

## The evaluation of transportation services for personnel provided as an outsourced way at a military hospital

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### Abstract

**OBJECTIVE:** In this study it was aimed to examine the quality of outsourcing transportation services provided for personnel at a military hospital in Turkey by using SERVQUAL method.

**MATERIAL AND METHOD:** This study was conducted as a cross-sectional study from 7 to 29 August 2014 at a military hospital in Ankara. One thousand questionnaires were distributed, 730 were received back, but 176 were excluded from analysis due to missing or false responses. The rest of 554 questionnaires were analyzed by using SPSS for Windows 18.0 package program. The SERVQUAL scale which was developed by Parasuraman et al. (1988) was the main scale in the study. The scale highlights the main components of high quality service as five factors - reliability, assurance, tangibles, empathy and responsiveness - that create the acronym RATER.

**RESULTS:** The majority of participants were women (56.4%), between 31-40 old years (47.2 %), and, up to 77.3% of them used transportation services every work day. It was found that the SERVQUAL instrument had a very high reliability. The Cronbach Alpha coefficient was found between 0.86 and 0.91 for expected quality and between 0.74 and 0.91 for perceived quality. The expectations regarding empathy dimension was at the highest level and expectations regarding other dimensions were also at very high level and very close each other. It was determined also that empathy factor was the highest in negative direction among perceived quality mean scores.

When the absolute differences between expected and perceived mean scores for the dimension of tangibles of the scale were compared for all age groups, a significant result was found ( $p=0,021$ ), and the difference for the age group of 51 and more was significantly lower than others. When the mean scores of perceived service

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quality of groups based on personnel' status were compared, the significant results were obtained for three dimensions as tangibles, empathy, responsiveness and also total perceived service quality (<0.05).

CONCLUSION: The absolute difference between expected and perceived mean scores regarding outsourcing personnel transportation services was found as negative (-). That means that the quality of service was perceived insufficient.

Keywords: Outsourcing, Transportation services, hospital

## 1. Introduction

Outsourcing is a practice used by different companies to reduce costs by transferring portions of work to outside suppliers rather than completing it internally.

It is an effective cost-saving strategy when used properly. It is sometimes more affordable to purchase a good from companies with comparative advantages than it is to produce the good internally.

The contracting or subcontracting of noncore activities to free up cash, personnel, time, and facilities for activities in which a company holds competitive advantage.

While goods quality can be measured objectively by such indicators as durability and number of defects, Service quality is elusive because of intangibility, heterogeneity, inseparability of production and consumption and can not be measured objectively.

The methods used for measuring service quality in general are Benchmarking, Total quality Index, SERVQUAL, SERVPERF, and Critical Incident Technique (CIT).

SERVQUAL can help researchers to identify general principles of functional service quality and to test the effectiveness of a given model among service-providing industries.

In this study it was aimed to examine the quality of outsourcing transportation services provided for personnel at a military hospital in Turkey by using SERVQUAL method.

## 2. Methods

This was a descriptive cross-sectional study conducted from 7 to 29 August 2014 at a military hospital in Ankara.

Sampling: One thousand questionnaires were distributed, 730 were received back, but 176 were excluded from analysis due to missing or false responses. The rest of 554 questionnaires were analyzed by using SPSS for Windows 18.0 package program. The sufficient number for representing target population of total 2400 users was estimated as 334.

The SERVQUAL scale which was developed by Parasuraman et al. (1988) was the main scale in the study. The scale highlights the main components of high quality service as five factors - reliability, assurance, tangibles, empathy and responsiveness - that create the acronym RATER.

The components of RATER are below.

reliability – ability to perform the promised service dependably and accurately

assurance- knowledge and courtesy of employees and their ability to inspire trust and confidence

tangibles- physical facilities, equipment and appearance of personnel

empathy - caring, the individualized attention the firm provides their customers that

responsiveness-willingness to help customers and provide prompt service

The SERVQUAL scale consists of 22 pair of items. While half of the items are related to consumers' expected level of service, the rest of them relates to consumer perceptions of the present level of service. It is a 5- point Likert format scale. While point 1 means strongly agree", point 5 means strongly disagree". Service quality is calculated by subtracting expectation score from perception score.

### 3. Results and Discussion

It was found that the SERVQUAL instrument had a very high reliability.

Table 1. The reliability analysis results related to the SERVQUAL scale and its dimensions.

Dimensions	Cronbach $\alpha$ value		Number of items
	Expected	Perceived	
Tangibles	0,83	0,90	4
Reliability	0,84	0,91	5
Responsiveness	0,84	0,90	4
Assurance	0,91	0,90	4
Empathy	0,74	0,865	3
Total service quality	0,95	0,97	20

The Cronbach Alpha coefficient was found between 0.86 and 0.91 for expected quality and between 0.74 and 0.91 for perceived quality (Table 1).

Table 2. Demographic characteristics of the beneficiaries involved in this study

DEMOGRAPHIC DATA	n	%
Sex		
Male	313	56,4
Female	242	43,6
Profession		
Physician	41	7,4
Nurse	131	23,6
Military Officer	27	4,9
Non-Commissioned officer	46	8,3
Civilian officers	310	55,9
Age		
20-30	98	17,9
31-40	258	47,2
41-50	170	31,1
51 and older	21	6,8
The frequency of service use		
Daily use (regularly)	429	77,3
Occasionally	87	15,7
When required	38	6,8

The majority of participants were women (56.4%), between 31-40 old years (47.2 %), and, up to 77.3% of them used transportation services every work day as seen in table 2. As presented in table 2, while Civilian officers constitute largest group (55.9 %), nurses were second largest group (23.6%).

Table 3. The distribution of mean scores according to dimensions of the SERQUAL scale.

Dimensions	Expected	Perceived	Difference
Tangibles	1,35	2,46	-1,11
Reliability	1,31	2,49	-1,18
Responsiveness	1,33	2,49	-1,16
Assurance	1,33	2,51	-1,18
Empathy	1,27	2,62	-1,34
Total service quality	1,33	2,51	-1,17

Table 3 presents the expected and perceived scores of participants. The expectations regarding empathy dimension was at the highest level and expectations regarding other dimensions were also at very high level and very close to each other. It was determined also that empathy factor was the highest in negative direction among perceived quality mean scores.

When the absolute differences between expected and perceived mean scores for the dimension of tangibles of the scale were compared for all age groups, a significant result was found ( $p=0,021$ ), and the difference for the age group of 51 and more was significantly lower than others.

When the mean scores of perceived service quality of groups based on personnel' status were compared, the significant results were obtained for three dimensions as tangibles, empathy, responsiveness and also total perceived service quality ( $<0.05$ ). Among these groups, the group of civilian officers had significantly higher mean scores comparing with physicians, officers, nurses, noncommissioned officers.

As the absolute differences between expected quality and perceived quality was compared for all occupational groups, statistically significant result was found also for tangibles dimension ( $p=0.007$ ), reliability ( $p=0,042$ ) and Empathy ( $p=0.003$ ) and total service quality ( $p=0.023$ ).

#### 4. Conclusion

The absolute difference between expected and perceived mean scores regarding outsourcing personnel transportation services was found as negative (-). That means that the quality of service was perceived insufficient. Although the absolute differences between perceived and expected quality was found as (-), the results varied in a range from minimum (-1.34) to maximum (-1.11). When we take into consideration that as (-4) indicates the lowest level of quality, the study findings could represent relatively higher results.

However, to make an exact decision we need to know the quality of the previous transportation system for comparison. Unfortunately we do not have any data on it. So we suggest before making any service transition to investigate the existing status would be helpful for future evaluation not only for quality but also other issues.

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