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Abstract

The purpose of this study is to examine customers' perceptions of primary healthcare service quality in public institutions in the city of Šibenik. The research was aimed at investigating whether there is a difference between customers' expectations and their satisfaction with received medical services. The findings suggest that primary healthcare public institutions need to improve all the dimensions of SERVQUAL service quality from the carried out gap analysis. Furthermore, the research analyzed whether there is a difference in the perception of the given healthcare service among examinees considering their gender, age, employment status and frequency of using the mentioned services. It was established that demographic variables of age and gender do not generate significant differences in the perception of healthcare service quality while there is significant difference in satisfaction regarding employment status and frequency of services usage. The given results partially differ from the data acquired in other relevant and similar studies. The factor analysis which was conducted did not confirm "a priori" accepted theoretical model of Parasuraman et al. (1988) which claims that the concept of quality has five dimensions. On the contrary, it reached the conclusion that three highly reliable factors were identified regarding the perceived quality of primary healthcare services.

Keywords: Primary healthcare sector, SERVQUAL, factor analysis, reliability analysis

1. Introduction

Ever since the beginning of the 1990s, the health sector in Croatia has experienced significant reforms, which predominantly comprised the level of primary healthcare protection. The main goal of these reforms was to liberate the system from excessive bureaucracy and to enhance the professional and organizational responsibility of medical workers (Katić et al., 2009) with the purpose of primarily "increasing service quality, providing greater availability of medical care, regulating the number of patients per doctor, improving existing informatization, and introducing a system of control" (Ministry of Finance, 2014).

The most significant change that was introduced by reforms was the transition which established the medical system as the mixture of public and private. The majority of doctors working in primary

healthcare became individual contractors with the Croatian Health Insurance Fund, whereas the rest remained as employees in health centers. With these reforms private doctors became concessionaires of former state medical offices and started to be financed mainly through poll taxes, which depend on the number of patients and their age differentiation. The mentioned reforms in many cases did not contribute to the realization of their objectives since they positioned doctors as financially dependent on the number of enlisted patients. This consequently led to doctors' offices with too many patients (somewhere over 2000) and disabling them in dealing with and resolving medical problems. In the course of their work, doctors see many patients to whom, due to lack of time, they cannot dedicate themselves completely.

A research carried out concerning Croatian doctors established that in city doctors' offices, family doctors perform so many procedures in a single day that, if they devoted the prescribed time, their working day would have to be approximately 8 hours and 48 minutes and in rural offices even 10 hours and 30 minutes (Labor et al., 2012). It is prescribed that a doctors' working day is 7 hours while it is also defined by regulations that a family doctor is obliged to see every patient who comes in his office which consequently reduces the time necessary for individual patients and the efficiency of work.

A more visible problem in the organization of healthcare is an increase in the number of patients over 65 who, in general, use the services of primary medical care more often than younger patients. According to the last Census in 2011, they represent 17.7% of the entire population and in Šibenik this percentage is even higher – 19.2% (Croatian Bureau of Statistics, 2011).

Due to the circumstances and working conditions primary healthcare has become an unattractive profession and Croatia is faced with a deficit of family doctors of several hundred (Bakar, 2009). It is therefore not unexpected that the results of a research conducted in 2007 on a sample of 9000 Croatian citizens, of them 405 from the County of Šibenik-Knin, conclude that the examinees rated healthcare services only 5.2 (on the scale of 1-10). The examinees from the County of Šibenik-Knin rated the service quality even lower regarding the national average – with low 4.8 (Dobrotić et al., 2007: 85). The research that would apply to the quality of primary healthcare services in the city of Šibenik was not carried out in the mentioned study.

Patients' expectations and pleasure have received more significance in the assessment of healthcare service quality. Creators of medical policy and practice have become more aware of the patients' central role in defining optimal care and in improving the quality of medical care. "Including patients in the improvement of medical healthcare is not only desirable but socially, economically and technically essential. Patients' opinion about doctors' work is created according to different subjective, objective, emotional and rational attitudes and interactions of individuals and communities" (Grol and Wensing, 2000). It is therefore essential to constantly monitor and analyze attitudes, expectations and opinions of health services users in order to establish if they match with, and to what extent, those of healthcare providers (Ozretić Došen et al., 2009: 28).

There is no agreement between scientists on the definition of quality in total healthcare systems, among the population or in the separate healthcare services. Different cultures have different values and priorities; for some the very existence of medical staff and facilities is "good", whereas for some it means equity and empathy, and for developed countries it means optimal clinical outcomes (Tipurić, 2014). Moreover, there is no agreement on methods of measuring the quality of medical services. The greatest reason for that is the fact that medical or healthcare organizations are service companies and thus have their own specific qualities related to products and these are namely the lack of substantial properties, transience and heterogeneity (Trbušić, 2005; Šiško Kuliš and Grubišić, 2010) while some other authors stress the problem of possession (e.g. Pupovac, 1999; Ozretić Došen, 2002; Kotler et al., 2006; Kotler and Keller, 2008). Besides the already mentioned characteristics, the process of measuring medical services is a complex one due to the following reasons: impossibility of controlling and rejecting services that do not correspond to a certain standard before their administering (Ozretić Došen et al., 2010: 32); it is more difficult to distinguish the level of quality in medical than in other services, primarily because they imply human beings and connect their welfare directly to quality; "users always want more and their expectations of quality are different from the quality offered; only practice, careful listening and attention can lead to a more or less truthful idea" (Kolanović, 2007: 214-215).

On the basis of all above, the main problem of this research is measuring service quality of primary healthcare in the city of Šibenik. It is expected that the results of this research will provide useful information to healthcare providers in public institutions of primary healthcare services in the city of Šibenik, in order for them to make valid decisions regarding possible improvement of service quality and, in addition, to scientists and practitioners in solving problems and discovering possibilities in reaching contentment in this sector.

2. Conceptual background

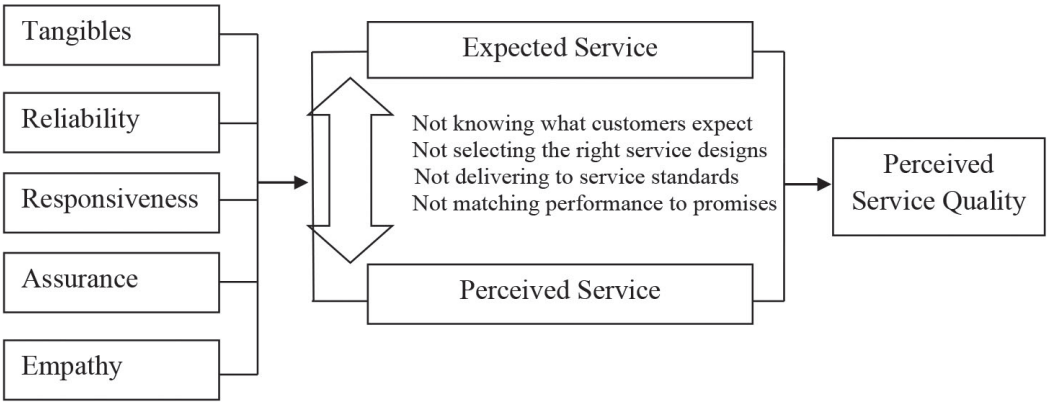
There are two key elements in measuring service quality: customers' expectations (Brown and Swartz, 1989) and perceived quality that reflects customers' opinion about the excellence of service (Zeithaml, 1988). In the light of these factors, Parasuraman et al. developed the SERVQUAL model in 1985 which identified ten dimensions for measurement of service quality. With further improvements of this process, the same authors developed a new model of dimensions in 1988 where the previous ten dimensions were reduced to five as follows: tangibles - physical facilities, equipment, and appearance of employees; reliability - the ability to perform the promised services dependably and accurately; responsiveness - willingness to help customers and provide prompt service; assurance - the knowledge and courtesy of employees, as well as their ability to convey trust and confidence; empathy - the provision of caring and individualized attention to customers.

From the listed dimensions it is perfectly clear that services possess less tangible elements and the research therefore needs to focus more on intangible ones. The mentioned criterions have been established as "relevant for many services" (Johnson, 2002).

The SERVQUAL scale consists of 22 items for assessing customer perceptions and expectations regarding the quality of service. A level of agreement or disagreement with a given item is rated on a seven-point Likert scale. The results are used to identify gaps that are determinants of customers' perception of service quality as shown in Figure 1.

The gap is measured by the difference between perceptions and expectations scores and indicates the level of service quality. If the result is positive, perceived service exceeds expected service. A negative result means low quality of service. According to this instrument, service quality occurs when perceived service meets or exceeds the customer's expectations.

Figure 1 Measuring service quality using the SERVQUAL model



Source: Adjusted according to Parasuraman et al. (1988)

The SERVQUAL model has been subjected to criticism by numerous scientists (e.g. Lewis and Mitchell, 1990: 15; Cronin and Taylor, 1992: 55-56; Teas, 1993: 29). These critical comments have largely been directed towards the theoretical base of the model and its operational mode (measurement principles). The most frequent criticism is related towards validity and reliability of the model, measurements of expectations and structure of dimensions. "However, due to its positive elements – simplicity of use and ability of instruments to provide quantitative assessment, the model has been accepted and applied for measuring quality of different types of services" (Ozretić Došen et al., 2010: 33) such as banking, (Pepur, 2006; Mei Mei et al., 2013), educational (Legčević, 2010; Behdioğlu and Şener, 2014; Ansary and Jayashree, 2014), hotel (Marković and Rapor Janković, 2013; Madar, 2014) and similar ones. There is a general attitude that results obtained by the SERVQUAL model predict the overall quality of services in a very reliable way (Khan, 2003: 121).

This model has been accepted as the key instrument for measuring immediate service quality in the medical sector and due to this reason, an ever increasing number of researchers has been using it in their work. The research results of a significant number of authors, regardless of the county or region where they were conducted, can be brought to one common conclusion: expectations of health care users are considerably higher than the actual satisfaction which implies that the service quality is not satisfactory (e.g. Anderson, 1995; Lam, 1997; Wong, 2002; Ozretić Došen et al., 2010; Papanikolaou and Zygiaris, 2012). The same conclusions have been reached by authors who conducted their research on healthcare users in private establishments (e.g. Camilleri and O'Callaghan, 1998; Sohail, 2000).

As far as the importance of individual dimensions of the SERVQUAL model is concerned, the results vary to some extent. A research which Anderson (1995) conducted in Houston by applying the SERVQUAL model proved that the most significant dimensions according to healthcare users were reliability, assurance and responsiveness, and while empathy and tangible elements, such as the building and its exterior or interior features, were considered less important, medical equipment, on the other hand, was considered extremely important. Lam (1997) reached similar conclusions in a survey conducted in Hong Kong. However, Papanikolaou and Zygiaris (2012) carried out a research which concluded that empathy was the most important element.

Furthermore, according to reliability and validity of the SERVQUAL model in the healthcare sector, available research provides mixed results. Some authors found that SERVQUAL is reliable and valid in the health care environment (Babakus and Managold, 1992; Lam, 1997; Papanikolaou and Zygiaris, 2012), some authors have modified it to a certain point (Anderson, 1995) while others identified new dimensions. Brown and Swartz (1989) reported additional dimensions not captured by the SERVQUAL instrument – "professional credibility", "professional competence" and "communications".

However, in Croatia, there have been only a few researches on the quality of medical service by applying the SERVQUAL model. Verner (2005) conducted a research in Osijek on a sample of 434 healthcare users. The results showed a gap with every dimension of primary healthcare service quality. Ozretić et al. (2010) measured healthcare service quality in primary healthcare institutions in the city of Zagreb and the County of Zagreb on a sample of 181 examinees. They have also stressed a gap for all dimensions of services and the greatest being for the dimensions of responsiveness, assurance and reliability. The study that refers to only one healthcare institution was conducted by Bajto and Kondić (2005) who measured customers' satisfaction with the Public municipal hospital in Našice, where the unsatisfactory elements of healthcare service were medical equipment and communication between the medical staff and the patients. Marković et al. (2014) who measured quality in one specialty hospital for medical rehabilitation by applying a modified SERVQUAL model, have found the greatest gap in social activities and recreational programs offered in that hospital.

In all these previously mentioned studies in Croatia, the authors have not analyzed whether socio-demographic characteristics of the examinees generate significant differences in the perception of healthcare service quality. In studies of foreign authors, socio-demographic variables were mostly proven to be inconsistent and weak predictors of patients' satisfaction (e.g. Mummalaneni and Gopalakrishna, 1995).

The lack of available research indicates the conclusion that there are still not enough relevant data in Croatia which could identify the level of contentment of medical services users. Reports of institutes

about the quality of doctors' work and efficacy of individual doctors' offices mainly focus on financial indicators of efficacy whereas patients' opinions have almost entirely been neglected. Everything mentioned consequently, justifies this paper and the analysis that was conducted.

3. Research methodology

This empirical study reveals customer satisfaction with service quality in primary health care institutions. Therefore, the main objectives of this study are to:

- establish whether there is a difference between patients' expectations and their satisfaction with the received health care;
- investigate whether there is a difference in perception of provided medical service quality among examinees regarding their gender, age, employment status and frequency of service usage;
- provide useful information by applying SERVQUAL instruments to healthcare providers in public institutions of primary healthcare services in the city of Šibenik in order for them to make valid decisions regarding possible improvement of service quality;
- establish reliability of the SERVQUAL model for the medical sector;
- analyze service quality dimensions that can be determined in the medical sector by using factor analysis.

According to the literature review and the defined goals, the following hypotheses were proposed:

H1: There is a statistically significant difference between users' expectations and their satisfaction with given medical care in public institutions of primary healthcare in Šibenik.

H2: There is no statistically significant difference in perception of given healthcare service quality among examinees regarding their gender.

H3: There is no statistically significant difference in perception of given healthcare service quality among examinees regarding their age.

H4: There is no statistically significant difference in perception of given healthcare service quality among examinees regarding their employment status.

H5: There is no statistically significant difference in perception of given healthcare service quality among examinees regarding their frequency of using health care services.

H6: The SERVQUAL model is reliable for measuring service quality in the health care sector.

H7: It is possible to confirm the original dimensions from the SERVQUAL model into the health care sector by factor analysis.

The questionnaire consisted of three parts. In the first part, the expectations of examinees were measured with regard to the quality of primary healthcare services in general, while in the second, the customers' perception of the provided services were measured. The third part contained questions regarding gender, age, employment status, frequency of using services in primary healthcare public institutions and use of medical services in private institutions of primary healthcare. At the end of the questionnaire, examinees were asked to express their satisfaction with the quality of services in primary healthcare institutions by giving a single evaluation mark.

The questionnaire was prepared according to dimensions from the SERVQUAL model and adjusted to the specific characteristics of medical services. After a pre-testing was conducted on 8 examinees, the range of the questionnaire was reduced from the initial 22 to 20 claims. Two items of the original SERVQUAL instrument were deleted because of their unsuitability for the research context and due to the shown lack of understanding by the questioned respondents. The final questionnaire consisted of two sets of 20 items.

The Likert scale of 5 degrees was used to measure the quality of expected and provided service, instead of 7 degrees proposed by Zeithaml, Parasuraman and Malhotra (2002). The reason is the fact that grading from 1 to 5 is generally accepted in Croatia (eg. Legčević, 2009; Ozretić Došen et al., 2010; Brumini et al., 2012; Raspor et al., 2013), so it was believed that the examinees would find it easier to evaluate statements according to notions and dimensions.

The main population in this survey consisted of all users of services in primary healthcare public institutions in Šibenik over the age of 16. The question-

naire was not intended for children younger than 16 since parents` consent would have been necessary, which would complicate the research. In addition, it was assumed that some of the concepts and terms may not have been fully comprehended on their part. The sample thus consisted of persons of eligible age who were users of services in primary healthcare public institutions in Šibenik and were willing to participate. All the doctors in whose offices this study was carried out were personally contacted and acquainted with the way and purpose of the study providing their cooperation in the further research. Having obtained the doctors' permission, the survey was conducted. In the course of two months three educated and experienced examiners repeatedly visited eight offices of family medical practice located in different parts of Šibenik. The participants were approached by an interviewer while waiting for their turn to be received by doctors and they were asked to participate in a study that measures service expectations about particular health care. They were assured of the anonymity and the confidentiality of their responses. Participants were first given the expectations version of the SERVQUAL questionnaire. After the visit, participants were approached again by the interviewer and they were kindly asked to complete the second part of the questionnaire, which included the perceptions version of SERVQUAL.

Input and data processing were finalized by using the statistical package IBM SPSS Statistics 22. To enable ease of data entry, questions were precoded. Data were analyzed using descriptive, bivariate (paired sample t-test, analysis of variance - ANOVA) and multivariate (exploratory factor analysis and reliability analysis) statistical analyses. Descriptive and bivariate analyses were performed to evaluate customer expectations and perceptions of primary healthcare service quality, as well as to establish any significant difference between mean scores of perceived and expected service. The classical approach of applying the Cronbach criterion was used to assess reliability of the model that surveyed quality of services in primary medical healthcare. The closer the coefficient is to 1, the better. Coefficients higher than 0.6 were considered acceptable, indicating reasonable internal consistency reliability (Hair et al., 2006). Moreover, exploratory factor analysis was conducted to gain a better understanding of the service attribute structure. The objective of the analysis was to summarize the information contained in the original 20 variables into smaller sets of explanatory composite factors, which define the fundamental constructs assumed to underline the original variables. Principal Component Analysis with Varimax rotation was used. In order to adequately apply this technique, several conditions should be respected. Firstly, the ratio between sample and number of variables should be at least five and the maximum size of the sample should not be below 200, and this was respected. The Kaiser-Meyer-Olkin's measure (KMO) should be greater than 0.7 and is inadequate if it is less than 0.5 (Stewart, 1981). The KMO measure indicates whether or not enough items are predicted by each factor. Further, the significance value of Bartlett's sphericity test should be less than 0.05 (Leech et al., 2005). This means that the variables are correlated highly enough to provide a reasonable basis for factor analysis. Finally, items with eigenvalues equal or greater than 1, a solution with at least 60% of the total variance explained, factor loadings above 0.5, and factors, which contain at least three items, were retained. The research was conducted in December 2014 and January 2015.

3.1 Applicability of instrument while measuring healthcare service quality

As already mentioned, the classical approach of applying the Cronbach criterion was used to assess reliability and internal consistency of the model that surveyed quality of services in primary medical health care.

The total value for the coefficient of reliability that refers to expectations is .885 whereas for real satisfaction is .953.

All specific values for each variable surpasses the recommended level of 0.6 ranging from .875 to .955. This implies that the coefficient of reliability while using characteristics of SERVQUAL instruments in the health care sector does not distinguish itself significantly from other service branches. The hypothesis H6 is, therefore, confirmed.

An additional factor analysis or sensible grouping of quality characteristics in a smaller number of hidden variables or quality dimensions was also conducted which tried to confirm the "a priori" accepted theoretical model of Parasuranam et al. (1988), according to which the concept of service quality

Table 1 Cronbach's coefficients for the consistency of the study tool

Axes	Number of variables	Cronbach's Alpha coefficients	Range of values Cronbach's Alpha coefficients according to variables	
			Min	Max
Expectations	20	.885	.875	.885
Real satisfaction	20	.953	.949	.955

Source: Authors

has five dimensions. The factor analysis was conducted by the Principal Component Method and 20 questions on perception of healthcare services provided its realization.

Table 2 Kaiser-Meyer-Olkin test and Bartlett test sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.946
Bartlett's Test of Sphericity	Approx. Chi-Square	3111.203
	df	190
	Sig.	.000

Source: Authors

The result of the KMO test of .946 can be considered satisfactory since it is higher than the limit of acceptability 0.5. The Bartlett's Test was significant (p =.000) meaning that there are strong correlations between the items in each factor. Hence, it was justified to conduct the exploratory factor analysis.

In conducting the factor analysis, the Varimax rotation was used with the purpose of having a simpler interpretation of results. The analysis for the expectations scale extracted three factors whose eigenvalues are higher than 1. Most of the factor loadings were greater than 0.6, implying a reasonably high correlation between extracted factors and their individual items.

Table 3 Rotated factor matrix

Variables	Factor 1	Factor 2	Factor 3
	reliability, responsiveness and empathy	tangibility	assurance
P1		.775	
P2		.778	
P3		.657	
P4		.611	
P5	.754		
P6	.763		
P7	.767		
P8	.825		
P9	.757		
P10	.696		
P11	.782		
P12	.689		
P13	.752		
P14	.730		
P15	.667		
P16	.532		.539
P17			.588
P18	.636		
P19			.780
P20	.607		.599
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 7 iterations.			

Source: Authors

Assertions 16 and 20 overlap between the first and the third factor but assertion 16 is grouped in the third and assertion 20 in the first factor due to a slightly greater factor coefficient. This criterion with overlapping was used by the authors of the SERVQUAL model themselves (Parasuraman et al., 1994).

Having identified the factors, a group of variables involved in this factor or their internal consistency were researched. Values of Cronbach if Item Deleted for all the variables included in factor 1 are between .951 and .955, for all the variables included in factor 2 are between .803 and .846, and for variables included in factor 3 are between .817 and .828 which indicates that all variables fit very well into factors and excluding any variable would not have any influence on increasing that coefficient.

However, dimensions established with this analysis are not completely identical to the original SERVQUAL dimensions. The results show that two original dimensions, tangibility and assurance, form two separate factors. The first factor consists of characteristics of three integrated dimensions: reliability, responsiveness and empathy. The hypothesis H7 is therefore rejected.

4. Research results

Out of a total of 276 patients approached, 218 completed both the expectations and the perceptions version of the questionnaire, while 46 refused to participate in the study and 12 refused to complete the post-measure. Accordingly, the final results of empirical research were obtained by analyzing 218 questionnaires. The size of the sample in this research is acceptable (N>200), and this was the prerequisite for application of used statistical methods. Table 4 shows the results of research with regard to the characteristics of the respondents.

The sample included almost an equal number of male (50.5%) and female (49.5%) examinees. The majority of those examined belong to the age group between 30 and 49 (34.9%). According to employment status, the largest portion are employed persons (46.3%). It was also analyzed how often examinees use services of public healthcare institutions. In majority of cases the basic determinant to define a frequent visitor of family doctors is the number of visits. According to Vrca Botica (2003), a frequent patient is the one who makes 8 visits in the course of one year. The mentioned criterion was used in this research.

Table 4 Characteristics of the respondents (N=218)

Characteristics	Modality	Number of respondents	Percentage of respondents
Gender	male	110	50.5
	female	108	49.5
Age	16-29	71	32.6
	30-49	76	34.9
	50 and more	71	32.6
Employment status	student	31	14.2
	employed	101	46.3
	unemployed	53	24.3
	retiree	33	15.1
Frequency in usage of services	often	52	23.9
	several times a year	145	66.5
	rarely	21	9.6
Usage of services also in private institutions	yes	87	39.9
	no	131	60.1

Source: Authors

Table 5 Comparison of average ratings of examinees' expectations and perceptions – according to variables from the SERVQUAL model

No. of variable	Variable	Mean		Gap	t	Sig.
		E	P			
1	Modern-looking equipment	4.62	3.09	-1.53	20.258	.000
2	Visually appealing physical facilities	4.37	3.25	-1.12	14.683	.000
3	Neat medical staff	4.65	4.02	-0.63	9.398	.000
4	Clean medical equipment and devices	4.84	3.83	-1.01	16.126	.000
5	Service without delays	4.61	3.19	-1.42	16.455	.000
6	Interest of medical staff in solving patients' problems	4.60	3.25	-1.35	17.595	.000
7	Performing services right the first time	4.64	3.45	-1.19	15.299	.000
8	Performing service in the promised time	4.62	3.21	-1.41	16.793	.000
9	Performing service without mistakes	4.61	3.29	-1.32	16.676	.000
10	Knowing the exact time when service will be performed	4.47	3.24	-1.23	15.808	.000
11	Medical staff provides prompt service	4.49	2.90	-1.59	18.865	.000
12	Willingness to help patients	4.64	3.47	-1.17	15.185	.000
13	Medical staff has time to answer patients' questions	4.31	3.06	-1.25	13.491	.000
14	Medical staff instills confidence	4.65	3.32	-1.33	18.076	.000
15	Feeling safe and secure during examination	4.71	3.49	-1.22	15.060	.000
16	Courteous medical staff	4.54	3.46	-1.08	12.065	.000
17	Medical staff has knowledge to answer questions	4.56	3.25	-1.31	17.969	.000
18	Medical staff provides personal attention	4.16	3.17	-0.99	11.254	.000
19	Appropriate working hours	4.09	3.72	-0.37	3.977	.000
20	Understanding patients' specific needs	4.15	3.27	-0.88	10.598	.000

Source: Authors

Due to greater reliability of the results, it was desirable to have the majority of frequent patients (8 or more times a year or at least several times) and this was assured in the sample (only 9.6% of the examinees use services rarely, less than once a year). The greatest number of examinees (66.5%) uses services of primary healthcare institutions several times per year. It is extremely interesting that 39.9% examinees along with services in the primary healthcare public sector, use services of private institutions of primary health care.

Cross-analysis according to age and gender showed that males between the ages of 30 and 50 form the largest proportion of the total number (21% of all examinees) whereas women between 14 and 29 create the smallest proportion (12%). When analyzed according to employment status and frequency of service usage, it was found that the greatest num-

ber of examinees is employed and uses primary healthcare services several times a year (34%) and the smallest proportion were pensioners who use services rarely (1%).

When we analyze the results of the survey and research shown in Table 3, which are based on answers about expectations and perceptions of the characteristics of service quality in primary healthcare institutions, they visibly suggest that expectations are considerably high. Average values of expectations considered through notions range between 4.09 and 4.84. The majority of examinees have the highest expectations regarding cleanliness and tidiness of medical equipment and instruments followed by the wish to feel safe and secure during examinations. However, it can generally be stated that expectations tend to be relatively high in all claims and the patients tend to be more "demanding" regarding the quality they expect from healthcare services since there was only a small proportion of those who have low expectations and are satisfied or relatively satisfied with mediocre (or even below average) service.

Furthermore, when we observe real satisfaction, average marks range from extremely low 2.90 (it refers to speed of providing a service) to 4.02 (refers to tidiness and cleanliness of the staff). This can be explained with the fact that "patients wait too long in doctors` offices probably due to the excessive number of patients, no functional system of making appointments, the great number of repeated examinations conditioned by long processing and complicated administrative procedures. Other probable reason can be the socio-economic status of patients who are consequently searching for solutions to all their health problems in primary healthcare institutions and occasionally insufficient education of doctors" (Mazzi et al., 2006). Relatively low ratings refer to real satisfaction for time related notions of medical staff and their dedication to each patient and the individual approach. This derives from present management in health where "doctors have less time per patient but are more involved with diagnostics and informatics" (Mazzi et al., 2006). Consequently elements of communication, listening to problems, advising and the main task of family doctors have degenerated.

Based on ratings of expectations and perception, a gap has been calculated and it represents a very good indicator of the overall quality of services in primary health care in Šibenik. All 20 variables have a negative gap which means that perceptions are lower than expectations and the quality of services in primary healthcare institutions is not satisfactory. These results lead to the conclusion that there is definitely the need to improve quality of services that institutions of primary healthcare in the city of Šibenik provide to their patients and specifically the speed of providing the mentioned services since the greatest gap (-1.59) is recorded for this variable. We should also emphasize variable 1 from the questionnaire which related to the modernity of equipment in primary healthcare institutions and which also had a relatively high gap (-1.53). Examinees are most satisfied with the working hours of institutions but this result cannot be considered as satisfactory since this question also reveals higher expectations than actual satisfaction.

As expected, and seen in previous studies (e.g. Ozretić Došen et al., 2010.; Marković et al., 2014), the results of paired-samples t - test showed that for examinees and with level of significance of 5% there is a statistically significant difference between expected and perceived assessment for all analysed characteristics of services in primary health care in Šibenik. With the above mentioned the hypothesis H1 has been confirmed.

4.1 Expected and real satisfaction of examinees regarding their gender, age, employment status and usage frequency

Four one-way analysis of variance with gender, age (as category variable), employment status and usage frequency as independent variables, and overall satisfaction with medical services as dependent variable, were calculated in order to establish whether there is difference in real satisfaction with healthcare services in primary healthcare institutions regarding patients' socio-demographic characteristics. The Scheffe post hoc test was also conducted for those notions where a statistically significant difference in the level of satisfaction between examinees was established.

The results of analysis on the whole sample showed that male examinees tend to be more satisfied with healthcare services than women but this difference is not statistically significant (p=.915). The hypothesis H2 is hence approved.

Table 6 Differences in assessment of service quality by examinees regarding their socio-demographic characteristics

Characteristics	Modality	N	Mean	St. dev.	Std. Error	Testing value
Gender	male	110	3.34	.838	.080	F = .107 p =.915
	female	108	3.32	.852	.082	
Age	16-29	71	3.28	.848	.101	F = .348 p = .706
	30-49	76	3.31	.838	.097	
	50 and more	71	3.39	.853	.101	
Employment status	student	31	3.29	.902	.162	F = 3.744* p = .012
	employed	101	3.50	.844	.084	
	unemployed	53	3.04	.733	.101	
	retiree	33	3.30	.847	.147	
Usage frequency	often	52	3.10	1.034	.143	F = 3.497* p = .032
	several times a year	145	3.37	.754	.063	
	rarely	21	3.62	.805	.176	

**F is statistically relevant on the risk level of 5%.*
Source: Authors

No significant differences were noticed regarding assessment of service quality among examinees of different ages (p=.706). Consequently, the hypothesis H3 is accepted.

Considering that the analysis of variance showed that there is a statistically significant difference in satisfaction with medical services regarding employment status (p=.012), the hypothesis H4 has been rejected. Scheffe post hoc test showed that examinees who are employed are statistically more satisfied with healthcare service quality in relation to unemployed examinees (p=.013), whereas the difference between all other groups of examinees regarding employment status is not statistically significant.

The analysis also established that there is a statistically significant difference in satisfaction with healthcare services regarding service usage frequency (p=.032) which is evidence for rejecting the hypothesis H5. The Scheffe post hoc test showed that there is a difference between examinees who use services often and those who use them less than once a year. Although it is questionable, due to the marginal results (p=.055), whether the mentioned difference on the level of significance of 5% can be defined as statistically significant, according to Rozga (2012) it is with no doubt about "practical significance" that has to be emphasized.

These results partially differ from those obtained in similar researches conducted up to present time. Namely, in the previously conducted studies, the socio-demographic variables were proven to be inconsistent and weak predictors of the patients' satisfaction. Furthermore, it was concluded that patients' assessments depended more on characteristics of care themselves rather than on socio-demographic characteristics of patients (Mummalaneni and Gopalakrishna, 1995). Campbell et al. (2001) have established that only the patients' age had a significant effect on satisfaction. Contrary to the just mentioned, the results of this study show some social characteristics which influence healthcare service satisfaction whereas the influence of demographic characteristics has not been established.

5. Discussion

The study provides important implications for theory and practice. The findings of this study have contributed to the continuing enhancement of the measurement of service quality in the primary healthcare sector giving important insights for healthcare service providers about patients' wants,

needs and attitudes. Implications suggest that primary healthcare public institutions in Šibenik are not providing the level of service quality demanded by patients. From the carried out gap analysis, the findings also suggest that primary healthcare public institutions need to improve all the dimensions of service quality.

Although the SERVQUAL scale has been widely used to measure service quality in a variety of industries, there is an evident lack of academic research regarding the primary healthcare service quality. Thus, this study contributed to the conceptualization and operationalization of service quality in the primary healthcare sector. Our results suggest, however, that the instrument may not be easily generalizable to primary health care doctors or healthcare service in general. The dimensions identified in this study reflect only partially the SERVQUAL dimensions.

The results of this study should be viewed in light of the study's limitations. First, they cannot be generalized on all primary health care services, since the research was primarily oriented towards services provided in general practice clinics excluding in this way dental practices, emergency services, occupational services and gynecological clinics which all have an unmistakable importance in the selection of the primary healthcare system. Second, the research was performed only on the territory of Šibenik and therefore cannot be concluded for the primary health care services in general. Ultimately, despite the fact that in contemporary scientific literature in the field of quality there is strong emphasis on the crucial importance of users' demands as the main criterion of quality, these demands should not be based solely on the patient perspective.

6. Conclusion

All set goals were achieved with the empirical research. By quantitatively applying the SERVQUAL instruments, we have primarily given useful information to healthcare providers in primary healthcare institutions in Šibenik in order to enable making valid decisions about possible improvements in the service quality.

As expected, and seen in previous studies it has been defined that there is a statistically significant difference between the examinees' expectations and their satisfaction with the received medical services and that expectations are statistically higher than the realized satisfaction which, again, leads to the conclusion that quality of medical services in primary healthcare public institutions in Šibenik is not satisfactory and that enough effort has not been made in order to increase the patients' contentment.

When it comes to satisfaction with specific elements of medical services, it has been concluded that the examinees are least pleased with the duration of time necessary to have physical check-ups and with insufficiently modern medical equipment. We should definitely emphasize that the research has recorded the way in which the examinees had the highest expectations from tangible elements of medical services whereas in similar studies conducted in, for instance, banking (Pepur, 2006; Mečev and Grubišić, 2013) the participants had the lowest expectations from the tangible dimension. This may be explained with a well-known fact that cleanliness and tidiness are generally associated with good health.

It was established that demographic determinants of age and gender do not generate significant differences in the perception of service quality, whereas there is a statistically significant difference in satisfaction with service quality regarding employment status and frequency of using services.

Ultimately, it can be concluded that this research should be conducted in regular periodical intervals in the future in order to reach a relevant judgment about trends in quality of services in primary healthcare institutions in Šibenik and its influence on patient satisfaction. Likewise, future studies should include perceptions of employees in primary healthcare institutions allowing them to be compared with attitudes of patients which would certainly help identify differences.

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Mjerenje kvalitete usluge u ustanovama primarne zdravstvene zaštite: SERVQUAL ljestvica

Sažetak

Svrha ovoga istraživanja je ispitati percepciju kvalitete usluge korisnika u javnim ustanovama primarne zdravstvene zaštite u Šibeniku. Istraživanje je za jedan od ciljeva imalo istražiti postoji li razlika između očekivanja korisnika i njihovoga zadovoljstva pruženim zdravstvenim uslugama. Budući da je za sve SERVQUAL dimenzije utvrđen negativan jaz, rezultati ukazuju na činjenicu da bi ustanove primarne zdravstvene zaštite trebale poboljšati kvalitetu svojih usluga prema svim analiziranim dimenzijama. Također se istražilo postoji li razlika u percepciji ostvarene kvalitete zdravstvene usluge između ispitanika s obzirom na spol, dob, radni status i učestalost korištenja zdravstvenih usluga. Utvrđeno je da demografske odrednice dob i spol ne generiraju značajne razlike u percepciji kvalitete zdravstvenih usluga dok postoji značajna razlika u zadovoljstvu zdravstvenim uslugama s obzirom na radni status i učestalost korištenja usluga. Dobiveni rezultati djelomično se razlikuju od onih dobivenih u do sada provedenim sličnim istraživanjima. Provedena faktorska analiza nije potvrdila „a priori" prihvaćeni teorijski model Parasuramana et al. (1988), prema kojem se koncept kvalitete usluge sastoji od pet dimenzija, već su u kontekstu percipirane kvalitete primarne zdravstvene usluge identificirana tri visoko pouzdana faktora.

Ključne riječi: primarna zdravstvena zaštita, SERVQUAL, faktorska analiza, analiza pouzdanosti