Service Quality toward Patient Satisfaction the Moderating Role of Time and Efforts in Public Hospitals in Tripoli, Libya

Yousf Ibrahim Aljoudimi

Graduate School of Business
Universiti Tun Abdul Razak (UNIRAZAK)
Kuala Lumpur, Malaysia
yosef571@gmail.com

Ismail B. Rejab

Graduate School of Business
Al-Medinah International University
Shah Alam, Malaysia
jetaimeismai@gmail.com

Zulkifflee Bin Mohamed

Bank Rakyat School of Business and
Entrepreneurship (BRSBE)
Universiti Tun Abdul Razak (UNIRAZAK)
Kuala Lumpur, Malaysia
zulkifmohamed@gmail.com

Abstract: *This quantitative study aimed to examine the moderating effect of the non-monetary perceived value (time and effort) on the relationship between five dimensions of service quality (environment and technology, convenience of care process, responsiveness, trust and security, and respect and caring) and patient satisfaction in the health care environment in general, non-specialist public hospitals in Tripoli, Libya (GPHT). Research questions were formulated to investigate the following research objectives: (1) to examine the relationship between service quality dimensions and patient satisfaction; and (2) to examine the moderating effect of time and efforts on the relationship between dimensions of service quality and patient satisfaction. In order to measure quality of service, patient's perceptions of service quality were investigated and data on patient were collected using an adapted instrument based on (1) SERVPERF, which was developed as an alternative to the disconfirmation-based SERVQUAL; (2) past research related to hospitals service quality; and (3) interviews with patients, physicians and medical staff in GPHT. Final sample size for analysis was 353. Exploratory and confirmatory factor analyses were conducted. Hypotheses were tested using multiple regression analysis and hierarchical multiple regression through SPSS and SEM. The findings revealed that the time and effort did not moderate the relationship between service quality dimensions and patient satisfaction. The findings of this research could potentially provide an important contribution and inputs which may be useful in the process of decision making within the management, doctors and nurses working in Libya hospitals. Hence the study contributes to the further development of studies in service quality, perceived value and patient satisfaction in healthcare environment. Finally, the implications and limitations were also discussed.*

Keywords: *Service Quality Dimensions, Time and Effort, Perceived Value, Patient Satisfaction, Public Hospitals, Libya.*

1. INTRODUCTION

Meeting customer's needs and expectations is a great challenge facing service organizations. Nowadays satisfaction is influenced by the developments surrounding, including the massive, rapid and intense competition in the various activities, which is why organizations are always looking for solutions to satisfy its customers in light of these variables. The key to continue competitive advantage lies in delivering high quality services that will in turn lead in satisfied customers (Shemwell et al, 1998). The main goal of this research was examined the moderating role of non-price dimensions of perceived value (time and efforts) on the relationship between service quality dimensions and patient satisfaction in general public hospital in Tripoli, Libya. Another objective was examined if patient's satisfaction is influenced by service quality dimensions. These dimensions are listed as follows: environment and technology, convenience of care process, responsiveness, trust and security, and respect and caring. The relationship between service quality and satisfaction of customers has been studied by numerous authors, scholars and researchers within various contexts spanning many years (Cronin & Taylor, 1992; Dabholkar 1995; Gronroos, 1984; Lehtinen & Lehtinen, 1991; Oliver 1980, 1993; Parasuraman et al., 1985; Ribbink et.al, 2004; Spreng & Mackoy,

1996; Sureshchandar et al, 2003; Taylor & Baker, 1994; Zeithaml et al., 1990). Savage, Campbell, Ford, and van der Reis (2004) recommended exploring the struggle of developing countries to maximize health care access, cost, and quality.

In the health care context, many studies have also examined the relationship between service quality and satisfaction. There have been some studies on public hospitals that have empirically addressed this relationship (Arasli et al, 2008; Berendes et al, 2011; Camilleri & O'Callaghan, 1998; Cong et al, 2014; Jabnoun and Chaker 2003; Taner & Antony 2006; Yousapronpaiboon & William, 2013). Furthermore, most of these published public health care studies are focused on health care in North America, Europe, and relatively fewer in Asia. Very few studies have actually been done in North African Arab countries which have tested the relationship between service quality and patient satisfaction in public general hospitals (Al-Hawary, 2012; Diab, 2012; Mostafa, 2005; Zamil et al, 2012).

Perceived value is an antecedent of customer satisfaction (Eggert & Ulaga, 2002; Kuo, Wub, & Deng, 2009; Paul & Geoffrey N., 2009). Researchers indicate that customer satisfaction is influenced by relational benefits and perceived value (Dagger & O' Brien, 2010; Han & Ryu, 2009). Further, the relationship between service quality, perceived value, and customer satisfaction are crucial to the service industry (Hu, Kandampully, & Juwahee, 2009). Utility theory, which is resulting from the modern microeconomic theory, indicates the existence of a relationship between quality and value. Quality offers utility to the customer, who, in turn, must forgo the disutility inherent in price. Deruyter et al. (1997) find that an increase in service quality leads to an increase in satisfaction. However, such increase in the quality of service may not be indicative of increased levels of service satisfaction if the price is high.

Literature indicated that the direct effect of either service quality or perceived value on satisfaction separately explained lower of the variance in satisfaction than the interaction between service quality and perceived value. researchers such as Caruana et al, (2000) and Zeithaml (1988) agree that value is highly related to cost customers assess and pay for quality, whereas the utility of a service is depend on customer perceptions of what is got (i.e. some may want volume, others high quality, still others convenience) and what is given (i.e. some are concerned only with money expended, others with time or effort). Therefore, monetary of perceived value such as time costs, search costs and psychological costs (Zeithaml, 1988).

Prior studies have examined perceived value in mediating the relationship between service quality and customer satisfaction (Cronin, Brady, and Hult 2000; Korda & Snoj, 2010; Lin and Shih 2005; Lai, Griffin, and Babin 2009). However there is virtually no empirical study to date examining the role of time and efforts of perceived value in moderating the relationship between service quality dimensions and patient satisfaction in healthcare services. Although research on hospital services satisfaction is vital to ensure a high quality of care and patient satisfaction and to maximize the benefits in community. Given that the possible role of value as a moderating variable has received less academic attention, little is known about the moderating effect of perceived value in service quality models (Ismail et al., 2009). Others have examined the impact of value on satisfaction (McDougall and Levesque, 2000) the moderating role of perceived value in the quality of service and satisfaction relationship (Caruana et al., 2000). They found that perceived value has a significant moderating role between service quality and satisfaction. Thus, the understanding of the moderating effect of time and efforts value still remains key issues. This study will contribute to a conceptual model that, reflecting the moderating role of patient perceived time and efforts of service value on the relationship between service quality dimensions and patient satisfaction cross different cultures when previous studies have done.

Although efforts have been made to facilitate the exchange of technological knowledge among developed, emerging, and developing countries, the management of health care remains a challenging issue in developing countries, such as Libya. Even though medical care is provided to all Libyan citizens, Libyans are increasingly interested in purchasing private medical care to receive what is perceived to be a higher level of service and quality ("Health system profile: Libya," 2007). Focusing service quality and understanding what are the patient needs and the health care system should be an objective of general public hospital. Given the importance of patient satisfaction, this study examined to what extent the patient is satisfied with the public hospitals service quality. Due to advances in technology, patient satisfaction and service quality have become critical objectives in the strategic

planning processes of organizations. Patients today are more informed than ever and will not hesitate to switch to an alternative health care professional if they don't obtain satisfaction (Ramsaran-Fowdar, 2008).

Based on the foregoing, the effect of quality on satisfaction may not just be direct but may also be moderated by value. Perceived value is likely to play a more important role than service quality to satisfy patients. Therefore, it is the task and the challenge of this study to determine if perceived value can change/increase the relationship between service quality and patient satisfaction in Libya, a non-western or Asian nation. In the sense that, to what extent do perceived of time and efforts will be able to influence the relationship between service quality and patient satisfaction levels in public hospitals in Libya? However, the study will explore which particular service quality dimension is more directly related to patients' perceived value; which in turn affects   patient satisfaction in the health care context.

1.1. Research Questions

Q1. Is there a significant relationship between service quality dimensions (environment and medical technology, convenience of care process, responsiveness, trust and security to medical staff, and medical staff respect and caring) and patient satisfaction?

Q2. Does time and effort of non-monetary perceived value moderate the relationship between service quality dimensions (environment and medical technology, convenience of care process, responsiveness, trust and security to medical staff, and medical staff respect and caring) and patient satisfaction?

1.2. Research Objectives

- To examine the relationship between service quality dimensions and patient satisfaction.
- To examine the moderating effect of time and effort on the relationship between service quality dimensions and patient satisfaction.

1.3. Research Hypotheses

H1: There is a positive relationship between environment and technology and patient satisfaction

H2: There is a positive relationship between convenience of care process and patient satisfaction

H3: There is a positive relationship between responsiveness and patient satisfaction

H4: There is a positive relationship between trust and security and patient satisfaction

H5: There is a positive relationship between respect and caring and patient satisfaction

H6: Time and efforts of perceived value moderates the relationship between service quality dimensions and patient satisfaction

2. LITERATURE REVIEW

With increasing awareness, the patients, as customers expect quality in healthcare service. Lynch and Schuler (1990) observed that quality has been shown to be an important element to the customer's choice of hospitals. In 2007, Jackie L.M. Tam focused on patient satisfaction with a medical service encounter rather than on the efficacy of treatment, the study suggested that using patient feedback as an input for quality improvement improves performance on both dimensions. The study also suggested that quality medical encounters improve patient satisfaction. Moreover, Carman (2000) indicated that perception of service quality is an attitude, which in turn is related to the function of some combination of attributes that a patient considers to be contents of quality. These attributes can be classified into two sets, functional, which include measures such as ambiance and provider attentiveness; and technical, such as outcome that describe how the service is delivered. Thus, there exist an association between perceived service quality and patient satisfaction.

Owusu-Frimpong, et al (2010) suggested that healthcare consumers' assessments of the various tangible elements associated with a particular healthcare service include both the physical environment and physical facilities in which the service occurs, as well as the billing procedures and other amenities such as food and parking facilities associated with each institution's delivery system.

In the healthcare area, quality service strategies may be targeted at rationing and augmenting capacity through new hospitals, extensions and new service lines such as public health service direct (Redwood, 2000).

Technical quality in the healthcare environment referred to as quality in fact, is defined primarily on the basis of the technical accuracy of the diagnoses and procedures. In healthcare organizations, several techniques for measuring technical quality have been proposed and are nowadays in use (Joint Commission for Accreditation of Healthcare Organizations 1987). Consequently, acknowledging that perceived quality is the most important variable influencing consumers' value perceptions seems reasonable. These value perceptions, in turn, affect customers' intentions to purchase products or services (Bopp, 1999; Bolton & Drew, 1988; Zeithaml, 1988).

2.1. The Service Quality Dimensions

Service quality has been approached as SERVQUAL, a multi-item scale first suggested by Parasuraman, Zeithaml, and Berry (1985). It has been utilized for measuring customer perceptions of service quality across a wide variety of service environments including healthcare in the US. The SERVQUAL scale was developed by Parasuraman and colleagues (1988) first applied SERVQUAL to quantitatively measure service quality in several sectors. In particular, the scale was used to measure the difference between customer expectations and perceptions. Parasuraman et al. (1985), had at first identified ten dimensions of service quality which were, at a latter step and after extensive exploratory research and empirical examining, operationalized in five dimensions that comprise 22-items. The instrument distinguishes between different dimensions of services from the consumer's point of view (Parasuraman et al 1988).

In the health care service environment, Babakus and Mangold (1992) was the first to adopt the SERVQUAL instrument for evaluating healthcare services. In particular, some scholars analyzed and confirmed the scale's practical suitability for health care facilities, as well as its reliability and validity for evaluating hospital services (Devebakan, 2005; Buttle, 1996; Dursun & Cerci, 2004). They came out with validated results that are replicable after passing through the rigour of robust research. The investigators of the scale emphasize that while each service industry has different cases with other aspects, there are five dimensions or constructs of service quality which identified for applicability in service-providing organizations in general. These dimensions are tangibles, responsiveness, assurance, reliability and empathy (Parasuraman et al, 1988)

Despite the controversies regarding the validity and reliability of SERVQUAL, this model (both with and without modification) have been applied in the health care sector (Teas, 1994; Newman, 2001). Moreover, SERVQUAL has been widely used in other service industries, including hotels, travel, higher education, real estates, accountancy, architecture, construction services, dentistry, call centers, and hospitals (Foster, 2001; Foster & Thomas, 2001; Nelson, 1995).

Tangibles are defined as the appearance of physical facilities, equipment, personal, and communication materials (Zeithaml & Bitner 2006). All of these provide physical representations or images of the service that customers, particularly new customers, will use to evaluate quality. In this regard, Sewell (1997) asked The National Health Service (NHS) patients to identity the quality dimensions they considered to be important. Tangible was found out to be the least important in their assessment.

Reliability is defined as the ability to perform the promised service dependably and accurately (Zeithaml & Bitner 2006). Reliability has been consistently shown to be the most important determinant of perceptions of service quality among U.S customers (Parasuraman et al 1988). In their study in Taiwan aimed sat constructing an instrument to evaluate service quality of mobile value added services and extend the discussion of the relationships among service quality, perceived value and customer satisfaction. Kuo et al., (2009) found out that reliability was most influential on perceived value and customer satisfaction.

Responsiveness is the willingness to help customers and to provide prompt service. This dimension emphasizes attentiveness and promptness in dealing with customer requests, questions, complaints, and problems (Zeithaml & Bitner 2006). They also added responsiveness as communicated to the customer by the length of time they have to wait for assistance, to have their questions answered, or their problems attended to. Responsiveness also captures the notion of flexibility and ability to customize the service to customer needs. De Jager et al (2010) in their study "Delivering quality

service to in- and out-patients in a South African public hospital" that focused only on Responsiveness. They found that all patients demand excellent responsive levels but none of these were met, resulting in dissatisfaction; they also found that overall patients were least satisfied with reasonable waiting time for receiving medicine as well as reasonable waiting time for treatment. But Al-Alak and Alnaser, (2012) found that there is no significant relationship between responsiveness and students' satisfaction. On the other hand, Ismail and Abdullah (2009) conducted an exploratory study to examine perceived value as a moderator between service quality and academic staff's satisfaction in higher institutions in Malaysia. They found that perceived value about the use of responsiveness and has not increased customer satisfaction. To truly distinguish themselves on responsiveness, companies need well-staffed customer service departments as well as responsive frontline people in all the contact positions of the organization (Zeithaml & Bitner, 2006).

Assurance is defined as employees' knowledge and courtesy and the ability of the firm and its employees to inspire trust and confidence (Zeithaml & Bitner 2006). It is the view of these scholars that this dimension is likely to be particularly important for services that customers perceived as involving high risk and/or about which they feel uncertain about their ability to evaluate outcomes, for example medical, banking, insurance, brokerage and legal service. Anderson (1995) also addressed the quality of services provided by a public university health clinic by using SERVQUAL in which he utilized 15-items of the instrument representing the five dimensions of SERVQUAL. The findings indicated that all the five dimensions measured negatively, assurance being most negatively measured. It was based on these outcomes that Anderson made some recommendations for budgeting future quality improvement projects.

Empathy is depicted in the way and manner the organization engages in caring, and providing individualized attention to its customers and clients. The essence of respect and caring is convening, through personalized or customized service which invariably emphasizes that customers are unique and special (Zeithaml & Bitner 2006). Empathy means caring and understanding, which a company provides and/or offers its customers in terms of its individualized and personalized attention (Parasuraman et al., 1988). In the NHS hospitals Sewell (1997) found that empathy was shown to be of equal importance. Al-alak (2012) found that empathy had the strongest influence on customer satisfaction and behavioral intention in a spa setting in Malaysia. Based on the above discussion this current study will use all five dimensions of service quality as independent variables.

2.2. Patient Satisfaction

A widely accepted description of satisfaction would have been the process leading to the consumer's fulfillment response. In other words, "it is a judgment that a product or service feature, or the product of service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under-or over-fulfillment…" (Oliver, 1997). While, Rust and Oliver (1994) described the dominant model of customer satisfaction in the services review as: In brief, customer satisfaction is a summary cognitive and affective reaction to a service incident (or sometimes to a long-term service relationship). Satisfaction (or dissatisfaction) results from experiencing a service quality encounter and comparing that encounter with what was expected (Rust & Oliver, 1994, p. 2).

For healthcare providers, researchers pointed out that customer satisfaction leads to profitable and advantageous results (Peyrot et al., 1993; Zeithaml, 2000). Others reported that Patient satisfaction also affects the rate of patient compliance with physician advice and requests (Calnan, 1988; Pascoe, 1983).Therefore, satisfaction actually influences the outcome of medical usage. For these causes, patient satisfaction estimation has become an integral part of healthcare organizations' strategic processes (Reidenbach and McClung, 1999). Conway and Willcocks (1997) indicated treatment is a basic health service expectation as patient satisfaction is known as an evaluation of distinct healthcare dimensions (Linder-Pelz, 1982). However, Turner and Pol (1995) considered that patient satisfaction as one of the desired results of care and so patient satisfaction information is very important to quality assessments for managing healthcare. Patient satisfaction also enhances the image of a hospital and that can be translated into increased service use and market share (Andaleeb, 1998). Patient satisfaction is frequently used as an efficient proxy measure of quality of care. A considerable body of evidence exists regarding how patient satisfaction influences patient return and increased referrals (Corviano, 2005; Garman& Hargreaves, 2004; Jackie, 2007; Otani & Harris, 2004). Ruggeri defined patient satisfaction as ''the extent to which services satisfy wishes, wants or desires for treatment' (Ruggeri, 1994).

2.3. Patient Perceived Value

The concept of perceived value has become of increasing interest to marketing researchers as it has a mediating relationship with the perceptions of customer satisfaction (McDougall and Levesque, 2000). The perceived value variable was found out to be a mediating variable between perceived quality and customer satisfaction (Cronin, Brady, and Hult 2000; Korda & Snoj , 2010; Lin, and Shih 2005; Lai, Griffin, and Babin 2009). On the other hand studies suggest that perceived value is moderating the relationship between service quality and customer satisfaction (e.g. Caruana et al 2000; Chen, 2008; Ismail et al 2009). Value may be viewed as the evaluation of what is received compared with what is given in a service encounter. McDougall and Levesque (2000) defined value as "benefits received relative to costs" (p. 393). Similarly, Zeithaml (1988) defined value as a consumer's overall assessment of product (or service) utility, based on perceptions of what was received and what was given in the exchange. Hence, perceived value is the difference between what a customer gives and what he/she gets.

By interesting qualitative study Zeithaml (1988) has investigated the concept of value and reports findings which identified four consumer definitions of product value for supporting literature, these components are centered around reducing price, how reasonable the price is compared to quality as the customer need. These definitions are (1) value is low price (2) value is whatever I want in a product (3) value is the quality I get for the price I pay and (4) value is what I get for what I give. Utility theory (Lancaster, 1971) provided the theoretical based upon for the value construct. This approach emphasizes that very often customers do not buy services for their own benefit. The customers buy set of attributes that together reflect a certain level of service quality which firms are offered at a certain price level. This theory emphasizes the linking between quality and value. The common method of perceived value dimensions is SERV-PERVAL scale which proposed by Petrick and Backman (2002). This method includes five dimensions: i.e. quality, monetary price, non-monetary price, reputation, and emotional response. In this study, perceived value is a result of patient's evaluation of the service received against their perceptions of the non-price costs such as time and efforts which have not been studied as moderator before.

2.4. Linking Between Service Quality, Perceived Value and Satisfaction

The link between variables as service quality, perceived value and customer satisfaction has been addressed in a variety of industries. Some studies argue that perceived value is an intervening variable that mediates the relationship between service quality and customer satisfaction (e.g. (Cronin, Brady, and Hult 2000; Korda & Snoj, 2010; Lin, Sher, and Shih 2005; Lai, Griffin, and Babin 2009). Some other studies suggest that perceived value is moderating the relationship between service quality and customer satisfaction (e.g. Caruana et al 2000; Chen, 2008; Ismail et al 2009). Caruana et al (2000) examined the moderating role of perceived value on the relationship between service quality and customer satisfaction. They found that the moderating influence supports such a role for value in an audit firm, but not in the health care industry. Chen (2008) found that perceived performance has an indirect effect on overall satisfaction moderated by perceived value. Hence he mentioned that without taking perceived value into account, the predictive power of service quality on overall satisfaction is questionable. This result also supports the debate of the importance of the measurement of perceived value in conjunction with the measurement of satisfaction by Oh (2000) and Woodruff (1997).

However, Ismail et al (2009) addressed the perceived value as a moderating variable on the relationship between service quality features and customer satisfaction in one public institution of higher learning in East Malaysia. But they examined only three dimensions of service quality named responsiveness, assurance and respect and caring, the study found that perceived value has increased the effect of respect and caring on customer satisfaction, but perceived value has not increased the effect of responsiveness and assurance on customer satisfaction. Thus, the finding showed that perceived value does act only as a partial moderator in the overall relationship between service quality features and customer satisfaction. Authors recommended that the organizational features (e.g., ownership and type) are a potential variable that can influence perceive value about service quality and this needs to be further explored. (Ownership and type). And they added that using organizational ownership and type may provide meaningful perspectives for understanding of how individual likeness and differences affect service quality policies within an organization. The present research proposes that perceived value has a moderating effect on the link between service quality and satisfaction. Therefore, this research seeks to explore whether the relationship between service quality dimensions and patient satisfaction is fully or partially moderated by value.

Even though many studies have been done, little is known about the moderating effect of perceived value in service quality models (Ismail et al 2009). Thus, the understanding of the moderating effect of perceived service value still remains key issues. The current study contributes to a conceptual model that, reflecting the moderating role of customer-perceived service value on the relationship between service quality dimensions and patient satisfaction cross different culture called Libya. However, the majority of these studies were conducted in the Western and Asian region. In Arab and North Africa as the researcher knows very few studies have been conducted (Mokhtar, 2010). He examined the relative importance of service quality, relational benefits, and customer perceived value to customer loyalty in the context of family doctors in Egypt non-western context. He found service quality has an effect on perceived customer value. On the other hand there is no study as the researcher's knowledge addressed the relationship between three variables in public hospitals. Additionally, the research did not find any study examining this relation moderating by perceived value in public hospitals. In this aspect, there is a need to better ascertain the nature of quality relationships with satisfaction moderated by patient perceived value in healthcare subject.

3. METHODOLOGY

The purpose of this research was to determine the non-monetary of perceived value (time and efforts) that patient spend to get the treatment and healthcare services in GPHT and its influence on the relationship between service quality dimensions and patient satisfaction. Thus, the study favors a quantitative research perspective in approach. This study is going to provide answers to the research questions, which will ultimately identify factors that contribute to the development of service quality, perceived value and patient satisfaction at GPHT in Libya and marketing services in general. Patients at the GPHT were asked about the service quality provided in those hospitals, their opinions and their levels of satisfaction towards the quality of services provided. In addition patients were also asked about how they perceived the value of time and efforts towards service quality. It is instructive to state that quantitative research needs a structured instrument to measure and document data. The SERVQUAL scale is considered to be one of the most adaptable in providing a valid instrument for measuring health service quality (e.g. Andaleeb, 2001; Tomes & Ng,1995; Babakus and Mangold, 1992; O'Connor et al., 1994; Parasuraman et al., 1985, 1988; Reidenbach and Sandifer-Smallwood, 1990; Taner and Antony, 2006; Taylor and Cronin, 1994; Woodside et al., 1989).

Based on these studies some developments were made consistent with the research setting set forth in this research, thirty two items representing the most widely acknowledged and empirically tested five dimensions of service quality (i.e. Environment and technology, Convenience of care process, Responsiveness, Assurance, and Respect and caring), and only service of performance approach - perceptions of patients, SERVPERF model (Cronin & Taylor, 1992) - based instrument measuring service quality, developed as an alternative to the disconfirmation based SERVQUAL (Parasuraman et al, 1985, 1988) were measured in order to determine the level of service quality. Time and affords of perceived value was measured by four items adapted from previous studies (Dodds et al., 1991; Keith Lee & Lee, 2004; Sweeney & Soutar, 2001; Zeithaml, 1988). Patient satisfaction was measured by five items adopted from Oliver (1997). A five- point Likert scale ranging from 5 (strongly agree) to 1 (strongly disagree) was utilized for all items. The demographic factors of the patients selected as participants such as age, education level, gender and income will also be taken into consideration in the data gathering process in the study. The target population of this study consisted of the patients in public hospitals in Tripoli. A total of 580 questionnaires were distributed. Of these 139 questionnaires were lost. A total of 441 were completed and returned. The response rate of 76 % was above the adequate level (50%) recommended by Rubin and Babbie (2005). Of the 441 completed questionnaires in this study, 78 questionnaires were returned unfilled, 10 questionnaires were excluded due to filling completely the same answer. Three hundred and fifty three of questionnaires found to be completed and usable to entered into SPSS.

4. DATA ANALYSIS AND FINDINGS

4.1. Respondents' Profile

This part presents the statistical responses to the demographic questions. The four demographic questions addressed the variables of, gender, education, income, and age. As presented in Table 1, 51.6% (n=182) of respondents were male compared to 48.4% (n=171) of respondents were female.

Regarding to education level of the respondents, the majority of respondents (29.5%; n=107) had a primary school, followed by 23.2% (n= 82) of respondents had Bachelor's degree, whereas (21.2%) and (19.8%) of participants had secondary school and do not have education respectively. Only 10 of respondent (2.9) had postgraduate degree. In addition, around (3%) of respondents had diploma level. The majority of patients 32.6 (n=115) were 50 years and above, followed by (24.6%) of respondents were within the age ranged of 30-39, few of respondents were young who ages were between 18 to 20 years which represented only (6.5%) of the total patients. This is logical and not surprising because the young people less vulnerable to disease and vice versa in the case of the elderly. A substantial percentage 46.5 (n=164) of respondents reported that their monthly income is less than LYD 200 hundred. It is not surprising for patients who are taking treatment in public hospitals. Followed by (26.3%) of respondents were had monthly income between LYD 400 and LYD 600. While (11.3%) of sample their monthly income is within (LYD 600 and LYD 800). About (9.6) of respondents had a monthly income between LYD 200 and LYD 400, and approximately (6%) of respondents were had monthly income more than LYD 800.

Table1. *Frequencies of demographic respondents and accommodation information attributes of Tripoli public hospitals*

Demographic Attributes		Frequency	%
Gender	Male	182	51.6
	Female	171	48.4
	Total	353	100.0
Age	18 – 20 years	23	6.5
	21 – 29 years	73	20.7
	30 – 39 years	87	24.6
	40 – 49 years	55	15.6
	over 50 years	115	32.6
	Total	353	100.0
Educational Levels	No education	70	19.8
	Primary	104	29.5
	Secondary	75	21.2
	Diploma	12	3.4
	Bachelor graduate	82	23.2
	Post graduate	10	2.9
	Total	353	100.0
Monthly Income	Less than LYD200	164	46.5
	LYD 200 less than LYD 400	34	9.6
	LYD 400 less than LYD 600	93	26.3
	LYD 600 less than LYD 800	40	11.3
	LYD 800 or above	22	6.2
	Total	353	100.0

4.2. Reliability and Validity Analysis

According to Sekaran and Bougie (2010, pp. 161,327) Exploratory factor analysis (EFA) was used to assess the validity of the instrument. EFA is used to determine the number of factors and which observed items are indicators of each latent variable. EFA was first used to assess the validity of each variable. These variables include the dimensions of service quality: trust, caring, convenience, responsiveness, and environment. Other variables include patient perceived value non-monetary (time and efforts) and patient satisfaction. A Principle Component Analysis (PCA) with Varimax method was run for seven variables which include service quality dimensions (32 items), the moderator variable which represented by perceived value of time and efforts (4 items) as moderator and patient satisfaction (5 items) as dependent variable. With 353 respondents (patients) the suitability of PCA was assessed prior to analysis. Inspection of the correlation matrix showed almost of all of variables had at least one correlation coefficients greater than 0.3. The overall KMO measure was .885 with individual KMO measures all greater than 0.5 classifications of "acceptable" to "meritorious" according to the Kaiser (1974). Bartlett's Test of Sphericity was statistically significant ($p < 0.0005$) indicating data was likely factorable. The final solution of PCA revealed seven components that had eigenvalues greater than one and which explained 76.922 of the total variance which are closely similar to the factor structure hypothesized in the context of this study. These factors are caring

(MSRC-4items); Convenience (COCP-5items); Responsiveness (RESP-4items); trust (MSTS-4items) and Environment (ENMT–3 items) related to independent variable, whereas one component for each moderator of perceived value of time and efforts (PVTE-4items) and dependent variable of patient satisfaction (PSAT-4items). For details (see Table 2 and Appendix A).

Table2. *Measurement model evaluation*

Latent Construct	Observed Indicators	Factor Loadings	CR	AVE[b]	α[c]
Environment & Technology	ENMT 1	.888	.900	.752	.868
	ENMT 2	.968			
	ENMT 3	.728			
Convenience	COCP 1	.746	.896	.690	.886
	COCP 2	excluded			
	COCP 3	.628			
	COCP 4	0.91			
	COCP 5	0.991			
Responsiveness	RESP 1	0.999	.882	.657	.867
	RESP 2	0.719			
	RESP 3	0.737			
	RESP 4	0.742			
Trust & security	TSMS 1	0.968	.898	.690	.884
	TSMS 2	0.825			
	TSMS 3	0.804			
	TSMS 4	0.705			
Respect & Caring	MSRC 1	0.946	.939	.793	.921
	MSRC 2	0.857			
	MSRC 3	0.889			
	MSRC 4	0.868			
Patient Satisfaction	PSAT 1	0.613	.835	.568	.852
	PSAT 2	0.616			
	PSAT 3	0.955			
	PSAT 4	excluded			
	PSAT 5	0.778			
Percieved Value	PVTE1	0.829	.847	.584	.843
	PVTE2	0.653			
	PVTE3	0.719			
	PVTE4	0.839			

a is Composite reliability,

b is Average Variance Extracted and c is Cronbach α

After determining the EFA results, a confirmatory factor analysis (CFA) was also conducted to confirm EFA and to evaluate the measurement model for modeled constructs, which are service quality dimensions, time and efforts of perceived value and patient satisfaction. One item on convenience dimension was problematic in fitting the model and was dropped from further analysis.

The revised model showed good fit to the data x^2 = 841.040, with 300 df. (2. 80) is less than the cutoff point of 3, as suggested by Bagozzi and Yi (1988) at p value 0.000. Moreover, the goodness-of-fit index (GFI = 0.85) that is close to the cut-off point of 0.90 whereas comparative-fit index (CFI of .93) are greater than the recommended value of 0.9. The root-mean-square error of approximation (RMSEA) is .07, which is less than 0.10 (Hair, Black, Babin, Anderson, & Tatham, 2006). Hence, the model fits the data reasonably well overall. The reliability, convergent validity, and discriminant validity of the constructs were assessed as the next step to examine the quality of the final measurement model (see Fig 1 and Table 1). Reliability falls in the range of Cronbach's alpha (1951) scale for each latent construct (87 to .98) which in turn evidence of internal consistency for each latent construct. Convergent validity was evaluated by the factor loadings of each observe of the latent constructs (Anderson and Gerbing, 1988). Every item loaded significantly on the construct at the p value. Moreover, the composite reliabilities of each construct in this study ranged from ranged from .83 to .94. That are well above the recommended value of 0.7 (Hair et al., 2006). Average variance

extracted was calculated for assessing discriminant validity (Baumgartner and Homburg, 1996; Steenkamp and Van Trijp, 1991). The average variance extracted ranged from .57 to .79 which is more than 50% of the variance as suggested by Bagozzi and Yi (1988)Therefore, all the scales met the requirements for testing the hypothesized structural model.
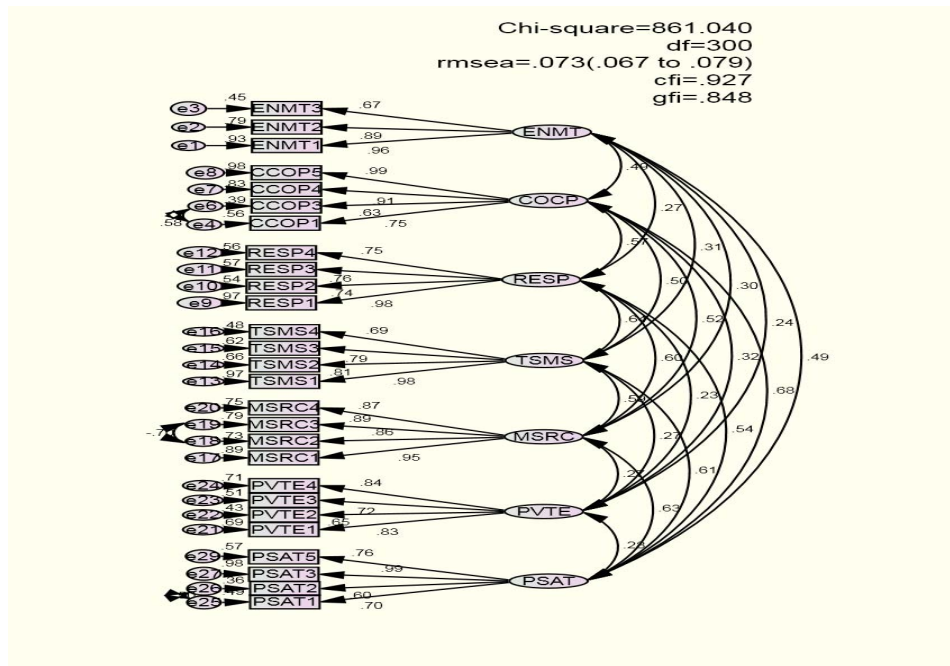

Fig1. *Confirmatory factor analysis*
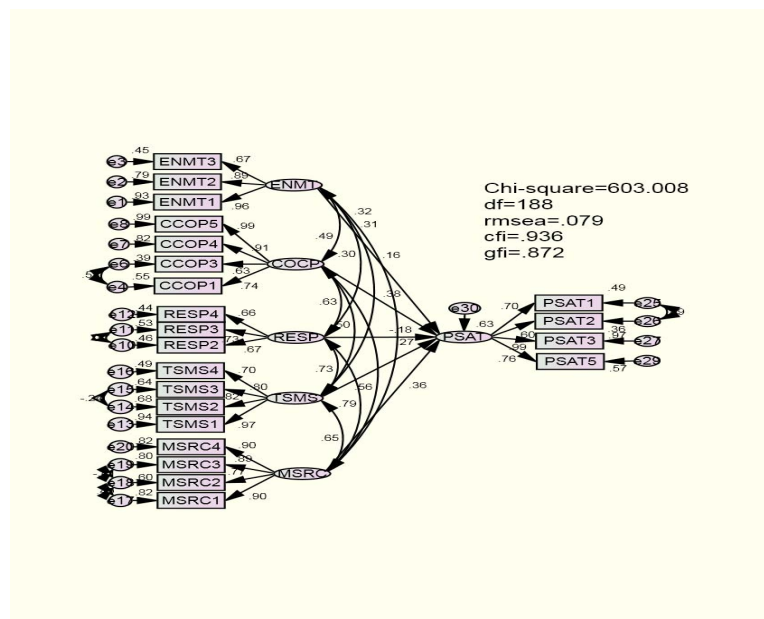
4.3. Structural Model and Test of Hypotheses

Fig2. *SEM of relationship between service quality dimensions and patient satisfaction*

The simultaneous maximum-likelihood-estimation procedures are utilized to test the hypothesized relationships among latent construct. Fig. 2 shows the results of the coefficients and goodness-of-fit statistics of the final estimated structural model. The result shown that x^2 statistic is significant (x^2 = 603.008), and, the ratio of the x^2 value to degrees of freedom (x^2/df = 3.207) is close to 3. Other fit indices, including GFI (0.872) and RMSEA (0.079). This result implies that the model has a good explanation of the observed covariance among the constructs. Relating to the hypothesis tests, only four of five hypothesized relationships were support the estimated structural model. As shown in Fig. 3 based on regression coefficient result, all of the exogenous variables are making statistically

significant at ($p < 0.01$) contribution to the patient satisfaction. However, dimension of responsiveness came out as an insignificant determinant of patient satisfaction. Convenience of care process has the most important significantly positive effects on patient satisfaction ($\beta = 0.38$) followed by respect and caring ($\beta = 0.36$), trust ($\beta = 0.26$), and finally environment and technology ($\beta = 0.16$). Thus, H1, H2, H4, and H5 were supported. On the other hand, the effect of responsiveness on patient satisfaction is not significant ($\beta = -.18$). Hence, H3 was not supported. More details about regression coefficients result (see appendix B and C).

In sum, the structural model confirmed the relationship between dimensions of service quality, environment, convenience, trust and caring with patient satisfaction, while the hypothesized path of responsiveness – satisfaction is not supported. The results in current research revealed that the five factors structures suggested by Parasuraman et al. (1988) for the SERVQUAL and Cronin and Taylor (1994) for the SERVPERF scales were almost supported. This is more in line with Lonial et al. (2010) who suggested that the dimensions of service quality are reliable and valid across cultural and economic environments in the context of healthcare/hospital. It is also in line with Taner and Antony (2006) found SERVQUAL, as a standard instrument for measuring functional service quality, which was found to be reliable and valid in a hospital environment. However, the result is not in line with Mostafa (2005) who studied public and private hospitals in Egyptian context, conforming three dimensions of service quality. Our finding is also not in line with a study conducted in Japan (Amira, 2008).

Among five dimensions of service quality, respect and caring, convenience of care process, trust and environment have a highest impact on patient satisfaction respectively. This result is almost consistent with Lonial et al. (2010). However, responsiveness has not influents on patient satisfaction. This result is not in line with Cong & Mai (2014) who found that the dimension tangible (environment & equipment) was found to have strongest influence on the Vietnamese patient satisfaction in public hospitals. Therefore, this present research also supports the significant and positive effect of service quality dimensions on patient satisfaction. This result implies that superior service quality dimensions increases patients' satisfaction to public hospitals.
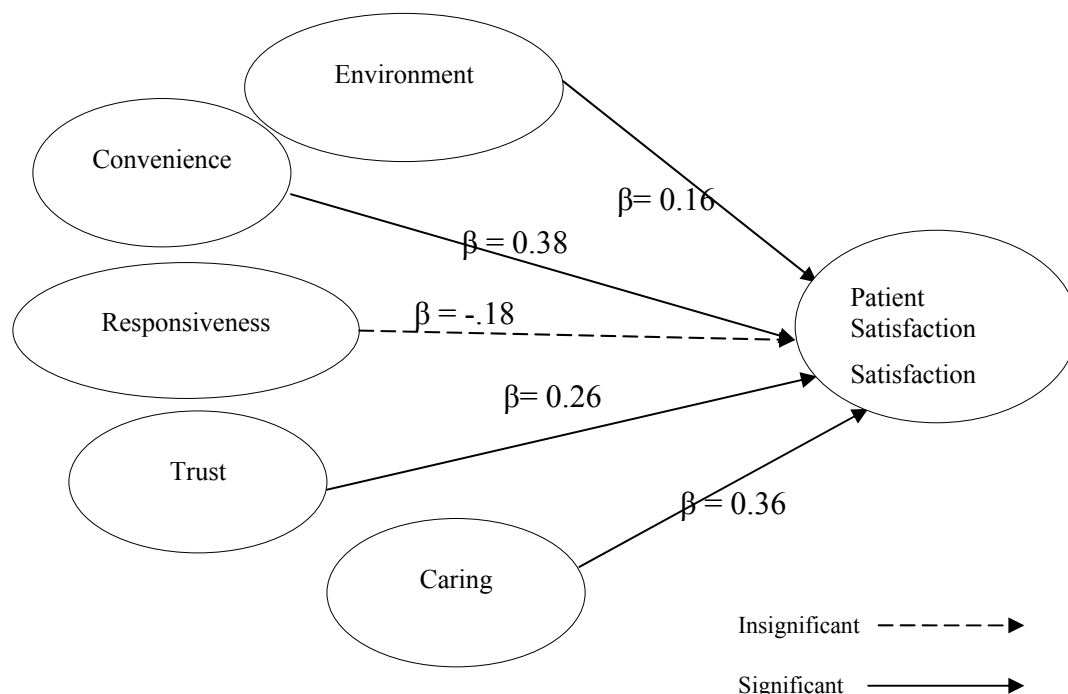
Fig3. *Standardized of coefficients of service quality dimensions and patients satisfaction*

To examine the moderation effect of time and efforts on the relationship between service quality dimensions and patient satisfaction, such relationships can be tested with a Hierarchical regression

analysis (HMR) as recommended by Cohen & Cohen (1983).Three important service quality dimensions and its relationship with patient satisfaction as resulted by regression coefficient, these are respect and caring, convenience of care process and assurance will be tested in the next step. Moderating effect is an interaction that shows the degree of relationship between the independent variables and dependent variables will change if other variables exist in the relationship (Cohen & Cohen, 1983; Jaccard et al., 1990). Results of an interaction are evident when the relationship between interacting terms and the dependent variable is significant. Such *interactions* are included as *the product* of two variables in a regression model" (Sekaran & Bougie, 2010, p.354). HMR was used to analyze this hypothesis. As recommended in the literature of multivariate analysis literature (Hair et al, 2006). Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. Tolerance and VIF ranged from .35 to .77 and from 1.30 to 2.83, respectively which is fall in the cut-off (tolerance value of less than .10, or a VIF value of above 10). Multicollinearity exists when the independent variables are highly correlated is .9 and above (Tabachnick & Fidell, 2007). The correlations between each of independent variables in this research less than .67.

Table 3 provides an overview of all three models and the respective regression results. The results of Model 1 show that the patients' gender (β = -.321, p < .05) is negative and positive significantly effected on the patient satisfaction. However, other three control variables age, monthly income and education level are not significantly has impact on patient satisfaction. The results from Model 2, which includes the main effects variables of service quality dimensions such as convenience of care process, assurance and respect and caring, and time and efforts of perceived value (PVTE) show strong, positive, and significant effects on patient satisfaction except PVTE was not significant. For convenience of care process (β = .323, p < .05), assurance (β = .307, p < .05) and respect and caring (β = .234, p < .05). The PVTE shows no significant effect on patient satisfaction (β = -.002, p > .05. Finally with respect to model 3 which includes all three interaction terms in the regression analysis. The first set of interaction terms in Model 3 tests the moderating effects of the PVTE. The regression coefficients show that there is no significant regression coefficients for all three interaction terms, convenience of care process x PVTE (β = -.010, p > .05), assurance x PVTE (β = -.010, p > .05) and respect and caring (β = .052, p > .05), in reject of H6.

HMR determines the change in R^2 that results during a hierarchical test of three regression equations. In the first regression the dependent variable of patient satisfaction is regressed on all demographic variables. Findings show a significant R^2 of .107. Findings also indicate that provides a significant R^2 of .528 (Table 3 column 6), followed by a second regression of satisfaction with both the independent variables of quality and the moderator variable PVTE. The results shown in Table 3 column 6 indicate a high increasing R^2 from .107 to .528 is significant (p < .05). In the third regression, the cross-product term of the independent variables and the moderator (interactions variables) are entered. The cross-product terms or the interactions variables were used in literature review to analysis the role of effect of moderator variable (Caruana et al, 2000; Engelen et al, 2013; Ismail & Abdullah, 2009; Leonidou et al, 2013). Model 3 analyze moderating relationship of PVTE. Overall model has a good fit but no variable is significance in this model .This results improved R^2 to 0.529 (Table 3, column 9). The increase R^2 from .528 to .529 is statistically insignificant F = 34.887; p >0.05.

Contrary to the research results, the literature revealed that monetary of perceived value did have a moderating impact on relationship between service quality dimensions such as (convenience of care process, responsiveness and respect and caring, and assurance) and satisfaction (Caruana, 2000). However, perceived value can also be a moderator on the relationship between only respect and caring service quality dimensions and satisfaction (Ismail and Abdullah, 2009). The results in current research revealed that, patients think that the service hospitals provide high levels of service quality; it does necessarily results high satisfaction. If, time and efforts are perceived to be high this may not effect on satisfaction. Patient satisfaction does depend on service quality alone and higher levels of time and efforts of perceived value are not effect on or change the relationship between service quality dimensions such as convenience of care process, respect and caring and assurance with patient satisfaction.

Table3. *HMR of predicting patient satisfaction from service quality dimensions interacting with perceived value*

Variables	Model 1			Model 2			Model 3		
	B	β	Sig	B	β	Sig	B	β	Sig
Gender	-.584	-.321*	.000	-.293	-.161*	.000	-.289	-.159*	.000
Educational	-.055	-.092	.113	-.047	-.079	.065	-.046	-.077	.073
Age	-.026	-.037	.523	.006	.009	.840	.005	.007	.869
Income	-.007	-.010	.865	.040	.057	.182	.039	.056	.193
IV									
Convenience				.319	.323*	.000	.317	.321*	.000
Trust				.358	.307*	.000	.362	.309*	.000
Caring				.244	.234*	.000	.254	.244*	.000
PVTE				-.002	-.002	.967	-.002	-.002	.967
Interaction									
CCOP X PVTE							-.002	-.010	.816
TSMS X PVTE							-.016	-.010	.831
MSRC X PVTE							-.017	.052	.296
R^2		.107*			.528			.529	
R^2 Adjusted		.097*			.517			.514	
F		10.4			48.1			34.9	
R^2 Change		.107			.421			.002	
Sig. F Change		.000			.000			.738	

Note: ** p < 0.001*

5. CONCLUSIONS AND IMPLICATIONS

The study examined the relationship between service quality dimensions and patient satisfaction through the time and efforts as non-price dimension of perceived value as the moderator effect. The research examined service quality dimensions such as environment and technology, convenience of care process, responsiveness, assurance and respect and caring in public hospitals. Quantitative research was conducted with a sample of 353 patients at the public hospitals in Tripoli, Libya. The aim of the study was to examine if a particular monetary such as time and efforts of perceived value change or strengthens the relationship between service quality dimensions correlate more strongly or more positively with the determinants of patient satisfaction. The main objectives in this research were: 1) to examine the relationship between service quality dimensions such as environment and technology, convenience of care process, responsiveness, assurance and respect and caring with patient satisfaction, and 2) to examine the moderating effect of perceived value on the relationship of service quality dimensions such as environment and technology, convenience of care process, responsiveness, assurance and respect and caring with patient satisfaction. For achieve the **objective 1** several hypotheses were conducted, testing the hypotheses were conducted. Findings accepted all the hypotheses except for the effect of responsiveness on patient satisfaction (H3). Regression showed that responsiveness service quality dimension does not influence on patient satisfaction, whereas each of other service quality dimensions such as assurance, respect and caring, convenience of care process and environment and technology (H4, H5, H2 and H1) were found to be has influence on patient satisfaction. The most important dimension predicting patient satisfaction in public hospitals analysis was dimension of respect and caring. **Regarding to achieving the objective 2** several hypotheses were tested, HMR was conducted. Hypotheses tests 6 was rejected all sub-hypotheses which related to time and efforts of perceived value moderates the relationship between the three important service quality dimensions such as respect and caring, convenience of care process and assurance. Moreover, perceived value such as time and efforts dimension does not moderate the relationship between each of remained service quality dimension such as convenience of care process, trust and respect and caring with patient satisfaction. Therefore, time and efforts dimension of perceived value may be antecedent variable for patient satisfaction. Based on research objectives and followed by the research findings, this study contribute to better understanding of the service quality dimensions and their impact on patient satisfaction in the context of the public hospitals in Tripoli, Libya. This research is meaningful since the ability to deliver quality services and provide patient satisfaction, especially in the public hospitals units in developing countries like Libya is limited.

The important implications and contributions of the research findings comprise managerial and theoretical implications. This work provides significant impacts on some major aspects: practical contribution, and theoretical contribution. In team of **practical contribution**, the findings of this research can be employed as a guideline by maker's decision to develop the design and department of service quality program in hospitals. With respect to **theoretical contribution**, this study provides several important findings time and efforts of perceive value about the use of service quality dimensions such as convenience of care process; respect and caring and trust in delivery healthcare services have not increased patient satisfaction. This finding is not in line with studies conducted of Caruana et al. (2000), Eggert and Ulaga (2002) and Monroe (1990) and this result is consistent with studies by Eggert and Ulaga (2002) and Varki & Colgate (2001). The findings of the investigation hold important implications for future planning and improvement in Libyan hospitals industry and more specifically, public hospitals.

5.1. Limitations and Future Research

The conclusion drawn from the results of this study should consider the following limitations. **Firstly**, this research was a cross-sectional design. Longitudinal method may achieve a better understanding of the effective behavior of the variables analyzed. **Secondly**, this research only examines the relationships between latent variables (i.e., responsiveness, assurance, respect and caring, time and efforts, and patient satisfaction) and the conclusion drawn from this study does not specify the relationship between specific indicators and observes for the independent variable, moderating variable, and dependent variable. Future research may expand in this regard. **Thirdly**, this research conducted the sample which only represents inpatient in hospitals in a single city and they were chosen by using a convenient sampling technique. It is acknowledged that if it included outpatient it would have been more inclusive. The study was conducted in Tripoli city, but if it was conducted to all cities in Libya it would have been more inclusive. **Fourthly,** the study was conducted in a part of sector which is General public hospitals; further research may examine differences of sectors such as private and specialization of hospital, Primary health care units. Although the study is one of the first studies in the Libya which clarified the concept of quality from the patients view in Libya hospitals, it is limited as it did not study the concept of quality from other customer viewpoints as mentioned in limitation of the research. Therefore, perhaps further studies are needed on this issue.

REFERENCES

Al-Alak, B., & Alnaser, A. (2012). Assessing the relationship between higher education service quality dimensions and student satisfaction, *Australian Journal of Basic and Applied Sciences*, *6*(1), 156-164.

Al-Hawary. S. I. S., (2012). Health care services quality at private hospitals, from patients' perspective: A comparative study between, Jordan and Saudi Arabia, *African Journal of Business Management*, *6*(22), 6516-6529.

Amira, E. (2008). Patient satisfaction in Japan. *International Journal of Health Care Quality Assurance*, *21*(7), 692-705.

Andaleeb, S. S. (1998). Determinants of customer satisfaction with hospitals: A managerial model. *International Journal of Health Care Quality Assurance, 11*(6), 181-187.

Andaleeb, S. S., (2001). Service Quality Perceptions and Patient Satisfaction: A Study of Hospitals in a Developing Country, *Social Science and Medicine*, *52*(9), 1359-1370.

Anderson, E. (1995). Measuring service quality and a university health clinic. *International Journal of Health care assurance, 8*(2), 32-37.

Arasli, H., Haktan, E. E., & Katircioglu , S. T. (2008). Gearing service quality into public and private hospital in small islands Empirical evidence from Cyprus. *International Journal of Health Care Quality Assurance, 21*(1), 8-23.

Babakus, E. & Mangold, W. G. (1992). Adapting the SERVQUAL scale to hospital services: An empirical investigation. *Health Services Research*, *26*(6), 767-786.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94.

Baumgartner, H., Homburg, C. (1996). Applications of structural equation modeling in marketing and consumer research: a review. *International Journal of Research in Marketing*, 13, 139–161.

Berendes S, Heywood P, Oliver S, & Garner P (2011) Quality of Private and Public Ambulatory Health Care in Low and Middle Income Countries: Systematic Review of Comparative Studies. PLoS Med *8*(4), 1-10.

Bolton, R. N., & J. H. Drew. (1988). *A model of perceived service value*. Technical Note 88-420.1. Waltham, MA: GTE Laboratories.

Bopp, K. D. (1999). How patients evaluate the quality of ambulatory medical encounters: A marketing perspective. *Journal of health care marketing, 10*(1), 6-15.

Buttle, F. (1996). SERVQUAL: Review, critique, research agenda. *European Journal of Marketing*, *30*(1), 8-32.

Calnan, M. (1988).Towards a conceptual framework of lay evaluation of health care. *Social Science Medical, 27*(9), 927– 933.

Camilleri, D. & O'Callaghan, M. (1998). Comparing public and private care service quality. *International Journal of Health Care Quality Assurance*, *11*(4), 127-33.

Caruana, A., Money, A.H., & Berthon, R.P. (2000). Service quality and satisfaction – the moderating role of value, *European Journal of Marketing*, *34*(11), 1338 - 1353.

Che Rose, R., Uli, J., Abdul, M & Ng, K. (2004). Hospital service quality: A managerial challenge *International Journal of Health Care Quality Assurance*, *17*(3), 146-159.

Chen, C. F. (2008). Investigating structural relationships between service quality, perceived value, satisfaction, and behavioral intentions for air passengers: Evidence from Taiwan. *Transportation Research, 42*, 709-717.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd Ed.). Hillsdale, NJ: Erlbaum.

Cong. N. T & Mai. N. T. T (2014). Service Quality and Its Impact on Patient Satisfaction: An Investigation in Vietnamese Public Hospitals *Journal of Emerging Economies and Islamic Research*, *2*(1), 1-13.

Conway, T. & Willcocks, S. (1997).The role of expectations in the perceptions of health care quality: Developing a conceptual model. *International Journal of Health Care Quality Assurance*, *10*(3), 131-40.

Cronbach, L.J., (1951). Coefficient alpha and the internal structure of tests. Psychometrica 16, 297– 334.

Cronin, J. J. Jr., & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing 56*(7), 55-68.

Cronin, J. J., Brady, M. K., & Hult, T. M. (2000). Assessing the effects of quality, value, customer satisfaction on consumer behavioral intention service environment. *Journal of Retailing*, *76*(2), 193-218.

Dabholkar, P. A. (1995). A contingency framework for predicting causality between customer satisfaction and service quality. *Advances in Consumer Research, 22*(1), 101-108.

De Jager. J. W., du Plooy. A. T., & Femi Ayadi, M. (2010). Delivering quality service to in-and out-patients in a South African public hospital. *African Journal of Business Management, 4*(2), 133-139.

Devebakan, N. (2005). Measurement of perceived quality at Health Facilities Izmir [online] Available at: www.kalder.org/genel/saglik%20isletmelerindeahkveolcumu.

Diab, S. M (2012) Measuring Quality Dimensions of Government Hospitals Medical Services in Jordan: A Staff and Patients Perspective, *journal of Islamic university*-Gaza, 1, 20 p, 69-104.

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. *Journal of Marketing Research, 28*(2), 307–319.

Dursun, Y. & Cerci, M. (2004). Perceived quality: A study on patient satisfaction and behavioral factors. Erciyes U ̈niversitesi Iktisadi ve Idari Bilimler Faku ̈ltesi Dergisi (Erciyes University. *Journal of Economics and Administrative Sciences,* Faculty Itesi, *23*, 1-16.

Eggert, A., & Ulaga W. (2002). Customer-perceived value: A substitute for satisfaction in business markets? *Journal of Business and Industrial Marketing*, *17*(2/3), 107-118.

Foster, S., & Thomas, Jr. (2001). *Managing Quality: An integrative approach.* Prentice-Hall, Upper Saddle River, NJ. 223-244.

Garman, A.N. & Hargreaves, M. (2004). Patient satisfaction as a predictor of return-to provider behavior: Analysis and assessment of financial implications. *Quality Management in Health Care, 13*(1), 75-80.

Ismail. A., Ali. N., & Abdullah. M. M. (2009). Perceive Value as a Moderator on the Relationship between Service Quality Features and Customer Satisfaction, *International Journal of Business and Management* February, *4*(2), 71-79.

Jabnoun, N. & Chaker, M. (2003). Comparing the quality of private and public hospitals. *Managing Service Quality*, *13*(2), 290-9.

Jaccard, James, Robert Turrisi, and Choi K. Wan. 1990. Interaction Effects in Multiple Regression. Newbury Park, CA: Sage.

Jackie, L. M., & Tam. (2007). linking quality improvement with patient satisfaction: a study of a health service centre. *Marketing Intelligence & Planning, 25*(7), 732-745.

Hair, J. F. J., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Englewood Cliffs, NJ: Prentice-Hall.

Han, H.S., & Ryu, K. (2009). The roles of the physical environment, price perception, and customer satisfaction in determining customer loyalty in the family restaurant industry. *Journal of Hospitality & Tourism Research*, *33*(4), 487-510.

Health system profile: Libya. (2007). Eastern Mediterranean Regional Health Systems Observatory. Retrieved from. http://gis.emro.who.int/HealthSystemObservatory/PDF/Libya/Full%20Profile. pdf.

Hu, H. H. S., Kandampully, J., & Juwaheer, T. D. (2009). Relationships and impacts of service quality, perceived value, customer satisfaction, and image: an empirical study. *Services Industry Journal*, 29, 111-125.

Korda A. B & Snoj. B. (2010). Development, validity and reliability of perceived service quality in retail banking and its relationship with perceived value and customer satisfaction. *Managing Global Transitions, 8*(2), 187–205.

Kuo, Y. F., Wub, C. M., & Deng, W. J. (2009). The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services. *Computers in Human Behavior, 25*, 887–896.

Lai, F., Griffin, M., & Babin, B. J. (2009). How quality, value, image, and satisfaction create loyalty at a Chinese telecom. *Journal of Business Research*, *62*(10), 980-986.

Lancaster, K. (1971), *Consumer Demand: A New Approach,* Columbia University Press, NewYork, NY.

Lee, Y. K., Lee, Y., Lee, K. A., Park, D. H. & Moon, H. (2004). Exploring the role of service value in the relationship between service quality and customer satisfaction. *International Journal of Hospitality & Tourism Administration*, *5*(1), 67-86.

Lehtinen, U., & Lehtinen, J. (1991). Two approaches to service quality. *The Service Industries Journal, 3,* 287-303.

Leonidou, L.C., C.S. Katsikeas, T. Fotiadis, and P. Christodoulides (2013), Antecedents and consequences of an eco-friendly export marketing strategy: The moderating role of foreign public concern and competitive intensity, *Journal of International Marketing*, *21*(3), 22-46.

Lin, C. H., Sher, P. J., & Sher, P. J. (2005). Past progress and future. *International Journal of Service*, 16 (4), 318-336.

Linder-Pelz, S. (1982).Toward a theory of patient satisfaction. *Social Science and Medicine*, *16*(5), 577-82.

Lynch, J. & Schuler, D. (1990). Consumer evaluation of the quality services from an economics of information perspective. *Journal of Health Care Marketing*, *10*(2), 6-22.

McDougall, G.H.G. & Levesque, T. (2000). Customer satisfaction with services: Putting   perceived value into the equation. *Journal of Services Marketing, 14*(5), 392-410.

Mokhtar. Y. O. (2010). Service quality, relational benefits, and customer loyalty in a non-western context. *Society for the Advancement of Management*, 75 (1).

Mostafa, M. M. (2005). An empirical study of patient's expectations and satisfaction in Egyptian hospitals. *International Journal of Health Care Quality Assurance*, *18* (7), 516-32.

Monroe, K. B. (1990). *Pricing: Making Profitable Decisions*, 1st ed. McGraw-Hill, New York.

Nelson, E. C., Rust, R.T., Zahorik, A., Rose, R.L., Batalden, P. & Siemanski, B. A. (1992). Do patient perceptions of quality relate to hospital financial performance? *Journal of Health Care Marketing, 12*(4), 6-13.

Newman, K. (2001). Interrogating SERVQUAL: A critical assessment of service quality measurement in a high street retail bank. *The International Journal of Bank Marketing, 19* (3), 126-139.

Oliver, R. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, *17*, 460-469.

Oliver, R. L. (1993). A conceptual model of service quality and service satisfaction. In: Swartz TA, Bowen DE, Brown SW, editors. Advances in services marketing and management. *Research and practice,* 2. Greenwich, CT: JAI Press, 65–68.

Oliver, R. L. (1997). *A Behavioral Perspective on the Consumer*, McGraw-Hill, New York, NY.

Otani, K., & Harris, L. E. (2004). Different integration processes of patient satisfaction among four groups. *Health Care Management Review, 29*(3), 188-195

Owusu-Frimpong, N., Nwankwo, S., & Dason, B. (2010). Measuring service quality and patient satisfaction with access to public and private healthcare delivery. *International Journal of Public Sector Management*, *23*(3), 203-220.

Parasuraman, A., Zeithaml, V. A. & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, *49*(4), 41-50.

Parasuraman, A., Zeithaml, V. A. & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*, 12-40.

Pascoe, G. (1983). Patient satisfaction in primary health care: a literature review and analysis. *Evaluation and Programmed Planning*, (6), 185-210.

Paul, W., & Geoffrey N.,S. (2009). Value, Satisfaction and Behavioral Intentions In An Adventure Tourism Context. Annals of Tourism Research, *36*(3), 413-438.

Petrick, J.F., & Backman. (2002). An examination of the construct of perceived value for the prediction of golf travelers' intentions to revisit. *Journal of Travel Research*, *41*(1), 38-45.

Peyrot. M., Cooper. P. D., & Schnapf, D. (1993). A consumer satisfaction and perceived quality of outpatient health services. *Journal of Health Care, Marketing*, *13*, 24 – 33.

Ramsaran-Fowdar, R.R. (2008). The relative importance of service dimensions in a healthcare setting, *International Journal of Health Care Quality Assurance,* (1), 104-124.

Redwood, H. (2000), Why Ration Health Care? CIVITAS, London.

Reidenbach, R. E., & McClung, G.W. (1999). Managing stakeholder loyalty: When satisfaction is just not enough. *Marketing Health Service, 21*, 21-29.

Reidenbach, R. E., & Sandifer-Smallwood, B. (1990). Exploring perceptions of hospital operations by a modified SERVQUAL approach. Journal *of Health Care Marketing*, *10*(4), 47 55.

Ribbink, D., Van Riel, A. C. R., Liljander, V. & Streukens, S. (2004). Comfort your online customer: quality, trust and loyalty on the internet. *Managing Service Quality*, *14*, 446-456.

Rubin, A. & Babbie, E. (2005). Research Methods for Social Work (5th Edition). Belmont, CA: Brooks/Cole-Thompson Learning. Chapter 12: Single-case evaluation designs (pp. 365-393). Chapter 13: Issues in program evaluation (pp. 394-426).

Ruggeri, M. (1994). Patients' and relatives' satisfaction with psychiatric services: The state of the art of its measurement. *Social Psychiatry & Psychiatric Epidemiology*, 29, 212 – 227.

Rust, R. T., & Oliver, R. L. (Eds.). (1994). *Service quality: New directions in theory and practice*. Thous and Oaks, CA: Sage Publication, Inc.

Sekaran, U., & Bougie, R. (2010). Research Methods for Business: A Skill. Building Approach. UK: John Wiley.

Shemwell, D.J., Yavas, U., Bilgin, Z. (1998).Customer-service provider relationships: an empirical test of a model of service quality, satisfaction and relationship oriented outcome. *International Journal of Service Industry Management*, 9, 155-68.

Sewell, N. (1997). Continuous quality improvement in acute healthcare: Creating aholistic and integrated approach. *International Journal of healthcare quality assurance*, *10*(1), 20-26.

Spreng, R. A., MacKenzie, S.B. & Olshavsky, R.W. (1996). A re-examination of the determinants of consumer satisfaction. *Journal of Marketing*, *60*(3), 15-32.

Steenkamp, J.E.M., Van Trijp, H.C.M., 1991. The use of LISREL in validating marketing constructs. International Journal of Research in Marketing 8, 283–299.

Sureshchanndra, G. S., Rajendran, C., & Anantharaman, R. N. (2003).The relationship between service quality and customer satisfaction - a factor specific approach. *Journal of Service Marketing*, *16*(4), 363-379.

Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: the development of a multiple item scale. Journal of Retailing, *77*(2), 203-20.

Tabachnick, B.G. & Fidell, L.S. (2007). Using multivariate statistics (5th edn). Boston: Pearson Education.

Taner, T., & Antony, J. (2006). Comparing public and private hospital care service quality in Turkey. *Leadership in Health Services, 19*(2), i-x.

Taylor, S. A., & Baker TL. (1994). An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions. *Journal of Retailing, 70*(2), 163 –78.

Teas, R. K. (1994). Expectations as a comparison standard in measuring service quality: An assessment of a reassessment. *Journal of Marketing*, *58*, 132-139.

Tomes, A. E., & Ng, S. C. P. (1995). Service quality in hospital care: the development of in-patient questionnaire. *International of Health Care Quality Assurance*, *8*(3), 25-33.

Tracey S. Dagger, Timothy K. O'Brien, (2010) .Does experience matter?: Differences in relationship benefits, satisfaction, trust, commitment and loyalty for novice and experienced service users. *European Journal of Marketing*, *44*(9/10), 1528 – 1552.

Turner, P., & Pol, L. (1995). Beyond patient satisfaction. *Journal of Health Care Marketing*, *15* (3), 45-53.

Varki, S., & Colgate, M. (2001).The Role of Price Perceptions in an Integrated Model of Behavioral Intentions. *Journal of Service Research, 3*(3), 232-240.

Woodruff, R. B. (1997). Customer value: The next source for competitive advantage. *Journal of Academic of Marketing Science*, *25*(2), 139–53.

Woodside, A.G., Frey, L. L., & Daly, R.T. (1989). Linking service quality, customer satisfaction, and behavioral intention. *Journal of Health Care Marketing, 9*(4)*,* 5-17.

World Health Organization. Regional Office for the Eastern Mediterranean Tuberculosis control in the Eastern Mediterranean Region: *progress report 2009* / World Health Organization.

Yousapronpaiboon, K., & William C. (2013). A Comparison of Service Quality between Private and Public Hospitals in Thailand, *International Journal of Business and Social Science, 4*(11), 176-184.

Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means- End Model and Synthesis of Evidence. *Journal of Marketing*, *52*(7), 2-22.

Zeithaml, V. A., & Bitner, M. J. (2000). *Services marketing*. New York: McGraw-Hill.

Zeithaml, V. A, & Bitren, M. J. (2006). *Service marketing: integrating customer focus across the firm*. McGraw-Hill Higher Education.

Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. New York, NY: Free Press.

Zamil, A, M., Areiqat, A, Y., Tailakh, W. (2012).The Impact of Health Service Quality on Patients' Satisfaction over Private and Public Hospitals in Jordan: A Comparative Study, *International Journal of Marketing Studies, 4*(1), 123-137.3

Appendix A: Exploratory Factor Analysis

	Component						
	1	2	3	4	5	6	7
ENMT1	.247	.117	.139	.007	.062	.080	.888
ENMT2	.258	.177	.104	.113	.105	.069	.831
ENMT3	.113	-.016	.018	.148	.106	.065	.807
CCOP1	.893	.128	.077	.043	.141	.141	.140
CCOP2	.770	.086	-.028	-.057	.113	-.020	.142
CCOP3	.822	-.021	.053	.001	.173	.048	.144
CCOP4	.689	.180	.193	.338	.071	.316	.174
CCOP5	.726	.210	.203	.351	.087	.298	.202
RESP1	.126	.243	.321	.802	.058	.237	.091
RESP2	.030	.332	.134	.753	.058	.021	.147
RESP3	.051	.357	.265	.681	.115	.059	.110
RESP4	.095	.030	.256	.761	.066	.234	.018
TSMS1	.109	.250	.822	.255	.096	.252	.114
TSMS2	.054	.143	.806	.240	.128	.123	.012
TSMS3	.113	.191	.780	.157	.066	.177	.111
TSMS4	.034	.276	.656	.272	.071	.207	.090
MSRC1	.149	.874	.200	.226	.105	.135	.102
MSRC2	.084	.852	.155	.104	.057	.180	.048
MSRC3	.091	.724	.262	.362	.115	.132	.086
MSRC4	.176	.710	.355	.318	.118	.228	.105
PVTE1	.121	.054	.095	.095	.844	.054	.043
PVTE2	.050	.085	.086	.101	.743	.066	.024
PVTE3	.123	.036	.006	-.012	.787	.031	.185
PVTE4	.167	.091	.091	.036	.841	.071	.022
PSAT1	.103	.078	.179	.089	.084	.872	.082
PSAT2	.064	.173	.183	.178	.103	.797	-.005
PSAT3	.305	.394	.264	.143	.082	.646	.297
PSAT5	.310	.277	.312	.210	.023	.549	.076
Extraction Method: Principal Component Analysis.							
Rotation Method: Varimax with Kaiser Normalization.							
a. Rotation converged in 6 iterations.							

Appendix B: Regression Weights: (Unstandardized)

			Estimate	S.E.	C.R.	P	Label
F6	<---	F1	.172	.048	3.604	***	par_20
F6	<---	F2	.403	.067	6.030	***	par_21
F6	<---	F3	-.258	.170	-1.516	.129	par_22
F6	<---	F4	.301	.074	4.068	***	par_23
F6	<---	F5	.394	.088	4.498	***	par_24
ENMT1	<---	F1	1.000				
ENMT2	<---	F1	.953	.040	23.807	***	par_1
ENMT3	<---	F1	.502	.034	14.971	***	par_2
CCOP1	<---	F2	1.000				
CCOP3	<---	F2	1.009	.056	18.168	***	par_3
CCOP4	<---	F2	.844	.046	18.456	***	par_4
CCOP5	<---	F2	.933	.047	19.748	***	par_5
RESP2	<---	F3	.889	.062	14.306	***	par_6
RESP3	<---	F3	1.000				
RESP4	<---	F3	1.064	.098	10.815	***	par_7
TSMS1	<---	F4	1.000				
TSMS2	<---	F4	.933	.041	22.828	***	par_8
TSMS3	<---	F4	.911	.042	21.591	***	par_9
TSMS4	<---	F4	.832	.049	17.109	***	par_10
MSRC1	<---	F5	1.000				
MSRC2	<---	F5	1.043	.043	24.137	***	par_11
MSRC3	<---	F5	1.044	.042	25.082	***	par_12
MSRC4	<---	F5	.885	.034	25.796	***	par_13
PSAT1	<---	F6	1.000				
PSAT2	<---	F6	.725	.047	15.301	***	par_14
PSAT3	<---	F6	.920	.056	16.458	***	par_15
PSAT5	<---	F6	1.030	.075	13.817	***	par_16

F1 is environment, F2 convenience, F3 responsiveness, F4 trust, F5 caring, F6 patient satisfaction

Appendix C: Standardized Regression Weights

			Estimate
F6	<---	F1	.159
F6	<---	F2	.376
F6	<---	F3	-.181
F6	<---	F4	.267
F6	<---	F5	.365
ENMT1	<---	F1	.964
ENMT2	<---	F1	.888
ENMT3	<---	F1	.668
CCOP1	<---	F2	.744
CCOP3	<---	F2	.626
CCOP4	<---	F2	.907
CCOP5	<---	F2	.994
RESP2	<---	F3	.675
RESP3	<---	F3	.728
RESP4	<---	F3	.660
TSMS1	<---	F4	.970
TSMS2	<---	F4	.822
TSMS3	<---	F4	.802
TSMS4	<---	F4	.703
MSRC1	<---	F5	.904
MSRC2	<---	F5	.771
MSRC3	<---	F5	.893
MSRC4	<---	F5	.904
PSAT1	<---	F6	.698
PSAT2	<---	F6	.602
PSAT3	<---	F6	.986
PSAT5	<---	F6	.758

F1 environment, F2 convenience, F3 responsiveness, F4 trust, F5 caring, F6 patient satisfaction

AUTHORS' BIOGRAPHY

Yousf was born in April 3, 1972 in Zliten, Libya. He holds a Master of Marketing degree from the Academy of Graduate Studies, Tripoli, Libya. He is currently a PhD (Management) student at Universiti Tun Abdul Razak, Kuala Lumpur, Malaysia. Postal Address: U1, 13A-02, AmpangDamai Condo, Jln, wawasan, Bandar BaruAmpang, 68000, Selangor, Malaysia.

Prof Dr Ismail Rejab holds a D.B.A degree from the University of Kentucky, Lexington, Kentucky, USA – 1979. Currently he teaches at Al-Medinah International University Shah Alam, Malaysia. His main research area is marketing and strategic management. He is also conducting research in the area of political marketing.

Assoc. Prof. Dr. Zulkifflee Mohamed currently is a Dean at Bank Rakyat School of Business & Entrepreneurship (BRSBE), Universiti Tun Abdul Razak (UNIRAZAK) Malaysia. He has been with Pricewaterhoosecooper Malaysia as external auditor before joining academic arena. In addition, Dr. Zulkifflee is a Fellow member of CPA Australia as Certified Practicing Accountant, Fellow member of Institute Financial Accountant (UK), member of Malaysian Institute of Accountants (MIA) as Chartered Accountant, member of The Malaysian Institute of Certificate Public Accountants (MICPA) as Certified Financial Accountant (CFiA) and member of Institute of Internal Auditors Malaysia (IIAM) as Chartered & Professional Internal Auditors. His primary research areas of interest include corporate governance, auditing, financial accounting and reporting, corporate social responsibility (CSR), service quality and accounting education.