

The Importance of Infection in Health Service Marketing and the Health Service Users' Evaluation of Hygiene Conditions in Private Hospitals

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Abstract

In the scope of this study, the importance of infection and the hygiene that causes infections in health enterprise marketing has been discussed in detail. Infection with regard to human health in health enterprises and hygiene in preventing infection are important concepts. Hygiene in hospitals is the primary factor the service recipients urge on. Encountering hospital infections in hospitals frequently makes hygiene come into importance day by day. In this study, 5 private hospitals in Ankara were investigated comparatively for hygiene in examination and patient rooms, surgery, doctors, nurses, auxiliary staff, food services, inside hospital, outside hospital, examination and patient beds, laboratories, examination equipments, bathrooms and toilets, emergency and examination rooms, patient locker rooms, anterooms and rest rooms inside the hospital, anterooms and rest rooms outside the hospital, cafeteria and canteens and the differences and similarities were revealed. The evaluation results will be presented visually to guide the hospital marketing managers.

Keywords: Health Service Marketing, Infection, Hygiene, Hospital Enterprises, Private Hospitals

1. Introduction

Hospital infections increase treatment costs, duration of hospital stay and labor loss both in the world and in our country. Presently, ensuring hygiene conditions constitute the basis for preventing and controlling hospital infections. The scientific structuring of these control methods has been actualized in the middle of the 19th century. Four scientists have made serious contribution in the development of this knowledge. Joseph Lister (1827-1912), Louis Pasteur (1822-1895), Ignaz Phillip Semmelweis (1818-1865) and Robert Koch (1843-1910) have carried out studies on control methods in this field (Van Den Broek, 2003, pp. 3-13).

Within the last 30-40 years, developed countries were the first to start developing and applying programs to prevent hospital infections. While hospital infections were rarely mentioned in our country before the 1980's, various universities established infection control committees and study groups to prevent infection as of 1984.

Along with globalization, competition in the world is also increasing rapidly in the health sector. Quality service perception in health enterprises takes providing patients with a quality care service as a main objective. The purpose of this study is to emphasize the importance of hygiene in preventing infections which are important indicators of care services in the health service marketing literature.

In the scope of the study, basic concepts related to health service marketing that could serve the stated purpose will be explained. In the forthcoming parts of the study, the importance of infections and hygiene in health service marketing will be discussed. In the final part of the study, hygiene perceptions of private hospitals operating in Ankara will be analyzed comparatively and brought into the use of marketing administrators.

2. Health Service Marketing and its Importance

The growth of the health sector and the increase in marketing expertise in present has made the marketing of hospital services a separate specialty.

The advancement in health service technologies has played an important role in this (Karahan, 1999). Health services are medical activities conducted in order to protect from the effects of various factors that harm human health, to treat patients and familiarize those whose physical and mental capabilities have decreased.

The concept of marketing related to health services is a concept greatly misunderstood by health service administrators. Health service administrators generally consider the concept of marketing as a part of public relations. In addition, it is seen that marketing applications in the field of health services are applications based on promotional activities devoted to sales (Flexner and Berkowitz, 1979, p. 507).

The concept of marketing in the health sector has emerged in hospitals in order to gain recognition by the society, be dependable, compete with hospitals providing similar standards, and to influence the expectation and needs of potential patient groups. Successful enterprises nowadays are enterprises that know their market and know how to draw sufficient resources and to transfer these resources to suitable assets, ideas and services, and distribute them to various consuming groups efficiently. Health enterprises should not stay out of this rule. They should know the market, be more sensitive to the health need of the society, be informed and give importance to patient satisfaction. They should be able to develop methods to use their current resources more efficiently and turn them into suitable service and ideas (Secim, 1995, p. 307).

In order to determine the importance of marketing in health services, it is best to set off from efficient and productive realization of exchange which is the main function of marketing. The efficient and productive realization of exchange between the producer and consumer ensures the satisfaction of the target market (Fyfe and Carthy, 1981, p. 22). In many cases, because establishments providing health service do not encounter competition, meeting demands is of sole importance and as a result, satisfying the consumer is far from being an important matter. By commencing marketing activity applications in the field of health services, the request and needs of customers consuming these services will become a priority and as a result, providing more efficient health services will be possible.

3. The Importance of Infection in Health Service Marketing and Hygiene

The way to decrease hospital infections in health establishments is to fully applying infection control programs. Every hospital must apply the program developed by its own infection control committee. Applying these programs according to the national and regional acts and instructions, under the light of scientific and modern data, will not only ensure standardization within the country but also increase infection control and health service quality (<http://www.ncbi.nlm.nih.gov/entrez>). For this purpose, activities on the record system should not be hindered. Unfortunately, there were serious problems with appointing and recording of the hospital infections during and after the 1070's. Physicians and hospitals are irritated of the infection rates and because of this, it is perceived as a mistake, a policy to hide and whitewash (Toreci, 2003, pp. 17-33). However, the solving of negations is possible if there are analyzable data in hand.

As hospital infections are preventable and abatable infections, the responsibility of taking control precautions against hospital infections, recording of the data and related infrastructure, recruiting staff and financial support should be left to the hospitals. In our country, infection control committees and activities to prevent hospital infections are supported by hospital administrators. However, these are often distributed to physician and assistant staff as additional duties and sufficient staff and financial resources are not created. Most of the problems in this issue are due to the lack of legal regulations and insufficiency of staff and financial resources. Examination and treatment costs that arise after hospital infections are added to patient invoices, and thus either the patient or the institutions of those who have social security pay for these costs.

Hospital infection in our country constitutes an important health problem not only because it causes deformity but also because it increases costs. In a study on infection conducted in two separate university hospitals has determined that hospital infection lengthens, the patient's duration of hospital stay by 35-36 days and brings an extra cost between 1304 and 2280 American Dollars (Yalcin, Bakir, Hayran et al., 1998, pp. 46-49). Infection rates can be decreased by 20-30 % with the application of active control programs and control precautions. Although hospital infections can't be terminated all together, they contravene with the rights and interests of social security institutions, patients and society due to labor loss and treatment costs. In cases where these interests, which are protected by law are endangered, punishment and compensation for the damage comes into question (Isik, 2000, pp.175-182). However, this may not apply for each patient. It is a better approach to evaluate each patient in its own conditions. If not, medical and legal mistakes can be made.

Even if news about hospital infections makes headlines in our country and filing claims are mentioned, there are no cases that have been finalized at the High Council of Health and Institution of Forensic Medicine where physicians or hospital administrators are punished. The reasons that can be counted for this can be patients and patient relatives not complaining, the necessity to carry out an autopsy and the fact that our society has a dim view on autopsy, or the negligence of administrators on carrying out autopsies, private health insurances not being common, acts not being up to date and detailed and a relation of casualty not being established between fault and damage. Hygiene education conducted in order to protect and develop health is among the most important issues of public health. Every year, more than three million children die of illnesses that cause diarrhoea when it is possible to prevent illnesses with diarrhoea by providing sufficient amount of healthy water and obeying sanitation and hygiene rules. According to the World Health Organization, insufficient hygiene is responsible for 80% of infectious diseases in developing countries (Wick, Murre, Esrey, 2008, <http://www.unicef.org>).

Preparing and applying programs based on society as well as preventing risky behaviours, training on hygiene and its applications are quite important. Rules, administration and standardization systems to be obeyed have been established in order for all sorts of food, medicine, goods and service to be produced under the same hygiene conditions. Hygiene is controlled with three different ways as staff hygiene, product hygiene and surrounding hygiene (<http://www.dnv.com.tr>, 05.01.2008).

It has been reported that not providing hand hygiene, which is the first step of staff hygiene, is the most important risk in diseases threatening public health. However, hand hygiene which is quite a cheap and efficient method of protection decreases many health problems including hospital infections when applied carefully.

4. The Objective of the Research

The objective of this study is to determine the importance of hygiene in private hospitals that hold an important share in the health sector and to fill a void in literature. In accordance with this objective, comparing private hospitals in terms of hygiene and determining their similar and distinct characteristics and thus putting it into the use of decision makers is another aim.

5. The Methodology and Limits of the Research

Anova and Tukey tests have been applied in order to determine the distinctive and similar sides of private hospitals in terms of hygiene. SPSS computer programs have been used in the evaluation of these analyses.

The Anova test is an analysis technique applied to reveal the effects of explanatory variables that can be measured qualitatively on dependent variables that can be measured quantitatively. This test is applied in order to reveal whether there is a difference between the groups. A comparison is made according to its level of significance (Ersoy and Orbas, 1996, p. 363).

The Tukey test on the other hand is used to determine the groups that are the sources of the any significant difference, if any, between the dependent variable levels at the end of the Anova test (Mendenhall and Sincich, 1995, pp. 890-892).

Face to face survey technique has been used in the gathering of the research data. The survey consists of two parts. Demographic information of the consumers takes place in the first part. The second part contains the characteristics of private hospitals related to hygiene.

In the survey, subjects have been asked the degree to which they agree or not to the ideas composed of sentences under the 5 point Likert scale. A 5 point scale ranges from 1 (I definitely agree) to 5 (I definitely disagree).

The research has some important limitations. The leading of these is the research field being private hospitals operating only within the Ankara provincial borders. In the selection of the hospitals the bed capacity was taken into account. The hospitals with bed capacities between thirty to fifty were selected. The hospitals were selected in different suburbs of Ankara.

The participants of the survey have been selected by random sampling method from consumers who have bought service from or are informed about these hospitals. 260-people sample has been selected per procuration of the population, yet 42 survey forms have been left out for various reasons and 218 surveys have been taken into evaluation.

6. Findings of the Research

Within the scope of this research, 218 consumers have evaluated five private hospitals in terms of hygiene related to 17 variables. The following findings have been discovered when the demographic characteristics of the consumers participating in the research are analyzed.

52.29% of the participants are female and 47.71% are male. When the consumers are analyzed in terms of age, it is seen that with 33.94 %, the majority are between the ages of 26-35. This is followed by 36-45 age group with 23.85%, age group younger than 25 with 19.72%, age group 46-55 with 15.14%, age group 56-65 with 5.05% and age group over 66 with 2.29%.

When the consumers are analyzed in terms of educational level, it has been determined that 46.33% are college, 18.35% are graduate school, 17.89% are high school graduates, 11.93% are postgraduate, and 5.50% are primary school graduates.

60.09% of the participants are employed in the public sector, 12.84 in the private sector and 3.67 are self-employed. The rate of students is 14.22% while the rate of housewives is 5.05%.

When the levels of income are analyzed, it has been understood that the participants are in income levels of 1001-2000 TL (47.25%) and 1000 TL and below (41.74%). In terms of social security, 94.04% are with SSI and 5.96% have a private insurance.

Within the scope of the study, It is necessary to set the differences between the private hospitals operating within Ankara and to make the evaluation differences meaningful through a statistical method. Anova test is applied in order to make these differences meaningful.

Table1: Anova Test Results of Private Hospitals Related to Hygiene

STATEMENT	HOSPITALS	N	AVE.	STD. DEVI	F	P
Examination and Patient Rooms	Hospital A	218	3,26	1,211	55,743	0,000
	Hospital B	218	2,84	1,366		
	Hospital C	218	3,51	1,145		
	Hospital D	218	1,89	1,252		
	Hospital E	218	2,51	1,338		
Operating Rooms	Hospital A	218	3,47	1,137	52,943	0,000
	Hospital B	218	2,67	1,289		
	Hospital C	218	3,46	1,065		
	Hospital D	218	2,16	1,416		
	Hospital E	218	2,42	1,178		
Doctors	Hospital A	218	3,37	1,185	39,628	0,000
	Hospital B	218	2,77	1,345		
	Hospital C	218	3,53	1,091		
	Hospital D	218	2,19	1,400		
	Hospital E	218	2,63	1,415		
Nurses	Hospital A	218	3,40	1,184	37,091	0,000
	Hospital B	218	2,89	1,303		
	Hospital C	218	3,62	1,105		
	Hospital D	218	2,33	1,469		
	Hospital E	218	2,69	1,271		
Assistant Staff	Hospital A	218	3,45	1,277	86,299	0,000
	Hospital B	218	2,66	1,336		
	Hospital C	218	3,69	1,053		
	Hospital D	218	1,89	1,228		
	Hospital E	218	2,21	1,255		
Food	Hospital A	218	3,46	1,112	68,668	0,000
	Hospital B	218	2,42	1,250		
	Hospital C	218	3,50	1,153		
	Hospital D	218	2,03	1,255		
	Hospital E	218	2,47	1,172		
Within the Hospital	Hospital A	218	3,40	1,226	62,764	0,000

	Hospital B	218	2,55	1,292		
	Hospital C	218	3,49	1,129		
	Hospital D	218	1,89	1,217		
	Hospital E	218	2,65	1,294		
Outside the Hospital	Hospital A	218	3,32	1,171	75,448	0,000
	Hospital B	218	2,64	1,188		
	Hospital C	218	3,59	1,109		
	Hospital D	218	1,88	1,191		
	Hospital E	218	2,35	1,295		
Examination and Patient Beds	Hospital A	218	3,38	1,098	77,807	0,000
	Hospital B	218	2,64	1,274		
	Hospital C	218	3,55	1,056		
	Hospital D	218	1,85	1,025		
	Hospital E	218	2,53	1,285		
Laboratories	Hospital A	218	3,31	1,105	42,495	0,000
	Hospital B	218	2,64	1,245		
	Hospital C	218	3,37	1,169		
	Hospital D	218	2,09	1,337		
	Hospital E	218	2,56	1,259		
Examination Equipment	Hospital A	218	3,39	1,090	45,752	0,000
	Hospital B	218	2,69	1,275		
	Hospital C	218	3,31	1,154		
	Hospital D	218	2,04	1,305		
	Hospital E	218	2,56	1,277		
Bathroom-WC	Hospital A	218	3,42	1,146	56,571	0,000
	Hospital B	218	2,78	1,277		
	Hospital C	218	3,30	1,147		
	Hospital D	218	1,88	1,198		
	Hospital E	218	2,56	1,316		
Emergency Service Examination and Patient Rooms	Hospital A	218	3,21	1,112	79,291	0,000
	Hospital B	218	2,49	1,208		
	Hospital C	218	3,46	1,099		
	Hospital D	218	1,69	1,036		
	Hospital E	218	2,45	1,337		
Patient Changing Rooms	Hospital A	218	3,31	1,108	64,968	0,000
	Hospital B	218	2,60	1,245		
	Hospital C	218	3,39	1,160		
	Hospital D	218	1,80	1,149		
	Hospital E	218	2,45	1,330		
Indoor Waiting and Resting Areas	Hospital A	218	3,38	1,251	58,055	0,000
	Hospital B	218	2,58	1,293		
	Hospital C	218	3,51	1,053		
	Hospital D	218	1,94	1,224		
	Hospital E	218	2,57	1,426		
Outdoor Waiting and Resting Areas	Hospital A	218	3,36	1,223	34,587	0,000
	Hospital B	218	2,59	1,300		
	Hospital C	218	3,06	1,241		
	Hospital D	218	2,00	1,327		
	Hospital E	218	2,62	1,403		
Cafeteria and Canteen Service Areas	Hospital A	218	3,41	1,117	57,905	0,000
	Hospital B	218	2,58	1,243		
	Hospital C	218	3,17	1,167		
	Hospital D	218	1,94	1,308		
	Hospital E	218	2,13	1,325		

In table 1, Anova test has been applied in order to determine whether there is a significant difference between hospitals. When the variables related to hygiene at the end of this test are analyzed, it has been revealed that there is a statistically significant difference in all of the statements ($p < 0.05$).

A Tukey test has been applied in order to determine the source of the difference revealed at the end of the Anova test and to establish homogeneous sub-groups.

Table 2: Examination and Patient Room Hygiene Tukey Test

Hospitals	N	4	3	2	1
Hospital A	218	1,8853			
Hospital B	218		2,5138		
Hospital C	218			2,8440	
Hospital D	218				3,2615
Hospital E	218				3,5092

$p < 0.05$

In Table 2, homogeneous groups between private hospitals have been established at the end of the Tukey analysis. According to this, with the lowest average, Hospital A is perceived to be insufficient compared to other hospitals in terms of examination and patient room hygiene. It is seen that Hospitals B and C have close values; however Hospital C pays more attention to it. Because Hospitals D and E are close to each other in terms of the averages, they are similar in terms of examination and patient room hygiene. Compared to other hospitals, hospitals D and E have been perceived to be more successful by consumers in terms of examination and patient room hygiene.

Table 3: Hygiene of the Surgery Rooms Tukey Test

Hospitals	N	3	2	1
Hospital A	218	2,1606		
Hospital B	218		2,4174	
Hospital C	218		2,4174	
Hospital D	218			3,4587
Hospital E	218			3,4725

$p < 0.05$

It is seen in the above table that hospitals D and E are in the same homogeneous group and that they demonstrate a similarity in terms of surgery room hygiene. With the highest average, these hospitals are perceived to be successful by consumers in terms of surgery room hygiene. Other hospitals taking place in the same group are hospitals B and C. These hospitals are also perceived to be similar in terms of surgery room hygiene. Being in a different position than these hospitals, Hospital A is seen to be insufficient by consumers in terms of this variable.

Table 4: Hygiene of Doctors Tukey Test

Hospitals	N	3	2	1
Hospital A	218	2,1881		
Hospital B	218		2,6330	
Hospital C	218		2,7706	
Hospital D	218			3,3716
Hospital E	218			3,5321

$p < 0.05$

Hospital A is seen to be in a separate position compared to other hospitals according to the hygiene of the doctors. With the lowest average, this hospital is perceived to be unsuccessful compared to other hospitals. Hospital B and C are other hospitals perceived to be unsuccessful after Hospital A. Hospital D and E demonstrate similarity in terms of doctor hygiene and are perceived to be successful by consumers.

Table 5: Nurse Hygiene Tukey Test

Hospitals	N	3	2	1
Hospital A	218	2,3303		
Hospital B	218		2,6927	
Hospital C	218		2,8945	
Hospital D	218			3,3991
Hospital E	218			3,6239

p<0.05

Hospitals D and E take place in the same group in terms of the importance nurses give to hygiene and demonstrate similarity. These hospitals are perceived to be more successful compared to other hospitals in terms of nurse hygiene. Receiving different values, other hospitals are different positions. With the lowest value, Hospital A is perceived to be insufficient by consumers in terms of nurse hygiene.

Table 6: Assistant Staff Hygiene Tukey Test

Hospitals	N	4	3	2	1
Hospital A	218	1,8899			
Hospital B	218		2,2064		
Hospital C	218			2,6560	
Hospital D	218				3,4495
Hospital E	218				3,6881

p<0.05

Hospitals D and E demonstrate similarity in terms of assistant staff and are seen to be successful compared to other hospitals. Although Hospitals B and C have received close values, they appear in different groups. Hospital C is perceived better in terms of assistant staff compared to Hospital B. These hospitals are in the middle line in terms of the values they have received. With the lowest value it has received, Hospital A is seen to be insufficient by consumers in terms of the importance assistant staff give to hygiene.

Table 7: Food Hygiene Tukey Test

Hospitals	N	3	2	1
Hospital A	218	2,0275		
Hospital B	218		2,4220	
Hospital C	218		2,4679	
Hospital D	218			3,4633
Hospital E	218			3,5046

p<0.05

Hospital A has got the lowest value in terms of food hygiene. This hospital is perceived to be insufficient compared to other hospitals. In terms of this variable, D and E are in the best position and are similar. Hospitals B and C are in similar position and take place in the middle.

Table 8: Hygiene within the Hospital Tukey Test

Hospitals	N	3	2	1
Hospital A	218	1,8899		
Hospital B	218		2,5459	
Hospital C	218		2,6514	
Hospital D	218			3,3991
Hospital E	218			3,4908

p<0.05

In terms of hospital hygiene, Hospital A has received the lowest value and has been perceived to be insufficient. In terms of the value they have received, Hospitals B and C follow this hospital. Hospitals D and E take place in the same group and demonstrate similarity. These hospitals have received the highest value and are found successful in terms of hygiene within the hospital.

Table 9: Hygiene outside the Hospital Tukey Test

Hospitals	N	5	4	3	2	1
Hospital A	218	1,8761				
Hospital B	218		2,3532			
Hospital C	218			2,6422		
Hospital D	218				3,3211	
Hospital E	218					3,5917

p<0.05

When we analyze the values hospitals have received in terms of hygiene outside the hospital, Hospital A is perceived as insufficient. This hospital is followed by Hospital B. Hospital E has received the highest value and is in the best position in terms of hygiene outside the hospital. This hospital is followed by hospitals D and C respectively. All hospitals have been perceived in different positions.

Table 10: Examination and Patient Bed Hygiene Tukey Test

Hospitals	N	3	2	1
Hospital A	218	1,8486		
Hospital B	218		2,5275	
Hospital C	218		2,6422	
Hospital D	218			3,3807
Hospital E	218			3,5459

p<0.05

It has been seen that while Hospitals B and C establish a group, Hospitals D and E establish a different group in terms of examination and patient bed hygiene. Of these hospitals, Hospitals D and E are perceived to be better compared to other hospitals in terms of this variable. It is understood from the table that Hospital A has received the lowest value and is perceived to be insufficient.

Table 11: Laboratory Hygiene Tukey Test

Hospitals	N	3	2	1
Hospital A	218	2,0917		
Hospital B	218		2,5550	
Hospital C	218		2,6376	
Hospital D	218			3,3119
Hospital E	218			3,3670

p<0.05

The values hospitals have received in terms of laboratory hygiene can be seen in the above table. According to these values, D and E have received the highest values. According to these values, Hospitals D and E have received the highest average values. The laboratory hygiene of these hospitals is perceived to be similar and sufficient by consumers. Hospitals C and B have received the closest values to these hospitals. It is seen that the most insufficient hospital in terms of laboratory hygiene is Hospital A.

Table 12: Examination Equipment Hygiene Tukey Test

Hospitals	N	3	2	1
Hospital A	218	2,0367		
Hospital B	218		2,5642	
Hospital C	218		2,6881	
Hospital D	218			3,3119
Hospital E	218			3,3853

p<0.05

In terms of Examination Equipment hygiene, Hospital A has received a low value compared to the other hospitals. Hospital A is perceived to be insufficient in terms of examination hygiene. Hospital B and C demonstrate a similarity and follow Hospital A with the values they have received.

In terms of examination equipment hygiene, E Hospital has received the highest value. This hospital is perceived to be successful by consumers compared to other hospitals. Hospital D is considered successful after Hospital E.

Table 13: Bathroom-WC Hygiene Tukey Test

Hospitals	N	3	2	1
Hospital A	218	1,8761		
Hospital B	218		2,5550	
Hospital C	218		2,7752	
Hospital D	218			3,2982
Hospital E	218			3,4174

p<0.05

It is seen that there are three groups in terms of bathroom and WC hygiene. Hospital A has received a low value compared to other hospitals and is considered insufficient. Hospital B and C demonstrate similarity and follow Hospital A in terms of the values they have received. In terms of bathroom and WC hygiene, Hospital E and Hospital D have received the highest values. Hospital E seems to be in the best position.

Table 14: Emergency Service Examination and Patient Room Hygiene Tukey Test

Hospitals	N	3	2	1
Hospital A	218	1,6881		
Hospital B	218		2,4495	
Hospital C	218		2,4862	
Hospital D	218			3,2110
Hospital E	218			3,4633

p<0.05

In terms of emergency service examination and patient room hygiene, Hospital A is considered insufficient compared to other hospitals. Hospital B and C demonstrate a similarity in terms of this variable and are in middle position in terms of the values they have received. Hospital E and D are considered the best on this issue.

Table 15: Patient Dressing Room Hygiene Tukey Test

Hospitals	N	3	2	1
Hospital A	218	1,8028		
Hospital B	218		2,4541	
Hospital C	218		2,6009	
Hospital D	218			3,3073
Hospital E	218			3,3899

p<0.05

In terms of hospital dressing room hygiene, there are different homogeneous groups. Of these groups, while Hospitals B and C constitute a group, Hospital D and Hospital E constitute the other group. Among these hospitals, Hospitals E and D are perceived to be more positive in terms of patient dressing room hygiene. Hospital A is perceived to be insufficient in terms of patient dressing room hygiene. Hospital B and C take middle position in terms of this variable.

Table 16: Hygiene of the Resting and Waiting Areas within the Hospital Tukey Test

Hospital	N	3	2	1
Hospital A	218	1,9450		
Hospital B	218		2,5688	
Hospital C	218		2,5826	
Hospital D	218			3,3807
Hospital E	218			3,5138

p<0.05

When we analyze the values hospitals have received in terms of the hygiene of the resting and waiting areas within the hospital, Hospital A is perceived to be insufficient. Hospital B and C follow this hospital. Hospitals E and D occupy the best position in terms of resting and waiting room hygiene within the hospital.

Table 17: Hygiene of Resting and Waiting Areas outside the Hospital Tukey Test

Hospitals	N	4	3	2	1
Hospital A	218	2,0000			
Hospital B	218		2,5872		
Hospital C	218		2,6239		
Hospital D	218			3,0596	
Hospital E	218				3,33624

p<0.05

Hospital A has received the lowest value and has been perceived to be insufficient in terms of hygiene in the resting and waiting areas outside the hospitals. Hospitals B and C follow this hospital in terms of the values they have received. Although Hospitals D and E take place in different groups, their positions seem different. It is seen that Hospital E has received the highest value and is perceived to be successful in terms of hygiene in the waiting and resting areas outside the hospital.

Table 18: Cafeteria and Canteen Hygiene Tukey Test

Hospitals	N	3	2	1
Hospital A	218	1,9450		
Hospital B	218	2,1330		
Hospital C	218		2,5780	
Hospital D	218			3,1743
Hospital E	218			3,4083

p<0.05

Hospital A and Hospital B have received a low value compared to other hospitals in terms of cafeteria and canteen service area hygiene. Hospital C takes place in the middle in terms of cafeteria and canteen service area hygiene. Hospital E has received the highest value. This hospital is perceived to be more successful than the other hospitals. Hospital D is perceived to be successful after Hospital E.

7. Result and Suggestions

In the scope of the research, 5 private hospitals operating within Ankara have been comparatively analyzed on 17 variables that make up the components of hygiene. An Anova test has been applied in order to determine whether there is a difference between the hospitals. A Tukey test has then been applied in order to determine the source of the difference revealed and establish homogeneous sub-groups. At the end of the analyses, it is seen that Hospitals E and D have the highest averages in terms of the variables that make up the hygiene components we have analyzed. On this basis, hospitals E and D are similar and are the most successful hospitals in terms of hygiene.

Hospitals B and C follow these hospitals. These two hospitals appear in the same group in terms of most variables and have demonstrated similarity. Hospital A on the other hand is the hospital that has received the lowest value among all the other hospitals in terms of all the variables. In terms of the hygiene variables that we have included in the scope of the research, Hospital A has been perceived to be insufficient by consumers and thus this hospital needs to review its hygiene provisions. It will be appropriate for the other hospitals to conduct consumer surveys at certain intervals to determine their position.

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