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Factors Determining Perceived Service Quality: A Case Study of Different Physiotherapy Centers in Dhaka City

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Abstract: Research suggests that customers do not perceive quality of service in a unidimensional way but rather evaluate quality based on multiple factors. Parasuraman, Zeithaml, and Berry (1988) proposed five specific dimensions of service quality that apply across a variety of service contexts. The five dimensions are reliability (ability to perform the promised service dependably and accurately), responsiveness (willingness to help customers and provide prompt service), assurance (employees' knowledge and courtesy and their ability to inspire trust and confidence), empathy (caring, individualized attention given to customers), and tangibles (appearance of physical facilities, equipment, personnel, and written materials). The present study tests whether these five dimensions or factors do determine perceived service quality of physiotherapy centers in Dhaka City. The study also measures the relative importance of these five dimensions in determining perceived service quality of physiotherapy centers in Dhaka City and test the variability of the levels of these five dimensions or factors across age, educational level, and gender. The study finds that reliability is the most important factor followed by tangibles, and empathy is the third important factor followed by responsiveness. Assurance is found to be the least important factor. It also finds that these five factors or dimensions vary across age, educational levels, and gender.

1. Introduction

Services are intangible deeds, processes, and performances targeted at creating utility to satisfy some human needs. In other words, a service is an intangible outcome of an effort. Services are different from physical goods. Some important unique characteristics of services are briefly described below:

1. Intangibility: Because services are performances or actions rather than objects, they cannot be seen, tasted, touched, or wrapped with packages.
2. Heterogeneity: "Because services are performances, frequently produced by humans, no two services will be precisely alike" (Zeithaml, Bitner, and Gremler, 2006, p. 23).

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3. Because services cannot be stored, most services are sold first and then produced and consumed simultaneously.
4. Because services cannot be saved or stored, when the service factory is open or service is delivered and there is nobody to receive the service, it perishes instantly.
5. Irrevocability: Once rendered, services cannot be revoked.

In addition to above five unique characteristics of services, there are some other characteristics. One of them is that service is a credence product. It is very difficult for the consumers to evaluate the quality of service before consumption, and in many cases, even after consumption, consumers cannot properly evaluate the quality of service consumed. As a result, consumers tend to base their perception of service quality on some factors. Over the years, Service Marketing researchers have suggested that consumers judge the quality of services based on their perceptions of the technical outcome provided, the process by which that outcome was delivered, and the quality of the physical surroundings where the service was delivered. These elements of service quality are called outcome quality, interaction quality, and physical environment quality, respectively. For example, in the case of a lawsuit, a legal services client will judge the quality of the technical outcome, or how the court case was resolved, and also the quality of the interaction. Interaction quality would include such things as the lawyer's timeliness in returning phone calls, his empathy for the client, and his courtesy and listening skills. Similarly, a restaurant customer will judge the service on his/her perceptions of the meal (technical outcome quality) and on how the meal was served and how the employees interacted with him/her (interaction quality). The décor and surroundings (physical environment quality) of the restaurant will also impact the customer's perceptions of overall service quality (Zeithaml, Bitner, and Gremler, 2006, p. 116).

This depiction of service quality as outcome quality, interaction quality, and physical environment quality was captured by Michael Brady and Joseph Cronin (2001) in their empirical research. Other researchers defined similar aspects of service in their examinations of service quality. Gronroors (1992) defined two types of quality — technical and functional — referring to the outcome of the service and the manner in which it is delivered. Rust and Oliver (1994) defined three aspects of service quality: service product, service delivery, and service environment. On the other hand, Bitner (1993) described the "evidence of service" quality as consisting of the three new **P**s for services: people, process, and physical evidence. In some cases, as with restaurant

services, all three aspects of service are likely to be important to the overall assessment of quality. Other times, as in the case of a kiosk-based ticketing service, only technical outcome and physical environment quality are likely to come into play in the consumer's evaluation process. Because the technical outcome for many services is highly complex and sometimes ambiguous, the quality of the technical outcome is not always evident. For example, the technical quality of services offered by lawyers, doctors, engineers, university professors, accountants, and architects, among others — as well as many routine services such as termite inspection and automobile or computer repair — may be difficult to assess. In such cases consumers may rely on their assessments of interaction and physical environment quality as cues for technical quality (Zeithaml and Bitner, 2003, pp. 92-93).

Olsen and Johnson (2003) added that in considering perceptions, "it is also important to recognize that customers will have perceptions of single, transaction-specific encounters as well as overall perceptions of a (service) company based on all their experiences". All of these researchers suggest that there are common aspects of service that a consumer will evaluate in forming his/her perceptions of quality of service of a company. They suggest that customers do not perceive quality of service in a unidimensional way, but rather judge service quality based on multiple factors relevant to the context. For example, quality of automobiles is judged by such factors as reliability, serviceability, prestige, durability, functionality, and ease of use, whereas quality of food products might be assessed on other dimensions such as flavor, freshness, aroma, and so on (Zeithaml and Bitner, 2003, p. 93). Parasuraman, Zeithaml, and Berry (1988) proposed that five specific dimensions of service quality determine each of the three above mentioned service quality (outcome, interaction, and physical environment quality). They argue that these five dimensions apply across a variety of service contexts. They also developed a multidimensional scale to capture customer perceptions and expectations of service quality in terms these five dimensions known as SERVQUAL (Zeithaml, Bitner, and Gremler, 2006, pp. 154-156).

These five dimensions are briefly described below (*CF* Zeithaml, Bitner, and Gremler, 2006, pp. 116-120):

1. Reliability: It is defined as the ability to perform the promised service dependably and accurately. In its broadest sense, reliability means that the service provider delivers on its promises — promises about delivery, service provision, problem resolution, and pricing. Customers want to do business with

companies that keep their promises, particularly their promises about the service outcomes and core service attributes. Of the five dimensions, reliability has been consistently shown to be the most important determinant of perceptions of service quality among U.S. customers.

2. Responsiveness: It is the willingness of the service provider to help customers and to provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer requests, questions, complaints, and problems. Responsiveness is communicated to customers by the length of time they have to wait for assistance, answers to questions, or attention to problems. Responsiveness also captures the notion of flexibility and ability to customize the service to customer needs.

3. Assurance: Assurance is defined as employees' knowledge and courtesy and the ability of the company and its employees to inspire trust and confidence. This dimension is likely to be particularly important for services that the customers perceive as involving high risk and/or about which they feel uncertain about their ability to evaluate outcomes — for example, banking, insurance, brokerage, medical, and legal service.

4. Empathy: Empathy is defined as the caring, individualized attention the firm provides its customers. The essence of empathy is conveying, through personalized or customized service, that customers are unique and special. Customers want to feel understood by and important to firms that provide service to them. Personnel at small service firms often know customers by name and build relationships that reflect their personal knowledge of customer requirements and preferences. In business-to-business services, customers want supplier firms to understand their industries and issues.

5. Tangibles: Tangibles are defined as the appearance of physical facilities, equipment, personnel, and communication materials. All of these provide physical representations of images of the service that customers, particularly new customers, will use to evaluate quality. Service industries that emphasize tangibles in their strategies include hospitality services where the customer visits the establishment to receive the service, such as restaurants and hotels, retail stores, and entertainment companies.

The above mentioned five dimensions of service quality represent how consumers organize information about service quality in their minds. On the basis of exploratory and quantitative research, these five dimensions were found relevant for banking, insurance, appliance repair and maintenance, securities brokerage, long-distance telephone service, automobile repair service, and others. These dimensions are also applicable to retail and business services, and logic suggests they would be relevant for internal services as well. Sometimes customers will use all of the dimensions to determine service quality perceptions, at other times not (Zeithaml and Bitner, 2003, p. 93).

On the other hand, after two years, Zeithaml, Parasuraman, and Berry (1990) revised the above mentioned five dimensions and instead proposed that the following ten generic dimensions are used by customers in evaluating quality of service:

1. Credibility: Trustworthiness, believability, and honesty of the service provider.
2. Security: Freedom from danger, risk, or doubt.
3. Access: Approachability and ease of contact.
4. Communication: Listening to customers and keeping them informed in language they can understand.
5. Understanding the customers: Making the effort to know customers and their needs.
6. Tangibles: Appearance of physical facilities, equipment, personnel, and communication materials.
7. Reliability: Ability to perform the promised service dependably and accurately.
8. Responsiveness: Willingness to help customers and provide prompt service.
9. Competence: Possession of the skills and knowledge required to perform the service.
10. Courtesy: Politeness, respect, consideration, and friendliness of contact personnel.

The first five dimensions and the revised ten dimensions are the two sides of the same coin except access and security, because the last ten dimensions are derived from the first five dimensions, except access and security.

Howbeit, logic suggests that the absolute as well as relative importance of these dimensions in determining perceptions of service quality will vary from service to service, from customer to customer, from consumption situation to consumption situation, and from culture to culture (Zeithaml, Bitner, and Gremler, 2006, p. 23). Therefore, it is important to know whether this logic is true or not.

2. Research Objective

The objective of the present study is to find out the absolute and relative importance of the first proposed five factors (reliability, responsiveness, assurance, empathy, and tangibles) by Parasuraman, Zithaml, and Berry (1988) in determining perceived quality of services provided by different physiotherapy centers in Dhaka City. The present study also analyzes the possible variability of the importance of these five factors across age, educational level, and gender.

3. Methodology and Data Source

The present research is based on primary data. To collect data, 151 patients from five different physiotherapy centers were interviewed. 30 patients from each of four centers and 31 patients from one center were randomly chosen irrespective of their age, education, and gender. They were asked to respond about their perceptions of the quality of services provided by different physiotherapy centers in terms of the above-mentioned five service quality dimensions. To record the responses of the sample respondents, a structured questionnaire was used (please see Appendix-2). In the questionnaire, six statements were made: five for the five above mentioned factors or service quality dimensions (tangibles, assurance, reliability, empathy, and responsiveness) and one for the overall quality of the physiotherapy centers. The respondents were asked to respond about their perceptions about the level of presence of each six factors. They gave their responses in terms of their agreements and disagreements about the presence of these six factors (one being the overall quality of services). Their agreements and disagreements were recorded on a five-point scale with five numerical values: strongly agree = 5, agree = 4, neither agree nor disagree = 3, disagree = 2, and strongly disagree = 1. With the collected data some statistical analyses were performed. First a multiple regression with quality as a dependant variable and the five quality dimensions as the explanatory variables was run. But due to multi-colinearity, the regression produced bang bang coefficients all of which were statistically insignificant and the regression gave a negative sign in case of “Assurance”. On the other hand, the correlation coefficients among all variables (including the dependent variable) are positive and strong. The estimated correlation coefficients suggest that whenever a customer is satisfied (dissatisfied), s/he finds the level of all five dimensions of service quality are high (low). The estimated correlation coefficients are shown in Table 3.

Table 3: Correlations Between different Dimensions of Service Quality

	Reliability	Responsiveness	Assurance	Empathy	Tangibles
Reliability					
PearsonCorrelation	1.000	.489**	.369**	.253**	.275**
Sig. (2-tailed)		.000	.000	.002	.001
N	151	151	151	151	151
Responsiveness					
PearsonCorrelation	.489**	1.000	.437**	.580**	.408**
Sig. (2-tailed)	.000		.000	.000	.000
N	151	151	151	151	151
Assurance					
PearsonCorrelation	.369**	.437**	1.000	.403**	.326**
Sig. (2-tailed)	.000	.000		.000	.000
N	151	151	151	151	151
Empathy					
PearsonCorrelation	.253**	.580**	.403**	1.000	.460**
Sig. (2-tailed)	.002	.000	.000		.000
N	151	151	151	151	151
Tangibles					
PearsonCorrelation	.275**	.408**	.326**	.460**	1.000
Sig. (2-tailed)	.001	.000	.000	.000	
N	151	151	151	151	151

**Correlations are significant at the 0.05 level (2-tailed).

As a result of multi-colinearity, in this study, ANOVA is used and to test the statistical significance F-test is used. In addition, to test the variability of importance of these five factors across age, education, and gender, cross tabulations are done and Pearson Chi Square test is used.

4. Analysis of Findings

The estimated ANOVA (Table 4) shows that all five dimensions (reliability, responsiveness, assurance, empathy, and tangible) are statistically significant at 0.00% level. This implies that these factors do play important role in determining the level of perceived service quality of different physiotherapy centers in Dhaka City. Based on F

values, it is also found that "Reliability" is the most important factor followed by "Tangibles". "Empathy" is the third important factor followed by "Responsiveness" and "Assurance" is the least important factor.

(Table 1 and Table 2 show the descriptive statistics and Table 5, Table 16, and Table 27 show case processing summary for age, education, and gender, respectively. These tables are placed in Appendix-1).

Table 4: ANOVA

		Sum of Squares	d.f	Mean Square	F	Sig
Reliability	**Between groups**	76.508	4	19.127	25.194	0.00
	Within groups	110.843	146	.759		
	Total	187.351	150			
Responsiveness	**Between groups**	39.421	4	9.855	11.507	0.00
	Within groups	125.043	146	.856		
	Total	164.464	150			
Assurance	**Between groups**	25.661	4	6.415	7.153	0.00
	Within groups	130.949	146	.897		
	Total	156.609	150			
Empathy	**Between groups**	42.832	4	10.708	14.726	0.00
	Within groups	106.161	146	.727		
	Total	148.993	150			
Tangibles	**Between groups**	39.626	4	9.907	15.166	0.00
	Within groups	95.367	146	.653		
	Total	134.993	150			

It is important to mention here that a survey conducted by a group of students of Services Marketing Course under the supervision of one of the authors showed that service organizations in Bangladesh gave highest importance on "Tangibles" and very low importance (4th importance in relative ranking) on "Reliability". Despite the fact that there is some positive correlation (0.275) between "Tangibles" and "Reliability", the findings of the present study suggest that there exists "Provider Gap 1" or the "Knowledge Gap" in service organizations in Bangladesh. Provider gap 1 is "not knowing what customers expect" (the gap between customer expectations and company perceptions of customer expectations) (Zeithaml, Bitner, and Gremler, 2006, pp. 34-35). On the other hand, "Knowledge Gap" "is the difference between what service providers

believe customers expect and customers' actual needs and expectations" (Lovelock and Wirtz, 2004, p. 412).

Table 6 shows the cross tabulation of "Age" and "Reliability".

Table 6: Cross Tabulation of Age and Reliability

		Reliability					
		Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
Age	**Less than 20**		1	**2**	**7**	**1**	**11**
	20 to less than 30	1	6	17	44	4	72
	30 to less than 40	4	10	5	6	4	29
	40 to 50	5	8	3	3		19
	Above 50	5	6	6	3		20
Total		15	31	33	63	9	151

From Table 6, it is seen that out of total 83 respondents of age less than 30 years, 56 (67%) respondents agree or strongly agree that the level of reliability of physiotherapy centers is good and only 8 (10%) disagree or strongly disagree that the level of reliability of physiotherapy centers is good. The rest 19 (23%) are neutral (neither agree nor disagree). On the other hand, out of 48 respondents of age between 30 to 50 years, only 13 (27%) respondents agree or strongly agree that the level of reliability of physiotherapy centers is good, 27 (56%) believe that the level of reliability of physiotherapy centers is low (disagree or strongly disagree). The rest 8 (17%) respondents are neutral (neither agree nor disagree). In addition, out of 20 respondents of age above 50 years, only 3 (15%) believe that the level of reliability of physiotherapy centers is good (agree) and none of them strongly agrees that the level of reliability of physiotherapy centers is good. However, 11 (55%) respondents of age above 50 years believe that the level of reliability of physiotherapy centers is not good (disagree or strongly disagree). The rest 6 (30%) respondents are neutral. These findings imply that there is an inverse relationship between age and the perceived level of reliability of physiotherapy centers. That is, younger people believe that the physiotherapy centers are reliable and thus the service quality is high as long as reliability dimension is concerned. On the other hand, older people believe that the physiotherapy centers are not reliable and thus the service quality is low as long as reliability dimension is concerned. Findings in Table 7 confirm this variability of the importance of "Reliability" across age. The value of Chi Square is significant at 0.00% level.

Table 7: Chi Square Test of Age and Reliability

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	54.576	16	0.00
Likelihood Ratio	59.110	16	0.00
N	151		

Table 8 reports the cross tabulation of "Age" and "Responsiveness".

Table 8: Cross Tabulation of Age and Responsiveness

		Responsiveness					
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Age	Less than 20		4	3	2	2	11
	20 to less than 30	1	15	19	31	6	72
	30 to less than 40	4	14	6	5		29
	40 to 50	6	3	7	3		19
	Above 50		10	8	2		20
Total		15	46	43	43	8	151

From Table 8, it can be found that out of total 83 respondents of age less than 30 years, 41 (49%) respondents agree or strongly agree that the level of responsiveness of physiotherapy centers is good and only 20 (24%) disagree or strongly disagree that the level of responsiveness of physiotherapy centers is good. The rest 22 (27%) are neutral (neither agree nor disagree). On the other hand, out of 48 respondents of age between 30 to 50 years, only 8 (17%) respondents agree or strongly agree that the level of responsiveness of physiotherapy centers is good, 27 (56%) believe that the level of responsiveness of physiotherapy centers is low (disagree or strongly disagree). The rest 13 (27%) respondents are neutral (neither agree nor disagree). In addition, out of 20 respondents of age above 50 years, only 2 (10%) believe that the level of responsiveness of physiotherapy centers is good (agree) and none of them strongly agrees that the level of responsiveness of physiotherapy centers is good. However, 10 (50%) respondents of age above 50 years believe that the level of responsiveness of physiotherapy centers is not good (disagree or strongly disagree). The rest 8 (40%) respondents are neutral. These findings imply that there is an inverse relationship between age and the perceived level of

responsiveness of physiotherapy centers. That is, younger people believe that the physiotherapy centers are responsive and thus the service quality is high as long as responsiveness dimension is concerned. On the other hand, older people believe that the physiotherapy centers are not responsive and thus the service quality is low as long as responsiveness dimension is concerned. Findings in Table 9 confirm this variability of the importance of "Responsiveness" across age. The value of Chi Square is significant at 0.00% level.

Table 9: Chi Square Test of Age and Responsiveness

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	52.935	16	0.00
Likelihood Ratio	51.916	16	0.00
N	151		

As long as age is concerned, we find the same inverse relationship between age and "Assurance", between Age and "Empathy", and between Age and "Tangibles" from Table 10, Table 12, and Table 14, respectively.

Table 10: Cross Tabulation of Age and Assurance

	Assurance					
	Strongly Disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
Age Less than 20		1	4	5	1	11
20 to less than 30						
30 to less than 40						
40 to 50						
Above 50						
	3	20	16	31	2	72
	4	6	11	4	2	29
	6	9	7	1		19
	2	9	8	1		20
Total	13	45	46	42	5	151

Table 11: Chi Square Test of Age and Assurance

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	36.859	16	0.002
Likelihood Ratio	40.808	16	0.001
N	151		

Table 12: Cross Tabulation of Age and Empathy

		Empathy					
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Age	Less than 20		1	4	6		11
	20 to less than 30	5	17	16	31	3	72
	30 to less than 40	4	12	9	2	2	29
	40 to less than 50	1	4	8	6		19
	Above 50		6	10	4		20
Total		10	40	47	49	5	151

Table 13: Chi Square Test of Age and Empathy

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	27.425	16	0.037
Likelihood Ratio	32.601	16	0.008
N	151		

Table 14: Cross Tabulation of Age and Tangibles

	Tangibles					
	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Age Less than 20 20 to less than 30 30 to less than 40 40 to less than 50 Above 50		3	5	2	1	11
	2	19	15	32	4	72
	2	3	16	7	1	29
	2	7	9	1		19
		11	7	2		20
Total	6	43	52	44	4	151

Table 15: Chi Square Test of Age and Tangibles

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	37.311	16	0.002
Likelihood Ratio	41.123	16	0.001
N	151		

From the cross tabulation of "Education" and "Reliability" (Table 17), it is found that out of total 90 undergraduate respondents 53 (59%) respondents agree or strongly agree that the level of reliability of physiotherapy centers is good and only 15 (17%) disagree or strongly disagree that the level of reliability of physiotherapy centers is good. The rest 22 (24%) are neutral. On the other hand, out of total 61 graduate respondents only 19 (31%) agree or strongly agree that the level of reliability of physiotherapy centers is good and 31 (51%) disagree or strongly disagree that the level of reliability of physiotherapy centers is good. The rest 11 (18%) are neutral. These findings imply that there is an inverse relationship between level of education of the respondents and the perceived level of reliability of physiotherapy centers. Findings in Table 18 confirm this variability of the importance of "Reliability" across the level of education. The value of Chi Square is significant at 0.00% level.

Table 17: Cross Tabulation of Education and Reliability

	Reliability					
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
Education						
Undergraduate	**5**	10	22	49	4	90
Graduate	**10**	21	11	14	5	61
Total	**15**	31	33	63	9	151

Table 18: Chi Square Test of Education and Reliability

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	24.112	4	0.00
Likelihood Ratio	24.527	4	0.00
N	151		

From Table 19, Table 21, Table 23 and Table 25, it is found that there is an inverse relationship between Education and "Responsiveness", Education and "Assurance", Education and "Empathy" and between Education and "Tangibles".

Table 19: Cross Tabulation of Education and Responsiveness

	Responsiveness					
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
Education	3	24	24	32	7	90
Undergraduate	8	22	19	11	1	61
Graduate						
Total	11	46	43	43	8	151

Table 20: Chi Square Test of Education and Responsiveness

	Value	**d.f**	**Asymp. Sig (2 sided)**
Pearson Chi Square	12.592	4	0.013
Likelihood Ratio	13.194	4	0.010
N	151		

Table 21: Cross Tabulation of Education and Assurance

	Assurance					
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
Education	**11**	19	23	34	3	90
Undergraduate	**2**	26	23	8	2	61
Graduate						
Total	**13**	45	46	42	5	151

Table 22: Chi Square Test of Education and Assurance

	Value	**d.f**	**Asymp. Sig (2 sided)**
Pearson Chi Square	18.736	4	0.001
Likelihood Ratio	2.808	4	0.001
N	151		

Table 23: Cross Tabulation of Education and Empathy

	Empathy					
	Strongly Disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
Education	**7**	16	27	37	3	90
Undergraduate	**3**	24	20	12	2	61
Graduate						
Total	10	40	47	49	5	151

Table 24: Chi Square Test of Education and Empathy

	Value	**d.f**	**Asymp. Sig (2 sided)**
Pearson Chi Square	12.073	4	0.017
Likelihood Ratio	12.276	4	0.015
N	151		

Table 25: Cross Tabulation of Education and Tangibles

	Tangibles					
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
Education	**4**	25	27	30	4	90
Undergraduate	**2**	18	25	14	2	61
Graduate						
Total	**6**	43	52	44	6	151

Table 26: Chi Square Test of Education and Tangibles

	Value	**d.f**	**Asymp. Sig (2 sided)**
Pearson Chi Square	2.906	4	0.574
Likelihood Ratio	2.930	4	0.570
N	151		

From the cross tabulation of "Gender" and "Reliability" (Table 28), it is found that out of total 83 male respondents 46 (55%) respondents agree or strongly agree that the level of reliability of physiotherapy centers is good and 23 (28%) disagree or strongly disagree that the level of reliability of physiotherapy centers is good. The rest 14 (17%) are

neutral. On the other hand, out of total 68 female respondents only 26 (38%) agree or strongly agree that the level of reliability of physiotherapy centers is good and 23 (34%) disagree or strongly disagree that the level of reliability of physiotherapy centers is good. The rest 19 (28%) are neutral. These findings imply that the perceived level of reliability of physiotherapy centers varies across gender. Male respondents perceive higher level of reliability and thus higher level of service quality than the female respondents. Findings in Table 29 confirm this variability of the importance of "Reliability" across gender. The value of Chi Square is significant at 0.00% level.

Table 28: Cross Tabulation of Gender and Reliability

		Reliability					
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Gender	Male	4	19	14	43	3	83
	Female	11	12	19	20	6	68
Total		15	31	33	63	9	151

Table 29: Chi Square Test of Gender and Reliability

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	13.646	4	0.009
Likelihood Ratio	13.873	4	0.008
N	151		

From Table 30, Table 32, Table 34, and Table 36, it is found that the levels of "Responsiveness", "Assurance", "Empathy" and "Tangibles" vary across gender and perceived levels of these factors are higher in case of male than in case of female respondents. Thus, male respondents' perceived service quality is higher than that of female respondents.

Table 30: Cross Tabulation of Gender and Responsiveness

		Responsiveness					
		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total
Gender	Male	3	24	26	25	5	83
	Female	8	22	17	18	3	68
Total		11	46	43	43	8	151

Table 31: Chi Square Test of Gender and Responsiveness

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	4.437	4	0.350
Likelihood Ratio	4.500	4	0.342
N	151		

Table 32: Cross Tabulation of Gender and Assurance

	Responsiveness					
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
Gender	9	25	20	28	1	83
Male	4	20	26	14	4	68
Female						
Total	13	45	46	42	5	151

Table 33: Chi Square Test of Gender and assurance

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	8.320	4	0.081
Likelihood Ratio	8.507	4	0.075
N	151		

Table 34: Cross Tabulation of Gender and Empathy

	Empathy					
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly agree**	**Total**
Gender	6	25	22	28	2	83
Male	4	15	25	21	3	68
Female						
Total	10	40	47	49	5	151

Table 35: Chi Square Test of Gender and Empathy

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	2.829	4	0.587
Likelihood Ratio	2.833	4	0.586
N	151		

Table 36: Cross Tabulation of Gender and Tangibles

	Tangibles					
	Strongly disagree	**Disagree**	**Neither agree nor disagree**	**Agree**	**Strongly Agree**	**Total**
Gender						
Male	2	24	27	25	5	83
Female	4	19	25	19	1	68
Total	6	43	52	44	6	151

Table 37: Chi Square Test of Gender and Tangibles

	Value	d.f	Asymp. Sig (2 sided)
Pearson Chi Square	3.353	4	0.501
Likelihood Ratio	3.578	4	0.466
N	151		

5. Limitation of the Study

The present study does not test the possible variability of Reliability, Assurance, Responsiveness, Empathy, and Tangibles across income levels of customers due to lack of information on monthly income of the respondents. Many of the respondents did not provide information about their monthly income. Howbeit, it is a quite plausible assumption that the perceived levels of these factors vary across income levels of the customers.

6. Conclusion and Generalization

From our statistical findings, we can conclude that the proposed five service quality dimensions or factors (reliability, assurance, responsiveness, empathy, and tangibles) do contribute in determining perceived service quality. Reliability is the most important factor followed by tangibles, and empathy is the third important factor followed by responsiveness. Assurance is found to be the least important factors. The present study

also finds that these five factors or dimensions vary across age, educational levels, and gender. The absolute and relative importance of factors determining perceived service quality vary from customers to customers, and perhaps, from service to service and from culture to culture.

7. References

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Appendix-1

Table 1: Descriptive Statistics

		N	Mean	Std. Deviation
Reliability	Strongly disagree	13	2.31	1.32
	Disagree	47	2.26	.97
	Neither agree nor disagree	46	3.57	.83
	Agree	42	3.83	.58
	Strongly agree	3	4.00	1.00
	Total	151	3.13	1.12
Responsiveness	Strongly disagree	13	2.54	.78
	Disagree	47	2.32	.96
	Neither agree nor disagree	46	3.11	.74
	Agree	42	3.48	1.11
	Strongly agree	3	4.33	.58
	Total	151	2.94	1.05
Assurance	Strongly disagree	13	2.00	1.41
	Disagree	47	2.53	.91
	Neither agree nor disagree	46	3.04	.73
	Agree	42	3.33	1.03
	Strongly agree	3	3.00	1.00
	Total	151	2.87	1.02
Empathy	Strongly disagree	13	2.08	.95
	Disagree	47	2.47	.91
	Neither agree nor disagree	46	3.24	.67
	Agree	42	3.50	.94
	Strongly agree	3	4.33	.58
	Total	151	2.99	1.00
Tangibles	Strongly disagree	13	2.77	1.01
	Disagree	47	2.34	.70
	Neither agree nor disagree	46	3.15	.79
	Agree	42	3.62	.88
	Strongly agree	3	3.67	.58
	Total	151	3.01	.95

Table 2: Descriptive Statistics

	N	Mean	Std. deviation
Reliability	151	3.13	1.12
Responsiveness	151	2.94	1.05
Assurance	151	2.87	1.02
Empathy	151	2.99	1.00
Tangibles	151	3.01	.95
Satisfaction	151	2.83	1.00
Gender	151	1.45	.50
Age	151	2.77	1.17
Education	151	1.40	.49

Table 5: Case Processing Summary of Age and Reliability

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Age*Reliability	151	100%	151	.0%	151	100%
Age*Responsiveness	151	100%	151	.0%	151	100%
Age*Assurance	151	100%	151	.0%	151	100%
Age*Empathy	151	100%	151	.0%	151	100%
Age*Tangibles	151	100%	151	.0%	151	100%

Table 16: Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Education*Reliability	151	100%	151	.0%	151	100%
Education*Responsiveness	151	100%	151	.0%	151	100%
Education *Assurance	151	100%	151	.0%	151	100%
Education *Empathy	151	100%	151	.0%	151	100%
Education *Tangibles	151	100%	151	.0%	151	100%

Table 27: Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender*Reliability	151	100%	151	.0%	151	100%
Gender*Responsiveness	151	100%	151	.0%	151	100%
Gender *Assurance	151	100%	151	.0%	151	100%
Gender*Empathy	151	100%	151	.0%	151	100%
Gender*Tangibles	151	100%	151	.0%	151	100%

Appendix-2

Sample Questionnaire

We will appreciate if you kindly cooperate with us to know your opinions about various dimensions of quality of services provided by these centers. Please circle one and only one answer for each of the following six statements:

1. Physiotherapy centers have the ability to perform the promised service dependably and accurately.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1

2. Physiotherapy centers are willing to help customers and provide prompt service.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1

3. Employees' are knowledgeable and courteous and they have the ability to inspire trust and confidence in the mind of the customer.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1

4. Physiotherapy centers provide caring, individual attention to the customers.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1

5. Physiotherapy centers have good physical facilities, all necessary equipment and trained personnel.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1

6. Service quality of physiotherapy centers is satisfactory.

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
5	4	3	2	1

7. Gender of the Respondent:

Male	Female
1	2

8. Age of the Respondent:

Less than 20	20 to less than 30	30 to less than 40	40 to 50	Above 50
1	2	3	4	5

9. Education Level of the Respondent:

Undergraduate	Graduate
1	2

Thank you for your cooperation.