Detecting Service quality influence using DINESERV model: A study with the reference to restaurants in Dhaka city

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Abstract

Number of studies related to assessing service quality through Service quality gap model, known as SERVQUAL model in tourism and hospitality industries is seen either originally or with developed version. The main aim of this study is focused assessing empirically on the developed version of SERVQUAL model for measuring the service quality for restaurant services known as DINESERV, in the context of restaurant services in Dhaka city, Bangladesh. The comprised 29 attributes of SERVQUAL model is DINESERV, that is used for designing the questionnaires in this study, which aimed to measure the gap between expectation and perception level of customers in restaurant service. However, 110 valid questionnaires from 150 has been statistically analyzed in SPSS20. This empirical study makes a glance that 25 indicators have rooms to make more improvement due to persisting gap between expectations and perceptions, meanwhile, results and findings have been complied with the identification of strength and weakness of service quality of selected oldest restaurants of Dhaka city, who can uphold their dignity through the possible suggestions from this study.

Keywords: DINESERV, SERVQUAL, service quality, restaurants, Dhaka city.

1. Introduction

Service quality in any organization is the most recognized and important factor to be considered. Service quality is such factor for service providers that have a direct impact on customer. Service quality brings the result of comparison among the expectations about service and perceptions on the performed service that is given to customers (Chun & Nyam-Ochir, 2020). Remembering the fact of impact of service quality in customer satisfaction and higher profitability, service providers acknowledge experiences from many sides to measure and to improve service quality. Service providers try to retain their customers to be in this competitive market. Service quality has been emerged and recognized as the key strategy value for gaining competitive advantages to business (Lee et al., 2016). Development of complex set of restaurant attributes are constantly focusing by the restaurant owners for providing best dining experiences among customers. Variety of measurement tools and techniques are deployed to assess service quality among which SERVQUAL by Parasuraman et al. (1988) is mostly adopted in previous studies. However, to measure service quality in restaurant settings the most fit and reliable instruments DINESERV, developed by Stevens et al. (1995), which is a modified version of SERVQUAL dimensions comprised of 29 instruments. The modified version DINESERV is used in this study to empirically assess the service quality in ten restaurants which is fifteen years old and running with dignity, in Dhaka city.

Restaurant industry is highly booming its growth towards business sector of Bangladesh. According to Bangladesh Bureau of Statistics (BBS) on the FY2019, the size of sector is Tk.2.85 billion (Bangladesh, 2019). However, Dhaka is assembled with around 1000 restaurants listed from both the South and North city corporations of Dhaka metropolitan (Abrar, 2020, June 13). Modified version of DINESERV is used in this study to empirically assess the service quality in ten restaurants in Dhaka city, specifically fifteen years old. This study is intended to bring the most influential service quality dimensions that help these restaurants to run successfully in industry as well DINESERV will point out those factors that is needed to be improvised in service quality within, which will also carry out as recommendations for other kind of restaurants that is struggling to establish. Studies on assessing service quality in restaurant industry of Bangladesh have been focused by many researchers, specializing in some certain dinning arrangements: (Hossain et al., 2018; Hossain, 2019; Huda & Islam, 2019; Islam et al., 2018; Rahman et al., 2012). Most of the studies are influencing in assessing service quality through SERVQUAL model and very few using DINESERV, whereas, findings of this study through DINESERV model focusing the oldest restaurants of mega city Dhaka is very much time befitting for restaurant owners to develop a deep insights of understanding with customers to uphold their dignity, that will guide other type of restaurant owners of country and same type of international within. This study is classified under the brief review of service quality measurement in restaurant industry, and then it goes with the methodology part with discussions of findings and followed by the conversations with ends with limitation that directs future scope of the study.

2. Review of Literature

Service quality is attempted to be the most important issue regarding any business issues. Managing service quality is a matter of concern (Gogoi & Jyoti, 2020). It is needed for service quality to enhance business to further. Service quality is represented in various researches in order to fulfill customers' demands and to match such with service providers (Markovic et al., 2013). Service quality model is mostly known as SERVQUAL is a multi-item scale developed to assess customer perceptions of service quality in service oriented organization or retail business. SERVQUAL took shape and was developed during the 88's by Zeithaml et al. (1988), originally developed from the GAP model. These dimensions are mainly focused on human aspects of service delivery, for measuring consumer perception of service quality which is known as SERVQUAL, where the dimensions collapsed from 10 to 5 as from early research of the same-

Tangibles- physical facilities, appearance of personnel and equipment

Reliability- ability to perform the promised service dependable and accurately

Responsiveness- willingness to help customers and provide prompt service

Assurance-ability of the organizations employees to inspire trust and confidence in the organization through their knowledge and courtesy

Empathy- personal attention given to customer.

SERVQUAL can help to assess the customers' satisfaction and service quality perceptions in various ways. It focusses on the core areas that are needed to develop in service quality for the organization where the management need to focus as it is already said earlier that, customer satisfaction in given service quality is important to exist in this competitive economy market.

Customers perception of service experiences are key elements for the success of every service organizations (Laming & Mason, 2014) and the degree in which customers perceive every Service's attributes directly affect customer's attitude when they are asked to issue an overall judgment about their experience of the Quality of Service delivered (Brida et al., 2016). Hence, Knutson et al. (1996) stated perceived service quality as collaboration between three independent variables as normative expectations predictive expectations and actual service quality which actually lead to the least expectations of customers on what should happen, the worthwhile perceptions of actual service.

According to Adeinat (2019), DINESERV is at big use of measuring restaurants performance because of its capacity to distinguish overall the quality scores as whole with similar service under performance. DINESERV is a very well established and trustworthy and very easy measurement tool of measuring customers satisfaction towards restaurant's service. In many research, shortage of measuring service quality with SERVQUAL several limitations have come up. According to Hansen (2014), the objective of DINESERV is to provide restaurant operators and its owners a path to have a concrete knowledge about their service quality and its acceptance to customers. It has an adoption of dimensions from SERVQUAL model and made fit into restaurant industry, developed by Knutson et al. (1996), whereas it is much noticeable uses of SERVQUAL in various studies of : (Fu & Parks, 2001; Marković et al., 2010; Ryu & Han, 2010; Wu & Liang, 2009). Meanwhile, DINESERV is much more identified as inspiration of SERVQUAL model that finds gap theory model comprises with

29 items and a performance –based measurement tool to measure the perceptions of service outcomes (Keith & Simmers, 2013). The 29 items survey instrument includes 10 items contains in tangibile,5 in reliability,3 in responsiveness,6 in assurance and 5 in empathy.

3. Methodology

This study is going to empirically assess the service quality of ten restaurants of fifteen years old; settings in Dhaka city. Level of perceptions and expectations among restaurants services will be empirically tested in this study. Through the following research objectives, this study is intended to look forward from the selected ten restaurants of Dhaka city.

1. To identify the degree of customers' expectations regarding restaurants service quality.
2. To determine the degree of customers' perceptions regarding restaurants service quality.
3. To examine the alterations between perceived and expected service from restaurants.

Following hypotheses have been framed in terms of research objectives:

H₁: Empathy is the most important expected service quality dimension of restaurants settings in Dhaka city.

H₂: Empathy is the most important perceived service quality dimension of restaurants settings in Dhaka city.

H₃: A significant difference persists among expected and perceived service quality in restaurant settings in Dhaka city.

These questions were measured on the basis of 29 attributes of DINESERV model (Knutson et al., 1996), that consists in extended five dimensions of DINESERV dimensions: tangibles, reliability, empathy, assurance, responsiveness on ten selected restaurants in Dhaka city which are fifteen years old, respectively. The given statement have been weighed using five point likert scale with strongly disagree as 1 and strongly agree as 5. The 150 questionnaires distributed to selected ten restaurants with the help of restaurants staffs to those participants that have been willingly participated after dining experience, with the availability of local food, known as 'deshi food' and shahi food which is known as rich food as well. Data analysis based on number of 110 valid questionnaires, with the response rate 73.3%. A convenience sampling method deployed to collect data. Statistical package of SPSS 20 used for analyzing data. To encounter the surveys areas, descriptive, bivariate (paired sample t-test) statistical analysis were deployed as well (Kothari, 2004). Descriptive statistics used to get the first two answers that measured the demographic profile to examine the service quality expectations and perceptions and the last answer was detected using paired sample t-test to know the how the two scores of perceptions and expectations of service quality are significantly different.

4. Research Findings

Through descriptive statistical analysis, respondents of demographic variables have been resulted as shown in the Table 1, whereas important demographics has been chosen, as income, gender response, different age group matters in response of satisfaction from service quality of restaurants (Mhlanga et al., 2015). This study has given importance to Gen X, Gen Y and Gen Z as aged group to persist real scenario and detection of gap from taking certain age group in studies of (Osman et al., 2018; Polas et al., 2020).

Table1: Demographic characteristics of respondents (N=110).

Particulars	Percentage	Particulars	Percentage
<i>Gender</i>		<i>Age</i>	
Male	46.4%	20----30	8.2%
Female	51.8%	30----40	19.1%
Wish not to answer	1.8%	40-----50	38.2%
		50-----60	20.9%
		60—above	13.6%
<i>Education Level</i>		<i>Occupation</i>	
College	35.5%	Business	20.9%
University	59.1%	Service	44.5%
None	5.5%	Student	34.4%
<i>Income (BDT)</i>			
15000---- 20000	21.8%		
20000----30000	38.2%		
30000----above	40%		

The above demographic characteristics previewed female respondents (51.8%) which slightly outnumbered male respondents (46.4%). This study also preferred with respect, those respondents who do not wish to mention gender and that respondent counted (1.8%) as valued customers. Education levels were mostly young generation of university level and college level, whereas some respondents were also found not having educational background. However, customers' perceptions and expectation level measured on five-point likert scale where the higher the scores, the results are positively entitled for the research. Bellow Table (2) are the results of bivariate statistical analysis inspired from [Hossain et al., \(2018\)](#); [Markovic et al., \(2013\)](#), following future suggestions made on such studies, whereas original attributes of DINESERV [Knutson et al. \(1996\)](#) that has been comprised in this study as this is the very first scenario in the context of restaurants of Dhaka city, in an intention with the best possible output through comparison for research results of customers' expectations and perceptions are illustrated.

Table 2: Expectations and perceptions of customers of service quality in restaurants of Dhaka city.

	Expectations		Perceptions			
Attributes	Mean ^a	SD	Mean ^b	SD	Gap	t-value
TA1- Visually attractive building exteriors and parking areas.	2.45	0.992	3.27	0.877	-0.82	-6.612*
TA2- Visually attractive dining areas	3.29	1.112	3.26	0.925	-0.03	.189

TA3- Staff members are neat and clean with well dress up.	2.83	1.148	2.85	0.727	0.02	-3.289*
TA4- Décor is maintaining with its image and price is in range.	3.09	1.17	4.1	0.729	1.01	1.637
TA5- Menu with easily readable	3.73	0.845	3.32	0.908	-0.41	-3.358*
TA6- Visually attractive menu that results the restaurants image.	3.83	0.8	2.22	0.902	-1.61	4.899*
TA7- Comfortable dining area with space to move around.	3.23	0.699	2.14	0.67	-1.09	8.282*
TA8- Rest rooms are clean all way	2.23	0.725	3.05	0.696	0.82	.897
TA9- Dining areas are clean .	3.27	0.887	2.84	0.773	-0.43	2.139*
TA10- Seats are comfortable in dining area.	3.24	0.703	2.21	0.863	-1.02	4.113*
Tangible (Mean)	3.12		2.93		-0.356	
RL 1- Serves in promised time.	2.69	0.571	3.18	0.623	0.49	6.067*
RL2- Corrects mistakes quickly.	2.59	0.494	3.88	0.775	1.29	-3.184*
RL3- Can be depend with consistency.	3.45	0.5	4.51	0.714	1.06	-5.023*
RL4- Guests are accurately checked.	2.48	0.52	3.42	0.828	0.94	-12.315*
RL5-Serves food as exactly ordered.	2. 93	1.073	2.33	0.869	-0.6	-6.272*
Reliability (Mean)	2.83		3.46		0.636	
RN1- Employees help each other during busy time to maintain prompt and quality of service.	2.96	0.716	4.51	0.714	1.55	-4.584*
RN2- Deliver quick service	2.54	0.631	3.42	0.828	-0.88	6.032*
RN3- Deliver extra effort to attend special request.	2.66	0.494	2.33	0.869	-0.38	-11.284*
Responsiveness (Mean)	2.72		3.42		0.1	
AS1- Ability of employees to answer your queries entirely.	2.84	0.711	2.61	0.607	-0.23	-.842
AS2- You are comfortable and confident dealing with employees.	3.56	0.516	1.89	0.817	-0.95	-13.017*
AS3- Personal who attends to inform about menu items, ingredients and preparation method.	4.22	0.722	4.22	0.669	-0.11	9.385*
AS4- You feel safe during your visiting hours.	3.53	0.906	3.14	0.772	-0.39	-8.899*
AS 5- Personnel are well trained, experienced and capable.	3.31	0.832	2.15	0.68	-1.16	11.281*
AS6- Management supports employees to ensure their best performance.	3.95	0.913	2.59	0.805	-1	12.203*
Assurance (Mean)	3.57		2.75		-0.64	

EM1- Rather considering rules and regulations, personal handles your individual needs and wants.	4.86	0.761	3.29	0.746	-1.57	6.838*
EM2- You are treated specially.	3.16	0.784	3.61	0.755	0.45	5.845*
EM3- Personal needs and wants are anticipated.	3..86	0.804	3.37	0.648	-0.49	2.155*
EM4- Employees reassure for any kind of misconduct and treat with sympathy.	3.86	0.76	3.57	0.78	-0.29	-2.243*
EM5- Occupy the customers' best attention in sentiment.	4.22	0.711	3.59	0.682	-0.63	2.585*
Empathy (Mean)	3.99		3.49		-0.506	
Total mean (29 attributes)	3.25		3.21		-0.15	

Note: Ranges of expectation **Mean**^a 1 to 5; ranges of perceptions **Mean**^b 1 to 5; SD-standard deviation and *t-test (2-tailed Sig.) $p < 0.05$.

In comparing research findings of customers' expectation and perceptions of restaurants service quality around Dhaka city where it can be decided as customers' perceptions is lower than expectations. Overall gap resulted as -0.15 which indicated as the peak level of service quality. The largest gap identified in assurance (-0.64) and lowest gap identified in tangible mean (-0.35). In sum up of total 8 out of 29 gaps indicating positively that customers' expectations have been exceed and they are satisfied in regard of these attributes. Meanwhile, other 21 gaps that represent negatively have more scope to be developed. In restaurant services, the dimensions of empathy resulted the highest mean score in the expectation (3.99) and in perception as well (3.99) scale, irrespective to that, the lowest mean score resulted in the dimension responsiveness (2.75). In terms of highest expectation, items recognized as occupy the best customers attention in sentiment, rather considering rules and regulations personnel handles individuals needs and wants, personal needs and wants are anticipates, employees reassures of any kind of mistakes, menu easily readable and menu that that goes with image of restaurants. From the perception point of view, highest items recognized as personnel attends customers queries despite of rules and regulation, customers are treated specially, employees help each other during busy time, décor is maintaining with price, can be depend with consistency and corrects mistakes quickly. On the other hand, the lowest expectation items were recognized as, rest rooms are clean all way, seats are comfortable in dining area, staff members are neat and clean, serves in promised time, corrects mistakes quickly, guests are accurately checked, serves food exact orders, deliver quick service, deliver extra effort to attend special request, ability of employees to answer queries entirely. In the perception, items that are ranked in lowest are: comfortable dining area, customers are comfortable while dealing with employees, personnel are well trained and experiences, management support to employees to deploy their best support, ability of employees to answer queries entirely, deliver extra effort to attend special request, serves food exactly ordered, seats are comfortable within dining area, dining areas are clean, comfortable dining areas with space to move, visually attractive menu with image and staff members are neat

and clean. In the results of table 2, indicate that there are variations which are significant statistically, in the responses of mean of all 29 attributes. All 25 variables from 29 attributes of 5 dimensions were significant statistically that confirms hypothesis H³.

5. Conclusion

The aim of this research paper was to investigate empirically service quality of ten restaurants around Dhaka city, the capital of Bangladesh, through three research objectives. Statistical analysis has been done to identify the level of expectations and perceptions, as well to determine the differences among scores. Consequently, all attributes of customers expectations and perceptions of restaurants service quality of Dhaka city were examined empirically. Therefore, all hypothesis and research questions were tested and answered. Descriptive analysis suggests from the results that the items that are importantly belongs to empathy dimensions with highest scores of means. This indicates that hypothesis H¹ and hypothesis H² is accepted.

The results of analysis from t-test, which showed differences that is significant among expectations and perceptions, where the majority of attributes in a room of more improvement. However, managers of restaurants need to have special attention different demographic attitudes of customers as satisfaction differs from each characteristics and that is what is needed by the managers through their service to be in the competition.

Meanwhile, expectations and perceptions of another largest division of Bangladesh, known as Chattogram has been developed by [Hossain \(2019\)](#), which only focused fine dining and fast food restaurants, as well in the paper of [Markovic et al. \(2013\)](#), determined reliability as the most significant dimension in the restaurant settings of Croatia. Using DINESERV model for measuring service quality of restaurants in Dhaka city is being carried out for the first time through this study in Bangladesh. This study are significantly important for the management implication to carefully overlook on the subjects matters to so many negative impressions on perceptions items that will help to sustain in competitive economy.

However, limitations of this study are selection of restaurants can be more with lowest time framing. One more limitation can be determined of taking only domestic customers are respondents whereas, such study can take further, with both national and international participants in more restaurants, which might flourish the results more generalize as DINESERV [Knutson et al. \(1996\)](#) is the most fittest instruments to measure service quality in restaurant settings.

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