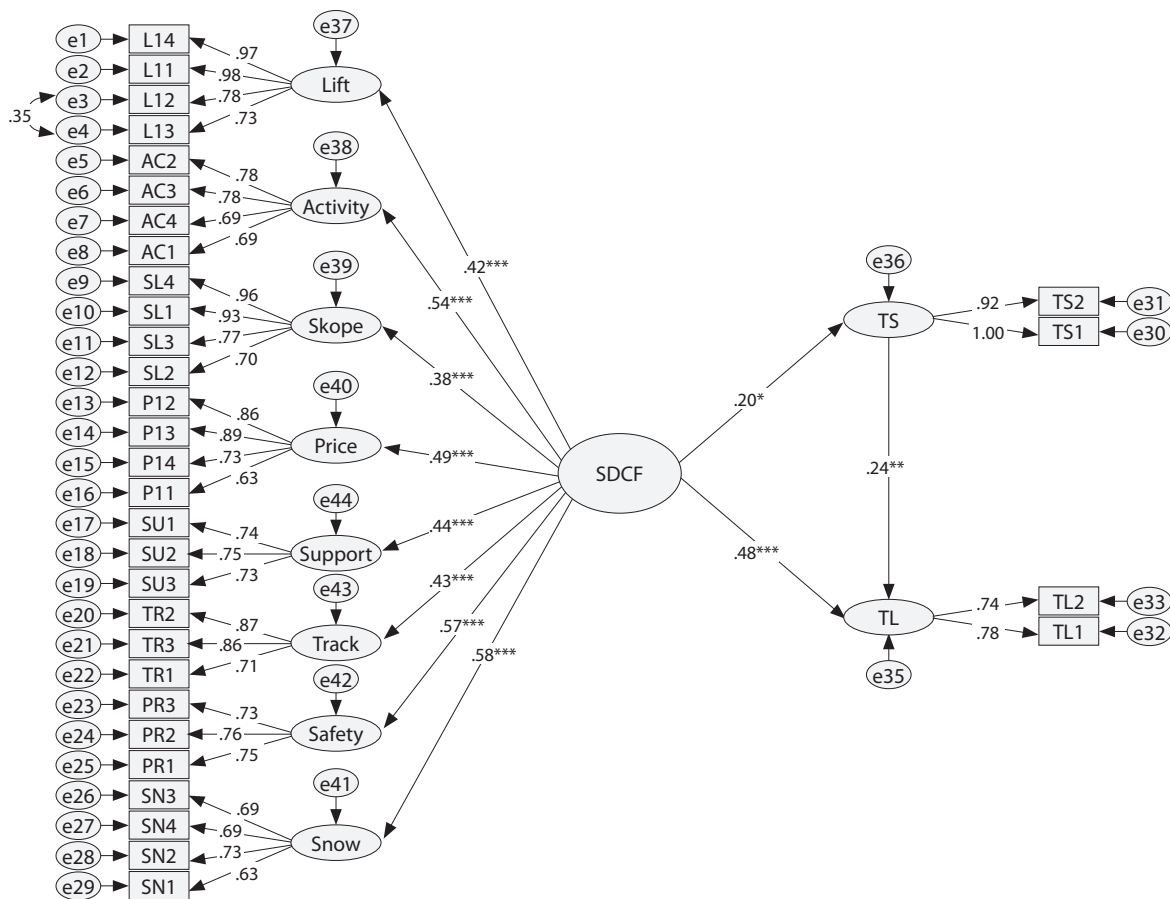
Table 6
SEM results

Hypotheses	Path	Estimate	p-value	t-value	Outcome
H1	SDCF→TS	0.20*	0.05	2.241	H1 accepted
H2	SDCF→TL	0.48***	0.001	4.544	H2 accepted
H3	TS→TL	0.24***	0.01	2.911	H3 accepted

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

SEM results supported the hypotheses indicating that choice factors significantly impacted tourist satisfaction ($\beta=0.20$, $p<0.05$), loyalty ($\beta=0.48$, $p<0.001$), and tourist satisfaction significantly impacted tourist loyalty ($\beta=0.24$, $p<0.01$) (Table 6 and Figure 2).

Figure 2
Estimated model



4.4. Moderation results

The moderation impact of gender, age, marital status, previous experience, skill level, and nationality was checked through multigroup analysis. A chi-square difference test using AMOS was applied to study the difference in groups (Gaskin & Lim, 2018). The results of the multigroup analysis presented in Table 7 indicated the presence of moderation across groups.

The chi-square test for gender shows two different significant paths across males and females. The beta values 0.264 ($p < 0.01$) and 0.251 ($p < 0.05$) indicated that positive relationship between TS and SDCF is stronger for the male. In contrast, the beta values of 0.207 ($p < 0.01$) and 0.298 ($p < 0.001$) showed that a positive relationship between TL and TS was stronger for female. Hence, partial moderation was noted, and H4 was accepted for these paths only. Complete moderation was found using marital status as moderated. The beta values of 0.271 ($p < 0.01$), 0.612 ($p < 0.001$), and 0.253 (0.001) showed that the positive relationship between TS and SDCF, TL and SDCF, and TL and TS were stronger for unmarried. Hence, H5 was accepted. Age had a moderate impact across the model, indicating a positive relationship between TS and SDCF ($\beta = 0.293$, $p < 0.05$), TL and SDCF ($\beta = 0.652$, $p < 0.001$), and TL and TS ($\beta = 0.406$, $p < 0.01$) was stronger for above 40. Hence, complete moderation was noted, and H6 was accepted. Visit status showed partial moderation since the role of the moderator was not significant throughout all the relationships. The positive relationship between TL

and SDCF ($\beta=0.619$, $p<0.001$) TL and TS ($\beta=0.240$, $p<0.01$) was stronger for repeat skiers. In contrast, the positive relationship between TL and TS ($\beta=0.240$, $p<0.001$) is stronger for first-time tourists. Hence, H7 was accepted for these two paths only. Skill level moderated the relationship between the two paths in the model. This positive relationship between TS and SDCF ($\beta=0.358$, $p<0.01$), TL and TS ($\beta=0.363$, $p<0.001$) was only stronger and more significant for advanced-level skiers. Hence, H8 was accepted for these two paths only. Nationality, as moderator, showed differences across groups. The positive relationship between TS and SDCF ($\beta=0.322$, $p<0.05$) TL and SDCF (0.609, $p<0.001$) was stronger for foreign skiers than Indians. Hence, H9 was partially accepted for moderation impact. The detailed results of the moderation analysis are given in Table 7.

Table 7
Moderator effect

Moderator	Category	SDCF→TS	SDCF→TL	TS→TL
Gender	Male beta	0.264**	0.617***	0.207**
	Female beta	0.251*	0.547***	0.298***
	Beta difference	0.013	0.070	-0.091
	P-value for difference	0.025	0.128	0.000
	Interpretation	Difference	No difference	Difference
Marital status	Married beta	0.229†	0.573***	0.163
	Unmarried beta	0.271**	0.612***	0.253***
	Beta difference	-0.042	-0.039	-0.090
	P-value for difference	0.000	0.000	0.000
	Interpretation	Difference	Difference	Difference
Age	Below 40 beta	0.249**	0.399**	0.177**
	Above 40 beta	0.293*	0.652***	0.406**
	Beta difference	-0.044	-0.253	-0.229
	P-value for difference	0.000	0.000	0.090
	Interpretation	Difference	Difference	Difference
Visit status	First beta	0.220†	0.602***	0.212**
	Repeat beta	0.271**	0.619***	0.240**
	Beta difference	-0.052	-0.017	-0.028
	P-value for difference	0.234	0.036	0.000
	Interpretation	No difference	Difference	Difference
Skill level	Beginner beta	0.022	0.667***	0.088
	Advanced beta	0.358**	0.520***	0.363***
	Beta difference	-0.335	0.146	-0.276
	P-value for difference	0.004	0.262	0.316
	Interpretation	Difference	No difference	Difference
Nationality	Indian beta	0.250**	0.593***	0.226***
	Foreigner beta	0.322*	0.609***	0.316**
	Beta difference	-0.072	-0.016	-0.090
	P-value for difference	0.000	0.000	0.100
	Interpretation	Difference	Difference	No difference

† $p < 0.10$. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

4.5. Concluding moderation analysis

Given the multigroup analysis results, it could be concluded that male and female, single and married, below 40 and above 40 age, first-time and repeat, beginner and advanced, Indian and foreigner ski tourists were similarly satisfied and loyal with the SDCF. But, the positive relationship between SDCF→TS was more favourable for males, while females perceived loyalty better (TS→TL) than males. Further, the positive relationship between SDCF→TS, SDCF→TL, and TS→TL was more advantageous for unmarried, above 40, repeat, advanced, and foreign skiers than their counterparts.

5. Discussion and conclusion

This study explored the ski destination choice factors, satisfaction, and loyalty of ski tourists to Gulmarg, India, intending to know the extent to which global behavioural patterns of ski tourists were prevalent hereto.

The choice factors for ski tourists were related to core, peripheral, and support aspects such as lift, activity, slope, price, support, track, protection, and snow. The study identified eight factors related to twenty-nine attributes. The attribution of these factors with choice factors in descending order suggests that snow is related to quality, depth, powder snow, and snow condition. The next choice factor, personal safety, was related to proper signage, safety, and accident prevention. The following factors were skiing activity (downhill skiing, cross-country skiing, snowboarding, and helicopter skiing) and reasonable prices (ski equipment, tickets, daily pass, and food and accommodation). Supporting elements include skiing guides, skiing facilities for children and beginners, and skiing tracks such as length, variety, and quality of skiing tracks. The next SDCF was the ski lift (good in number and carrying capacity, fast, and safe rides), followed by elements of slope quality such as wind-sheltered slopes, quality of pitches, high altitude, and well-maintained slopes.

Similarities and dissimilarities were identified with other studies on these factors. Some of the dimensions formed by factor analysis in the present study are similar to Konu et al. (2011), which identified slopes and track as two factors for tourist choices. Similarly, ski elements, prices, and cost were found to be three different factors (Davras, 2021; Hall et al., 2017), and the same is noted hereto. In contrast, dissimilarities are pointed out with lift, slopes, and snow aggregated as one composite factor in other research (Davras, 2021; Hall et al., 2017; Miragaia & Martins, 2014) and separately in this study.

The ski destination choice factors identified were found to impact skier satisfaction. The study supported previous findings indicating that ski destination choice factors significantly influenced tourist satisfaction (Davras, 2021; Matzler et al., 2008).

More importantly, the finding revealed that ski destination choice factors and satisfaction significantly impacted tourist loyalty. The results synced with earlier studies on tourist satisfaction conducted on different types of tourists, such as airline travellers (An et al., 2010), adventure tourists (trekking/rafting) (Tapar et al., 2017), religious tourists (Preko et al., 2020) sports (marathon) tourists (Jeong & Kim, 2019), medical tourists (Rahman et al., 2019), and leisure tourists (Albaity & Melhem, 2017; Kumar, 2016). Overall, the study established that skiing tourist satisfaction was related to SDCF. Further, loyalty was related to SDCF and tourist satisfaction, indicating that tourist satisfaction and SDCF were two important antecedents of ski tourist loyalty. These findings revealed that SDCF and tourist satisfaction were the two significant antecedents of tourist loyalty, thereby suggesting that as the tourist's perception of a destination enhanced, so did their satisfaction levels, ultimately turning a satisfied tourist into a more loyalist (Schiffman et al., 2011).

The relationship between the study's three constructs differed among tourist groups. The multigroup analysis revealed that male skier was slightly more satisfied than females, while females were more loyal than males. This relates to previous research that notes male tourists were more confident than females (Suki, 2014) and females were more loyal than males (Chi, 2011; Ozdemir et al., 2012a). Further, it was found that the positive relationship between TS and SDCF, TL and SDCF, and TL and TS were stronger for unmarried skiers. The finding is related to Ragavan et al. (2014) and Ozdemir et al. (2012b), who found a significant difference between single and married tourists with high satisfaction and loyalty among single tourists. Next, those above 40 years aged tourists were more satisfied and loyal than those below 40. This finding was consistent with the previous research, which claimed that older tourists are generally more emotionally attached than younger tourists (Han & Ryu, 2006; Homburg & Giering, 2001).

Further, the research found that repeated visitors were more satisfied than first-time visitors and supported previous studies which showed repeat tourists were more comfortable and loyal to destinations (Petrick, 2004;

Rather, 2018). It was viewed that tourists, through their revisit, had a greater awareness of opportunities and attractions and stronger social networks, which led to positive feelings toward a particular destination (Fakeye & Crompton, 1991). Advanced skiers noted a more positive perception of skiing destination choice attributes towards satisfaction (TS and SDCF) and loyalty (TS and TL) than beginners. This is related to Matzler et al. (2008), who found satisfaction–loyalty relationship in the high-skills group skier was stronger than in the group with low-skilled skiers. Jacobsen et al. (2008) advanced skiers were more informed groups who sought challenging slopes and terrains to enhance their satisfaction. Further, nationality was found to moderate the relationship between TS→SDCF and TL→SDCF, and perceptions were stronger among foreign tourists than Indians. This may be because skiing for Indians was an emerging sport, and even if some Indians loved skiing, most were less experienced with discipline (Vanat, 2020).

5.1. Theoretical implications

The findings of this study are of importance to theory. Most studies have investigated ski destination choice factors and satisfaction in European countries. However, fewer studies identified the impact of skiing destination choice factors on tourist satisfaction and loyalty. The study's main contribution lies in establishing the ski destination choice factors of ski tourists in the Indian Himalayan region and the relationship between ski destination choice factors and tourist behaviour. Significantly, the findings illuminated the formation of skiing destination choice factors of ski tourists and their satisfaction and loyalty. The study extended an understanding of the interplay between factors of satisfaction and loyalty within the context of ski resorts. The results confirmed that aggregated choice factors influence ski tourists' satisfaction and loyalty, while the positive relationship between skiing destination choice factors, satisfaction, and loyalty varied between segments. Therefore, the study improved the understanding of the moderating role of demographics. The study formed the base for conducting research at other ski resorts in India and the world. As stated earlier, most of the research reflected the situation in European and other developed skiing regions worldwide, so a brief comparison of the existing conclusions follows (Table 8).

Table 8
Comparing SDCF, satisfaction and loyalty in Indian and worldwide resorts

	Indian Himalaya	Rest of the World
Skiing destination choice factors	Lift, activity, slope, price, support, track, protection, and snow	Finland - slopes and track (Konu et al., 2011) Norway - ski, price, and facility (Jacobsen et al., 2008) Turkey - ski elements, prices (Davras, 2021). Greece - access, price of lunch, price of lifts, quality services, facilities, and organizational and morphological characteristics (Siomkos et al., 2006). Switzerland- tourist information services, accommodation, ski shops, ski slopes, ski slope services, and tour operator services (Hudson & Shephard, 1998). Korea - snow conditions, variety of trails, travel time, cost, and amenities (Won et al., 2008)
Satisfaction with resort	Higher among men and single visitors and those looking for high intensity of activities	Repeat tourists are more satisfied (Petrick, 2004) First-time tourists showed higher satisfaction levels towards a destination than repeat tourists (Shavanddasht & Allan, 2019) No differences in tourist satisfaction between single and married tourists (Hwang et al., 2013) Foreign tourists are more satisfied (Zgolli & Zaiem, 2017) Sustainability measures implementation (Bauch et al., 2019)
Loyalty to the resort	Higher among older, experienced, and among higher satisfied tourists	Repeat tourists are loyal to destinations (Petrick, 2004) Domestic tourists are more loyal (Zgolli & Zaiem, 2017)

Even though most of the features of loyalty, satisfaction, and SDCF were the same in India as in other worldwide skiing resorts, sustainability was an element that stood out more and more frequently in studies of European ski resorts and as a choice factor, which was connected with the profound relation of environmental sensitivity and the attitude of the resort towards the environment (Abbeg et al., 2021; Bausch et al., 2019; Gajdošíková et al., 2019). On the other hand, sustainability was not a decisive factor in the tourists' selection, satisfaction, and loyalty to Gulmarg resort. However, considering the increasingly visible signs of climate change in this area (Dar et al., 2014), it was necessary to start thinking about this element and the possibilities of mitigation and adaptation to climate change.

5.2. Management implications

The practical implications of the findings will be specifically helpful to skiing companies and ski resort authorities. The study showed that ski destination choice factors relate to tourist satisfaction and loyalty. The satisfaction of antecedent ski tourists was crucial for defining satisfaction level. Moreover, it could also be a good indicator that would be applied to future tourists. Overall, the principal goal of the destination was to have a high level of tourist- satisfaction.

Further, the study showed that the overall performance of ski destination choice factors except snow was low, especially in supporting elements, skiing activities, and reasonable prices. These factors related to various attributes and strategic decisions could be done by resort management by improving supporting features of ski resorts, such as available activities, prices, and supporting elements. The conditions would enhance the possibilities of good skiing experiences, resulting in enhanced satisfaction. The natural environment factor, i.e., snow, was also a significant and fragile element for which resort managers could take provisions for its proper utilization and protection. Given that the appearance of snow is a consequence of global climate factors, it is crucial to high-light activities aimed at mitigating climate change (CC), not only because CC influences destination choice but also because it is clear that the entire winter tourism globally depends on stopping or at least slowing down the process of climate change. In addition to CC adaptation, other measures aimed at environmental sustainability (waste management, emission reduction, reduction of resource consumption) are undoubtedly necessary, as well as measures aimed at improving the socioeconomic conditions of the local community.

The study showed a moderate impact on demographics. Thus, the resort managers are advised first to discover the structure and segments of their tourists and then analyze their satisfaction surveys by considering the moderating role of demographics. Setting target groups and specific improvements about the right satisfaction dimensions in each segment could increase overall satisfaction and loyalty without spreading losses. Particular emphasis in further management and development should be placed on loyal tourists, who had a particularly positive impact in times of crisis, such as the COVID-19 pandemic. An analysis of this type provided managers with clear advice on where improvements of the offers are necessary and meaningful.

5.3. Limitations and directions for future research

Like other research, this research was not untouched by limitations. First, the model was tested with a sample size of 190 tourists at one ski resort in the Indian Himalayan region. Thus, it restricted the generalizability of the findings. However, this study could be used to expand similar research to other destinations and on a large sample to get generalized results. Second, the study relied on quantitative data. Future research could concentrate on ski tourists' satisfaction and loyalty by using narrative analysis to generate data for an enhanced understanding of the behaviours. Third, the study adopted the purposive sampling method due to the non-availability of the sampling frame. Only available and accessible respondents were selected, which might have excluded more experienced respondents; thus, future research could adopt random sampling methods to reduce selection bias. Finally, further research could reflect and investigate tourism destination choice relation with CC adaptation

measures, especially in the light of new findings (Fang, 2022) where even in Asia (namely China, Japan, Korea, and Russia), ski tourism may be under severe threat due to reduced precipitation and higher temperatures.

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Appendix

Descriptive statistics

Items	Mean	SD	Skewness	Kurtosis
SL1-This resort has wind-sheltered skiing slopes	3.940	1.027	-0.732	-0.562
SL2-This resort has quality skiing slopes	4.020	0.948	-0.720	-0.378
SL3-This resort has high-altitude slopes	3.970	0.829	-0.786	0.410
SL4-This resort has good maintenance of slopes	3.890	1.020	-0.622	-0.698
TR1-The resort has the right length of skiing tracks	3.450	1.026	-0.124	-0.568
TR2-This resort has varieties of skiing tracks	3.670	1.023	-0.359	-0.735
TR3-This resort has quality skiing tracks	3.480	1.032	0.013	-0.910
LI1-This resort has a good number of ski lifts	3.470	0.969	-0.225	0.053
LI2-This resort has availability of fast ski lifts	3.670	0.890	-0.446	0.565
LI3-This resort has availability of safe ski lifts	3.830	0.850	-0.244	-0.375
LI4-Carrying capacity of ski lifts is good	3.520	0.991	-0.259	-0.056
AC1-This resort has good availability of downhill skiing	3.330	1.094	-0.224	-0.529
AC2-This resort has good availability cross country skiing	3.420	1.034	-0.410	-0.276
AC3-This resort has good availability of snowboarding	3.400	0.919	-0.384	0.268
AC4-This resort has good availability of heliski	3.340	1.025	-0.387	-0.159
SN1-This resort has good-quality of snow for skiing	4.050	0.941	-0.683	-0.324
SN2-This resort has a good depth of snow cover	4.370	0.831	-1.242	1.113
SN3-This resort has powdery snow	4.050	0.947	-0.635	-0.301
SN4-This resort has good snow condition	4.030	0.914	-0.399	-0.821
SU1-This resort has availability of skiing guides	2.770	1.296	0.164	-0.999
SU2-This resort has availability of skiing facilities for children	2.720	1.315	0.186	-1.081
SU3-This resort has availability of skiing facilities for beginners	3.190	1.062	-0.011	-0.336
PR1-This resort has proper signage in skiing areas	3.590	0.920	-0.287	-0.181
PR2-This resort has proper safety and security for skiers	3.470	0.941	-0.139	-0.399
PR3-This resort has accident prevention	3.780	0.885	-0.256	-0.466
PI1-This resort has reasonable prices for ski equipment rent	3.280	1.010	0.107	-0.397
PI2-This resort has a reasonable price for the lift ticket	3.380	0.946	-0.094	-0.002
PI3-This resort has a reasonable price for a daily pass	3.440	0.887	0.000	0.331
PI4-This resort has a reasonable price for food and accommodation	3.400	0.860	0.323	-0.034
TS1-I am satisfied visiting this resort	4.940	0.244	-1.620	1.225
TS2-I enjoyed my visit to this resort	4.930	0.262	-1.290	2.915
TL1-I will revisit this resort for skiing	4.530	0.801	-1.801	2.973
TL2-I will recommend this resort for skiing	4.780	0.472	-2.122	2.839