Studying and Analyzing the National Olympic and Paralympics Academy's Service Quality Based on SERVQUAL Model

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Abstract

The aim of this study was to evaluate and analyze the quality gap between customer’s expected and perceived quality of services offered at the National Olympic and Paralympics Academy of Iran Based on SERVQUAL. The research method was descriptive – survey. The study population consisted of athletes, coaches and staff members, students, and all National Olympic and Paralympics Academy service users who were admitted to the Academy in June 2012. Given 120 subjects and by using Morgan table, the statistical samples were considered 92 cases. 120 SERVQUAL Questionnaire that its validity was confirmed by experts and its reliability was calculated and confirmed by Cronbach’s alpha test were distributed among the statistical sample and finally 92 questionnaires were evaluated. The results of descriptive and inferential statistics (KS examinations, Friedman's variance analysis) showed negative and significant gaps in the all service quality components (physical equipment, trust, reliability, accountability and responsibility, and empathy). In addition, the customers' perceptions and expectations were ranked. Results of this research were consistent with most studies conducted to evaluate the quality of services, particularly in the area of sport.

Keywords: Quality of Service - SERVQUAL - National Olympic and Paralympics Academy

Introduction

In recent years, the quality management has been considered as a way of understanding and satisfying customer needs and demands in a reliable manner by national and international organizations. In this method, the quality management is consists of operational practices implementation and pre-defined customer relationship. So, one of the main tasks of quality management is setting goals that through reaching them, the customer satisfaction is achieved.
One of the best known and most widely used techniques to evaluate service quality and the design basis for most models is the SERVQUAL model (SERVQUAL). Actually, service quality technique is a tool to evaluate the gaps between desired levels and actual performance levels in a service organization or a production organization’ service section. The basis of service quality technique is designing the questionnaire and assessing the attitudes.

The SERVQUAL dimensions include:

1) Being tangible the facilities appearance: physical facilities, equipment, personnel and communication personnel (modern equipment, visually attractive facilities, organized labor force).

2) Reliability: Ability to perform correctly the promised service based on conditions (to get things done in the time promised, to show sincere interest in solving problems, correct and reliable implementation of services and insist on error-free operation).

3) Accountability: Desire to help customers and provide prompt service (members of the workforce should provide emergency services, workforce members should always be willing to assist and meet customers' needs).

4) Assurance: Employees knowledge and good manner (workforce members' politeness and their ability to inspire trust and confidence) will create confidence of customers, customers should feel safe in their interactions with the organization, and staff and members of the workforce should be polite and have enough knowledge to answer questions.

5) Empathy: special attention of staff to customers (individual and personal attention, having highest heart's desire and understanding the specific needs of customers). Choi( 2001) in his doctoral thesis concluded that understanding the service quality is the best predictor of customer satisfaction and re-purchase. In addition, other important factors in re-purchase include the interaction between people and understanding service quality. The results showed that there is a significant relationship between customer satisfaction and re-purchase.

Lam (2000) in a study evaluated the quality of service in America Houston fitness clubs. He found that the employee's behavior, proposed programs, locker rooms, and environmental and safety features will affect on customer perception of service quality in the club.

Woo (2005) in a review of service quality, satisfaction and loyalty of the members of fitness clubs in Taiwan concluded that good service to customers and employee behavior in dealing with customer are the most important factors that influence loyalty. (Sport events quality assessment) is an article title that Koo et al (2011) have carried out with the aim of increasing awareness of service quality in such events through the development of a conceptual framework and designing specific criteria to measure the perceived quality of the event by spectators. Using a comprehensive literature study and theoretical and qualitative research processes, a comprehensive model of quality in the sports event (MEQSS) and the criteria for
measuring quality in sports event (SEQSS) have designed and the results have supported the reliability and validity of these models and tools.

Regarding the relationship between service quality and satisfaction of League Baseball spectators, Ji Yong Koo and colleagues (2009) have carried out a study. In this study, researchers have concluded that the easiness of equipment, facilities and locations appearance, comfort of sports facilities, geographic location of sites, food and beverage quality, retail sales, service staff and entertainment held during the Games are among the most important criteria in evaluating service quality.

Among the other studies discussed in this regard, we can refer to Hyun Duck Kim and colleagues work( 2006) which have been published as the impact of service quality on satisfaction and intention to repurchase in Korean professional basketball league. This study was conducted for identifying the impact of service quality's five factors on customer satisfaction and willingness to repurchase and spectators attending in Korean Professional Basketball League. Questionnaire was developed based on SERVQUAL model and 5 dimensions including physical factors, reliability, assurance, responsiveness and empathy.

In this research, researcher has identified the needs of customers and categorized them, prioritized customer expectations, rated perceived quality by customers on any needs and also identified the gap between expected quality and perceived quality by customers.

Methodology

Considering main objective of this study that was to evaluate the service quality of the National Academy of Olympic and Paralympics based on SERVQUAL model, research method is descriptive – survey. In functional aspect, it was considered an applied research.

Library research was used for collecting theoretical foundations and research literature. Field study was the method for collecting the required data to test the research hypothesis. Data was collected by service quality SERVQUAL model based questionnaire that was revised for using in National Olympic and Paralympics Academy. Reliability and validity of the questionnaire were confirmed using Cronbach’s alpha (0.83) and the opinions of experts and scholars (12 patients), respectively.

Statistical population was consisting of all National Olympic and Paralympics Academy's service users in June 2012 that was estimated to be 550 attendances of 120 people. According to the Morgan table, the appropriate sample for this population was n = 92. Due to the possibility of not completed questionnaire, 120 questionnaires were distributed at Academy's various centers and finally 98 questionnaires were completed and accepted.

In this study, stratified random sampling method has been used for selecting samples. Thus, based on the volume of referrals to Academy's various centers, appropriate statistical sample was determined for each center.
Finally, descriptive statistics (frequencies, means, standard deviations, charts and graphs) and inferential statistical (Kolmogorov - Smirnov KS) tests to determine the distribution of the data, nonparametric sign test to analyze the gap (comparing the expected quality and perceived quality), Friedman test to rank customers’ expectations and perceptions of service quality and Cronbach's alpha for the provision of research tool reliability was used for analyzing data.

**Research Findings**

*Descriptive results of the gap analysis:*

The analysis results of descriptive data obtained from questionnaires completed by the expected quality and perceived quality and the gap between them, are in Table 1.

**Table 1: Attained scores for service quality components based on expected and perceived quality**

<table>
<thead>
<tr>
<th>Service Quality Gap Percentage</th>
<th>Expectation Percentage</th>
<th>S.D</th>
<th>Expectation Mean</th>
<th>Perceived Percentage</th>
<th>S.D</th>
<th>Perception Mean</th>
<th>Item</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>-18.4</td>
<td>97.4</td>
<td>0.24</td>
<td>4.87</td>
<td>79.00</td>
<td>0.54</td>
<td>3.95</td>
<td>4</td>
<td>Physical equipment</td>
</tr>
<tr>
<td>-17.00</td>
<td>94.00</td>
<td>0.48</td>
<td>4.70</td>
<td>77.00</td>
<td>0.72</td>
<td>3.85</td>
<td>4</td>
<td>Trust</td>
</tr>
<tr>
<td>-16.4</td>
<td>95.4</td>
<td>0.39</td>
<td>4.77</td>
<td>79.00</td>
<td>0.70</td>
<td>3.95</td>
<td>5</td>
<td>Reliability</td>
</tr>
<tr>
<td>-15.8</td>
<td>97.2</td>
<td>0.29</td>
<td>4.86</td>
<td>81.4</td>
<td>0.80</td>
<td>4.07</td>
<td>4</td>
<td>Accountability</td>
</tr>
<tr>
<td>-21.2</td>
<td>94.6</td>
<td>0.44</td>
<td>4.73</td>
<td>73.4</td>
<td>0.91</td>
<td>3.67</td>
<td>5</td>
<td>Empathy</td>
</tr>
<tr>
<td>-17.8</td>
<td>95.8</td>
<td>0.38</td>
<td>4.79</td>
<td>78.00</td>
<td>0.76</td>
<td>3.90</td>
<td>22</td>
<td>Total</td>
</tr>
</tbody>
</table>

As can be seen in the table above, most of the expectations were in physical equipment, accountability, reliability, empathy and trust, respectively.

In addition, it can be seen that the least perceived quality by customers was in the components of empathy, trust, physical facilities and reliability and accountability, respectively.

It also can be seen in Table 1 that the five needs have the highest service gap, respectively include:

1 - Empathy
2 - Physical facilities
3 - Trust
4 - Reliability
5 - Responsibility and Accountability
According to the table it can be seen in all components, the perceived quality was higher than the theoretical mean (3). Therefore it can be concluded that the overall quality of services provided by the National Academy of Olympic and Paralympics was in good condition.

Results of quantitative analysis and analytical tests

Test results of the Kolmogorov - Smirnov showed that in all components, perceived quality and expected quality, data distribution was non-normal. Significance level in all components and in the entire questionnaire in both dimensions were equal to \( P = 0.00 \) that due to being lower than 0.05, the normality of data in any of the desired cases could not be verified. So, the nonparametric sign test was used for the mean comparison between expected and perceived quality.

In the sign test results listed in Table 2, it can be seen that the significance level of sign test in all 6 cases were lower than 0.05. Therefore, significant differences between expected service quality and perceived service quality of the National Olympic and Paralympics Academy was confirmed in both overall and in each of the 5 components (physical equipment, trust, reliability, accountability, responsibility and empathy).

Table 2: Sign test results

<table>
<thead>
<tr>
<th>Sig</th>
<th>Z</th>
<th>Total</th>
<th>Ties</th>
<th>Positive differences</th>
<th>Negative differences</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.001</td>
<td>-9.38</td>
<td>92</td>
<td>2</td>
<td>90</td>
<td>0</td>
<td>physical equipment</td>
</tr>
<tr>
<td>0.001</td>
<td>-8.06</td>
<td>92</td>
<td>10</td>
<td>78</td>
<td>4</td>
<td>Trust</td>
</tr>
<tr>
<td>0.001</td>
<td>-8.18</td>
<td>92</td>
<td>8</td>
<td>80</td>
<td>4</td>
<td>Reliability</td>
</tr>
<tr>
<td>0.001</td>
<td>-8.14</td>
<td>92</td>
<td>16</td>
<td>74</td>
<td>2</td>
<td>Accountability</td>
</tr>
<tr>
<td>0.001</td>
<td>-8.38</td>
<td>92</td>
<td>12</td>
<td>78</td>
<td>2</td>
<td>Empathy</td>
</tr>
<tr>
<td>0.001</td>
<td>-19.06</td>
<td>460</td>
<td>48</td>
<td>400</td>
<td>12</td>
<td>Service quality</td>
</tr>
</tbody>
</table>

Friedman ANOVA results

In this part of the research, the results of the Friedman ANOVA were provided which was used to rank the quality of the components in both perceptions and expectations.

Tables 3 and 4 show the results of Friedman ANOVA and components ranking in terms of perceived quality and expected quality.

Table 3: Friedman ANOVA results

<table>
<thead>
<tr>
<th>Sig.</th>
<th>df</th>
<th>X²</th>
<th>variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.001</td>
<td>4</td>
<td>25.78</td>
<td>Perception components</td>
</tr>
</tbody>
</table>
The Friedman ANOVA test results in the table above show the significance level of the test was less than 0.05. Therefore, it is clear that the difference between the ranks of components in the perceptions and expectations was significant.

Table 4: Friedman ANOVA test and expectation and perception component ranking

<table>
<thead>
<tr>
<th>Expectation rank</th>
<th>Expectation rank mean</th>
<th>Perception rank</th>
<th>Perception rank mean</th>
<th>Service quality components</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>second</td>
<td>3.16</td>
<td>second</td>
<td>3.03</td>
<td>Physical equipment</td>
<td>1</td>
</tr>
<tr>
<td>fourth</td>
<td>2.80</td>
<td>fourth</td>
<td>2.89</td>
<td>Trust</td>
<td>2</td>
</tr>
<tr>
<td>fifth</td>
<td>2.78</td>
<td>third</td>
<td>2.98</td>
<td>Reliability</td>
<td>3</td>
</tr>
<tr>
<td>first</td>
<td>3.29</td>
<td>first</td>
<td>3.62</td>
<td>Accountability</td>
<td>4</td>
</tr>
<tr>
<td>third</td>
<td>2.96</td>
<td>fifth</td>
<td>2.48</td>
<td>Empathy</td>
<td>5</td>
</tr>
</tbody>
</table>

As indicated in Table 4, the highest quality was perceived by customer in the areas of accountability, physical equipment, reliability, trust and empathy, respectively. In addition, the results in Table 4 show that the highest expectations of customers were in accountability, physical equipment, empathy, trust and reliability, respectively.

**Conclusion**

According to the results of descriptive and inferential test and higher average perceptions of the five components of physical equipment (3.95), confidence (3.85), reliability (3.95), accountability (4.07), empathy (3.67) and average perceptions (3.90) relative to theoretical mean (3.0), it can be concluded Academy's service qualities was higher than average.

Of research in the area of service quality and its relationship with customer satisfaction are the surveys have been conducted by Shank and Chaladaurai (2008) and Park, Kim and Woo et al. (2000) in regard to the role of service quality in customer satisfaction and their return to sports events. They claim that the quality of services is related to things like customer satisfaction, customer loyalty, value and willingness to repurchase.

According to research conducted and the confirmed direct impact of perceived service quality on customer satisfaction, it can be said academy's customer satisfaction of received service is higher than average.

The results showed in physical equipment with significance level (0.001 = P), a significant gap is confirmed between customer expectations and perceptions. Based on the results obtained in this component, 98% of people have higher expectations than the current situation and 2%
expectations were in the limit of current situation. None of the customers have not evaluated the physical facilities over the expected level.

Cases were examined in the physical equipment component, include:

- Physical facilities of salons and Academy environment are desirable.
- Modern and appropriate equipment and facilities exist at the Academy.
- Academy staff attends with a suitable appearance in office environment and physical environment.
- Sports facilities and administrative Academy equipment is located appropriately.

Since the physical facilities have been ranked second highest gap in the five elements, thus Academy can improve the quality of physical facilities and equipment in order to maintain and increase customer loyalty and take effective steps.

Trust component's mark test results (0.001 = P) shows a significant gap between expectations and perceptions of consumers. 85% of customers' expectations were more than perceptions. 11% were in the same way; and in 4% of cases, the situation was more than expected.

Since the gap of trust is in the third place of highest gap ranking, academy should adopt circumstances to minimize the gap and meet customer expectations.

In the reliability component, 87% of the test subjects' expectations were more than their perceptions. While 4% assessed the current situation more favorable than expected; 9% considered both equal.

The fourth rank belongs to the reliability component that despite having fewer gaps between perceptions and expectations relative to the components of empathy, trust, physical equipment, the arrangements should continue to reduce the gap and the perceptions and existing conditions should be closer to customer expectations. Items that were collected under this component include:

- Academy staff is honest and trustees in helping clients solve their problems.
- New and updated information is available to clients.
- Appropriate response is given to referral in the least possible time.
- Academy experts and staff are always eager to assist clients.
- Academy units and centers are keen to obtain feedback from clients.

Liability component in the mark test has succeeded to have lowest position in the gap ranking (Of 81% positive difference, 2% negative difference, 17% equity between perceptions and expectations dimensions). This implies that the liability component along with items such as "experts and staff sufficient knowledge to answer patrons", "staff familiarity with the use of
modern equipment and new technologies", "staff interest to work and update their knowledge in order to answer patrons" and "responding to patrons in the shortest time possible" has managed to keep the perceptions and current situation close to Academy customers expectations and favorable conditions relative to the gap in the other four components.

In this regard, the Academy policies should be for survival of status quo and positive reinforcement in order to further decrease in gap between expectations and perceptions.

Sign test in empathy component confirmed a significant gap between the perceptions and expectations.

empathy Component along with items such as " attention to the needs and wants of individual customers, " equal attention to all clients, " reasonable working hours", " clients feel comfortable and relaxed interaction with the Academy ", " employees special attention to customers " has ranked first place in gap ranking. This implies that the maximum difference between perceptions and expectations is in this component. Therefore, this seems necessary to pay special attention to reducing this gap in order to maintain customer satisfaction and loyalty, and make the customer perceptions close to his expectations.

Friedman test in ranking perceptions and expectations were revealed that Academy customers in relation with expectations gave the most points for the components of accountability, physical equipment, empathy, trust and confidence, respectively.

The highest points in relation with perceptions were given to the components of accountability, physical equipment, confidence, trust and empathy, respectively. It can be concluded that although two components of accountability and physical facilities are in relatively desirable conditions, because of being the academy’s main priorities in expectations component and the approved gaps between customer expectation and perception, appropriate planning should be provided for maintaining current conditions and improving their quality in order to minimize the gap between expectations and perceptions of these two components.

Acknowledgements

We would like to thank Dr.Akbar Heidary (email:akbar.heidary@yahoo.com) for his technical support of the paper.

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