Service Quality Variance across Demographic Variables:
An Empirical Assessment of Hotel Industry in Northern India

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ABSTRACT
Service operations worldwide are affected by the new wave of quality awareness and importance. As a result, service-based companies are obligated to provide excellent services to their customers in order to have sustainable competitive advantage especially in the current trend of trade, liberalization and globalization. Since service quality predominantly is about meeting customers’ needs and requirements and how well the service level delivered matches customer expectations, delivering high quality services will enable companies to achieve customer satisfaction and, in turn, to increase their repurchase intention. Moreover, successful hotel industries of the future will be those that will analyze markets based on customer perceptions, design a service delivery system that will meet customer needs, and enhance the level of service performance in order to delight their customers rather than merely satisfying them. In view of this well-known belief, an attempt has been made in the present study to measure service quality variation in hotel industry of northern India across demographic variables with a view to offering suggestions to make the overall services in hotel industry more effective and efficient. The study is based on data gathered from six hundred sixty three (663) respondents; the results lead us to the conclusion that service quality of hotels in Punjab is comparatively better as compared to the hotels of Jammu and Kashmir, and suggests improvement in all dimensions to augment the quality of hotel services. Finally, the study also brought to light that there exists an insignificant variation in service quality on majority of demographic variables in all hotels of northern India under reference.

Keywords: Service Quality, Customer Satisfaction, SERVQUAL, SERVPERF, Demographic Variables, Hotel Industry and Northern India.

INTRODUCTION:
The Indian hospitality industry has emerged as one of the key industries driving the growth of the services sector and, thereby, the Indian economy. The delivery of high-quality customer service plays an important role in the success of the hospitality business. By providing high quality services, hospitality procedures are more likely to attract both first time and repeat visitors. Hotel guests who have a quality experience are likely to revisit and to communicate favorable reports to friends and relatives. This creates both repeat business and potential for new business. Unfortunately reverse is also possible, if quality hospitality services are not provided. As a result, the unhappy/dissatisfied customers/hotel guests will not return the same hotel again and express negative comments about the hotel and damage its market reputation. Moreover, past researches have revealed that service quality is clearly linked to customer satisfaction, increased willingness to pay higher prices for high quality services, profitability, repeat purchase behavior and positive word of mouth and increased customer loyalty (Berry, et.al., 1994; Scheneider and Chung, 1996; Magi and Julander, 1996; Lee, et. al., 2000). Providing high quality services to customers depends on the hotels ability to exceed the expectations of the guests. Measuring service quality perceived by customers helps in initiating quality improvement areas in a
hotel, correcting quality problems and seeking new ways of innovation (Raghu, 2009). Therefore, it becomes vital for hospitality industry to study the quality of service the hotels are offering to its guests from the customers’ perspective.

OBJECTIVE OF THE STUDY:

In view of the growing importance of service quality in hotel industry, an attempt has been made in the present study, to measure service quality of hotel industry in northern India under study, across demographic variables. Such an analysis will provide hotel industry a quantitative estimate of their services being perceived by their respective customers and also to suggest, on the basis of study results, ways and means for improving service quality of hotel "industry with a view to make overall services more effective and efficient.

REVIEW OF LITERATURE:

Service Quality Conceptualization:

Quality initiatives date back to the 1920’s when manufacturers began to focus on controlling the physical production of goods and the internal measurements of the production process (Kandampully, 2002). Quality has taken on a variety of definitions and no consensus has been reached as to how to define or evaluate this elusive concept. Reeves and Bednar (1994) defined quality as: Quality Excellence; Quality Value; as Conformance to Specifications; Quality as Conformance to Requirements; Quality as Fitness for Use; Quality as Loss Avoidance; and, Quality as Meeting and/or Exceeding Expectations. Quality can also be defined as: delighting the customer (Ermer and Kniper, 1998; Chelladurai and Chang, 2000); and, satisfying or meeting implied needs (Chelladurai and Chang, 2000). The broad nature in which quality is defined suggests that it is evaluated based on the targets or features of a product or service, the standard or criteria applied in the judgment, and the evaluator or arbiter of quality (Chelladurai and Chang, 2000). Most of the efforts in defining and measuring quality are coming from the goods sector. According to the prevailing Japanese philosophy, quality is “zero defects – doing it right the first time”. Garvin (1983) measures quality by counting the incidence of “internal” failures (those observed before a product leaves the factory) and “external” failures (those incurred in the field after a unit has been installed). Crosby (1979) defines quality as “conformance to requirements”. Requirement must be clearly stated so that they cannot be misunderstood. Measurements are then taken continually to determine conformance to those requirements. The non-conformance detected is the absence of quality. Quality problems become non-conformance problems, and quality becomes definable. However, understanding of quality in goods and its importance is not sufficient to understand service quality. Four well documented characteristics of services – intangibility, heterogeneity, perishability and inseparability – must be acknowledged for a full understanding of service quality (Parasuraman, et.al., 1985).

Intangibility: Services are activities or benefits that are essentially intangible, cannot be prefabricated in advance and do not involve ownership of the title (York, 1993). They may include the traditional personal assistance service, for instance, baby-sitter, gardener etc. The fix-IT service such as mechanic, repairman, etc. and finally the value added service as the least tangible of all (Cotter, 1993). Most services are intangibles ( Bateson 1977; Berry 1980; Lovelock 1981), because they are performances rather than objects. Precise manufacturing specifications concerning uniform quality can rarely be set. Most services cannot be counted, measured, inventoried, tested and verifed in advance of sale to assure quality (Parasuraman, et.al., 1985). Because service is not an object but a phenomenon, it is difficult for customers to evaluate the quality of services as they evaluate physical goods. Because of intangibility, the firm may find it difficult to understand how customers perceive their services and evaluate service quality (Zeithaml 1981).

Heterogeneity: Services, especially those with high labor content, are heterogeneous; their performance often varies from producer to producer, from customer to customer, and from day to day (Parasuraman, et.al., 1985). Consistency of behavior from service personnel (i.e. uniform quality) is difficult to assure (Booms and Bitner 1981) because what the firm intends to deliver may be entirely different from what customer receives.

Inseparability: Production and consumption of many services are inseparable (Regan 1963; Carmen and Gronroos 1978; Langeared 1980; Upah 1980). Services involve simultaneous production and consumption. Inseparability implies that service is simultaneously produced and consumed while physical goods are first produced, then sold and finally consumed. Inseparability of production and consumption often forces the involvement of the customer in the production process. Inseparability also means that the producer and the vendor often compromise on economic entity (York 1993). In labor intensive services for example, quality occurs during service delivery, usually in an interaction between the client and the contact person from the
service firm (Lehtinen and Lehtinen 1982). In this situation, the customer input becomes critical to the quality of service performance.

**Perishability:** The inseparability of production and consumption in turn results inability to store service capability. Perishability means that services cannot be produced in advance, inventoried and later made available for sale. Services are performances that cannot be stored (Zeithaml, 1998). It is often difficult to adequately match up with demand and supply such as those corrective maintenance works, for instance, heating and cooling repairs. Although the concept of service quality have been studied by many researchers for several decades, there is no consensus about the conceptualization of service quality (Cronin and Taylor, 1982) as different researchers has focused on different aspect of service quality. Reeves and Bednar (1994), noted that there is no universal, parsimonious or all encompassing definition or model quality. Clearly, as Robinson (1999) concludes that “It is apparent that there is a little consensus of opinion and much disagreement about how to measure service quality” Parasuraman, et al., (1985) defined service quality as: “the degree and direction of discrepancy between customers’ perceptions and expectations in terms of different but relatively important dimensions of the service quality which can affect their future behaviour”. In line with this thinking, Gronroos (1982) developed a model in which he contends that customers compare the service they expect with perceptions of the service they receive in evaluating service quality. Also, Smith and Houston (1982) claimed that satisfaction with service is related to confirmation or disconfirmation of expectations. They based their research on disconfirmation paradigm, which maintains that satisfaction is related to size and direction of the disconfirmation experience where disconfirmation is related to person’s initial expectations. Similarly Lewis and Booms (1983) stated that “service quality is a measure of how well the service level delivered matches customer expectations. Delivering quality service means confirming to customer expectations on a consistent basis”. Examination of these above writings and other literature on service marketing suggested three underlying themes:

- Service quality is more difficult for the customer to evaluate than goods quality.
- Service quality perceptions result from a comparison of customer expectations with actual service performance.
- Quality evaluations are not made solely on the outcome of the service; they also involve evaluations of the process of service delivery.

Most writers agree that customer’s expectations are rarely concerned with single aspect of the service package, but rather many aspects. Gronroos (1985), for example, investigates an attitudinal construct, resulting from the discrepancy between customer’s expectations and their perceptions of the quality of service actually delivered (Mangold and Emin, 1990). Furthermore, when decision makers in service organization, such as banks and hospitals are asked what constitutes quality in their service, the answers are less well-defined and tend to vary more from individual to individual. Consequently, the measurement, monitoring and improvement of quality become an elusive task. While the concept of service quality is difficult to define, the fact is, that both customers and service providers evaluate service quality on a daily and revolving basis (Mangold and Emin, 1990).

From the above discussion it is clear that service quality revolves around customer expectation and their perceptions of service performances. Hence it is characterized by the customers’ perception of service and the customers are the sole judges of the quality. Parasuraman et. al., (1991) rightly explained that consistent conformance to expectations begins with identifying and understanding customer expectation, only then the effective service quality strategies can be developed.

**Research Hypotheses:**

Service organizations need to provide constant service quality in order to gain and maintain competitive position in the market. In order to study service quality across demographic variables, respondents were divided into different groups based on demographic variables like: age, gender and education. Mean score were calculated for each group separately. F test, t test, post hoc test and effect size have also been performed to test the significant differences and hypothesis. The result of such an analysis are presented in tables 4-7.

Many researchers, Akbar, and Parvez, (2009); Bhat, (2012); Beheshti, et. al., (2012); Eugenia, et. al., (2004); Kailesh, (2011); Lin, et. al., (2001); Metwally, (2002); Spathis, et. al., (2004); Sudesh, (2007); Vija y and Selvaraj, (2012) and Webster, (1989) have studied variation in the quality of hotel services across demographics. Variables and found that evaluation of quality in hospitality industry depends on the behavior of customers towards those services and behavior of customers is influenced by their socio-economic characteristics. Shergill and Sun (2004) found that different perceptions of hotel service quality existed between business customers and leisure customers in terms of different demographic characteristics, such as gender, age, education, purpose of
visits and ethnic background. The differences in gender, age, and other demographic characteristics suggested that hotel managers need to become aware of customer perceptions of service quality, which always remained unstable across demographic characteristics. Similarly, Tabasum et al., 2004 conducted a study to assess service quality variation of customers in terms of demographic characteristics and concluded that perception about service quality varies among customers in terms of age, gender, and occupation differences. In addition, the authors commented that few researchers have focused on the influence of different demographic characteristics on customer perceptions of service quality. In line with the above research studies, following hypothesis were also framed in the present study:

H1: Service quality in hotels varies significantly across all age groups;
H2: Service quality in hotels varies significantly across gender groups;
H3: Service quality in hotels varies significantly across all educational groups;

Sample Design:
In order to determine the sample size for the study, a pilot survey was conducted in February, 2016 and the investigator took a random sample of 100 guests who were staying in different hotels of northern India (Jammu & Kashmir, Punjab). Selected guests were asked limited questions related to hotel services with the aim to know whether they had ever used hotel services. Based on the pilot survey, the investigator found that almost 75 guests had used the hotel services earlier (i.e. 75% of the 100 guests) and remaining had not used before. On the basis of this information, following formula has been used to work out the appropriate sample size:

\[ S = X \cdot N \cdot P(1-P)/d^2(N-1)+\chi^2(1-P) \]

(Krejcie & Morgan, 1970)

Where,
- \( S \) = sample size.
- \( X^2 \) = Chi square
- \( N \) = population size.
- \( P \) = significance level
- \( d \) = degree of freedom

As a result, a sample of approximately 663 customers must be taken from the sample organization. The sample size consisting 663 (six hundred sixty three) in two selected states of northern India was proportionately distributed after considering availability of hotels rooms. This was further proportionately distributed based on classification of hotels as shown in following Table 3.1. The data was collected in a period of six months by spending 3-4 hours a day and investigator took every care that the guests staying in different hotels already contacted should not be repeated. The questionnaire were personally distributed and collected. Out of 800 (eight hundred) questionnaires, 665 (six hundred sixty five) were found usable, thus representing a response rate of 83.85%. The questionnaires were distributed and collected personally representing a 100% response rate. The data was then analyzed with the help of SPSS 20 and Amos version 20 data base.

| Category of Hotels | Jammu & Kashmir | Punjab | Total |
|--------------------|-----------------|--------|-------|
| A                  | 32              | 62     | 94    |
| B                  | 47              | 89     | 136   |
| C                  | 55              | 102    | 157   |
| D                  | 40              | 91     | 131   |
| E                  | 33              | 112    | 145   |
| **Total**          | **207**         | **456**| **663**|

Research Instrument:
For carrying out the present study, SERVPERF scale has been used (Cronin and Taylor, 1992). Cronin and Taylor (1992, 1994) suggested that the conceptualization and operationalization of service quality as presented in SERVQUAL is inadequate. They questioned the validity of gap theory that suggests the difference between customer’s expectations about performance of service providers and their assessment of the actual performance drive their perception of service quality. Other objections against the SERVQUAL model relate to use of (P-E)
gap scores, length of the questionnaire, predictive power of the instrument, etc. (Babukus and Boller, 1992; Cronin and Taylor 1992; Dabholkar et.al., 2000; Teas 1993, 1994). Cronin and Taylor (1992) found the SERVQUAL Scale as confusing with service satisfaction. They opined that Expectation (E) component of SERVQUAL be discarded and instead Performance (P) component alone be used. They proposed that what is referred to as the ‘SERVPERF’ Scale. Besides theoretical arguments, Cronin and Taylor (1992) provided empirical evidence across four industries (namely banks, pest control, dry cleaning and fast food) to corroborate the superiority of their “performance-only” instrument over disconfirmation based SERVQUAL Scale. Being a variant of the SERVQUAL Scale and containing perceived performance component alone, ‘Performance only’ scale is comprised of only 22 items. This way SERVPERF becomes more efficient to administer in practical situations (Duncan and Elliot, 2004). Under the SERVPERF, a higher perceived performance implies higher service quality and higher customer satisfaction (Jain and Gupta, 2004). In equation the SERVPERF can be expressed as:

\[ SQ_i = \sum_{j=1}^{K} P_{ij} \]

Where \( SQ_i \) = Perceived service quality of individual “I”

\( K \) = number of attributes/items

\( P\) = Perception of individual “I” with respect to performance of a service firm on attribute “j”

Methodologically, the SERVPERF scale represents marked improvement over the SERVQUAL scale. Not only is the scale more efficient in reducing the number of items to be measured by about 50 percent, it has also been empirically found superior to the SURVQUAL scale for being able to explain greater variance in the overall service quality and customer satisfaction measured through the use of single-item scale. This explains the considerable support that has emerged overtime in favour of SERVPERF scale (Babukus and Boller, 1992; Bolton and Drew, 1991; Boulding et.al.1993; Churchill and Suprenant, 1982; Gotlieb, Grewal and Brown, 1994). Realizing the superiority of SERVPERF over the earlier models of service quality, the use of SERVPERF scale has been made to measure the service quality in the hotels under study. The questionnaire for the study was divided into two parts. Part I was designed to measure the perceptions of service quality; Part II to explore the demographic profile of respondents. For measuring the service quality, SERVPERF instrument has been used.

| Table 2: Reliability Analysis |
|-----------------------------|
| **Constructs** | **Cronbach’s alpha** |
| Tangibility | .916 |
| Reliability | .829 |
| Responsiveness | .734 |
| Assurance | .867 |
| Empathy | .935 |
| **Overall Service quality** | **.858** |
Table 3: Factor loading for Service Quality

| Items      | Tangibility | Reliability | Responsiveness | Assurance | Empathy |
|------------|-------------|-------------|----------------|-----------|--------|
| Tangibility 2 | 0.66        |             |                |           |        |
| Tangibility 3 | 0.54        |             |                |           |        |
| Tangibility 4 | 0.60        |             |                |           |        |
| Tangibility 5 | 0.82        |             |                |           |        |
| Tangibility 7 | 0.67        |             |                |           |        |
| Reliability 1 | 0.64        | 0.64        |                |           |        |
| Reliability 2 | 0.66        |             |                |           |        |
| Reliability 3 | 0.70        |             |                |           |        |
| Reliability 4 | 0.81        |             |                |           |        |
| Reliability 6 | 0.56        |             |                |           |        |
| Reliability 7 | 0.87        |             |                |           |        |
| Responsiveness 1 | 0.52    |             |                |           |        |
| Responsiveness 3 | 0.65    |             |                |           |        |
| Responsiveness 4 | 0.70    |             |                |           |        |
| Responsiveness 5 | 0.57    |             |                |           |        |
| Responsiveness 6 | 0.68    |             |                |           |        |
| Responsiveness 7 | 0.91    |             |                |           |        |
| Assurance 1  | 0.68        |             |                |           |        |
| Assurance 2  | 0.73        |             |                |           |        |
| Assurance 3  | 0.63        |             |                |           |        |
| Assurance 4  | 0.80        |             |                |           |        |
| Empathy 1    | 0.82        |             |                |           |        |
| Empathy 2    | 0.67        |             |                |           |        |
| Empathy 5    | 0.80        |             |                |           |        |
| Empathy 6    | 0.89        |             |                |           |        |
| Empathy 7    | 0.60        |             |                |           |        |

Result of the Study:
Service organizations need to provide consistent service quality in order to maintain/increase their profitability. In an attempt to study whether service providers, under study, provide the same service quality to all their customers, respondents were divided into different groups, based on demographic variables like age, gender and level of education. Service quality scores for different groups and for each service provider were computed accordingly which are presented below. t-Test and F-test were accordingly performed to determine the level of significant difference among all groups.

Service Quality Variation and Age:
With a view to measure service quality variation, if any, of different age groups of the sample organization, respondents were categorized into four groups: 20-30 years, 31-40 years, 41-50 years and above 51 years of age. SERVPERF score were computed for each group and for each category of hotel customers separately followed by F test, post hoc test and the effect size to test the significant differences, if any, and to test the research hypothesis. The data on Table 4 clearly reveals that there is insignificant differences (p>0.05) in the overall quality of services as reported by different age groups, thus negating the hypothesis H1. In other words, it brings to light that hotels do not differentiate among different age groups while delivering their services. However respondents belonging to the age group of 31-40 years reported relatively better service quality (3.26) followed by the age group of 20-30 years while as the age group of above 51 years reported relatively low quality of hotel services (3.18). Further, effect size (0.29) signifies small differences (see table 5.7 for threshold limits).
Dimension-wise analysis shows insignificant variances (p>0.05) on tangibility as reported by different age groups. However, service quality score on tangibility as reported by the respondents in the age group of 31-40 years is relatively high (3.31) followed by the age group of 20-30 years (3.29). Relatively low service quality score has been reported by the age group of above 51 years (3.13) followed by the 41-50 years (3.23). The analysis of the data (Table 4) shows insignificant variance (p>0.05) in the quality of services on reliability
dimension as reported by the respondents of all age groups. Respondents belonging to the age group of 20-30 years have reported relatively low score on the said dimension followed by the age group of above 51 years. Comparatively higher score has been reported by the age group of 41-50 years. On responsiveness dimension, respondents of all age groups reported insignificant variance (p>0.05). Relatively higher scores (3.33) on said dimension has been reported by the age group of 31-40 years. While as, this dimension is reported relatively low by the age group of above 51 years. Respondents of all age groups have reported insignificant variances (p>0.05) on assurance dimension. The respondents belonging to the age group of 20-30 years reported relatively high score (3.28). While as, least score (3.11) has been reported by the age group of 51 years. Data on empathy dimension brings to fore insignificant variances (p>0.05) as reported by the respondents of all age groups. Relatively better quality of service has been reported by the age group of 20-31 years and 31-40 years. While as, relatively low service have been reported by the age group of above 51 years followed by 41-50 years.

Table 4: Comparative SERVPERF Scores as per Different Age Groups

| Service Quality Dimensions | Age            | Mean Scores | Variance Between Hotels | Variance Total | Percent Explained | P Value* | Effect Size η² |
|----------------------------|----------------|-------------|-------------------------|----------------|------------------|----------|----------------|
| Tangibility                | 20-30 Years    | 3.29        | 1.69                    | 12.37          | 13.66            | 0.712    | 0.20           |
|                            | 31-40 Years    | 3.31        |                         |                |                  |          |                |
|                            | 41-50 Years    | 3.23        |                         |                |                  |          |                |
|                            | Above 51 Years | 3.13        |                         |                |                  |          |                |
| Reliability                | 20-30 Years    | 3.11        | 2.12                    | 9.94           | 21.32            | 0.465    | 0.22           |
|                            | 31-40 Years    | 3.18        |                         |                |                  |          |                |
|                            | 41-50 Years    | 3.27        |                         |                |                  |          |                |
|                            | Above 51 Years | 3.22        |                         |                |                  |          |                |
| Responsiveness             | 20-30 Years    | 3.27        | 4.32                    | 15.43          | 27.99            | 0.834    | 0.26           |
|                            | 31-40 Years    | 3.33        |                         |                |                  |          |                |
|                            | 41-50 Years    | 3.29        |                         |                |                  |          |                |
|                            | Above 51 Years | 3.24        |                         |                |                  |          |                |
| Assurance                  | 20-30 Years    | 3.28        | 3.21                    | 11.09          | 28.94            | 0.751    | 0.27           |
|                            | 31-40 Years    | 3.21        |                         |                |                  |          |                |
|                            | 41-50 Years    | 3.21        |                         |                |                  |          |                |
|                            | Above 51 Years | 3.11        |                         |                |                  |          |                |
| Empathy                    | 20-30 Years    | 3.26        | 3.23                    | 12.38          | 26.09            | 0.829    | 0.21           |
|                            | 31-40 Years    | 3.26        |                         |                |                  |          |                |
|                            | 41-50 Years    | 3.14        |                         |                |                  |          |                |
|                            | Above 51 Years | 3.21        |                         |                |                  |          |                |
| Overall                    | 20-30 Years    | 3.26        | 4.96                    | 15.08          | 32.89            | 0.970    | 0.29           |
|                            | 31-40 Years    | 3.25        |                         |                |                  |          |                |
|                            | 41-50 Years    | 3.22        |                         |                |                  |          |                |
|                            | Above 51 Years | 3.18        |                         |                |                  |          |                |

Insignificant (p>0.05) at 5% level

Service Quality Variation and Gender:
In order to study service quality variation by gender, respondents were categorized into male and female groups. SERVPERF scores were computed for both the groups separately which are presented in Table 5 followed by t-test and effect size to test the significant differences, if any, and to test the research hypothesis. The data (p = 0.971) on Table 5 clearly reveals that there is insignificant differences (p>0.05) in the overall quality of services as reported by gender group, thus, negating the hypothesis H2. Besides, size effect (0.503) indicates medium size insignificant differences in the quality of hotel services as reported by the gender group. In other words, it brings to light that hotels do not differentiate amongst gender while delivering their services. However female respondents reported higher service quality scores (3.27) as compared to male respondents (3.24).
Dimension-wise analysis shows insignificant variances (p>0.05) on tangibility as reported by gender groups. However, service quality scores on tangibility as reported by the female (3.29) respondents is relatively high compared to their male (3.25) counterparts. The analysis of the data (Table 5) shows insignificant variance (p>0.05) in the quality of services on reliability dimension as reported by the gender group. Again female (3.19) respondents reported relatively higher service quality scores as compared to male (3.18) respondents. On responsiveness dimension, respondents reported insignificant variances (p>0.05). Relatively higher scores (3.30) on said dimension has been reported by the male respondents. While as this dimension is reported relatively low by the female respondents (3.27). Respondents of both the gender groups have reported insignificant variances (p>0.05) on assurance dimension. Female (3.32) respondents reported relatively higher service quality scores on the said dimension while as relatively low service quality scores was observed by male (3.21) respondents. Data on empathy dimension brings to fore insignificant variances (p>0.05) as reported by the gender group. Relatively better service quality scores have been observed by the female (3.31) respondents as compared to male (3.26) respondents.

Table 5: Comparative SERVEPERF Score as per Gender

| Service Quality Dimensions | Gender | Mean Scores | ‘t’ Value (Overall) | ‘P’ Value (Overall)* | Effect Size Cohen’s D |
|---------------------------|--------|-------------|--------------------|---------------------|----------------------|
| Tangibility               | Male   | 3.25        | 11.36              | 0.662               | 0.344                |
|                           | Female | 3.29        |                     |                     |                      |
| Reliability               | Male   | 3.18        | 7.51               | 0.762               | 0.403                |
|                           | Female | 3.19        |                     |                     |                      |
| Responsiveness            | Male   | 3.30        | 6.23               | 0.093               | 0.216                |
|                           | Female | 3.27        |                     |                     |                      |
| Assurance                 | Male   | 3.21        | 4.11               | 0.077               | 0.341                |
|                           | Female | 3.32        |                     |                     |                      |
| Empathy                   | Male   | 3.26        | 5.72               | 0.410               | 0.382                |
|                           | Female | 3.31        |                     |                     |                      |
| Overall                   | Male   | 3.24        | 18.98              | 0.971               | 0.503                |
|                           | Female | 3.27        |                     |                     |                      |

Insignificant (p>0.05) at 5% level

Service Quality Variation and Education:
With a view to study service quality variations of hotels in northern India, if any, of sample organization, at different educational levels, respondents were grouped into three levels of education viz., up to secondary level; graduation; and post graduation. Mean perception of service quality for respondents were calculated separately for hotels and presented in Table 6 followed by F test, post hoc test and calculation of effect size to test the significant differences, if any and to test the research hypothesis. The data on Table 6 clearly reveals that there is a significant difference (p<0.05) in the overall quality of services as reported by different educational levels, thus, accepting the hypothesis H3. Effect size (0.343) shows medium differences in the quality of hotel services as reported by different educational groups (See Table 5.7 for threshold limits). In other words, it brings to light that hotels differentiate among respondents while delivering their services belonging to different educational groups. However, respondents who were post graduates reported relatively higher service quality scores (3.24) followed by graduates (3.16) while as relatively low service quality scores were observed by up to secondary level education group (3.11). Dimension-wise analysis shows significant variances (p<0.05) on tangibility dimension as reported by different levels of educational groups. However, service quality score on tangibility as reported by post-graduates are relatively high (3.37) followed by graduates (3.28). Relatively low service quality scores are reported by the Up to Secondary level educational group (3.13). The analysis of the data on reliability dimension shows significant variance (p<0.05) in the quality of hotel services as reported by the respondents of all educational groups. Respondents who were post graduates (2.98) have reported relatively low scores on the said dimension. Comparatively higher scores have been observed among respondents who were graduates (3.22) followed by secondary levels (3.01) of education. On responsiveness dimension, respondents of all educational levels reported significant variances (p<0.05). Relatively higher scores (3.17) on the said dimension has been reported by up-to secondary level education group followed by graduates (3.14) while as this dimension is reported relatively low by the post graduates (3.12) respondents. Significant differences
(p<0.05) in the quality of hotel services are reported on assurance dimension with medium size effect (0.341) on service quality (refer Table 5.7 for threshold limits). Respondents who were post-graduates have reported relatively high service quality scores (3.21) followed by graduates (3.10). The least score (3.08) has been reported by the respondents having is up-to secondary level education. Data on empathy dimension brings to fore significant variances (p<0.05) as reported by the all levels of education. Relatively better service quality has been reported by the respondents who were post graduates (3.52) while as relatively low service quality scores have been reported by graduates (3.06) followed by the respondents whose educational level is up-to secondary levels (3.16).

Table 6: Comparative SERVEPERF Scores as per level of Education

| Service Quality Dimensions | Level of Education          | Mean Scores | Variance Between Hotels | Variance Total | Percent Explained | P-Value* | Effect Size Eta² |
|----------------------------|----------------------------|-------------|-------------------------|----------------|------------------|----------|-----------------|
| Tangibility                | Up to Secondary Level      | 3.13        |                        | 2.22           | 8.12             | 27.33    | 0.001*          | 0.121       |
|                            | Graduation                | 3.28        |                        |                |                  |          |                 |             |
|                            | Post Graduation            | 3.37        |                        |                |                  |          |                 |             |
| Reliability                | Up to Secondary Level      | 3.01        |                        | 1.78           | 4.91             | 36.25    | 0.002*          | 0.031       |
|                            | Graduation                | 3.22        |                        |                |                  |          |                 |             |
|                            | Post Graduation            | 2.98        |                        |                |                  |          |                 |             |
| Responsiveness             | Up to Secondary Level      | 3.17        |                        | 4.33           | 8.18             | 52.93    | 0.010*          | 0.113       |
|                            | Graduation                | 3.14        |                        |                |                  |          |                 |             |
|                            | Post Graduation            | 3.12        |                        |                |                  |          |                 |             |
| Assurance                  | Up to Secondary Level      | 3.08        |                        | 4.94           | 12.01            | 41.13    | 0.021*          | 0.341       |
|                            | Graduation                | 3.10        |                        |                |                  |          |                 |             |
|                            | Post Graduation            | 3.21        |                        |                |                  |          |                 |             |
| Empathy                    | Up to Secondary Level      | 3.16        |                        | 5.42           | 12.23            | 44.31    | 0.000*          | 0.214       |
|                            | Graduation                | 3.06        |                        |                |                  |          |                 |             |
|                            | Post Graduation            | 3.52        |                        |                |                  |          |                 |             |
| Overall                    | Up to Secondary Level      | 3.11        |                        | 5.76           | 14.14            | 40.73    | 0.000*          | 0.343       |
|                            | Graduation                | 3.16        |                        |                |                  |          |                 |             |
|                            | Post Graduation            | 3.24        |                        |                |                  |          |                 |             |

*Significant (p< 0.05) at 5% level

Table 7: Shows homogeneity based on level of Education Tukeys’ b

| Education                  | Subset for alpha = 0.05 |
|----------------------------|------------------------|
|                            | 1                      | 2                      |
| Up to Secondary Level      | 3.124                  |                        |
| Graduation                 | 3.254                  | 3.254                  |
| Post Graduation            |                        | 3.367                  |

The above findings are complemented with the effect size (0.343), which signifies medium differences in the mean value across all the educational groups. Nevertheless, results from the post hoc test, distinguishes guests having educational qualification graduates and post graduates for the underlying causative differences.

CONCLUSION AND MANAGERIAL IMPLICATIONS:

In this study, a scale for measuring the service quality in hotel industry was proposed through confirmatory factor analyses resulting in five factors/dimensions namely: Tangibility, Reliability, Responsiveness, Assurance and Empathy. The findings of the study reveal that service quality score in hotels are comparatively low (3.18, 3.22) as reported by higher age groups of above 51 years and 41-50 years respectively. In the age group of 20-30 years service quality score are relatively low (3.24) followed by 31-40 years service quality score is 3.26. In
terms of gender, the analysis revealed insignificant variation (p>0.05) in service quality between male and female respondents. However, female respondents reported comparatively better service quality than male guests. In terms of education, the overall analysis reveals that graduate and post graduate respondents reported better service quality scores as compared to other educational groups. Further, significant variations (p<0.05) in quality of hotel services has been observed among the three education groups which means that hotels differentiate their services amongst their customers on the basis of education. These research findings are in harmony with the research findings of Cavana, Corbett, and Lo, (2007), Khan (2010), OluOjo (2010), Rakumar and Harish (2011), Siew, Ayankule, Hanisah and Alan, (2011), Shahzad and Saima (2012) and Ode Egana (2013). The analysis of service quality scores across all demographic variables further reveals that all hotels, under reference, are providing relatively better service quality to their respective customers, as their overall service quality mean score is above 3. However, service quality of hotels of Punjab (Chandigarh and Amritsar) is comparatively better as compared to the hotels of Jammu and Kashmir.

Measuring service quality enables an organization to know its position in the market and provides a strategic advantage to enhance its competitiveness. It also presents areas of strengths/weaknesses that offer opportunities to the organization to initiate an appropriate response to focus and improve salient attributes of customer perceived service quality. The research instrument used in the present study, if implemented in the right perspective, will surely go a long way in identifying the area/s for improvement and the area/s to be capitalized to meet/beat competition. Hotel industry is vigorously investing in enhancing service quality, competitive pricing, and diversified offering to attract new/retain existing customers. The results of this study substantiate the response strategy of hotel industry to enhance service quality, competitive pricing and reliability dimensions that are vital to affect the customers' perception of quality of hotel industry.

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