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SERVICE QUALITY MEASUREMENT IN HEALTH TOURISM SECTOR: AN EXPLORATORY STUDY

The research has examined the SERVQUAL instrument as a possible measure to assist managers and researchers in evaluating service quality. The SERVQUAL instrument can serve as a useful indicator for managers in health tourism sector attempting to identify areas of needed service improvement and to researchers seeking a success measure of health tourism services.

The purpose of the study is to provide a short theoretical and methodological review of the existing tools for measuring service quality, and to testing an adapted version of SERVQUAL instrument in health tourism sector. The aim of the present research is the descriptive and multivariate statistical analysis of a SERVQUAL scale adjusted for health tourism sector.

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The final section of the study is devoted to developing and proposing new directions for future service quality management and measurement.

Keywords: *service quality, SERVQUAL, factor analysis, reliability analysis, helth tourism*

1. INTRODUCTION

Health tourism has received considerable attention in the past few years, both in the literature and international marketplace. Tourism industry is service oriented, and such outlets are different from product oriented ones. Tourism services are usually intangible and thus difficult for customers to recognize immediately. The customers travel to a location where the service is offered. Instead of taking the product home, they interact with the service provider. Since the late 70s, service in the global marketplace is gaining considerable importance. Quality and customer satisfaction are increasingly seen as integral parts of total quality management. Success to a certain extent depends upon the quality of service by the provider (Calantone and Mazanec, 1991). This quality is an elusive and abstract construct that is hard to define and even harder to measure (Carman, 1990; Parasuraman et al., 1985). It can be described as the firm's capacity to meet customers' expectations (Lewis and Booms, 1983). According to Reeves and Bednar (1995), among the various definitions proposed in service literature, conformance to specifications and meeting/exceeding customers' expectations have been used most widely. Cronin and Taylor (1992) defined perceived service quality as an attitude and developed an instrument to measure that attitude.

The definition of service quality and its attributes migt be disputed, but its overall importance results in long-term benefits in customer loyalty, cost-effectiveness, profitability and increased market share (Zeithaml, Parasuraman and Berry, 1990). It has been found that firms with compara-

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tively higher levels of quality typically reap higher market shares and returns. Good service enhances a company's ability to attract new customers, makes it easier to do business with existing customers, and promotes cross-selling (Sonnenberg, 1988). Service involves the consistent satisfaction of the needs and expectations of all customers. In order to comprehend service quality, the different service characteristics need to be analysed. Intangibility, inseparability of production and consumption, heterogenity, and perishability are consistently cited in marketing literature.

Health tourism, though defined in many ways, is generally used to describe activities conducted to promote and enable their customers to improve and maintain their health through a combination of leisure, recreation and education in a location removed from the distractions of work and home. A health resort is one where visitors stay overnights and take part in activities intended to improve or maintain their health. Though health tourism has become a topic of great interest in the literature, there is not yet a broadly accepted definition of it. However, health services exist to meet the health needs of customers, so the delivery of health services should be designed to meet those needs.

In the year 2003 Croatian health resorts visited 22.228 tourists or 9 per cent more than the year before (20.357). In the same year the total number of overnight stays in health resorts was 212.729 which represents a 11 per cent increase over the previous year. In overall number of health resorts visitors in the year 2003, 40.8 per cent are foreign tourists.

2. EXPLORATORY STUDY: A *SERVQUAL* APPLICATION

The objective of this exploratory study was to investigate the service quality expectations and perceptions of quests in health tourism sector in Croatia. An adapted version of SERVQUAL scale was developed for this purpose. The paper focuses on the development of the SERVQUAL scale, its reliability, its application, and the service quality expectations and perceptions of the guests. In addition, the implications on future research are discussed.

2.1. SERVQUAL and its application

SERVQUAL, developed by Parasuraman, Zeithaml and Berry (1985) and subsequent refinded in 1988 and 1991, is a multiple-item instrument designed to measure customer expectations and perceptions concerning a service encounter. Due to the overlap found between dimensions during analysis, the original 10 dimensions were collapsed into five. The final SERVQUAL (Parasuraman et al., 1988) consists of 22 items pertaining to expectations and perceptions. They are tangibles (physical facilities, equipment, and appearance of personnel), reliability (ability to perform the promised service dependably and accurately), responsiveness (willingness to help customers and provide prompt service), assurance (knowledge and courtesy of employees and their ability to convey trust and confidence) and empathy (caring, individualized attention the firm provides its customers).

SERVQUAL is a useful measurement tool that has made an important and valuable contribution in the area of service quality measurement. The original scale was revised and according to Parasuraman et al. (1991), it is a generic instrument with good reliability, validity and broad applicability. However, questions about its validity, reliability and generalizability have been raised. The SERVQUAL measurement has been criticized for its conceptual foundation and empirical operationalization.

As with any research tool, there are concerns expressed by other researchers. Lam (1997), Williams (1998), and O'Neill and Palmer (2001) have reviewed the criticisms of the original instrument. Criticisms include the failure to drawn on the various disciplines of psychology, social sciences and economics. Other issues relate to measuring time, stability over time, the measuring scale, the service quality dimensions and the use of difference scores. Another criticism was the generic nature of the instrument. It were suggested that the survey instrument needed to be customized for use in the specific industry to which it was being applied by including additional related questions (Carman, 1990; Babakus and Boller, 1992; Brown et al., 1993). Other researchers refuted the criticism when they proposed that practitioners require a generic model to ensure reliability, which allows both cross-industry and cross-functional comparisons to be made (Williams, 1998).

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Researchers who have used the SERVQUAL instrument to examine consumers' expectations of tourism and hospitality service organizations, while recognizing some of the latter criticisms, found the instrument to be a viable and reliable tool (Carman, 1990; Babakus and Boller, 1992). They reached similar conclusions as to the most important dimensions of the service, that is, assurance, reliability and tangibles, although they did rank them in different orders (Saleh and Ryan, 1991; Fick and Richie, 1991; Bojanic and Rosen, 1994; Wuest et al., 1996). Wuest et al. (1996) also reported that statistical analysis identified no significant differences between the ranging of any of the five dimensions.

Fick and Ritchie (1991) examined the operation of the SERVQUAL instrument in four major tourism sectors: airline, restaurant and ski area service. They found that the two most important expectations concerning service were reliability and assurance for all four sectors. Some of the inadequacies they identified included problems with positively and negatively worded statements; the inability of the 7-point Likert scale to distinguish subtle differences in expectations and perceptions; its inability to take into account any relationship existing between the levels of expectations and performance and the cost of that service; and an inadequate attempt to include those tangible factors contributing to the overall quality of the service expectations. It should be noted that Parasuraman et al. (1991) have since addresses some of the problems in their modified version.

Bojanic and Rosen (1994) examined the nature of the association between service quality as perceived by consumers and its determinants by applying SERVQUAL in a restaurant setting. The dimension that rated highest on expectation was assurance, followed by reliability, tangibles, access, knowing your customer, and responsiveness. In this study, the empathy dimension segmented into two: knowing the customer and access. Lee and Hing (1995) assessed the usefulness and application of the SERVQUAL instrument in measuring and comparing the service quality of two fine dining restaurants. The findings suggest that for both establishments, assurance and reliability were the highest expectations and tangibles were the lowest.

An adapted/modified version of SERVQUAL instrument was used in lodging (Knutson et al.,

1990) and restaurant settings (Stevens et al., 1995). In the former, only the expectation items (and not the perception) were adapted to capture the consumers' expectations of service quality in a hotel experience. Reliability had the highest mean score, followed by assurance, responsiveness, tangibles and empathy. The findings of the restaurant study revealed that reliability ranked first, followed by tangibles, assurance, responsiveness and empathy. Both the lodging and restaurant customers ranked reliability as first on the hierarchy; the only difference between the two was that tangibles ranked second for the restaurant and fourth for the lodging customers.

In their research in the hotel sector, Gabbie and O'Neill (1997) reported that the highest expectations of consumers related to the dimensions of reliability and assurance while the dimensions of tangibility and empathy were lowest in their ranking.

This discussion demonstrates that most of the studies used a modified or adapted version of the SERVQUAL scale in the hospitality /tourism area.

2.2. Methodology

This exploratory study analyzed the guests' expectations and perceptions in health tourism sector by using an adapted version of SERVQUAL scale. Opatija Riviera (Croatia) was chosen as a holiday destination in which selected customers had demonstrated their commitment to improve service quality by completing the questionnaires, which formed part of the research design. Questionnaires were designed according to the SERVQUAL model of measuring the gap between customers' expectations and perceptions (Parasuraman et al., 1985). The definition of service quality adopted in this study is "the degree of discrepancy between customers' normative expectations for the service and their perceptions of the service performance" (Parasuraman et al., 1988).

Following an extensive literature review, a construct of 38 service quality attributes relevant to the health tourism sector was developed to identify and analyze service gaps between guests' expectations and perceptions, and this constituted a major part of the questionnaire. To improve the readability of the questionnaire by guests of different nationali-

ties, the instrument was printed in three languages; namely, Croatian, English and German.

Seven dimensions of service quality were assessed, each represented by a research questions: (1) *tangibles* (such as the appearance of the physical infrastructure), (2) *reliability* (such as an employee's ability to perform promised services), (3) *responsiveness* (such as the willingness of support personnel to help guests), (4) *assurance* (such as support personnel's ability to convey trust and confidence), (5) *empathy* (such as the provision of caring and individualized attention given to guests), (6) *accessibility* (the approachability and ease of contact) and (7) *output quality* (the quality and veriety of service provided) .

The survey instrument (self-administered questionnaire) consisted of three sections: (1) items focusing on guests' expectations of service quality, (2) items focusing on received service quality (guests' perceptions), and (3) demographic data about the respondents (country and place of permanent residence, age, gender, profession/employment, education level, main reasons for visiting health resort, staying in town/place, staying at the health resort).

Modification to suit the health resort setting resulted in changes to some existing items. For example, an original assurance item: *"Guests feel safe in their transactions with employees"*, an item that was felt to be confusing because of the unclear meaning of "transaction", was replaced by *"Guests feel safe and secure in their stay"*. Items in SERVQUAL scale in this study were as followed (see Table 1): (a) 18 original SERVQUAL items (Parasuraman et al., 1988); (b) 11 items from Snoj, Ogorelc (1998) research in health resorts services; (c) 9 new items adapted for health resorts services and this exploratory study. Dimension "tangibles" includes 9 items (3 SERVQUAL items and 6 new items), dimension "reliability" includes 4 items (4 SERVQUAL items), dimension "responsiveness" includes 5 items (4 SERVQUAL items and 1 new item), dimension "assurance" includes 6 items (5 SERVQUAL items and 1 new item), dimension "empathy" includes 5 items (4 SERVQUAL items and 1 new item), dimension "accessibility" is new dimension used in this scale and includes 2 new items, and dimension "output quality" is added to scale in this study and includes 7 new items. All items were positively worded, exept one (item 38).

The validated scales were pre-tested with a small pilot group.

The adapted SERVQUAL scale for health tourism sector, leaving a total of 76 items in final scale (38 items for expectations scale and 38 items for perceptions scale). The items in the questionnaire were mesured on a 7-point Likert scale ranging from "strongly agree" coded as seven to "strongly disagree" coded as one. Each question was associated with the number one to seven and to complete their answers, respondents were asked to circle the number that best matched their opinion. The items of the scale were pre-tested for wording, layout and comprehension.

2.3. Sample Characteristics

A total of 280 questionnaires were distributed to guests in health resort "Thalassotherapia" Opatija (Croatia). "Thalassotherapia" Opatija is an institution specialized in medical rehabilitation of cardio-pulmonary conditions and rheumatism. It was founded in 1957. "Thalassotherapia" Opatija provides variety of medical programmes: cardiology programme, preventive cardilogy programme (ckeck-up), physiatric programme, dermatological programme, psychological programme, health care for atheletes, weight-control treatment, anti-stress and relaxation programme. In future years "Thalassotherapia" Opatija will expand it's offer with wellness programmes, tailored to the needs of modern travellers.

The questionnaires were distributed to guests on arrival at the reception desk of the health resort. The guests were requested to complete the survey questionnaire regarding their expectations and perceptions of service quality. The survey questionnaire was self-completed by the guests, with assistance available if required. The questionnaires were anonymous and returned directly to the research time. Data collection was performed during summer (July and August) 2003.

A sample size of 145 participants was collected, representing a response rate of 52 per cent which compares favourably to other tourism and hospitality studies (Fick and Richie, 1991; Knutson *et al.,* 1992; Barsky and Huxley, 1992; Danaher and Haddrell, 1996; Heung and Wong, 1997). This was considered an adequate sample size. The guests are

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approached on a stratified random sampling basis based on data provided by the health resort about characteristics of its customers.

The participants of this study were predominantly domestic visitors (58 per cent). Most of the foreign visitors come from Austria (33 per cent). A sample of 145 respondents, comprising 48 per cent male and 52 per cent female respondents, and most of the respondent were between 50 and 60 year of age. Further, 53 per cent of visitors have secondary school diploma, while less than 9 per cent of guests finished faculty or upper grade education. The guests are predominantly pensioners (39 per cent). The majority of guests (83 per cent) visited "Thalassotherapia" Opatija bacause of medical and health programms and relaxing holidays. Finally, 29 per cent were new guests who have never stayed at the "Thalassotherapia" Opatija before, while 71 per cent were repeated guests. Only for 24 per cent of guests it was the first visit to Opatija, and 76 per cent have been to Opatija once or more than once.

2.4. Data analysis

The statistical package, SPSS (12.0), was used to summarise and analyse the responses. Data were analysed using descriptive and multivariate statistical analysis. The 38 service quality variables in relation to their gap scores (perceptions minus expectations) were factor analysed to determine the existence of underlying dimensions of service quality. A principal component analysis with orthogonal VARIMAX rotation was conducted on the 38 expectations and 38 perception items measuring the service quality of the health resort. The objective of the analysis was to summarise the information contained in the original 38 variables into smaller sets of explanatory composite factors, which define the fundamental constructs assumed to underline the original variables. Factors with an eigenvalue equal to or greater than 1 were chosen for interpretation. Only variables with factor loading coefficients of 0.45 were considered; that is, items with less than 0.45 were excluded. A reliability analysis (Cronbach's alpha) was performed to test the reliability and internal consistency of each of the expectation and perception attributes. Alpha ranges from 0 to 1, and is a measure of the internal consistency of multi-item scales. The closer that Alpha is to 1, the better. A coefficient alpha of .70

or higher is considered to be adequately reliable for group data purposes.

2.5. Results

The study findings are presented in the following order: (1) identification of service quality dimensions, (2) guests' expectations, (3) guests' perceptions, (4) profile of the health resort guests. Table 2 lists the means, mode and standard deviation for guests' expectations and perceptions by questionnaire items. The paired t – test was used to test the significant mean difference (gap) between guests' expectations and perceptions of service quality. The participants of this study have higher expetations according to all items and dimensions. Although the guests were mostly satisfied with the level of service quality at the health resort, which is represented by grade 7 being the most frequent grade, the total SERVQUAL score is negative (-1,35). SERVQUAL gaps values for dimension "reliability" (-1,09), dimension "assurance" (-1,99), dimension "empathy" (-1,09) and dimension "accessibility" (-0,57) are below the value of average gap. The widest gaps occur for dimension "tangibles" (-2,10), dimension "responsiveness (-2,17), and dimension "output quality" (-1,44).

The range of service quality expectation and perception items was from 1 (very low expectations) to 7 (very high expectations). The mean scores in this study ranged from 3.44 to 6.77, with an overall of 6.35 for SERVEXP scale and 5.00 for SERVPERC scale (Table 2). Foreign guests have higher expectations (mean=6,40) and they assess perceptions of service quality (mean=5,45) better than domestic guests (expectation mean=6,29, perception mean=4,92). In the tourism/hospitality studies relating to service quality expectations, the overall mean scores were somewhat similar, mean=5.95 (Knutson et al., 1990), mean=6.12 (Stevens et al., 1995). High expectation values were also found by Fick and Ritchie (1991) in their research on airlines (mean=6.18), hotels (mean=6.11), restaurants (mean=5.91), and ski areas (mean=5.91). Overall mean expectations score in this study was slightly higher compared to other hospitality/tourism services reported above.

The most important service dimension in SERVEXP scale appears to be "assurance" (mean=6.54), followed by "reliability"

(mean=6.49), "responsiveness" (mean=6.48), "tangibles" (mean=6.43), "accessibility" (mean=6.35), "empathy" (mean=6,24), and "output quality" (mean=5,93). Dimension "assurance" was given the highest rating by the health resort guests. In other tourism/hospitality industry researches (Fick and Ritchie, 1991; Knutson *et al.,* 1992; Heung and Wong, 1997) was "reliability" the highest ranged dimension. The item *"equipment and facilities should be generally clean"* was considered more important, followed by *"a health resort should be clean and tidy".*The least important item was *"a health resort should not make any impression on me"*, which was also negative worded item.

The most important dimension by guests in SERVPERC scale were "accessibility" (mean=5.78) followed by "assurance" (mean=5.55), "reliability" (mean=5,40) "empathy" (mean=5,15), "output quality" (mean=4,49), "tangibles" (mean=4,33), and "responsiveness" (mean=4,31). The most important item was *"health resort offers variety of medical programmes"* and the last important item was *"health resort offers variety of sports activities and recreation".* Both items are part of dimension "tangibles".

T-test (Independed samplse t-test) confirmed the hyptothesis that there is a statistically significant difference between average ratings of expectations and perceptions by the guests, suggesting that respondents distinguished between SERVQUAL dimensions.

The variance analysis ANOVA was conducted to determine if there was statistically significant difference between dependent variables (questions from SERVEXP and SERVPERC scale) and independent variables (socio-demographic characteristics of respodents – gender, age, profession/employment, level of education, number of visits to the place/town, number of visits to the same hotel).

The results of variance analysis indicate that: (1) there is no statistically significant difference between average ratings of expectations and perceptions according to the gender of hotel guests and the number of hotels guests' visits to the place/town; (2) there is statistically significant difference between average ratings of expectations and perceptions according to the occupation of hotel guests, to the level of education of hotel guests, to the number of visits to the same hotel, and to the age of hotel guests.

Factor analysis was applied to 38 items on expectation and 38 items on perception of health tourism services, with responses on 7-point Likert scale. Pricipal component analysis, and VARIMAX rotation were used in the analysis. Suitability of factor analysis was determined by correlation and alpha reliability. The criteria for the number of extracted factors were based on the characteristic value, variance percentage, factor importance, and factor structure. Significant factors were considered to be those with characteristic value equaling or exceeding one.

The result amounting at least 60% of the total cumulative variance was considered a satisfactory solution. It is considered that a variable has practical importance and that it can be included in a factor when its correlation degree equals of exceeds 0,5 (Nunnally, 1967). The factor analysis and reliability analysis are presented in Table 3 and Table 4.

On the basis of VARIMAX rotation 5 factors were defined on the SERVEXP scale and 5 factors on SERVPERC scale. Factor analysis results indicate factor structure with relatively high factor coefficients on the corresponding factors. Both with the first and the second scale the majority of the variables loaded in the first three factors. This confirms that the factors overlapped the least possibly, and that they were independently structured. Higher factor coefficients indicate correlation of variables with the factors they define communality of each of the variables is reletively high ranging from 0,40 to 0,80, and this indicates the variance of original values being covered with factors well.

Five-dimensional solution in SERVEXP scale results in the following factors (refer to Table 3):

Factor 1 - "efficiency of service delivery" (N = 14 items, eigenvalue = 16,408, alpha = 0,9386),

Factor 2 - "empathy " (N = 7 items, eigenvalue = 2,614, alpha = 0,8994),

Factor 3 - "access to services " (N = 5 items, eigenvalue = 2,084, alpha = 0,8755),

Factor 4 - "output quality " (N = 5 items, eigenvalue = 1,685, alpha = 0,8641),

Factor 5 – "reliability " (N = 3 items, eigenvalue = 1,430, alpha = 0,7980),

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SERVPERC scale also makes up five factors including (refer to Table 4):

Factor 1 - "interpersonal relations " (N = 22 items, eigenvalue = 21,145, alpha = 0,9802),

Factor 2 - "tangibles " (N = 7 items, eigenvalue = 2,409, alpha = 0,9171),

Factor 3 - "empathy " (N = 3 items, eigenvalue = 1,398, alpha = 0,7063),

Factor 4 - "accessibility " (N = 3 items, eigenvalue = 1,181, alpha = 0,7383),

Factor 5 - "output quality " (N = 2 items, eigenvalue = 1,090 alpha = -0,1818),

Also, reliability analysis was conducted to measure the inside consistency of each of the five factors. The results indicate that all factors (in both scales) exceed the reccomended level of 0,50 (Hair et al., 1995), ranking from 0,70 to 0,98. Alpha coefficient for the total SERVEXP scale totals 0,954, whereas for the SERVPERC scale totals 0,953. All items in SERVQUAL scale have alpha 0,95 or higher.

3. CONCLUSION

This exploratory research had added to our understanding of dimensions of service quality. It has presented a further challenges to SERVQUAL methodology for assessing customer expectations and perceptions of service quality. The SERVQUAL scale proves to be a useful starting point in the development of service quality factors in health tourism sector. Both theory, as well as empirical research, support the reliability of the SERVQUAL scale in health tourism environments.

Further research is being undertaken to validate these results. There are several opportunities to extend this study. For example, further studies on service quality measurement must focus on issues on how different socio-demographic variables impact on service quality dimensions. Another factor that might have to be considered in future research is whether the factor structure proposed in this study is valid in other classes of accomodation. Studies of the remaining gaps indentified in the SERVQUAL model would be instructive and potentially beneficial to the health resorts to isolate issues affecting perceptions-expectations differences.

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MJERENJE KVALITETE USLUGA U ZDRAVSTVENOM TURIZMU

Sažetak

U istraživanju se testira SERVQUAL instrument kao moguća mjera kojom bi menadžeri i istraživači ocjenjivali kvalitetu usluga. SERVQUAL instrument predstavlja koristan pokazatelj menadžerima za poboljšanje usluga u zdravstvenom turizmu, ali i istraživačima koji žele uspješno mjeriti kvalitetu zdravstveno-turističkih usluga.

Svrha istraživanja je pružiti kratak teorijski i metodološki osvrt na postojeće alate za mjerenje kvalitete usluga, te testirati prilagođenu verziju SERVQUAL instrumenta u zdravstvenom turizmu izabranim metodama multivarijatne statistike.

Posljednji dio rada, odnosi se na prijedlog novih smjernica za buduća istraživanja i mjerenja kvalitete usluga.

Ključne riječi: kvaliteta usluga, SERVQUAL, faktorska analiza, analiza pouzdanosti, zdravstveni turizam

Table 1: Adapted SERVQUAL scale for this exploratory study

No.	Service attributes (items)	Dimension	Scale
1.	A health resort should have modern-looking equipment.	Tangibles	SEVQUAL
2.	The physical facilities in a health resort should be visually appealing.	Tangibles	SERVQUAL
3.	Staff in a health resort should appear neat.	Tangibles	SERVQUAL
4.	A health resort should have comfortable fixture and fittings.	Tangibles	New
5.	Equipment and facilities should be generally clean.	Tangibles	New
6.	Variety of food and beverage should meet guests needs.	Tangibles	New
7.	A health resort should be clean and tidy.	Tangibles	New
8.	A health resort should offer facilities according to the type of services provided.	Tangibles	Snoj, Ogorelc (1998)
9.	A health resort should be situated on an apropriate location.	Tangibles	Snoj, Ogorelc (1998)
10.	In a health resort promised services should be delivered on time.	Realiability	SERVQUAL
11.	A health resort should show an interest in solving guests problem.	Reliability	SERVQUAL
12.	A health resort should perform the services right the first time.	Realiability	SERVQUAL
13.	A health resort should provide its service at the time it promised to do so.	Realiability	SERVQUAL
14.	Services in a health resort should be reliable.	Responsiveness	Snoj, Ogorelc (1998)
15.	Staff in a health resort should tell you exactly when services will be performed.	Responsiveness	SERVQUAL
16.	Staff in a health resort should give you prompt service.	Responsiveness	SERVQUAL
17.	Staff in a health resort should always be willing to help you.	Responsiveness	SERVQUAL
18.	Staff in a health resort should never be too busy to respond to your requests.	Responsiveness	SERVQUAL
19.	The behaviour of staff should instill confidence in you.	Assurance	SERVQUAL
20.	Staff in a health resort should be consistently courteous with you.	Assurance	SERVQUAL
21.	Staff in a health resort should have the knowledge to answer your questions.	Assurance	SERVQUAL
22.	Guests should feel safe and secure in their stay.	Assurance	New
23.	Staff in a health resort should provide services at the time they promised to do so.	Assurance	Snoj, Ogorelc (1998)
24.	Staff in a health resort should have the skills to perform the service.	Assurance	New
25.	A health resort should give you an individual attention.	Empathy	SERVQUAL
26.	A health resort should have the staff who give you personal attention.	Empathy	SERVQUAL
27.	A health resort should have your best interest at heart.	Empathy	SERVQUAL
28.	Staff in a health resort should understand your specific needs.	Empathy	SERVQUAL
29.	Staff in a health resort should be commited for solving guests problems.	Empathy	Snoj, Ogorelc (1998)
30.	It should be very easy to find your way arround the health resort.	Accessibility	New
31.	A health resort should give you available, clear and fair information.	Accessibility	Snoj, Ogorelc (1998)
32.	A health resort offer variety of medical programmes.	Output Quality	Snoj, Ogorelc (1998)
33.	A health resort should offer wide range of entertainment and free time activities.	Output Quality	Snoj, Ogorelc (1998)
34.	A health resort should offer variety of sports activities and recreation.	Output Quality	Snoj, Ogorelc (1998)
35.	A health resort's programmes and services shou ld follow new trends and meet the needs of a modern traveller.	Output Quality	New
36.	The whole experience of a health resort should be exceptionally good, simply wonderful.	Output Quality	New
37.	A health resort should have recognizable image.	Output Quality	Snoj, Ogorelc (1998)
38.	A health resort should not make any impression on me.	Output Quality	Snoj, Ogorelc (1998)

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Table 2: Service quality gap between guest's perceptions and expectations in health tourism sector in Croatia (n = 145)

Items	EXPECTATIONS (SERVEXP scale)			PERCEPTIONS (SERVPERC scale)			SERVQUAL ' gap	Paired samples Test
	Mean	*Mode*	*Std. Dev*	*Mean*	*Mode*	*Std. Dev.*	*P - E*	*t - Value*
V1	6,25	7	1,680	4,06	5	1,228	- 2,19	14,242*
V2	6,12	7	1,627	4,36	4	1,258	- 1,76	11,432*
V3	6,66	7	1,194	5,93	7	0,658	- 0,73	7,423*
V4	6,31	7	1,675	4,54	5	0,954	- 1,77	11,894*
V5	6,77	7	1,247	5,71	7	0,643	- 1,06	9,939*
V6	6,67	7	1,633	5,17	7	0,719	- 1,50	10,839*
V7	6,68	7	1,292	5,49	5	0,716	- 1,19	11,158*
V8	6,27	7	2,084	4,00	1	1,243	- 2,37	11,194*
V9	6,10	7	1,633	5,46	7	1,711	- 0,64	4,242*
V10	6,48	7	1,463	5,47	7	0,791	- 1,01	8,071*
V11	6,47	7	1,555	5,33	7	0,834	- 1,14	8,552*
V12	6,56	7	1,568	5,26	7	0,897	- 1,30	9,365*
V13	6,46	7	1,971	5,72	7	1,041	- 0,74	4,324*
V14	6,52	7	1,451	5,25	7	0,891	- 1,27	9,657*
V15	6,58	7	1,637	5,56	7	0,752	- 1,02	10,107*
V16	6,43	7	1,419	5,32	7	0,840	- 1,11	9,517*
V17	6,57	7	1,333	5,63	7	0,753	- 0,94	8,181*
V18	6,28	7	1,373	5,43	7	0,970	- 0,85	6,954*
V19	6,50	7	1,490	5,37	7	0,867	- 1,13	9,186*
V20	6,61	7	1,247	5,83	7	0,801	- 0,78	6,918*
V21	6,47	7	1,353	5,44	7	0,890	- 1,03	8,574*
V22	6,43	7	1,586	5,23	7	0,949	- 1,20	9,279*
V23	6,46	7	1,422	5,41	7	0,816	- 1,04	8,691*
V24	6,73	7	1,178	6,03	7	0,680	- 0,70	6,613*
V25	6,12	7	1,712	5,19	7	1,060	- 0,94	6,083*
V26	6,26	7	1,622	5,22	7	1,143	- 1,04	7,111*
V27	6,28	7	1,578	5,24	7	0,970	- 1,04	7,742*
V28	6,32	7	1,666	4,91	5	0,985	- 1,41	9,472*
V29	6,19	7	4,414	5,52	7	1,069	- 0,67	1,794
V30	6,27	7	1,213	5,88	7	0,959	- 0,39	3,647*
V31	6,42	7	1,311	5,68	7	0,704	- 0,74	6,638
V32	6,57	7	5,881	6,22	7	0,848	- 0,35	0,722**
V33	6,04	7	1,914	3,72	4	1,274	- 2,32	13,278*
V34	6,01	7	1,922	3,44	1	1,680	- 2,57	13,955*
V35	5,94	7	1,766	4,12	4	1,308	- 1,82	11,225*
V36	6,12	7	1,562	5,23	7	1,083	- 0,89	5,916*
V37	6,33	7	1,628	4,97	7	0,993	- 1,36	8,301*
V38	4,41	7	1,867	4,32	4	2,033	- 0,09	0,421

Overall SERVQUAL gap = -1,35

Notes: A negative gap showed that guests' expectation of service in health tourism sector in Croatia was exceeding the guests' perception. Expectation and perception scores are measured on a 7-point Likert scale on which the higher the number, the better the expectation/perception about the service. SERVQUAL gap is the difference between the perception and expectation scores. Paired samples test: *(p < 0,01), ** (p < 0,05).

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Table 3: Factor analysis and reliability analysis of service quality dimensions (SERVEXP scale)

Variable	Component				
	1	2	3	4	5
E1 modern-looking equipment			,496		
E2 appearance of physical facilities			,413		,617
E3 employees? appearance	,723				
E4 comfortable fixture and fittings (inventory)	,596				
E5 cleanliness of equipment and facilities	,778				
E6 variety of food and beverage	,587				
E7 a clean and tidy health resort	,652			,425	
E8 facilities according to the type of services provided			,718		
E9 apropriate location			,671		
E10 delivering promised service on time	,579				
E11 interest in solving guests' problems	,669				
E12 performing services right the first time	,530	,601			
E13 performing services when promised	,571	,581			
E14 reliable services	,713				
E15 informing the guests about the exact time of performing services	,794				
E16 performing prompt service	,569				
E17 helping guests	,683				
E18 responding to guests? questions		,593			
E19 instilling confidence	,656				
E 20 courteous employees	,522	,508			
E21 employees? knowledge for providing information	,422			,411	,432
E22 safety and security of guests	,715				
E23 employees perform services when promised	,561				
E24 employees? professionalism				,784	
E25 individualized attention		,745			
E26 employees provide personal attention		,751			
E27 commitment to guests? comfort		,739			
E28 recognising guests? specific needs		,777			
E29 commitment for solving guests' problems	,466	,604			
E30 the ease of finding your way arround the health resort	,597	,475			
E31 available, clear and fair information	,618				
E32 variety of medical programmes				,798	
E33 wide range of entertainment and free time activities			,835		
E34 variety of sports activities and recreation			,857		
E35 following new trends and meeting the needs of a modern traveller		,495	,611		
E36 wonderful experience in health resort	,483	,555			
E37 recognizable image of halth resort				,404	
E38 making impression on guests					,606
Extraction Method: Principal Component Analysis. *Rotation Method: Varimax with Kaiser Normalization.* *a Rotation converged in 7 iterations.*					
Eigenvalues	16,408	2,614	2,084	1,685	1,430
Percent of variation *(overall = 63,767)*	43,178	6,880	5,484	4,433	3,763
Coefficient Alpha *(overall = 0,954)*	0,9386	0,8994	9,8755	0,8641	0,7980

Note: All absolute values less than 0.45 have been suppressed for the purpose of analysis

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Table 4: Factor analysis and reliability analysis of service quality dimensions (SERVPERC scale)

Variables	Component				
	1	2	3	4	5
P23 employees perform services when promised	,826				
P12 performing services right the first time	,820				
P14 reliable services	,805				
P28 recognising guests? specific needs	,804				
P27 commitment to guests? comfort	,798				
P19 instilling confidence	,795				
P22 safety and security of guests	,783				
P25 individualized attention	,780				
P17 helping guests	,779				
P26 employees provide personal attention	,774				
P21 employees? knowledge for providing information	,770				
P10 delivernig promised services on time	,768				
P20 courteous employees	,767				
P18 responding to guests? questions	,764				
P16 performing prompt service	,756				
P11 interest in solving guests' problems	,732				
P24 employees? professionalism	,633		,479		
P7 a clean and tidy health resort	,632				
P37 recognizable image of health resort	,600	,510			
P6 variety of food and beverage	,580				
P36 wonderful experience in health resort	,560	,531			
P15 informing the guests about the exact time of performing services	,540				
P29 commitment for solving guests' problems					
P34 variety of sports activities and recreation		,796			
P1 modern-looking equipment		,792			
P33 wide range of entertainment and free time activities		,786			
P35 following new trends and meeting the needs of a modern traveller		,695			
P8 facilities according to the type of services provided		,687			
P2 appearance of physical facilities		,685		,494	
P4 comfortable fixture and fittings (inventory)	,479	,640			
P30 the ease of finding your way arround the health resort			,672		
P13 performing services when promised			,586		
P31 available, clear and fair information	,528		,578		
P5 cleanliness of equipment and facilities	,454			,552	
P3 employees? appearance	,483			,522	
P9 apropriate location				,522	
P32 variety of medical programmes					,729
P38 making impression					-,681
Extraction Method: Principal Component Analysis.					
Rotation Method: Varimax with Kaiser Normalization.					
a Rotation converged in 11 iterations.					
Eigenvalues	21,145	2,409	1,398	1,181	1,090
Percent of variation *(overall = 71,640)*	55,645	6,340	3,676	3,109	2,869
Coefficient Alpha *(overall = 0,953)*	0,9802	0,9171	0,7063	0,7383	-0,1818

Note: All absolute values less than 0.45 have been suppressed for the purpose of analysis