Studying the relationship between Perceived Service Quality and Perceived Satisfaction towards Online Health Information: A Regression Analysis

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Abstract: This research paper is an opportunity to put across the relatedness of respondent perceived service quality and respondent satisfaction towards online health information. It is the health infrastructure of a country which acts as the backbone in times of crisis. With rising internet and SNS culture people are resorting to finding and reading Online Health Information (OHI) and this impacts their decision making related to overall health infrastructure. OHI engages consumers through various blogs, health related websites, SNS and more. Many hospitals have their own websites for information dispersal. Consumers of this information form perception of service quality and satisfaction towards the OHI provided online. This further affects them positively or otherwise. Hence it becomes imperative to study these factors related to OHI and their relationship with each other. A survey was conducted to understand people's response towards OHI. Our universe comprises respondents from in and around Delhi NCR, India. The data has been collected through a self-constructed google form and techniques of correlation, t- test have been used through spss version 17.0 for data analysis.

Keywords: Perceived Service Quality, Patient Satisfaction, Online Health Information

I. INTRODUCTION AND LITERATURE REVIEW

The definition of social media is still debated. A mutual appreciation is that social media comprises user-generated communication over the Internet and indicates active interactivity among participants. Eckler et al. trusts that social media encompasses two primary actions: socialization and sharing. Gartner's Anthony Bradley defined social media as an online environment established for the purpose of mass collaboration. When asked to describe 'social health', EmpowHER President and COO Thom Brodeur said: "At EmpowHER, we describe Social Health as a 21st century movement where health care practitioners and providers, health and wellness brands, and consumers are coming together using social media tools and social networking platforms to improve health, change, and save lives. We define Social Health as health and wellness by the people, for the people." Chou et al. categorized social media into three categories: social networking, blogging, and online support groups.

They found that social networking received the most utilization (23% of Internet users) followed by blogging (7%) and online support groups (5%). In healthcare journals today, there are many expert opinions regarding social media, but there are extremely few empirical studies that support opinions with data. Chou et al. tried to identify the characteristics of social media users by examining the data from the 2007 iteration of the Health Information National Trends Study (HINTS, N¼47674). HINTS was a nationally representative cross-sectional survey on health-related communication trends and practices. Jent et al. inspected the occurrence with which healthcare providers made use of social media, particularly in clinical practice, and their decision-making process after retrieving patient data from SM. The study found that healthcare providers usually supposed it not to be an incursion of confidentiality to demeanor an Internet/social media site search of someone they know;

however, no faculty permitted conducting explorations for patients. Faculty and trainees also varied in how they would retort to teenage profile information on social media sites. As per the authors, it is important to create guidelines for regulating the role of social media in clinical practice. According to Stroever et al. in his study regarding 'the value of using social media to communicate child health information to low-income parents, predominantly Hispanic parents', respondents preferred to obtain health information face-to-face from someone they trusted and not through Social Media.

1.1 Perceived Service Quality

According to Zeithaml (1988) service quality can be seen as an assessment of the customer on the consequences of the facility given to them. According to Parasuraman et al. (1985, 1988), customers assess service quality by linking their anticipation of service to be conventional with their insights of essentially established service. Although, it has been recommended in literature that service quality may be more accurately assessed by gauging customer insights of service quality (Ladhari, 2008).

The real measure of service is problematic to describe and quantify (Gavin 1983; Parasuraman et al. 1988; Brown and Swartz 1989). Though, researchers have grasped a consent that service quality should be definite and measured from the client's perception. The greatest acknowledged meaning of perceived service quality is that it signifies the inconsistency amid clients' expectations and their insights of the service presentation (Lewis and Booms 1983; Gronroos 1984; Parasuraman et al. 1988). There has been a discussion concerning the presence of prospects in the dimension of service quality (Teas 1993, 1994; Cronin and Taylor 1994; Parasuraman et al. 1994). Parasuraman et al. (1994) proclaim that the anticipation measures can help accomplish in recognizing those parts that need instant consideration. Parasuraman et al. (1994) agree that if the primary purpose of measuring perceived service quality is to explain the variance on some dependent construct, then a performance-based measure is appropriate

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1.2 Patient Satisfaction

In marketing, consumer satisfaction is critical as it has the potential to boost the organizational performance. The term consumer satisfaction is defined as the " contentment response or emotional feelings about a specific consumption experience (Oliver, 1997, cf. Choi et al., 2005).

Patient satisfaction can be defined in different ways by patients and the definition also varies for different patients. Patient satisfaction can sometimes be seen as a result quantifier of healthcare providers. A satisfied patient has higher chances to recommend the service provider to others. [Abramowitz et al., 1987] For patient interpersonal care provided by hospital staff hold great importance. Patients want quality of care and that is one of the factors determining patient satisfaction. As mentioned earlier, patient satisfaction is subject to individual evaluation of their intellectual and expressive reaction [Prakash, B, 2010]. Patient satisfaction can be termed as a patient's feeling of happiness or disenchantment as a consequence of contrasting an item/service perceived performance with its expectation (Kotler and Keller, 2009). Patient satisfaction assessment is serious for patient and for the service provider (Johansson et al., 2002). Patient satisfaction benefits the service provider in terms of creating better image and market share (Saad Andaleeb, 1998). Positive outcomes of patient satisfaction additionally benefit the service provider in advanced rates of patient treatment, positive word of mouth and increased profit (Zeithaml, 2000). Basically, patient satisfaction is a particular verdict that results from the inspection of expected and actual treatment performance of the healthcare provider. Healthcare service quality dimensions, i.e., physical environment, customer-friendly environment, responsiveness, communication, and privacy and safety are tested to relate

with patient loyalty if patient satisfaction mediates between their relationships. Patient satisfaction also affects the amount of patient regularity with healthcare providers (Calnan, 1988). Thus paient satisfaction impacts the result of medicinal practices. This is the reason why patient's satisfaction assessment has become a critical part of healthcare associations. Patient satisfaction, quality and perceived value are three major marketing constructs, and their relationships with post-purchase behavior have drawn considerable interest and attention from practitioners and academics. Parasuraman and Grewal (2000) opine that quality positively impacts perceived value that further, pays to customer loyalty. As per this chain model, satisfaction and loyalty lead to betterment of results,that enhances perceived value, and directly impacts customer satisfaction and loyalty. This helps in contributing towards the growth and profit of the organization. Before designing operative strategies to improve customer satisfaction and loyalty, it is imperious to recognize the role of quality and to study its relationships with satisfaction and post-purchase behaviour. While satisfaction is such an important factor. Some studies suggest that only satisfaction is not sufficient to keep customers loyal in highly competitive markets (Ones and Sasser 1995).

1.3 Relationship between Perceived Service Quality and Satisfaction

Perceived value is speculated to be a factor determining customer satisfaction. Higher the perceived service quality, higher is the cost of obtaining the service, the higher and higher is the perceived satisfaction. According to literature perceived value displays a strong and significant impact on consumer satisfaction, which also leads to repurchase intentions (Patterson and Spreng 1997; Eggert and Ulega 2002). Perceived value is noted to be a major factor in influencing purchase intentions (Fernández, Raquel & Bonillo, M. 2007), others opine that the effect of

perceived value on repurchase intentions is mediated via customer satisfaction (Patterson and Spreng 1997). In healthcare sector, experiential proof has also been established to sustain the perceived service quality – patient satisfaction relationship (Scotti et al., 2007). However in the current study we propose to understand the impact of perceived service quality dimensions on patient satisfaction pertaining to social media marketing setting. It is noted that perceived service quality is a cognitive construct, consumer satisfaction is an affective one and thus service quality plays the role of an antecedent of consumer satisfaction (Choi et al., 2005).
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II. RESEARCH METHODOLOGY

2.1 Objective of Study

To Study the relationship between Perceived Service Quality and Perceived Satisfaction towards Online Health Information: A Regression Analysis
In the light of the above discussion, the following hypotheses have been formulated.
Ho: Perceived Service Quality leads to Patient Satisfaction towards OHI
Ha: Perceived Service Quality doesn't lead to Patient Satisfaction towards OHI

2.2 Sampling

This study is an attempt to understand the relationship between perceived service quality and perceived satisfaction of respondents from OHI. For this study, our universe comprises respondents from Delhi/NCR. Random Sampling has been for the purpose of the study. Our data collection team comprised college students. Each student administered online questionnaire in the form of Google Forms at public places outside malls, theatres and heavy footfall areas. A total of 350 questionnaires were sent out, of which 320 questionnaires were received. 20 were discarded on the basis of inconsistency

of data or incomplete information and 300 questionnaires were coded and analysed.

2.3 Data Collection Method

The questionnaire was self-constructed and non- disguised. Initial Section of the questionnaire comprises questions on internet and social media usage. The respondents were filtered on the basis of social media usage and non-usage for health information. The categories of users and non-users was made. Further questions were administered only to the users.

The responses were mapped on likert 5 point agreement scale. The questionnaire was subjected to review by experts for validity. Reliability of the same was computed to be Cronbach Alpha .83. According to Nunnally (1978, p. 245) the instruments used in basic research have reliability of about .70 or better. Also, websites, journals and magazines have been used for collecting the secondary data.

III.   DATA ANALYSIS

3.1 Mean and Standard Deviation of Service Quality perception & Patient Satisfaction towards OHI

Mean and standard deviation of Service Quality Perception of OHI, Patient Satisfaction from OHI are given in Table 1. The table suggests that respondents seeking OHI show an inclination towards agreement on Service quality (m=3.44, sd=0.53) and Satisfaction (m=3.45, sd=0.61). Studies reveal that patient-physician relationship impacts patients' involvement in searching health related information online. If patients are satisfied with their General physician ability to involve them then they return to their doctor instead of online health information sites. (Patient satisfaction, e-health and the evolution of the patient–general practitioner relationship: Evidence from an Italian survey). According to an article in the Journal of Health Communication, patients empathized with the significance of patient-provider interaction. The study also revealed that dissatisfied patients relied heavily on trust information sources other than their physician for their

treatment compliance. This shows that trust is increasing getting built for online health sources since physician are not able to satisfy customers.

Table 1- Mean and Standard Deviation of Service Quality Perception and Patient Satisfaction towards OHI

Dimension	Mean	SD
Service Quality Perception	3.44	0.53
Patient Satisfaction	3.45	0.61

3.2 Correlations

Pearson correlation coefficient has been calculated of independent variable with dependent variable in Table-2. The dimension of Perceived Service Quality has been correlated with Patient Satisfaction for OHI. It was found that both these variables are highly correlated (r=.85 p<.05). Hence the correlation is statistically significant. Higher value of correlation suggests more strength in the relationship. This shows that higher the perceived service quality towards OHI, higher will be the satisfaction from OHI. For OHI, Service Quality perception is comprised of items related to efficiency of available information, system availability of online information and the privacy of information. According to correlation result, the higher value respondents find on all these parameters of service quality, the more is their satisfaction from OHI.

Table-2 - Relationship (Correlation Coefficient) of Independent Variable (Service Quality perception) with Dependent Variables (Satisfaction from OHI)

Independent variables	Perception about the service quality of the online health information.
Satisfaction from online health information.	0.850**

**significant at .001 level

NS= Not significant

3.3 Regression

Simple Linear Regression has been applied in order to ascertain the impact of independent variable on the dependent variable. Perceived Service Quality has been taken as the independent variable and Satisfaction has been taken as dependent variable.

The results of regression analysis as shown in Table 3 reveal that service quality of OHI is a predictor for satisfaction from OHI. Satisfaction depends on service quality up to the extent of 50.9% (R2=0.509) with β coefficients of .714. The findings of this research are consistent with the earlier research in Vietnam where it was observed that service quality played an important role in driving high customer satisfaction levels. According to this study Empathy (one of the metrics of service quality) played a pivotal role in driving customer satisfaction (Service Quality and Customer Satisfaction: A Case Study of Hotel Industry in Vietnam). The results also match the outcomes of another study done in the Indian context with telecom customers of Delhi/NCR as participants which also states that service quality leads to satisfaction & on the contrary if high promises are made and then undelivered then that causes dissatisfaction (Impact of Service Quality on Customer Satisfaction and Loyalty in the Sector of Telecom Service Provider in Delhi-NCR Kumar, Kuldeep, Rai, R.S., Dugar, Anurag).

Table-3 - Impact of Perceived Service Quality on respondent Satisfaction

Independent Variable	Dependent Variable= Satisfaction from OHI		
	Beta	R square	t-value
Perception about Service Quality of OHI	0.714	0.509	15.484

**significant at .001 level

NS= Not significant

IV. CONCLUSION

People are increasingly looking at healthcare for preventive as well as curative healthcare options. With increasing competition in the healthcare arena, and concepts like Medical tourism picking up thick and fast it is becoming imperative to leave no stone unturned to capture audience attention. Physical presence of healthcare institutions is not enough as most of the potential patients are surfing the internet for their health concerns. OHI is created and consumed by innumerous sources, some are authentic and some are non-authentic. However the results of this study clearly indicate that the perceived service quality of people for OHI is high and people also find OHI satisfying. Higher the perceived service quality of OHI, higher is the perceived satisfaction towards OHI which empowers the reader and sometimes allows him to question the physical healthcare infrastructure.

A strong healthcare infrastructure that highlights people's faith in the system is a must for a country's development. Online healthcare information providers have started playing a pivotal role in the process of engaging potential healthcare consumers. People have also started challenging the physical healthcare providers on the basis the knowledge they derive from authentic or non-authentic online health sources. To meet this challenge it is required that healthcare information going on the web be organized and healthcare providers must strengthen their online presence. This will not just help in customer acquisition but will also convey service quality and provide satisfaction to the potential customers. The focus should be on inculcating faith in the healthcare institution which will also build credibility of the physical institution. This requires the support of the whole institution, the doctors, the technicians and the authorities who manage web space.

REFERENCES

[1]. Abramowitz, S., Coté A, A., Berry, E. (1987). Analyzing patient satisfaction: a multianalytic approach. QRB. Quality Review Bulletin. Apr;13(4):122-130. DOI: 10.1016/s0097-5990(16)30118-x.

[2]. Calnan, M. (1988). Lay Evaluation of Medicine and Medical Practice: Report of a Pilot Study. International Journal of Health Services, 18(2), 311–322.

[3]. Chou W, S., Hunt Y,M., Beckjord E,B. (2009). Social media use in the United States: implications for health communication. JMed Internet Res 11(4): e48.

[4]. Cronin, J, J., & Taylor, S, A. (1994). SERVPERF versus SERVQUAL: Reconciling performance-based and perceptions-minus-expectations measurement of service quality. Journal of Marketing, 58(1), 125–131. https://doi.org/10.2307/1252256.

[5]. Eckler, P, Worsowicz, G and Rayburn, J, W. (2010). Social media and healthcare: an overview. Phys Med Rehabil; 2(11):1046–1050

[6]. Fernández, R., Bonillo, M. (2007). The concept of perceived value: A systematic review of the research. Marketing Theory - MARK THEORY. 7. 427-451. 10.1177/1470593107083165.

[7]. Jent, J, F., Eaton, C, K., Merrick, M,T. (2011). The decision to access patient information from a social media site: what would you do? J Adoles Health; 49: 414–420.

[8]. Keshavarz, Y., Jamshidi, D. (2018). Service quality evaluation and the mediating role of perceived value and customer satisfaction in customer loyalty. International Journal of Tourism Cities, ISSN: 2056-5607.

[9]. Kotler, Philip & Keller, K. (2006). Marketing Management. Upper Saddle River, New Yersey.

[10]. Kumar, K. Rai, R, S., Dugar, A (2019). An Analysis of Perception and Expectation Scores of Service Quality between Private Mobile Operators in Indi retrieved from https://www.jardcs.org/abstract.php?id=3452

[11]. Ladhari, Riadh. (2008). Alternative measures of service quality: A review. Managing Service Quality. 18. 65–86. 10.1108/09604520810842849.

[12]. Lee, O. (2012). Healthcare ''friending'' social media: what is it, how is it used, and what should I do?, retrieved from https://www.policymedical.com/healthcare-social-media-policies-every-hospital-needs/

[13]. Magnus, O., Johansson, P. (2002). Patient satisfaction with nursing care in the context of health care: a literature study retrieved from https://doi.org/10.1046/j.1471-6712.2002.00094.x, Citations: 168

[14]. Naidu, A. (2009). Factors affecting patient satisfaction and healthcare quality. International Journal of Health Care Quality Assurance, Vol. 22 No. 4, pp. 366-381. https://doi.org/10.1108/09526860910964834

[15]. Parasuraman, A Parsu & Zeithaml, Valarie & Berry, Leonard. (1994). Alternative Scales for Measuring Service Quality—A Comparative-Assessment Based on Psychometric and Diagnostic Criteria. Journal of Retailing. 70. 201-230. 10.1016/0022-4359(94)90033-7.

[16]. Parasuraman, A, Parsu., Zeithaml, Valarie, Berry, Leonard. (1985). A Conceptual Model of Service Quality and its Implication for Future Research (SERVQUAL). The Journal of Marketing. 49. 41-50. 10.2307/1251430.

[17]. Parasuraman, A., Grewal, D. (2000). The Impact of Technology on the Quality-Value-Loyalty Chain: A Research Agenda. Journal of the Academy of Marketing Science, 28, 168-170.

[18]. Patterson.,Paul., Spreng., Richard. (1997). Modeling the relationship between perceived value, satisfaction and repurchase intentions in a business-business, services context: An empirical examination. International Journal of Service Industry Management. 8. 414-434. 10.1108/09564239710189835.

[19]. Peterson, R, A. (1994). A Meta-Analysis of Cronbach's Coefficient Alpha. Journal of Consumer Research. The University of Chicago Press .Vol. 21, No. 2, pp. 381-391.

[20]. Prakash B. (2010). Patient satisfaction. Journal of cutaneous and aesthetic surgery, 3(3), 151–155. https://doi.org/10.4103/0974-2077.74491

[21]. Robert L., Brennan, E, G., Johnson. (1995). Generalizability of Performance Assessments retrieved from https://doi.org/10.1111/j.1745-3992.1995.tb00882.x

[22]. Saad., Andaleeb, S. (1998). Determinants of customer satisfaction with hospitals: a managerial model. International Journal of Health Care Quality Assurance, Vol. 11 No. 6, pp. 181-187.

[23]. Stroever S, J., Mackert, M, S., McAlister A, L. (2011). Using social media to communicate child health information to low income parents. Prevent Chronic Dis; 8(6): A148.

[24]. Tustin, Nupur. (2010). The Role of Patient Satisfaction in Online Health Information Seeking. Journal of health communication. 15. 3-17. 10.1080/10810730903465491.

[25]. Zeithaml, V.A. (2000). Service quality, profitability, and the economic worth of customers: What we know and what we need to learn. J. of the Acad. Mark. Sci. 28, 67

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