

Original scientific paper

UDK: 338.48-52(497.11)
796.9

Received: 11.2.2024

DOI: <https://doi.org/10.58984/smb2401007j>

Accepted: 20.4.2024

Corresponding author: sasa.virijevicjovanovic@mbs.edu.rs

THE FACTORS OF SERVICE QUALITY IN SKI TOURISM ON THE EXAMPLE OF THE REPUBLIC OF SERBIA

Saša Jovanović ¹, Goran Đoković ², Mirjana Gilić ³

Abstract: The aim of this paper is to provide an insight into the current models of service quality in ski tourism with a practical implication on the example of the Republic of Serbia. Nowadays, ski tourism has evolved into an important segment of the winter tourism industry in Europe. Its development was encouraged by the popularisation of skiing as a sport, as well as the growth of the number of people who ski professionally or recreationally. The studies from relevant publishers have been dealt with the concept of travellers' motivation in ski tourism from different point of views such as, the aspect of sustainable development in tourism, quality management, marketing strategy and customer satisfaction. When defining the research scope, it was noted that service quality represents an important driver of motivation in sports tourism. However, there is a certain research gap in exploring the factors that affect the service quality in winter sports, and in particular models and instruments that could provide their better understanding. In accordance with this statement, the research question in the study was to analyse the main determinants of service quality in ski tourism in the Republic of Serbia and to compare their relevance among the respondents belonging to different countries of origin and gender. The theoretical research presented in this paper was based on the application of a systematic literature review that has included relevant studies dealing with the concept of service quality in winter sport tourism. In addition, empirical research was conducted to address the research question in finding the factors that influence the service quality in ski tourism. The research was based on a sample of 208 skiers who visited the Republic of Serbia during the winter seasons in years 2023 and 2024. In the analysis and interpretation of the data, descriptive statistics, compare means and factor analysis were used.

Keywords: service quality, ski tourism, winter sports, quality management, sports tourism

¹ Full professor, Modern Business School, Terazije 27, Belgrade, phone: +38163259083, <https://orcid.org/0000-0002-4469-381X>; E-mail: sasa.virijevicjovanovic@mbs.edu.rs

² Associate professor, Modern Business School, Terazije 27, Belgrade, <https://orcid.org/0000-0001-6842-031>, E-mail: goran.djokovic@mbs.edu.rs

³ PhD Candidate, Faculty of organisational sciences, Belgrade, Serbia, E-mail: miramatic91@gmail.com



Introduction

The subject of this article deals with the research of service quality in ski tourism and the main factors that affect tourist satisfaction in ski destinations. Ski tourism has evolved into an important segment of the winter tourism industry attracting around 350 million skier visits annually (Steiger et al. 2019). Its development was encouraged by the popularisation of skiing as a sport, as well as the growth of the number of people who ski professionally or recreationally. One of the reasons for the popularization of this type of tourism is that skiing, which was once an elite sport, has now become more accessible to the wider population, which has had a positive effect on the growth of the ski tourism market.

Bieger et al. (2002) define the tourist destination of winter sports as the geographical, economic, and social unit, consisting of organisations, companies, activities and infrastructure, having as a goal to enable the satisfaction of specific needs of winter sports tourists. The most popular ski destination in the world are the Alps, with the so called “Big Four” ski countries that are situated in this region: Switzerland, Austria, Italy, and France. According to Statista (2023) around 37 percent of all ski resorts worldwide are in Alpine countries.

Literature review has recognised certain studies dealing with the concept of ski tourism from different aspects such as tourist motivation to travel, ski tourism sustainability and climate change (Prettenthaler et al., 2022), marketing strategies or ski tourism infrastructure. In addition, in some studies the concept of quality in ski tourism was examined from a perspective of seasonal employment in the sector (Ismert & Petrick, 2004). However, there is a certain research gap in exploring the determinants of service quality in winter sports. Therefore, the aim of this paper is to provide an insight into the current models of service quality in ski tourism with a practical implication on the example of the Republic of Serbia. The research question in the study was to analyse the main determinants of service quality in ski tourism in the Republic of Serbia and to compare their relevance among the respondents belonging to different countries of origin and gender.

Literature review

The modern concept of quality emphasises the customer as the only authoritative factor for the assessment of service quality (Djokovic & Celik, 2021). In accordance with this approach, the paper analyses the determinants of service quality in winter tourism from the perspective of tourist perception. Tsitskari, Tsiotras & Tsiotras (2006) define the concept of service quality in sport as a multi-dimensional structure that depends on a

socio - cultural context of a country and the type of service sector. The same conclusions were reached by Shang, Luo & Kong (2022) who stated that ski tourism is affected by multi-aspect factors. In addition, Thwaites & Chadwick (2013) indicated that service quality is the basis for differentiation on the sport tourism market and the development of competitive advantage. Another perspective of service quality in winter tourism was provided by Hallmann et al. (2015) who emphasised that the quality of accommodation, hotel staff, information management, destination policy and planning represent important indicators related to the quality standard of tourism product.

In exploring the concept of service quality in ski tourism, this paper was focused on the segment of recreational ski tourists, which has certain specificities. Theodorakis et al. (2009) in their study conducted a segmentation of recreational ski tourists according to motives, dividing them into four categories: beginners, lovers, naturalists, and tourists with multiple interests. Among the four categories of ski tourists, the authors have identified significant differences both in terms of loyalty and participation in the activities. The category of ski lovers had statistically higher results in engagement in activities compared to the remaining three groups of tourists.

Hudson & Shephard (1998) were among the first researchers who measured 10 factors of service quality at ski tourism destinations within focus groups and in-depth interviews in Switzerland. One year later, Weiermair and Fuchs (1999) conducted a study on a large sample of 1.822 tourists in Austria and Italy, demonstrating service quality indicators for ski resorts, which involved ski slopes, accommodation, restaurants, lift ticket service, employee service, and tour operator services. However, some authors used SERVQUAL model in measuring the quality of service in ski tourism. For instance, Weiermair and Fuchs (2000) have successfully applied this model for exploring tourists' judgments regarding service quality in alpine tourism.

Furthermore, Dickson and Faulks (2007) have analysed customer satisfaction in ski areas, showing that significant factors, which affect ski tourist decisions are safety and snow quality, the variety of tracks and space outside of tracks, but also other factors that are not directly related to skiing. These factors include shops, restaurants, and the possibility to participate in other recreational activities. In a study that was conducted in Alpine ski resorts, Faullant, Matzler & Füller (2008) have demonstrated that satisfaction and image rating affect the tourist's loyalty. Similar, Ferrand & Vecchiattini (2002) indicated how ski resort image, ski and non-ski service attributes impact customer satisfaction. In addition, Miragaia et al. (2016) were dealing with the satisfaction of ski tourists in ski destinations regarding the following determinants: capacities and equipment, characteristics of ski tracks, type of service in ski destination, restaurants, accommodation, and social activities, as well as the accessibility to a ski destination. Similar study was conducted by

Chua et al. (2015) who analysed the relations between “physical environmental stimuli (i.e., layout accessibility, aesthetics, cleanliness, and other visitors), perceived quality of physical environment, excitement, and behavioural intentions in ski resort”. Moreover, Xiao, Yaping & Yanqin (2022) have explored ski tourism experience from the perspective of perceived value that includes four dimensions: facility value, perceived price, safety value and service value.

A significant insight into the research of ski tourism was made by Alexandris et al. (2006) who measured the service quality in skiing resorts using Brady and Cronin's three-dimensional service quality model (physical environment quality, interaction quality, outcome quality). The starting point in their study was the fact that services are intangible which brings attentions to other aspects of satisfaction such as social interactions with the staff and hospitality, the quality of physical servicescape regarding natural environment, the ski tracks, landscape and the so called outcome quality which is related to tourist experience. The same model was used in different surveys that included 345 visitors (Kyle et al., 2010) and 129 visitors (Barlas, Mantis & Koustelios, 2010) in Greek ski centres. Their questionnaires consisted of 15 items that related to: facility quality (e.g., “ski slopes are well maintained”), interaction quality (e.g., “employees are friendly”), and outcome quality. The cited studies have also pointed out the service quality dimensions that affect word-of-mouth communication. In addition, significant contribution in studying ski tourism was made by Joppe, Eliot & Durand (2013) who investigated different segments in ski tourism market including skiers, snowboarders, and ski travellers according to “service considerations such as quality, entertainment, variety and lifestyle characteristics”. Another research provided by Konstantinidis et al. (2018) has pointed out the entertainment factors as important aspect of ski tourism that influence the travellers' choices. In recent studies, Oralhan, Oralhan & Kirdök (2022) analysed the criteria that affects the tourists' choice of ski resorts in Turkey based on the following factors: “facility amenities, price, accessibility, accommodation, alternative tourism, and visitors' rating score”.

The survey presented in this paper has included an analysis of different determinants (variables) of service quality in ski tourism which were successfully tested in practice and presented in cited literature. Having in mind the comprehensiveness of studies, they were used as a role model in designing the questionnaire for this research. However, the survey was additionally enriched with two service quality determinants referring to servicescape and nature.

Methods and sample

The theoretical research presented in this paper was based on the application of a systematic literature review that has included relevant studies dealing with the concept of service quality in winter sport tourism. Empirical research was conducted to address the research question in finding the factors that influence the service quality in ski tourism. The survey has included a sample of 208 (N=208) recreational skiers who visited the Republic of Serbia during the winter seasons in 2023 and 2024. The questionnaire was designed in accordance with the models presented in the literature review and included 18 statements (variables) referring to specific determinants of service quality in ski tourism. The variables were examined in the form of closed questions using a Likert scale with the following values: 1 = disagree; 2 = slightly disagree; 3 = neither agree nor disagree; 4 = slightly agree; 5= agree. In the processing and interpretation of the data, methods of factor analysis and compared means were applied.

Table 1 represents the sample structure by gender. Respondents were equally represented in the sample (N=208), with a slight majority of the male population (51,9%).

Table 1: The sample structure by gender

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	108	51.9	51.9	51.9
	Female	100	48.1	48.1	100.0
	Total	208	100.0	100.0	

Source: Authors' calculation in SPSS

The age distribution of the sample (table 2) is dominated by the respondents belonged to the 36-45 age category (62.5%) followed by the 47 -56 (15,4%), 57-65 (12%) and 20-35 (10.1%) age groups.

Table 2: The age categories of respondents

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-35	21	10.1	10.1	10.1
	36-46	130	62.5	62.5	72.6
	47-56	32	15.4	15.4	88.0
	57-65	25	12.0	12.0	100.0
	Total	208	100.0	100.0	

Source: Authors' calculation in SPSS

In relation to the country of residence, the respondents were from the following countries: Serbia (54.3%), Bosnia and Herzegovina (19.7%), Russia (9.1%), Montenegro (9.6%), North Macedonia (3.8%), Croatia (3.4%). Detailed data on this variable are shown in table 3.

Table 3: Respondents' countries of residence

		Country of residence			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Serbia	113	54.3	54.3	54.3
	Bosnia and Herzegovina	41	19.7	19.7	74.0
	N.Macedonia	8	3.8	3.8	77.9
	Montenegro	20	9.6	9.6	87.5
	Russia	19	9.1	9.1	96.6
	Croatia	7	3.4	3.4	100.0
	Total	208	100.0	100.0	

Source: Authors' calculation in SPSS

Research results

The respondents have ranked the importance of 18 variables that affect their perception of service quality in ski tourism. The variables have included different aspects such as facilities of ski resorts, snow conditions and ski tracks, additional services including shops and restaurants, accommodation, social life, landscape, and nature. To reduce the number of variables for further exploration, the method of factor analysis was applied at the beginning of this research.

Having in mind the data demonstrated in table 4 showing that KMO=0.748 is greater than 0.6, and Bartlett's Test of Sphericity is statistically significant ($p=0.000$), the factor analysis was considered justified in this study.

Table 4: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.749
Bartlett's Test of Sphericity	Approx. Chi-Square	3108.259
	Df	153
	Sig.	.000

Source: Authors' calculation in SPSS

Table 5: Total Variance Explained

Com- po- nent	Total Variance Explained						Rotation Sums of Squared Loadings ^a
	Initial Eigenvalues			Extraction Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	5.609	31.163	31.163	5.609	31.163	31.163	4.112
2	3.781	21.006	52.170	3.781	21.006	52.170	4.316
3	1.896	10.531	62.701	1.896	10.531	62.701	2.753
4	1.563	8.682	71.383	1.563	8.682	71.383	3.281
5	1.088	6.045	77.428	1.088	6.045	77.428	1.327
6	.925	5.139	82.567				
7	.687	3.816	86.383				
8	.588	3.267	89.650				
9	.385	2.140	91.790				
10	.367	2.040	93.829				
11	.271	1.506	95.336				
12	.203	1.129	96.465				
13	.167	.929	97.394				
14	.132	.736	98.129				
15	.121	.674	98.803				
16	.096	.533	99.336				
17	.067	.373	99.709				
18	.052	.291	100.000				

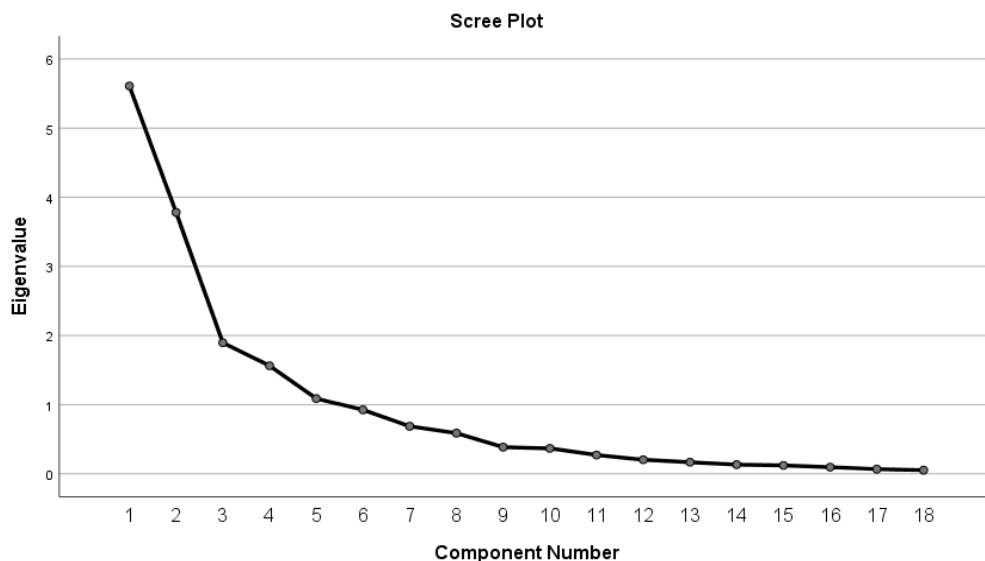
Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Source: Authors' calculation in SPSS

The table of Total Variance Explained (table 4) indicated five factors that have eigenvalues higher than 1. Together they account more than 77% of the variability in the original variables. In addition, the Eigenvalues and component numbers are demonstrated on a Scree Plot in figure 1.

Figure 1: Scree Plot



Source: Authors' calculation in SPSS

Table 6: Component Matrix

	Component Matrix ^a				
	1	2	3	4	5
Diversity of ski tracks	.832		.366		
Accommodation prices	.820	.360			
Lift maintenance and functioning	.812			-.440	
Restaurants prices	-.772			-.429	
Quality of the slopes	.756				
Facilities quality	.668	-.564			
Meeting different people	-.651	-.357			
Supermarkets and shops	.649		.500	.398	
Nightlife	.615	.556	-.325		
Competence of the employees and hospitality	.453		.404		
Restaurant quality		.862	-.329		
State of equipment	-.342	-.802			
Snow conditions		.755	.470		
Parking		.548	.421	-.306	

Accommodation quality	.419		-.708	.328	
Health and safety services	-.415	.561		.593	
Nature					.779
Landscape		.331		.402	.406

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Source: Authors' calculation in SPSS

According to the findings presented in table Component Matrix the variables were grouped within 5 factors. The first factor was highly associated with the following determinants: diversity of ski tracks, the quality of slopes, lift maintaining and functioning, the prices of accommodation and restaurants, facility quality, meeting different people and nightlife. Within the second factor the variables such as restaurant quality, state of equipment, parking and snow conditions were recognised as the most dominant. The third factor was associated with supermarket and shops and accommodation quality, while the fourth factor has the highest association with health and safety services. The fifth factor was related to nature and landscape.

Further research was conducted to compare the respondents' answers regarding the variables that were highly associated with the first factor. The data presented in table 7 demonstrate the compared means in variables between the ski tourists from different countries of residence. When interpreting the data it should be noted that higher representation of domestic tourists (54.3%) was represented in the sample, The highest mean values in answers were registered for variables "diversity of ski tracks" (Total M=4.89), "facilities quality" (Total M=3.93) and "quality of the slopes" (Total M=3.53).

For variable "lift maintenance and functioning" the highest mean was recorded among the respondents from Serbia (M=3.08, SD=0.73) in comparison with the lowest mean value among the respondents from North Macedonia (M=2.25, SD=0.46). Diversity of ski tracks was recognised as the most important determinant, with the highest mean values between the tourists from Bosnia and Herzegovina (M=4.97, SD=15), Montenegro (M=4.95, SD=0.22), Serbia (M=4.94, SD=0.22) and Russia (M=4.84, SD=0.37). Furthermore, respondents from Montenegro had the highest means for variables "quality of the slopes" (M=3.75, SD= 0.55) and "nightlife" (M=3.7, SD=0.73). Ski tourists from North Macedonia had highest mean values for variables "restaurants prices" (M=4.5, SD=0.92) and "meeting different people" (M=4, SD=0), while respondents from Serbia highly appreciated "facilities quality" (M=4.12, SD=0.66) as a determinant of service quality in ski tourism. The findings presented in table 7 are statistically significant according to ANOVA table ($p=0.00$) for selected variables.

Table 7: Compared Means regarding the country of residence

Country of residence		Lift mainte- nance and func- tioning	Report					
			Diversity of ski tracks	Quality of the slopes	Restau- rants prices	Night-life	Meeting different people	Facilities quality
Serbia	Mean	3.0885	4.9469	3.6814	3.0619	2.7345	3.5752	4.1239
	N	113	113	113	113	113	113	113
	Std. Deviation	.73869	.22523	1.06289	.65850	1.00905	.51418	.66992
Bosnia and Herzogo- vina	Mean	2.9756	4.9756	3.4878	3.4878	2.9512	3.0244	3.6829
	N	41	41	41	41	41	41	41
	Std. Deviation	.15617	.15617	.55326	.92526	.31235	.15617	.47112
N.Mace- donia	Mean	2.2500	4.2500	2.2500	4.5000	1.5000	4.0000	2.7500
	N	8	8	8	8	8	8	8
	Std. Deviation	.46291	.46291	.46291	.92582	.92582	.00000	1.03510
Monte- negro	Mean	2.9500	4.9500	3.7500	2.4500	3.7000	3.0500	3.8500
	N	20	20	20	20	20	20	20
	Std. Deviation	.22361	.22361	.55012	.94451	.73270	.22361	.36635
Russia	Mean	3.2632	4.8421	3.4211	3.3158	2.4737	3.1579	4.2105
	N	19	19	19	19	19	19	19
	Std. Deviation	.73349	.37463	.76853	1.05686	.90483	.37463	.63060
Croatia	Mean	2.2857	4.2857	2.5714	4.1429	1.8571	3.7143	3.1429
	N	7	7	7	7	7	7	7
	Std. Deviation	.48795	.48795	.97590	1.46385	1.46385	.48795	1.06904
Total	Mean	3.0096	4.8942	3.5337	3.2019	2.7692	3.3990	3.9327
	N	208	208	208	208	208	208	208
	Std. Deviation	.64449	.30828	.94732	.92083	.98521	.50063	.71916

Source: Authors' calculation in SPSS

Table 8: ANOVA table regarding countries of residence

ANOVA Table			Sum of Squares	df	Mean Square	F	Sig.
Lift maintenance and functioning * Country of residence	Between Groups	(Combined)	10.327	5	2.065	5.515	.000
	Within Groups		75.653	202	.375		
	Total		85.981	207			
Diversity of ski tracks * Country of residence	Between Groups	(Combined)	6.611	5	1.322	20.448	.000
	Within Groups		13.062	202	.065		
	Total		19.673	207			
Quality of the slopes * Country of residence	Between Groups	(Combined)	23.394	5	4.679	5.821	.000
	Within Groups		162.371	202	.804		
	Total		185.764	207			
Restaurants prices * Country of residence	Between Groups	(Combined)	36.797	5	7.359	10.716	.000
	Within Groups		138.723	202	.687		
	Total		175.519	207			
Nightlife * Country of residence	Between Groups	(Combined)	39.191	5	7.838	9.790	.000
	Within Groups		161.732	202	.801		
	Total		200.923	207			
Meeting different people * Country of residence	Between Groups	(Combined)	16.389	5	3.278	18.655	.000
	Within Groups		35.491	202	.176		
	Total		51.880	207			
Facilities quality * Country of residence	Between Groups	(Combined)	23.849	5	4.770	11.579	.000
	Within Groups		83.209	202	.412		
	Total		107.058	207			

Source: Authors' calculation in SPSS

The analysis of ski tourist decisions related to countries of residence was also considered to be important aspect in a study based on a panel data covering 28 Austrian ski resorts conducted by Falk (2010). Furthermore, Tjørve et al. (2018) indicated the correlation between the country of respondent's residence and repeated tourist visits of winter destinations. The comparison between the respondents' countries of

residence was also provided by Praet et al. (2015) who explored the perceptions among international ski visitors in Japan.

To address the Research Question in this study an additional analysis between the respondents' gender was performed. Compared means among the respondents' gender (table 9) have showed higher mean values in male answers related to variables "lift maintenance and functioning" ($M=3.04$, $SD=0.21$), "diversity of ski tracks" ($M=5$, $SD=0.92$), "nightlife" ($M=3.31$, $SD=0.42$) in compare to female respondents with higher means referring to "restaurants prices" ($M=3.46$, $SD=0.84$), "meeting different people" ($M=3.62$, $SD=0.48$) and "facilities quality" ($M=4.05$, $SD=0.94$). However, the differences in answers regarding "lift maintenance and functioning" and "quality of the slopes" were not statistically significant ($p>0.05$), while other findings match the values of statistical significance ($p<0.05$), which is demonstrated in ANOVA table 10.

Table 9: Compared means between the gender

Gender		Lift mainte- nance and func- tioning	Diver- sity of ski tracks	Report				
				Quality of the slopes	Restaurants prices	Nightlife	Meeting different people	Facilities quality
male	Mean	3.0463	5.0000	3.5370	2.9630	3.3148	3.1944	3.8241
	N	108	108	108	108	108	108	108
	Std. Deviation	.21111	.00000	.50095	.92651	.46661	.42047	.38253
female	Mean	2.9700	4.7800	3.5300	3.4600	2.1800	3.6200	4.0500
	N	100	100	100	100	100	100	100
	Std. Deviation	.90403	.41633	1.26695	.84591	1.05773	.48783	.94682
Total	Mean	3.0096	4.8942	3.5337	3.2019	2.7692	3.3990	3.9327
	N	208	208	208	208	208	208	208
	Std. Deviation	.64449	.30828	.94732	.92083	.98521	.50063	.71916

Source: Authors' calculation in SPSS

Table 10: ANOVA table regarding respondents' gender

ANOVA Table			Sum of Squares	df	Mean Square	F	Sig.
Lift maintenance and functioning * Gender	Between Groups	(Combined)	.302	1	.302	.727	.395
	Within Groups		85.679	206	.416		
	Total		85.981	207			
Diversity of ski tracks * Gender	Between Groups	(Combined)	2.513	1	2.513	30.169	.000
	Within Groups		17.160	206	.083		
	Total		19.673	207			
Quality of the slopes * Gender	Between Groups	(Combined)	.003	1	.003	.003	.957
	Within Groups		185.762	206	.902		
	Total		185.764	207			
Restaurants prices * Gender	Between Groups	(Combined)	12.827	1	12.827	16.242	.000
	Within Groups		162.692	206	.790		
	Total		175.519	207			
Nightlife * Gender	Between Groups	(Combined)	66.867	1	66.867	102.752	.000
	Within Groups		134.056	206	.651		
	Total		200.923	207			
Meeting different people * Gender	Between Groups	(Combined)	9.403	1	9.403	45.603	.000
	Within Groups		42.477	206	.206		
	Total		51.880	207			
Facilities quality * Gender	Between Groups	(Combined)	2.650	1	2.650	5.229	.023
	Within Groups		104.407	206	.507		
	Total		107.058	207			

Source: Authors' calculation in SPSS

These findings can be compared with the studies conducted by Glaes (2009), Pomfret & Doran (2015), which have also confirmed that gender presents an important variable in ski tourism. A significant contribution in studying the gender perspective of ski tourism was made by Williams & Lattey (1994) who recognised the importance of female skiers as tourists and their decisions in developing marketing strategies. Furthermore, Konu et

al. (2011) have also analysed the gender perspective of ski destination choice on the sample of Finnish ski resort customers. In exploring the outdoor recreational tourism in Sweeden, Godtman et al. (2020) have identified the existence of gender inequality. Additionally, Mirehie & Gibson (2020) indicated three dimensions in female skiers that affect their travel decisions such as resort amenities and activities, snow-sport conditions and quality, and price.

Conclusion

The paper provides an insight into the most significant scientific approaches and models that deal with the quality of services in ski tourism. Based on the literature review, it was indicated that important determinants of service quality in winter tourism relate to three aspects: physical environment quality, interaction quality, and outcome quality. The cited models and theoretical approaches were used as an example in designing the questionnaire that was applied in this study and consisted of 18 variables relating to different aspects of service quality in ski tourism. The findings of empirical research that was conducted on a sample of recreational skiers (N=208) in winter destinations in the Republic of Serbia indicated the existence of five different factor that affect the perception of service quality in ski tourism. The first factor was associated with the highest number of variables such as the diversity of ski tracks, the quality of slopes, lift maintaining and functioning, the prices of accommodation and restaurants, facility quality, meeting different people and nightlife. In accordance with this findings, further research was focused on exploring the identified variables among the respondents' gender and countries of residence. The highest mean values in respondent answers were registered for variables "diversity of ski tracks" (M=4.89), "facilities quality" (M=3.93) and "quality of the slopes" (M=3.53). Diversity of ski tracks was recognised as the most important determinant, with the highest mean values between the tourists from Bosnia and Herzegovina (M=4.97, SD=15), Montenegro (M=4.95, SD=0.22), Serbia (M=4.94, SD=0.22) and Russia (M=4.84, SD=0.37), which was statistically significant ($p=0.00$). Compared means among the respondents' gender have demonstrated higher mean values in male answers related to variables "lift maintenance and functioning" (M=3.04, SD=0.21), "diversity of ski tracks" (M=5, SD=0.92), "nightlife" (M=3.31, SD=0.42) in compare to female respondents with higher means referring to "restaurants prices" (M=3.46, SD=0.84), "meeting different people" (M=3.62, SD=0.48) and "facilities quality" (M=4.05, SD=0.94). The differences in answers regarding "lift maintenance and functioning" and "quality of the slopes" were not statistically significant ($p>0.05$), while other findings match the values of statistical significance ($p<0.05$).

The results presented in this article provide additional insight into the conceptualization of service quality in ski tourism and indicate the importance of its measurement. Furthermore, the empirical study conducted in the Republic of Serbia contributes to the clarification of the practical analysis of service quality determinants in ski tourism from the perspective of tourist gender and country of residence. However, certain limitations of this research should be emphasised, which relate to the significantly larger share of domestic tourists in the sample, as well as the fact that the respondents (except Russia) were from the same region, which indicates the existence of cultural and social similarities in quality perception.

Conflict of interests

The authors declare no conflict of interest.

Author Contributions

Conceptualization: Djokovic, G. Investigation: J. S., Dj. G., Theoretical framework: G. M., Data curation: J. S., Resources: J. S., Gilic, M., Writing – original draft: Dj. G., J. S., Writing – review& editing: J. S. All authors have read and agreed to the published version of the manuscript.

References

1. Alexandris, K., Kouthouris, C., & Meligdis, A. (2006). Increasing customers' loyalty in a skiing resort: The contribution of place attachment and service quality. *International journal of contemporary hospitality management*, 18(5), 414-425.
2. Barlas, A., Mantis, K., & Koustelios, A. (2010). Achieving positive word-of-mouth communication: The role of perceived service quality in the context of Greek ski centres. *World Leisure Journal*, 52(4), 290-297.
3. Bieger, T., Peter, W., & Caspar, P. (2002). Transformation der Skiindustrie/Business transformation in the alpine ski industry. Universitat St. Gallen.
4. Chua, B. L., Lee, S., Huffman, L., & Choi, H. S. (2015). The role of physical environment in leisure service consumption: evidence from a ski resort setting. *International Journal of Hospitality & Tourism Administration*, 16(4), 375-407.
5. Djokovic, G., & Celik, P. (2021). Raising the Level of Competitiveness in Services by Implementing TQM. *Kultura Polisa*, 18, 347-362.

6. Dickson, T. J., & Faulks, P. (2007). Exploring overseas snow sport participation by Australian skiers and snowboarders. *Tourism Review*, 62(3/4), 7-14.
7. Falk, M. (2010). A dynamic panel data analysis of snow depth and winter tourism. *Tourism Management*, 31(6), 912-924.
8. Faullant, R., Matzler, K., & Füller, J. (2008). The impact of satisfaction and image on loyalty: the case of Alpine ski resorts. *Managing Service Quality: An International Journal*, 18(2), 163-178.
9. Ferrand, A., & Vecchiattini, D. (2002). The effect of service performance and ski resort image on skiers' satisfaction. *European Journal of Sport Science*, 2(2), 1-17.
10. Glaes, G. (2009). *Gender and the French Ski Industry, 1946-1960*. In Proceedings of the Western Society for French History (Vol. 37). Michigan Publishing, University of Michigan Library.
11. Godtman Kling, K., Margaryan, L., & Fuchs, M. (2020). (In) equality in the outdoors: gender perspective on recreation and tourism media in the Swedish mountains. *Current Issues in Tourism*, 23(2), 233-247.
12. Hallmann, K., Mueller, S., & Peters, M. (2015). The assessment of competitiveness: The case of three alpine winter sports destinations. *Tourism Analysis*, 20(6), 677-687.
13. Hudson, S., & Shephard, G. W. (1998). Measuring service quality at tourist destinations: An application of importance-performance analysis to an alpine ski resort. *Journal of travel & tourism marketing*, 7(3), 61-77.
14. Ismert, M., & Petrick, J. F. (2004). Indicators and standards of quality related to seasonal employment in the ski industry. *Journal of Travel Research*, 43(1), 46-56.
15. Joppe, M., Elliot, S., & Durand, L. (2013). From ski market to ski traveller: a multidimensional segmentation approach. *Anatolia*, 24(1), 40-51.
16. Kyle, G. T., Theodorakis, N. D., Karageorgiou, A., & Lafazani, M. (2010). The effect of service quality on customer loyalty within the context of ski resorts. *Journal of park and recreation administration*, 28(1), 1-15.
17. Konstantinidis, K., Gargalianos, D., Matsouka, O., & Filippou, F. (2018). Service quality in ski resorts in Greece. *Choregia*, 14(1), 75 – 90.
18. Konu, H., Laukkanen, T., & Komppula, R. (2011). Using ski destination choice criteria to segment Finnish ski resort customers. *Tourism Management*, 32(5), 1096-1105.

19. Mirehie, M., & Gibson, H. (2020). Empirical testing of destination attribute preferences of women snow-sport tourists along a trajectory of participation. *Tourism Recreation Research*, 45(4), 526-538.
20. Miragaia, D., Conde, D., & Soares, J. (2016). Measuring service quality of ski resorts: An approach to identify the consumer profile. *The open sports sciences journal*, 9(1).
21. Oralhan, B., Oralhan, Z., & Kirdök, N. (2022). Evaluation of Ski Centers' Performance Using Multiple-Criteria Decision-Making Methods. *Polish Journal of Sport and Tourism*, 29(3), 29-35.
22. Praet, C. L., Gotoh, H., Miyazaki, Y., Lee, J., & Wang, L. (2015). Familiar and total strangers: An exploratory study of in-group and out-group perceptions among international ski resort visitors. *Cross-Cultural Marketing in Asia*, November, 120-135.
23. Pomfret, G., & Doran, A. (2015). *Gender and mountaineering tourism*. In *Mountaineering tourism* (pp. 164-181). Routledge
24. Prettenthaler, F., Kortschak, D., & Woess-Gallasch, S. (2022). Modelling tourists' responses to climate change and its effects on alpine ski tourism—A comparative approach for European Regions. *Journal of Outdoor Recreation and Tourism*, 39, 100525.
25. Shang, Z., Luo, J. M., & Kong, A. (2022). Topic modelling for Ski resorts: An analysis of experience attributes and seasonality. *Sustainability*, 14(6), 3533. <https://doi.org/10.3390/su14063533>
26. Steiger, R., Scott, D., Abegg, B., Pons, M., & Aall, C. (2019). A critical review of climate change risk for ski tourism. *Current Issues in Tourism*, 22(11), 1343-1379.
27. Statista (2023) <https://www.statista.com/statistics/801752/distribution-ski-resorts-by-region/>, Accessed 15.04.2024.
28. Thwaites, D., & Chadwick, S. (2013). Service quality perspectives in sport tourism. *In Sport Tourism* (pp. 189-205). Routledge.
29. Tjørve, E., Lien, G., & Flognfeldt, T. (2018). Properties of first-time vs. repeat visitors: Lessons for marketing Norwegian ski resorts. *Current issues in Tourism*, 21(1), 78-102.
30. Tsitskari, E., Tsiotras, D., & Tsiotras, G. (2006). Measuring service quality in sport services. *Total Quality Management & Business Excellence*, 17(5), 623-631.

31. Theodorakis, N. D., Tsigilis, N., & Alexandris, K. (2009). The mediating role of place attachment on the relationship between service quality and loyalty in the context of skiing. *International Journal of Sport Management and Marketing*, 6(3), 277-291.
32. Weiermair, K., & Fuchs, M. (1999). Measuring tourist judgment on service quality. *Annals of tourism research*, 26(4), 1004-1021.
33. Weiermair, K., & Fuchs, M. (2000). The impact of cultural distance on perceived service quality gaps: The case of alpine tourism. *Journal of Quality Assurance in Hospitality & Tourism*, 1(2), 59-75.
34. Williams, P. W., & Lattey, C. (1994). Skiing constraints for women. *Journal of Travel Research*, 33(2), 21-25.
35. Xiao, X., Yaping, L., & Yanqin, L. (2022). Ski tourism experience and market segmentation from the perspective of perceived value: A case study on Chongli District of Zhangjiakou. *Journal of Resources and Ecology*, 13(4), 655-666.