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Review of Global Practices in Measuring Healthcare Service Quality

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Abstract - India is one of the largest developing country in terms of population and area. To provide good healthcare service quality to large number of population is a major challenge. In India the healthcare services is provided by public, private and community hospitals. The major problem in front of healthcare service provider is to measure the service quality of healthcare services provided by them. At present few service qualities measuring instruments are developed but they are based on countries other than India. A lack of research exists in literature on healthcare service quality measurement in India. Hence there is a need of research to develop a measuring instrument to measure the service quality of Indian healthcare services. In this paper, we review related to research on measurement of healthcare service quality is carried out. The purpose of this review was to get insight about the healthcare service quality measurement and its limitation which will be useful for further research on developing the service quality measurement scale for Indian healthcare sector.

Keywords- Health care; service quality; services; Indian health care; Measurement; Challenges; service quality scale; patients .

1. INTRODUCTION

In the Health care industry, the quality of care is more than a concept. It has become essential to patient well-being and financial survival (Phill Buttell et al., 2007). Health care service quality is responsible not only for patient's physical health, but also to the financial health of a provider. Health care is diagnosis, treatment and prevention of diseases, illness, injury, and other physical and mental impairment in humans. Health care services are delivered patients by the practitioners, nurses, technician and many other care providers in hospitals and clinics. At present health care providers, managers and administrators recognised the importance of service quality for survival and success of the business. Patients and health care providers are two main stakeholder of health care services encounter process. The provider's perspective about health care service quality may be different than the patient's perspective. Patients are not able to judge technical quality (What is provided) of health care services but they can judge the quality on the basis of functional quality that is how the service is provided.

HEALTHCARE SERVICE QUALITY

Health care is the diagnosis, treatment, and prevention of disease, illness, injury, and other physical and mental impairments in human. Health care services are delivered by practitioners, caretakers, nurses to patients in health care organisation such as hospitals, clinics, nursing homes. Quality plays important role in attracting new customer as well as retaining old customer. To provide better quality services to patients one has to understand what health care service quality is? Number of professionals and researchers has tried to define health care service quality. Avedis Donabedian (1980) defined health care quality as 'that kind of care which is expected to maximise an inclusive measure of patient welfare, after one has taken account of the balance of expected gains and losses that attend the process of care in all its parts'. Patient's welfare has given prime importance in delivering the health care services. He pointed out that whether the cost should be included in the definition or not, since quality is also depends on cost to be paid. Hence he defined that quality as the maximum output that is possible with available input. The American medical

Association defined health care quality as such care which 'consistently contributes to the improvement or maintenance of quality and/ or duration of life' (Zaneta Piligrimiene and Ilona Buciuniene, 2011).The most widely used and cited defination of health care quality was proposed by the Institute of medicine(IOM) in 1990. According to IOM, health care quality is consist of the 'degree to which health services for individuals and populations increases the likelihood of desired health outcomes and are consistent with current professional knowledge' (P. Buttell et al.,2007). P. Buttell et al.(2007) extended the IOM defination of health care quality as 'quality consist of the degree to which health services for individuals and populations increase the likelihood of desired health outcomes(quality principles), are consistent with current professional knowledge (professional practitioner skill), and meet the expectations of health care users(the marketplace).

Department of health (UK) (1997) defines quality of health care as ' doing the right things (what), to the right people (to whom), at the right time (when), and doing things right first time.' This definition has given importance to the timing of services or care provided to the patient which is in need. If right care is not proviced at right time,it may result in loss of life of patient. Council of Europe(1998) defines quality of health care as 'the degree to which the treatment dispensed increases the patient's chances of achieving the desired results and diminishes the chances of undesirable results, having regard to the current state of knowledge'. World Health Organisation (WHO) (2000) defines health care quality as ' the level of attainment of health systems intrinsic goals for health improvement and responsiveness to legitimate expectations of the population.'

2. LITERATURE REVIEW

A. Issue of adequacy of dimensions of health care service quality.

Parasuramn et al.(1988) develops a service quality measurement scale SERVQUAL comprising of five dimensions-reliability, Responsiveness, Assurance, Empathy and tangibility. Customer evaluates the perceived service quality in terms of these five dimensions. These five dimensions are found consistently important for evaluation of various types of service setting by modifying the service quality attributes. According to Parasuraman et al. (1991)

'SERVQUAL is a generic instrument with good reliability and validity and broad applicability'. Many authors used modified SERVQUAL scale to find out service quality level of hospital. Reidenbach Eric et al.(1990) identifies seven health care service quality dimensions i)Patients confidence ii)Business competence iii)Treatment quality iv) Support services v) Physical appearance vi) Waiting time, vii) Empathy. Babacus and Mangold (1992) examined the usefulness of SERVQUAL scale for assessing the patients perceptions of service quality of hospital services. Two academicians and three management personal were involved in the process of building the service quality attributes of hospital services. After review 15 service quality items representing five SERVQUAL dimensions-reliability, responsiveness, assurance, empathy and assurance were finalized. They pointed out the SERVQUAL is designed to measure the functional quality only and suitable for other services also.Slim Hadded et al.(1998) conducted a research study in Guinea and suggest that, three dimensions-health care Personnel, health facility and health care delivery are important for measuring the health care service quality.

It is observed that SERVQUAL five dimensions are not sufficient to measure the health care service quality. Several authors have made attempt to measure the service quality of health care sector but nobody founds the same dimensions as reported in previous studies. Every country has different number and types of dimensions useful for assessing service quality of health care sector. It is not easy to find the dimensions of health care service quality due to its complexity. Patients are unaware about the technical quality of health care services. This review of past studies resulted that every country has different with other country in respect of culture, environment ,awareness and many more factor which affect the perception of patient.. The detailed about the studies used in this paper is represented in table I.

TABLE I

SUMMARY OF HEALTH CARE SERVICE QUALITY DIMENSIONS

S.N.	*Author, Year, Country*	*Final dimensions*
1	Reidenbach Eric et al., 1990,USA	**Seven Dimensions-** Patients confidence, Business competence, Treatment quality, Support services, Physical appearance, Waiting time, Empathy
2	Emin Babacus and Glynn Mangold , 1992,USA	**Five Dimensions-** Reliability, Responsiveness, Assurance, Empathy, Tangibles
3	James H. McAlexander et al., 1994, USA	**Five Dimensions**- Reliability, Responsiveness, Assurance, Empathy, Tangibility
4	Slim Hadded et al., 1998,Guinea	**Three dimensions-** Health care Personnel, Health facility, Health care delivery
5	Hanjoom Lee et al., 2000, USA	**Seven Dimensions**- Reliability, Professionalism/skill, Empathy, Assurance, Core medical services, Responsiveness, Tangibles
6	Syed Saad Andaleeb, 2001, Bangladesh	**Five dimensions-** Responsiveness, Assurance, Communication, Discipline, Baksheesh.
7	Victor Sower et al., 2001,USA	**Eight Dimensions-** Respect and caring, Effectiveness & Continuity, Appropriateness, Information, Efficiency, Meals, First Impression, Staff Diversity

B. Methodological issues in assessing health care service quality

This paper make an attempt to review the research paper on the basis of country as represented in table-1. Only studies focusing on measuring the health care service quality are included and subjected to a comprehensive in depth content analysis of the key methodological aspects of measuring the health care service quality of several types of health care services in various countries. The methodological issues identified in this review can be summarised as : research approach, types of respondent, method of data collection, sample size types of health care sector, survey administration, number of service quality items, reliability of service quality scale developed.

C. Research approach

In research study generally two research approaches are used i.e. qualitative approach and quantitative approach. The studies used in this paper used variety of research approaches- quantitative approach (Reidenbach Eric et al., 1990; James H. McAlexander et al., 1994; Mohamed M. Mostafa,1995; Figen Yasilada and Ebru Direktor, 2010; Rizwan Ahmad and Hina Samreen, 2011; Zaneta Piligrimiene et al.,2011; Upul Senarath,2011; Laith Alrubaiee and Feras Alkaaida,2011;

TABLE II

TYPES OF RESEARCH APPROACH

S.N.	*Author*	*Research Approach*
1	Reidenbach Eric et al. (1990)	Quantitative
2	Emin Babacus and Glynn Mangold (1992)	qualitative and quantitative
3	James H. McAlexander et al.(1994)	Quantitative
4	Slim Hadded et al.(1994)	qualitative and quantitative
5	Hanjoom Lee et al. (2000)	qualitative and quantitative
6	Syed Saad Andaleeb (2001)	qualitative and quantitative
7	Victor Sower et al. (2001)	qualitative and quantitative
8	RMPM Baltussen et al.(2002)	qualitative and quantitative
9	M. Sadiq Sohail(2003)	qualitative and quantitative
10	Dat Van Duong et al.(2004)	qualitative and quantitative
11	Mohamed M. Mostafa(2005)	Quantitative
12	Tracey Dagger et al (2007)	qualitative and quantitative

D. Sample size

Several studies used limited sample size for measuring the health care service quality. Upul Senarath(2011) use a sample of only 120 respondents which included only discharged patients.In Malesia the study carried out by M. Sadiq Sohail(2003) uses a sample of 150 discharged patients within last six months from survey. Syed Saad Andaleeb(2001) in Bangladesh uses a sample of 207 discharged patients and family member who used health services in past 12 month.These sample size is relatively very small for assessing the health care service quality and finding the service quality dimensions, hence future studies should used larger sample which should include the responses from inpatients and recently discharged patients for obtaining the better result and increasing the scale reliability.

S.N.	*Author*	*Sample size*
1	Reidenbach Eric et al	300
2	Emin Babacus and Glynn Mangold ,	443
3	James H. McAlexander et al.,	346
4	Slim Hadded et al.,	285
5	Hanjoom Lee et al.,	348
6	Syed Saad Andaleeb,	207
7	M. Sadiq Sohail,	150
8	Dat Van Duong et al.,	396
9	Mohamed M. Mostafa,	332
10	Tracey Dagger et al	340

Type of health care service industry considered

Health care services are provided by many types of hospitals and clinics such as primary health care centres (PHC), government hospital, private hospitals, medical college and hospital, speciality hospitals. For developing the appropriate health care service quality scale ,respondent from all types of health care industries should be used. Three authors (Reidenbach Eric et al.,1990; Figen Yasilada

and Ebru Direktor,2010; Wathek Ramez,2012) have not cleary mensioned the number of hospitals and types of hospital used in their study. Some studies collect the data from only one hospital. Emin Babacus (1990) and Ching-I Teng et al.(2007)collect the data from one hospital but did not report about the type of services provided in the hospital. Upul Senarath(2012) collect the data from one government hospital of Srilanka. James H. McAlexander et al.(1994) collect the data from two dental clinics. Two authors (RMPM Baltussen et al.,2002; Tri Rakhmawati et al.,2013) conducted study in government hospitals which provides only primary health care services.

E. Method of data collection

There are number of methods of data collection such as online (through email survey, website servey),offline (postal mail, telephonic survey) and Interview (personal interview, focus group interview, questionnaire based interview). In developed countries data can be collect through online method but it is quite difficult in developing country. Many researchers collect data through face interview (Rizwan, 2011; Zaneta et al.,2011), exit interview (Hadded et al.,1998;Baltussen et al.,2002) with patients, relatives and parents on the basis of survey questionnaire to developed health care service quality scale. Few authors collect data through interview at home and offices after discharge from hospital within one year period (Andaleeb,2001; Duong et al.,2004;Yasilada,2010;Ramez,2012). Reidenbach et al.(1990) used telephonic survey to collect the data for research. Number of authors used postal mail (Babacus,1992; James et al.1994; Hanjoom Lee,2000; Sohail, 2003; Dagger et al.2007) to collect data for research. In both the cases telephonic interview and postal mail ,it is possibility of getting improper perception about services. Postal method is time consuming. The response rate in both postal mail and email survey is very low as compared to face interview based on survey questionnaire. Authors should mention about method of data collection for research and

reason for selecting particular data collecting method for research. Victor Sower et al.(2001) not mention about the method of data collection in his research for developing service quality scale.

F. Number of service quality items

Service quality dimension is represented by number of service quality items. Parasuraman et al.(1991) defines five service quality dimension using 22 service quality items. Many researchers has pointed out that each service quality dimension is represented by more than one service quality items. Same dimensions may have different service quality items which are depends on the type of service sector. Several authors (Babacus,1992; James et al.,1994; Hadded et al.,1998; Andaleeb,2001;Baltussen et al.,2002; pointed out less than 40 service quality items to represent the health care service quality dimensions.

G. Reliability of service quality scale developed.

The reliability of scale means the internal homogeneity of a set of items and it is assessed by Cronbach's alpha coefficient. If the value of Cronbach's alpha is more than 0.7 then it is assumed good reliability. The coefficient value nearest to 1 , indicates that more reliability(Nunally,1978). Mangold and Babacus (1992) developed 15 service quality item scale to measure the health care service quality with a overall reliability of 0.897.

TABLE VI

SUMMARY OF RESEARCHES BASED ON DATA COLLECTION, FINAL NUMBER OF SERVICE QUALITY ITEMS, RELIABILITY OF SCALE.

SN	*Author, Year, Country*	*Method Data collection*	*Final Number of items*	*Reliability*
1	Reidenbach Eric et al., 1990,USA	Telephonic survey	41	Not reported
2	Emin Babacus and Glynn Mangold , 1992,USA	Postal Mail	15	Expectation =0.897 Perception= 0.964
3	James H. McAlexander et al., 1994, USA	Postal Mail	Expectation-15 Perception-15,	SERVQUAL=0.82 , SERVPERF =0.91,

CONCLUSION

An attempt is made in this paper to review various health care service quality measurement scales. All the studies are summarized in Table 1. This paper tried to cover maximum papers from various countries to cover the views of researchers from all part of the world. Research papers reviewed represent the Asian, American, European perspective about the health care service quality measurement. It is observed that till date there is no general agreement on the type and number of health care service quality dimensions. The health care service quality is a multidimensional construct. It is noted that nobody has use neural network to analysis the health care service quality measurement. On the basis of review it is observed that the health care service quality construct is depends on many factors such as type of health care services, country, types of respondents, types of medium is used for collecting the responses, environment etc. It is observed that the reliability of scale using perception minus expectation score is less than perception only score but most of the authors used perception –expectation score to measure the service quality. It is clear from review that till date there is none of the service quality scale developed which is suitable for all types of health care service setting and for all types of country. Most of the researches are done in developed environment hence there is a need to developed new service quality measurement for measuring the health care service quality of Indian health care sector because India has number of differences than European and American countries in respect of culture, environment, religious beliefs, education and economical level.

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