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IMPROVING THE HEALTHCARE SERVICE QUALITY IN CHINESE PUBLIC CLASS-A HOSPITALS: FROM FRONTLINE HEALTHCARE PROFESSIONALS' PERSPECTIVES

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Abstract

In a highly competitive market, healthcare service improvement is important to satisfy people's increasing need for care and to maintain the sustainability of hospitals' competitive advantages. Although Public Class-A hospitals are the top hospitals in China, existing problems exert negative influences on service quality. This research aims to contribute to the improvement of Chinese Public Class-A hospitals by investigating the perspectives of healthcare professionals regarding service improvement. Using a qualitative approach, 16 professionals working for several Public Class-A hospitals were interviewed and expressed their views on the existing service quality, the factors influencing this service and made suggestions about how to improve it.

The results of content analysis revealed that professionals view Chinese Public Class-A hospitals as having good medical ability, advanced equipment and reliable curative effect. The price of treatment is considered high but acceptable. According to professionals, the main problems were poor service attitude, lack of emotional support, communication problems, long waiting times, environmental problems, and administrative problems. The identified barriers to high-quality service delivery include professional pressure and burnout, patient factors, remuneration and promotion perspectives. Overall, more people-centered services were suggested, meaning that healthcare professionals should improve their service consciousness and humane care, while the whole society should give humane care to healthcare professionals as well. Other suggestions involved enhancing the hierarchical medical system, strengthening doctor-patient communication, optimizing the treatment processes, improving hospital environment and publicity, and dispensing health education. In short, addressing these themes can contribute to improve the service of Chinese Public Class-A hospitals.

Keywords: Service quality, Healthcare, Quality improvement, Healthcare professions.

Resumo

Num mercado altamente competitivo, a melhoria da qualidade dos serviços de saúde é importante para satisfazer as crescentes necessidades de cuidados da população e para a sustentabilidade das vantagens competitivas dos hospitais. Os hospitais públicos de Classe-A ocupam os lugares cimeiros na China, e os problemas neles existentes influenciam negativamente a qualidade do serviço que prestam. Este estudo tem por objetivo contribuir para a melhoria destes hospitais investigando as perspetivas dos profissionais sobre a melhoria do serviço. Com base numa abordagem qualitativa, 16 profissionais que trabalham em diversos hospitais públicos de Classe-A foram entrevistados e expressaram os seus pontos de vista sobre o nível de qualidade de serviço existente, os fatores que afetam este serviço e as sugestões para o melhorar.

Os resultados da análise de conteúdo revelam que os profissionais vêm os hospitais chineses de Classe-A como tendo elevada capacidade médica, equipamento avançado e uma reposta curativa eficaz. O preço dos serviços é considerado relativamente elevado, mas aceitável. Segundo os profissionais, os principais problemas existentes nestes hospitais referem-se à existência de fraca atitude de serviço, falta de suporte emocional, problemas de comunicação, longas listas de espera, problemas ambientais e problemas administrativos. As barreiras à prestação de cuidados de maior qualidade identificadas pelos profissionais reportam-se à pressão e ao *burnout* dos profissionais, a fatores relacionados com os doentes, à remuneração e às perspetivas de promoção. Em geral, os profissionais sugerem um serviço mais centrado nas pessoas, ou seja, os profissionais deverão acentuar a prestação de cuidados mais conscienciosos e humanos, enquanto a sociedade deverá cuidar de forma também mais humana dos profissionais de saúde. Outras sugestões focam-se na melhoria do sistema hierárquico de saúde, no fortalecimento da comunicação ente o médico e o doente, na optimização dos processos terapêuticos, na melhoria do ambiente hospitalar e na prática de educação em saúde. Em suma, lidar com estes temas pode contribuir para a melhoria do serviço prestado pelos hospitais chineses de Classe-A.

Palavras-chave: Qualidade do serviço, Serviços de saúde, Melhoria da qualidade, Profissionais de saúde.

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1. Introduction

1.1 Background

New trends show that people around the world attach more importance to healthcare service quality (HSQ) and healthcare service quality improvement (HSQI) than ever before and people are promoted to research on HSQ and HSQI. For instance, Wiig et al., (2014) explored HSQ's conceptualization in ten European hospitals in five different countries. The authors conceptualize service quality to connect in language about service quality between system levels, professions, and clinical services. HSQI is a developing process. Continuous Quality Improvement (CQI) was quoted in HSQ management by the end of 20th century. The concept of CQI is the development of the Total Quality Management (TQM) which lays greater emphasis on process management and continuous quality control to help organizations continuously improvement and satisfy clients (Mchale, 1985). In order to guide organization improvements in medical processes and to achieve high quality medical service, researchers offered solutions such as humanized service, patient first, strengthen of risk management and physician-patient communication (e.g., Song, Hamilton & Moore, 2012; Zhang, 2007; Zhu et al., 2006).

The healthcare sector in China is also expanding rapidly. The Chinese healthcare industry has already realized the importance of HSQI to help hospitals better serve patient and satisfy patient demand. Since the 1980s, medical service organizations have gradually accepted and applied the theory of the Total Medical Quality Management (TMQM) and have readily made reference to Continuous Quality Improvement (Wang et al., 2010). The introduction of the New Healthcare Reform and Public Hospital Reform facilitated the continuous reform of medical policy and healthcare management systems. (Li, 2012; Fang et al., 2012). However, these achievements are mainly based on the principles and methods of the commercial companies which were combined with the characteristics of the medical industry in

order to apply it to medical organizations. The concept of HSQ was limited to technical quality, thus ignoring the characteristics of psychological and social medical services (Zheng & Li, 2010).

Nowadays, HSQI is becoming a more organizational endeavor. Different entities have their own issues and problems, and require specific analyses of their own specific issues. Previous studies pointed out that "understanding the organizational issues in healthcare service delivery is vital to explain variations in healthcare and make progress towards sustained HSQI" (Robert et al., 2011: 1)

Public Class-A hospitals are the target of this study. Established by the government and recognized as the highest level medical hubs, Class-A hospitals are always the best-rated hospitals in multiple regions with qualified medical quality, high technical level and efficiency, advanced equipment and management ability based on the 3-tier assessment standard (Ministry of Health, PRC, 1989). As mentioned above, Class-A hospitals should realize the importance of HSQ and actively discovering and solving problems in medical service processes to ensure patients' safety, relieve suffering, promote rehabilitation, and help hospitals get sustainable development as well.

1.2 Problem discussion

According to Wendt et al. (2009), the main forms of healthcare system financing are taxation, social insurance contributions and private sources. They suggested that social insurance is a form of non-profit oriented and mandatory societal-based funding which is different from the financing of private health insurance contributions and private payments. Chinese Public Class-A hospitals are state (public non-profit) actors in the healthcare system (Wendt et al., 2009). The financial resources of Chinese Public Class-A hospitals consist of medical service charges, drug sales profits and government financial subsidies (Du & Zheng, 2009). Nowadays, the price for medical basic medical is regulated by the government. Although public hospitals can receive government subsidies, they are still responsible for their own profits and loss,

and must lay out and implement future development by themselves (World Bank, 2010).

"The main function of a healthcare systems is caring for patients, but health service provision has yet to be systematically addressed as a key dimension in comparative healthcare system research" (Wendt et al., 2009: 79). Since medical services generally produce net losses, while drug revenues produce net gains, there was a long-term and noticeable tendency for Chinese hospitals to offer more-expensive drugs and profitable services above the levels reimbursed by social insurance in order to increase the revenue of hospitals (Wang, 2012). The high price of medical care and the weakening sense of social responsibility in Public Class-A hospitals, mean that patients can find some unwanted checkups on their bills and the price is not affordable especially for unemployed people. Excessively expensive medical treatment and an unjustified increase of medical expenses made some citizens lose their trust in hospitals and medical results, and wonder whether public hospitals were always and only thinking about profit (Wagstaff et al., 2009). This significantly damaged doctor-patient relationships and impeded the daily work of healthcare professionals.

No country is satisfied with the current situation of its medical system. Reforms have being implemented almost everywhere (Glouberman & Mintzberg, 2001). As the medical reform intensifies in China, the government has started controlling the price of drugs. The policy about cancelling the drug addition in public hospital was pushed in recent years. The objective of this policy was to increase the price of medical services, such as diagnosis, surgery and nursing to reflect more adequately the value of medical workers, to reduce the price of inspection and treatment with large medical equipment, and finally to increase the proportion of medical service income to total hospital income (Hu et al.; 2010). However, all these problems are yet to be solved. It will take time to achieve a balance between hospital revenue, the income of healthcare professionals, the price of medical care and government financial input.

On the other hand, the shortage and uneven distribution of high-quality medical resources, the strained relation between doctor and patient and the frequent medical disputes had already become common problems (Zheng & Department of Cardiology, 2014). Chinese healthcare organizations must confront the contradiction between people's ever-increasing demand for healthcare services and the current capabilities of healthcare services. There had been a general recognition that it is difficult and costly to receive medical services in large hospitals (Sun & Liu, 2017). From the patient satisfaction surveys in different Chinese Public Class-A hospitals, we could see that the total satisfaction level is relatively high, but that patients are not fully satisfied with the HSQ provided by Public Class-A hospitals, since many respondents found and complained about problems (Zou et al., 2014; Qi, 2009).

Another noticeable problem is that Public Class-A hospitals are popular and overcrowded (Fan & Liu, 2011). The outpatient volume is high, and the daily average outpatient quantity of many Class-A hospitals has exceeded ten thousand (Sun & Liu, 2017). In order to change this alarming situation, new medical policy not only introduces hierarchical medical system but also uses health insurance as a lever for rational diversion of patient, such as the implementation of designated medical care (except for specialist hospitals) and differentiation of the reimbursement proportion (Si et al., 2016). The reimbursement proportion of social health insurance in tertiary hospitals is lower than that in low-grade hospitals (Gan et al., 2014). However, the implementation of hierarchical medical system has not really taken shape in China (Jin, 2015; Zhao & Fu, 2014). Apart from that, relevant policies are corrective actions and have yet totally changed the overcrowded situation. Class-A hospitals are still many patients' first choice, although they are affected by the uneven distribution of good medical resources, patient's demand for high-quality healthcare, the little differences between the minimum line of deductible medical insurance in different level hospitals and other factors (Gan et al., 2014; Zhao & Meng, 2005). Patients have granted autonomy in seeking medical treatment, which means that they can access

medical services after registration, if the payments are affordable. Researchers disclosed that Chinese high level hospitals are using best and the scarcest medical resources to serve a large number of common and frequently occurring diseases, which causes overcrowding and wastes of resources (Dai & Wang, 2014). Ordinary patients still need to face difficulties and healthcare service quality problems when they go to see doctors in Class-A hospitals. The most common and obvious problems are the long queuing time for physician service which is too much compared with the short treatment time, the overcrowded environments and the poor service (Liu, 2017; Zhao et al., 2011; Wagstaff et al., 2009; Liu, 2006).

To summarize, the chaotic pharmaceutical market caused by system defects and a lack of regulation led to problems (World Bank, 2010). With China's unique background, how to improve HSQ and provide consumers better services should be taken into account for every Public Class-A hospital.

1.3 Significance and objectives of study

Researchers around the world tend to explore and study HSQ and HSQI from different stakeholders' perspectives, and care about healthcare professionals' perspectives to define and evaluated HSQ aims at continuously improvement in the "real settings" (e.g., Wiig et al., 2014; Globenko & Sianova, 2012; Silva et al., 2013). Silva et al.'s (2013) conducted research on the definition of quality of care from the perspectives of Portuguese healthcare professionals and patients. They concluded that they hold different perspectives. They discussed the necessity to consider all the stakeholders, and the fact that the hospital must care about what their employees say as it impacts on the quality of care. Similarly, the subject of Continuous Quality Improvement (CQI) recognized the joint participation of doctors, managers, patients and their families, and the community in quality control activities as an important issue (Wang, 2010).

A hospital is not a simple organization, but it is, instead, highly differentiated into

four independent worlds comprised of community, control, cure and care (Glouberman & Mintzberg, 2001). The professional workforce takes the responsibility for cure and care seriously, and gets deeply involved in the institution. As experts, they are the main body of an internal hospital and play important roles in achieving high quality healthcare services and competitive advantages, compared with other stakeholders (Xu et al., 2007). Wang (2013) considered that the medical personnel should be the center of the internal management of health system, and that the organization must solve the problems mentioned by the medical personnel. On the one hand, healthcare professionals are internal customers in the service system (Bautista & Tangsoc, 2016). Their working condition, environment and job satisfaction are closely related to service quality that they provide. On the other hand, healthcare professionals who had worked in hospitals for years must have enough experience and concerns about the situation of healthcare system in their hospitals. Glouberman & Mintzberg (2001) further expressed that modern hospital administrators should have not only corresponding management knowledge, but also have a certain understanding of clinical medical services.

It is important to get views from different perspectives since different stakeholders have different concerns, which contribute to developing a comprehensive understanding and improvements. However, there is still a lack of literature about HSQI from healthcare professionals' perspectives in China. Most of the Chinese previous studies explored HSQI together with the concepts of TMQM or patient satisfaction, although based on different models. Assessment scales and adapted scales were widely used. For instance, Liu's (2012) research in Hangzhou, China and Zou's (2015) survey of outpatient satisfaction in a Class-A hospital in Xinjiang, China. Su et al.'s (2002) study investigated the relationship between doctor's service quality and outpatient satisfaction and showed that quality of doctor can influence patient satisfaction. When HSQ is connected with healthcare professionals in their survey, we could easily find that most Chinese authors tend to focus on healthcare

professional job satisfaction or on the relationship between burnout and HSQ (e.g. Yin, et al., 2008; Yang et al., 2006), but that they ignored that healthcare professionals also form a group of people who can evaluate HSQ and give valuable suggestions.

Consequently, the research on HSQI in China should be closer to the international trend and keep updating research methods. On the basis of patient satisfaction investigation, other perspectives such as the healthcare professional perspective should be paid more attention to in China. Healthcare professionals are entitled to talk about HSQ and improvements from their perspectives and their suggestions are valuable for hospital managers and staffs in relevant departments to consider HSQI from different angles. It is necessary to listen to the voices of healthcare professionals.

Given this background, the objective of this study is to obtain healthcare professionals' to perceptions about HSQ in Chinese Public Class-A hospitals from different aspects, and summarize HSQI approaches suggested by healthcare professionals to provide hospital administrators a significant reference to further improve HSQ.

1. Literature Review

2.1 Service quality

Service quality is a vital concern for many service organizations which has been explained by several different ways. In accordance with Hubbert and Bitner (1994), service quality refers to “the overall impression of customers of relative superiority/inferiority of organizations and their service.” One more conventional definition of the service quality was first proposed by Grönroos (1982) who accepted comparison between perceived expectations of customers and perceived performance.

In 1990, Parasuraman, Zeithaml and Berry defined service expectation as "how the service should perform" and then redefined as "service excellence". After one year, Parasuraman et al., (1991) described service expectation from two aspects, adequate

service and desired service and indicated that customer expectation forms according to their previous experience, the word-of-mouth of the organization and marketing campaigns. In general, customers compare the service they have received with expected service, and which if the former one below the latter, it causes disappointment. An entity with high service quality level will meet or exceed customer expectations and achieve economically competitive at the same time. From enterprise management perspective, service quality is an achievement in customer service (Kenzelmann, 2008).

Dimensions of service quality were originally introduced by Parasuraman, Ziethaml and Berry in the area of service quality. They introduced SERVQUAL model in 1988 as an instrument for measuring organizational service quality by analyzing 5 dimensions, namely reliability, tangibles, empathy, assurance and responsiveness. Another noticeable author Grönroos (1984) suggested "What" and "How" as two dimensions of service quality. "What" belongs to technical aspect and means what are provided to clients. This dimension is namely outcome quality by Parasuraman et al. (1988). "How" is in functional aspect means how the service is provided in Grönroos study while Parasuraman et al. (1988) called it process dimension. Grönroos (1988) concerned about 6 key components of good service quality which are professionalism and skill, attitude and behavior, accessibility and flexibility, reliability and trustworthiness, recovery, and reputation and creditability.

Later, other authors supported Grönroos's views by indicating other various dimensions and views. Brady and Cronin (2001) concluded that service quality is composed of the dimensions of interpersonal quality, outcome quality and environmental quality. This categorization was a powerful support for the categories Oliver and Rust (1994, cited in Cronin & Brandy, 2001) suggested and combined a part of Grönroos's idea (Brandy & Cronin, 2001). Most of it involved the same functional and technical dimension of the service quality; however, the titles of them vary from each other. Environmental dimension was mentioned by all listed authors

after Grönroos and administrative aspect relates to enabling dimension.

In order to integrate these mainstream theories, Dagger et al., (2007) concluded a summary of discussed dimensions as technical, interpersonal, environmental and administrative aspects (See table 1). We cannot simply conclude a final dimension model because some categorizations were included based on models of other researchers (Globenko & Sianova, 2012). But the purpose of this section is to research what dimensions exist overall within the literature instead of reveal new dimensions, therefore, summary suggested by Dagger et al. (2007) can be seen as a useful induction.

Table 1. Service Quality Categorizations

Authors of Service Quality Categorizations					Summary
categorizations	Grönroos (1984)	McDougall & Levesque (1994, cited in Dagger et al., 2007)	Oliver (1994, cited in Dagger et al., 2007)	Brendy & Cronin (2001)	Dagger et al. (2007)
	technical	service outcome	service outcome	service outcome	technical
	functional	service process	service process	interpersonal	interpersonal
		environment	environment	environment	environmental
		enabling			administrative

2.2 Healthcare service quality

Service quality is extremely important for the development and success of hospitals. As Kilbourne et al., (2004) and Otani et al., (2010) emphasized, quality will be the main driving force to meet the competitive challenges, and high-quality healthcare services can enhance the overall patients' satisfaction. For further discussion about how to improve service quality in Public Class-A hospitals, first of all, we should understand the definition and dimensions of service quality in healthcare industry and

the dimensions of it to offer a preliminary pool for healthcare professionals to talk about HSQ in the survey.

In healthcare sector, the concept of quality management has also been applied as a basis in medical service organizations combined with the characteristics of healthcare. Overall, there are some representative and widely endorsed concepts of HSQ. In 1988, Office of Technology Assessment (OTA) in the US proposed that HSQ refers to the process of using medical knowledge and technology to increase patient's expected results and reduce the undesired results in the medical service process under the existing medical conditions (Ma, 1996). Similarly, Donabedian (1988) expressed that HSQ is the ability to achieve desired goals which means help patients regain physical and mental health by rational methods.

With the improvement of living standards and people’s ever increasing demand for high-quality HSQ, definition from traditional narrow sense (medical technology) cannot achieve patients' requirements anymore. Kenagy et al. (1999) indicated that healthcare services have various characteristics to create patients' experience instead of just the medical quality in the course of diagnosis and treatment. Apart from considering the elements of medical technology, other elements should be taken into consideration. Donabedian (1992) further developed a perspective considering technology, interpersonal relationship and environment as three elements of medical service. Although different expressions were used in these literatures, all of them accurately reflected that key to HSQ is to help patients regain health physically and mentally and feel satisfactory. After that, in Mosadeghrad's (2013) survey about Iran hospitals, HSQ is defined as consistently delighting the patient by providing efficacious, effective and efficient healthcare services according to the latest clinical guidelines and standards, which meet the patients' needs and satisfy providers as well.

The medical quality evaluation index systems adopted by countries and regions are different since they have different medical systems and problems (Du et al., 2016).

American scholars are systematic and mature on the research of medical service quality indicators and evaluation. International Quality Indicator Project (IQIP) was put forward in 1985 and then became the largest medical indicator system in the world in 1991. IQIP used a set of results oriented evaluation system and used scientific methods to maintain the sustainability and stability of daily medical quality (Matthes & Wood, 2011). Hiidenhovi et al. (2002) proposed to use 12 questions such as course information, obey engagement, technical skill, manner, and service concern to evaluate HSQ and then investigated the HSQ of 19 departments during 1997 to 1999 in a Finnish university hospital. Sower et al. (2001) proposed the Key Quality Characteristics Assessment for Hospitals (KQCAH) scale based on the HSQ assessment presented by Joint Commission on Accreditation of Healthcare Organizations (JCAHO). They held the view that HSQ can be evaluated from respect and caring, effectiveness and continuity, appropriateness, information, efficiency, meals, first impression and staff diversity.

From previous scale discussions and assessments, many noticeable representative authors detected specified technical and functional categories as dimensions of HSQ as well as Grönroos and general quality of service's other representatives (Donabedian, 1992; Doran & Smith, 2004; Doran & Smith, 2004 Zineldin, 2006; Dagger et al., 2007). The ***technical*** quality of healthcare services is based on the reliability of identification and management process while functional quality means aspects uncorrelated with clinic (Nekoei-Moghadam, Amiresmaili, 2011). Zineldin (2006) concluded that technical category mainly as quality of the capabilities and skills, experience, know-how, technology. Lin et al. (2004) suggested that technical aspect is related to the accuracy of medical behaviors and procedures. Wang and Wang (2004) indicated 4 influence factors based on the theory of Parasuraman, Ziethaml and Berry (1988) and described technical category as healthcare safety which can be further expressed as complete medical equipment and curative effect. Choi et al. (2005) concerned the aspect of technical as tangible dimension which was

explained by equipment within a hospital. In general, we can see three obvious dimensions from previous studies related to technical dimension which are tangible quality such as physical facilities, namely equipment, outcome of healthcare services that could be explained by curative effect and professional skills.

The ***functional*** category refers to how the healthcare services are delivered to patients. According to Zineldin (2006: 69-70, 79, 87-88), interaction and function can be integrated into functional category and illustrated it as "sufficient instructions and explanations in and after hospitalization" and "the amount of time the nurses or physicians spend understanding needs of the patient". Doran and Smith (2004) emphasized on empathy which means pay attention to patients, assurance of safeness of process to get patients' responsiveness, trust as willingness to provide help for them and convey responsive service as well as reliability as the dependability of the healthcare service. Wang and Wang (2004) emphasized on the service attitude of staff while Choi et al. (2005) mentioned physician and staff concern here which means whether healthcare professionals explain medical process to patient well, take care of patients friendly, kindly and politely. At the same time, to sum up, functional category can be divided in 3 dimensions, interaction, service process and tangible concern (Globenko & Sianova, 2012).

1 Tangible concern refers to personality, emotion and attitude showing during the service process that could influence the interaction between patients and healthcare service providers.

2 Service process is usually judged by four sub-dimensions: (1) efficiency measures which shows the rapidity of procedures, (2) reliability of procedures, (3) safeness or assurance of processes, (4) available means affordable care.

3 Interaction. For instance, healthcare services are reliability, responsiveness and access which means healthcare providers are willing to communicate and offer emotional support to build feeling of trust and safeness, also, healthcare providers can

be available and accessible for patients. In addition, patient-centered is very important that could be explained by patients involvement in the medical procedure and be the decision maker.

It is worth noting that among the dimensions of functional aspect, both healthcare providers and patients are qualified to comment from sub-dimensions "interaction".

In addition to technical and functional dimensions, most of researchers mentioned about ***environmental*** components in healthcare sector. Donabedian (1992) gave a concept called "the amenities of care" which could be defined as environmental category. Hospital is a special environment when patients enter a hospital and get in touch with healthcare providers. Wang and Wang (2014) described environmental category as the overall environment of hospital. Good hospital environment should be safe and nice that can satisfy patients' psychological needs including qualified physical environment such as temperature, humidity, ventilation, direction which can make patients feel comfortable and controlled biological environment which can help avoid infection. Categories atmosphere, location and infrastructure can be seen as three dimensions in environmental category (Globenko & Sianova, 2012; Zineldin, 2006).

Administrative category is accepted as a dimension by some authors. For instance, Davies Avery, Stewart and Ware et al. (1978, 1983 cited in Dagger et al., 2007). Choi et al. (2005: 143) mentioned "convenience of care process which could be defined as administrative category since it is related to waiting time for medical treatment and how fast of simple can patients finish other procedures like payment or take medicine". This category was also expressed as administrative service measures of hospitals (Wang & Wang, 2004). Furthermore, Doran & Smith's (2004: 379-381) responsiveness category that was included in interpersonal aspect could also be categorized as administrative dimension as well because researchers explained it as

"willingness of the healthcare providers to help and provide responsiveness services" without specific type.

Apart from these four dimensions, some authors also considered physician and staff. Physician means health staff while the latter word represents other medical staff such as nurses, assistants, receptionist and other staff working in hospitals (Choi et al., 2005).

From previous researches on the HSQ, the unified view has yet formed and the research methods are varied. Later, there were some noticeable studies contributed to HSQ dimensions from professionals' perspectives and other perspectives. Qian et al.'s (2009) quantitative study investigated 389 healthcare professionals' perspectives in a Chinese military hospital. The multivariate analysis show that healthcare professionals consider medical technology, service attitude, professional title, dissatisfaction with salary, key discipline construction and other factors (from most relevant to less relevant) as closely related to the HSQ. Silva et al. (2013) studied the perceptions of Portuguese healthcare professionals and concluded process, structure, outcome, management, quality of care specificities and others as categories of HSQ from healthcare professionals' perspectives. Wiig et al. (2014) studied the HSQ in European hospitals and healthcare system based on the Quality and Safety in European Union Hospitals (QUASER) project. They recognized clinical effectiveness (CE) as the most important dimension associated with "professional competence skills and ability to provide complex treatment"(Wiig et al., 2014: 9) and suggested patient experience (PE), which was consist of eight dimensions of "patient-centered care" and patient safety (PS) as HSQ dimensions together. According to the Chinese national standard, seven dimensions which are prognosis of the disease, service processes of medical institutions, suitable diagnostic and treatment technique, nice facilities and good service, reasonable charge, patient satisfaction and without excessive medical services are used to evaluate HSQ (Wu, 2014).

From the analysis above, we could summarize a HSQ categorization combining previous representative articles and the objectives of this research (see Table 2). The summary suggested by Dagger et al., (2007) can still be applied to the classification of HSQ. The categories ***technical***, ***functional***, ***environmental*** and ***administrative*** can be used as a suitable preliminary pool for Chinese healthcare professionals to talk about HSQ.

Table 2. Healthcare Service Quality Categorizations

Authors of Service Quality Categorizations								Summary
categorizations	Donabedian (1992)	Davies et al. (1978)	Zineldin (2006)	Choi et al. (2005)	Wang & Wang (2004)	Doran & Smith (2004)	Chinese standards (2014)	
	technical	technical	technical	tangible	outcome	outcome	technical	technical
			infrastructure		facilities	tangible	facilities	
	interpersonal	interpersonal	functional	employee concern	functional	functional	functional	functional
			interaction					
	amenities of care	environmental	atmosphere	tangible	environmental			environmental
		administrative	interaction	convenience of care process	administrative	responsive ness	without over treatment	administrative

2.3 Healthcare service quality improvement and healthcare professionals' roles

Quality improvement researchers in healthcare industry and hospital managers have kept working on HSQI for a long time. As the direct implementer of medical services, skilled professionals have long been considered to be responsible for HSQI. They are the core staffs to provide patients high-quality healthcare services and ensure patient safety (Ranga & Denise, 2010). Their behavior affects the operation of hospital and even the healthcare system. Kaplan et al. (2012) stressed that the operation of HSQI is shaped by a number of contextual factors such as the diversity of team member, healthcare professional involvement and prior experience (Kaplan et al., 2012).

Among them, professionals' motivation, implementation capacity and quality improvement (QI) abilities are considered vital to the effectiveness and final success of QI. The extent to which healthcare professionals are hired and compensated are important factors in encouraging doctors to participate in QI teams and in building a supportive culture in hospitals (Kaplan et al., 2012). Besides, healthcare professionals should keep improving their medical skills, be positive to communicate and service patients and keep high sense of responsibility, good service attitude and nobility medical ethics (Jia et al., 2013; Zarei et al., 2012; Qian et al., 2009).

However, "traditional concept of selfless devotion to the patient is not easily accommodated the systematic methods of HSQI" (Brennan, 2002: 976). Healthcare professionals are important participant in HSQI activities, but they should not be the only participants.

HSQI needs the team effort, collaboration and communication among the key stakeholders of organizations such as internal staffs of hospital, patients and government (Cheng, et al., 2015; Wiig et al., 2014; Brennan, 2002). Institute of Medicine (IOM)'s (1999) study indicate that organizational defects is one of the root causes of poor quality. The challenges of hospitals are more organizational than clinical (Ranga & Denise, 2010). McGlynn & Brook (2001) supported it and considered the obstacles of HSQ are diffuse responsibility for quality improvement, old-style system designs and insufficient public information in the organization. The later study (IOM, 2001) recognized healthcare organizations are complicated with adaptive systems and studied the implement of improvement under this view. According to Robert et al. (2011), high-quality healthcare is associated with organizational and cultural characteristics of hospital. Researchers increasingly start to understand the variations in healthcare and help organizations achieve sustainable HSQI through learning organization issues in healthcare services providing processes (Robert et al., 2011). Facing the modern requirements and the nature of healthcare industry, organizations need to improve its management and drive the improvement of

healthcare to provide their customers high-quality services while healthcare providers need to take the responsibility and obligation to give full play of their professional competences to help with HSQI (Lin & Din, 2015).

Most of HSQI plans in medical organization are based on the understanding and evaluation of the HSQ in specific entities. Authors studied from different angles, such as the manager's angle, the doctor's angle, the patient's angle, the policy makers' angle and so on, and use different models as well.

Patient's perspective is one of the most widely used ways to help HSQI in hospitals. It has been claimed that service quality is closely related to patients' satisfaction level (Varinli, İlkay & Erdem, 1999). The US health system considers medical quality and patient satisfaction as synonyms (Zheng & Li, 2010). SERVQUAL or adapted models were widely used to monitor and measure the quality of hospital since it can get straightforward evaluation through comparison and put forward improvements (e.g. Zou et al., 2014; Yang et al., 2006). Zhang et al. (2007) presented to evaluate HSQ according to ISO9000 and built an index system including 17 indicators. Zari et al.(2012) 's study in Iranian private hospitals provided a cross-sectional study about HSQ assessment. This study put forward the necessity to build a strong hospital-patient relationship. In addition, hospital staffs need to be responsive and credible to satisfy patients. Zou et al. (2014) investigated 1300 outpatients' satisfaction levels in a Chinese Class-A hospital and indicated some helpful methods, such as improving the medical environment, strengthening the guiding and consulting functions of the outpatient nurses and improving the reservation system which can shorten patient's waiting times. Similarly, Agyemanduah et al. (2014) in Malawi, and Tyagi et al. (2013) in Canada also used patient's satisfaction to evaluate HSQ during HSQ processes.

Professional's perspective were also investigated around the world when studying HSQI. Qian et al.'s (2009) investigated healthcare professionals' perceptions about

HSQ in a hospital and found that most of participants were satisfied with non-medical aspects but considered technical quality as common level. Therefore, this hospital was suggested to strengthen medical technology input and make efforts to improve staffs' medical skills. Silva et al. (2013) investigated Portuguese healthcare professionals and indicated management aspect, quality of care specificities and structural issues as major obstacles to the possible changes of HSQI. Healthcare professional's perspective was also used to solve specific healthcare problems in hospitals. Wong's (2011) qualitative study investigated the perspectives of front-line healthcare professionals about effective discharge planning in public hospitals in Hong Kong. It offered a useful result that can help ensure the quality of care and maximizing organization effectiveness. Healthcare professional's perspective was also used in Ali and Agyapong's (2015) research to study mental health service quality improvement in Sudan and other relevant healthcare studies.

There are similarity and difference among different stakeholders' perspectives. Supporting researches used multi-angle observation between professionals and hospital managers (e.g. Braithwaite et al., 2011), between patients and relatives (e.g. Attree, 2008) and between healthcare professionals and patients (e.g. Levine et al., 2012) to assess HSQ. These studies give us chances to compare the perceptions among stakeholders.

Firstly, most of stakeholders consider that technical quality is the most important part of HSQ though they have different emphasis. The improvement of medical technology level is vital to HSQI (Qian et al., 2009). Medical staffs are people with professional knowledge while most of patients do not have enough medical knowledge to judge technical quality objectively, professionals usually care technical aspect with emphasis on professional skills, availability of equipment and healthcare indoor facilities' conditions while patient emphasized the doctor's competence, the accuracy of nurse and medical outcomes important in deciding whether HSQ is good or not (Silva et al., 2013). Just like Class-A hospitals are usually patient first choice

even they are always busy and overcrowded. Technical aspect is the most important basis when patients are choosing a hospital compared with non-medical factors (Xu et al., 2007).

In addition, healthcare professionals have different views and considerations toward the same question compared with patients and other stakeholders. Globenko and Sianova (2012) made a comparison research between patients and healthcare professionals' perspectives toward HSQ among 7 healthcare providers and 8 patients and illustrated that healthcare professionals tend to think about technical category and interaction dimensions but considered environmental category and administrative category less compared with other stakeholders. Flynn (2016) conducted a survey in the UK, both of professional and patient groups acknowledge the importance of positive caring behaviors exhibited during caring interactions but healthcare professionals ranked it different. However, there was no one specific and agreed view because different healthcare providers have different specialties and experience which influences their responses.

In order to guide the achievement of HSQI, researchers developed new models to guide the collection and data analysis in QI projects considering more comprehensive factors. Kaplan et al. (2012) developed the Model for Understanding Success in Quality (MUSIQ) framework to guide the application of QI methods in healthcare research and identify the contextual factors that influence the success of QI outcomes. Barson et al. (2017) investigated the success HSQI from healthcare leaders' perspectives and compared the result with 25 contextual factors in 6 groups that identified in MUSIQ model: external environment; organization; QI support and capacity; microsystem; QI team; and miscellaneous. They recognized workforce, partnership and measures in the organization as three important success factors and suggested to corporate with patients and families to get sustainable QI.

The overview of previous studies on this matter revealed that healthcare professional's perspective is valuable and sometimes have different focus compared with other groups in HSQ. This study aims to contribute to the lack of relevant articles by developing an attempt to investigate HSQ in Chinese Public Class-A hospitals from the clear points of view of healthcare professionals based on the obtained classification of HSQ dimensions concluded in the second part of literature review. Studies from healthcare professionals' perspectives can offer the possiblity for further research on HSQ in the future combined with patients' perspectives.

3. Methodology

3.1 Research Design

A qualitative method of interview was chosen to explore the perceptions of front-line healthcare professionals toward HSQ and improving approaches. Considering the direction of research was closely related to healthcare professionals' working experience and subjective idea, qualitative research was chosen. Moreover, since the particularity of doing research in hospital (no possible to get together so many doctors at the same time), one-to-one interview was adopted instead of discussion group and other methods. It was also conducive to protecting the privacy of respondents.

Semi-structured interview with a list of questions and follow-up questions was conducted compared with in-depth interview since the objectives of this study were hard to be fulfilled and results would be hard to conclude through free talking.

Lastly, literature review about HSQ shows a preliminary pool of HSQ dimensions. It guided repspondents answer questions and made data analysis procedure more convenient.

3.2 Participants

Health staff and non-health staff are two kinds of employees in hospitals (Miranda et al. 2010). HEALTHQUAL model defined two kinds of health service providers, staff

and physician. Non-health staffs, for example, managers, are administrative staffs that responsible for managing internal staffs and daily affairs to make sure that hospitals can operate well. Health staffs are the front-line healthcare professionals such as physicians, nurses and laboratory technicians (Chilgren, 2008). In this study, physicians, nurses, and laboratory technicians are the target population.

This research was conducted in China during April and May in 2018. Healthcare professionals with at least three years work experience were chosen from different departments in Public Class-A hospitals (see table 3) since they are most likely to understand Chinese healthcare system and Pubic Class-A hospitals, and can provide valuable suggestions. No age or gender limitations were applied. It should be mentioned that all the participants (11 physicians, 3 nurses and 2 medical technicians) of this study came from Public Class-A hospitals in Guangzhou, Beijing, Shenzhen and Xiamen. Due to the complexity of doing research in hospitals and regional restrictions (i.e. hard to get in touch with healthcare professionals without interpersonal relationship when they are off duty), it was no possibility to select respondents from many different healthcare organizations in different cities. Although each hospital has its characteristics, fortunately, Chinese Public Class-A hospitals are all recognized according to strict and fixed national standards and have to follow the same health policies formulated by the state. These could make sure the consistency and similarities of Public Class-A hospitals in general. By the way, the size of sample was not exactly decided before interview process started because it is hard to know when the content of interviews will reach saturation in advance and the number of respondents can be influenced by accessibility as well.

Table 3. List of interviewees

Healthcare professionals from Chinese Class-A hospitals							
Healthcare professional	Gender	Age	Position	Hospital department	Years of practice	Years in Class-A	Place of interview

						hospital	
1 Wei	Male	45	Physician	Orthopedic trauma	25	16	Hospital
2 Luo	Male	66	Physician	Traditional Chinese Medicine Department	42	42	Hospital
3 Lin	Female	32	Physician	Stomatology Department	8	8	Telephone
4 Lu	Female	26	Nurse	Outpatient Department	5	5	Hospital
5 Li	Male	47	Physician	Ophthalmology Department	23	13	Video
6 Qin	Female	55	Nurse	Emergency Department	25	25	Hospital
7 Chen	Female	55	Physician	Urology Department	31	31	Hospital
8 Guo	Female	54	Nurse	Outpatient Department	36	36	Hospital
9 Jia	Female	51	Physician	Cardiovascular Medicine Department	27	20	Telephone
10 Feng	Male	53	Physician	Plastic Surgery Department	30	30	Hospital
11 Su	Male	29	Physician	Ultrasonography Department	5	5	Telephone
12 Wan	Male	54	Medical Technician	Department of Gastroenterology	29	29	Video
13 Xiao	Female	28	Physician	Acupuncture Rehabilitation	4	4	Telephone
14 Zeng	Male	50	Medical Technician	Clinical Laboratory	28	28	Hospital
15 Wu	Male	53	Physician	Spinal surgery	30	5	Hospital

16 Wang	Male	36	Physician	Department of General Surgery	10	10	Video

3.3 Interview Guide (See Appendix)

To make sure the semi-structured interview can work well, a guided set of open ended questions was developed based on the literature review and research purpose. The questions covered the following points: (1) healthcare professionals' perception about current service quality in Public Class-A hospitals compared with other hospitals, (2) barriers to achieve perfect HSQ in Public Class-A hospitals, (3) what are imperative to be improved and can be improved, (4) suggestions according to their experience combined with Chinese healthcare industry and the distinctive situations of Public Class-A hospitals.

3.4 Data Analysis

Content analysis was utilized for data analysis. Firstly, the content of interviews were transcribed recorded as preliminary data before translated in English since the interviews were all conducted in Chinese. Then the ranscriptions were read carefully and thoroughly, and then thematic analysis was manually conducted to regenerate meaning and structure to the data collected (Ali & Agyapong, 2015). Different themes were identified according to the key words and meaning of sentences, similar phrases and words that commonly occurred in the transcripts were gathered under the same themes and finally formed summary.

4. Result

From the interview context, common views and similarities were found in large part when asked about the perceptions of HSQ in Public Class-A hospitals and suggestions of HSQI. At the same time, since respondents had different working experience and their hospitals had specific conditions, differences also occurred.

Regarding to the objective of this thesis, three core themes were confirmed: (i) healthcare professionals' perceptions about HSQ in Public Class-A hospitals, (ii)

factors that influence HSQ, and (iii) suggestions on the improvement of HSQ. The results are shown as merged together in Table 4. Respondents' perceptions about HSQ in Public Class-A hospitals were divided into good, acceptable and not good to show the advantages and problems existing in Public Class-A hospitals according to their answers.

Table 4. Summary of valuable results

Theme 1 Perceptions about HSQ in Public Class-A hospitals	
Good	Top medical ability, advanced equipment, excellent curative effect and excellent healthcare professionals (Technical) Strict and standardized hospital management systems (Administrative) Safe and reliable procedures (Functional)
Acceptable	Relatively high price but still reasonable (Functional)
Not good	Unsatisfactory service attitude, lack of emotional support, communication problems (Functional) Long waiting time and short treating time, some complicated and unreasonable processes (Functional) Overcrowded and noisy environment, imperfect infrastructures (Environmental) Process management (Administrative)
Theme 2 Factors that influence HSQ that healthcare professionals provide	
Work pressure and burnout Patient factors (ill-mannered, poorly educated, etc.) Remuneration and promotion	
Theme 3 Suggestion on HSQI	
Improve service consciousness and humane care Healthcare professionals need humane care and protection from their hospitals Strengthen hierarchical medical system Optimize the treatment process Improve hospital environment Publicity and education to help the public see doctors correctly	

4.1 Theme 1: Healthcare professionals' perceptions about HSQ in Class-A hospitals

Following the initial pool, respondents' answers were concluded from 4 dimensions: technical, functional, environmental and administrative.

4.1.1 Technical dimension

When asked about technical aspect of Chinese Public Class-A hospitals, all

interviewees admitted that Chinese Public Class-A hospitals have better medical service ability with advanced equipment, excellent curative effect and skilled healthcare staffs compared with other lower level hospitals.

> "Class-A hospitals' technical quality is absolutely better than other hospitals... We have our key disciplines, but the medical technological levels of other departments are also at the top of China. We have a large number of skillful and experienced healthcare professionals... it is hard for healthcare professionals to enter a Class-A hospital since we have tougher recruitment standards." (Respondent 1)

> "Our government invested so much... Public Class-A hospitals cared about hospital construction and improvement of technical skills. We have many excellent and experienced doctors who can help young doctors make rapid progress." (Respondent 5)

> "The difference between Class-A hospitals and other hospitals is not huge in diagnosis and treatment of common diseases. But Class-A hospitals can do better in perplexing diseases and major surgeries." (Respondent 8)

4.1.2 Functional dimension

Most participants expressed that the poor service attitude and lack of emotional support were the major problems of Chinese Public Class-A hospitals and tended to use private hospital as comparison. Their answers showed that the overall service attitude in Public Class-A hospitals were not as good as that of private hospitals and even some lower level community hospitals.

> "Generally speaking, the service attitude of Public Class-A hospitals are unsatisfactory compared with some private hospitals... it is the difference between public hospitals and private hospitals. The service attitude of public county hospitals and municipal hospitals are the same. Not so good." (Respondent 1)

"Private hospitals usually have better service attitude since good service attitude is one of their competitive advantages." (Respondent 16)

"Private hospitals pay more attention to humane concern. Doctors and nurses in private hospitals are very concerned with patients. It makes patients comfortable... patients with good financial conditions tend to choose good private hospitals where they can get good treatment and good service at the same time. " (Respondent 11)

"I have been to private hospitals for group consultations and operations. The differences between public hospitals and private hospitals are not mostly related to technical, but in service sectors... I am talking about the large and regular private hospitals." (Respondent 15)

Besides, respondents proposed that different medical departments had different service attitude even in the same Public Class-A hospitals. According to Respondent 10 (Plastic Surgery) and Respondent 5 (Ophthalmology Department), their departments cared more about patients feeling and usually did better job in humane concern compared with other departments because of the relatively early "socialization". It should be mentioned that the plastic department and the laser center of the ophthalmology do not belong to the basic medical category. They are owned by the public hospitals but operating independently, distributing in the way of socialization and can hire employees by themselves. Therefore, these departments tend to serve customers better to retain customers and compete with private hospitals.

When it comes to the physician-patient communication, only one respondent thought that physician-patient communication was the root of treatment and there was no problem while the rest respondents all mentioned about the lack of communication and related issues as follows:

"There are many patients ... we (healthcare professionals) have less time and energy to communicate with everyone and explain everything carefully."

(Respondent 15)

Participants further pointed that healthcare professionals in Public Class-A hospitals provide less emotional support to patients.

> "Doctors and nurses in major hospitals are sometimes indifferent or lukewarm... Sometimes I am impatient when there are too much work." (Respondent 6)

> "Patients come here with hope, but we prescribe in several minutes without listening to their pain or giving necessary comfort. "(Respondent 2)

About service processes in Public Class-A hospital, first of all, participants considered its reliability and assurance of safeness.

> "The standard of Public Class-A hospital is strict nowadays especially the standardization of diagnosis and treatment process." (Respondent 15)

On the contrary, the majority of respondents reflected that the waiting time was too long while the treatment time was too short. In addition, there were some unreasonable and complex parts during the treatment processes which were inconvenient for both doctors and patients, and no perfect reservation system was built. These problems influenced not only process efficiency, but also service quality and patient satisfaction level.

> "The waiting time for each patient can be 1 hour or 2 hours while the doctor finish the prescription in 3 to 5 minutes." (Respondent 2)

> "A return visti patient must register in the registration before going to surgical building and meet a doctor. After that, he must go back to Outpatient Building for payment and checkups. And then he back here again for prescription. Finally can he go to dispensary for charge and take medicine. These processes gave a lot of burdens to patients and wasted time. My patients have complained many times about the unjustified and annoyed processes." (Respondent 1)

"Our diagnosis area is on the third floor, but patients have to go to the first floor for blood routine test and find cashier on another place. They feel bad and tired. I have ever mentioned it to the administrative department and suggested to set a blood collecting station on the third floor, but it has not been solved yet." (Respondent 14)

"The reservation system is not as perfect as hospitals in developed countries. For instance, revisit patients came in the office when I was doing something else and not prepared... We cannot relax even when we finished the patients on the list. A new patient can register in the next minute." (Respondent 1)

As for the price, interviewees generally believed that the cost of diagnosis and treatment in Public Class-A hospital was relatively high among Chinese hospitals, but it was still reasonable and strictly according to national charging standard.

"It is expensive to see a doctor in Class-A hospitals... Public healthcare in China is insufficient... Many patients cannot afford the best treatment since the commercial insurance is undeveloped." (Respondent 3)

"The medical reimbursement proportion in community hospitals is higher than that in Class-A hospitals. Patient may feel it much cheaper when they go to low level hospitals to get medicine. ” (Respondent 9)

4.1.3 Environmental dimension

In terms of environment in Public Class-A hospitals, most of the respondents believed that the environment was crowded and chaotic. They considered the treatment environment and infrastructure construction should be improved. The environmental problems mentioned by respondents mainly include the following points:

"Our hospital is over-crowded every day. Lots of people standing at the door of consulting rooms and the waiting areas are always full of people. Some patients look or go inside if nurses do not stop them. There is no privacy at all. Another

thing is the infrastructure. Firstly, Class-A hospitals do not have enough parking spaces. Additionally, toilets are old and dirty especially the first floor of outpatient. You can see lots of small ads on the door of toilets. Patients will not have good impression on hospital. " (Respondent4)

"The surrounding infrastructure is weak... too few guideposts and the guidance is not clear enough for to understand. Patients came from small towns may not have the initiative consciousness to find signs. I have met so many patients asked about the position of Internal Medicine Inpatient Building or the other buildings even the guide-board is not far away. (Respondent 2)

"The treatment environment needs to be improved... the old decoration has not changed much over the past decade which is worse than private hospitals." (Respondent 10)

4.1.4 Administrative dimension

Respondents generally believed that Public Class-A hospitals had strict and standardized hospital management systems. Basically there were no major problems in management aspect. For instance, respondents 6 mentioned that "Public Class-A hospitals have high-grade configuration... The management system and organizational structure are also well-matched."

Besides, problems that interviewees mentioned were mostly about certain unreasonable process management influenced the convenience of treatment as I referred in functional dimension part. In addition, respondent 10 referred to the problem that public hospital management was not efficient enough.

"Too many administrative steps in Public Class-A hospital... It is very complicated if you want to do something. Many reports must be done to get the agreements from several leaders when a department need buy new equipment. And then we should attend conference to discuss about this proposal before

bidding. Sometimes it takes months or even a year after reporting."

4.2 Theme 2: Factors that influence HSQ from healthcare professionals' perspectives

Healthcare professionals' answers to question 3 "What factors could influence (improve or damage) the service quality that you/ healthcare professionals provide during your work?" embody the barriers that damage the high-quality healthcare services and reflect the working conditions of healthcare professionals. Result concentrates on three points: great work pressure and burnout, patient quality and reward.

4.2.1 Work pressure and burnout

Most participants explained that their intense work pressure was one of the major obstacles to the provision of quality healthcare service. Healthcare professionals were overworked and exhausted by their large number of inpatients and outpatients. They pointed out that their time and energy were obviously insufficient.

> "Too many patients and lack of healthcare providers are common phenomenon in Chinese Public Class-A hospitals. The service is certainly not such good... Physical and mental fatigue affected service quality that I provided. In addition to clinic hours and operations, I must go to other hospitals for group consultations and attend academic symposiums." (Respondent 3)

> "At first I was very enthusiastic about my work and felt excited when I met rare cases... When our hospital started to care more about the turnover rate and average length of stay to admit more patients, I got tired and lost enthusiasm. The healthcare quality was damaged too." (Respondent 16)

> "The accuracy and patience of the service will be affected when my work was too busy and complex." (Respondent 6)

> "My colleagues and I must spend a lot of time to write medical records and deal with documents every day. As a result, we have less time and energy to spend on

patients... e.g., writing medical record is complicated in traditional Chinese medicine hospitals...time and energy that we put on patients were limited." (Respondent 13)

4.2.2 Patient-related factors (educational level and manners)

Participants also highlighted patient-related factors (ill-mannered, poorly educated, etc.) as another barrier to HSQ, especially in doctor-patient communication and healthcare professionals' service attitude.

"Patient who is rude and impolite usually brings me bad feelings... " (Respondent 8)

"When patients expected and required too much... Some patients and their families were aggressive and hard to communicate... I was not willing to talk too much just for avoiding conflicts." (Respondent 10)

"Pooly educated patients do not know how to communicate with us and express chief complaint correctly." (Respondent 2)

"Patients with good character and high quality can understand and respect us which contribute to doctor-patient communication." (Respondent 9)

4.2.3 Remuneration and promotion

The third main factor identified as an impediment to HSQ was related to remuneration and to the professional promotion system. Over half of the respondents referred to the psychological gap between workload, salary and promotion difficulities. Therefore, many healthcare professionals increasingly lost enthusiasm for their work. The following comments are representative of the viewpoints expressed by a large number of participants on these issues:

"We paid a lot... it spends seven or eight years for a medical student to become a practicing doctor and about 20 years to become a chief physician... The input did

not transform into satisfying output. A Chinese top 10 physician in our hospital who is 60 years old can only earn 600,000 Yuan (80,000 euro) a year including bonus." (Respondent 16)

"A doctor working for public hospital is not a high paid job especially compared with doctors abroad... getting NSFC (the National Natural Science Foundation of China), publishing papers in SCI and other standards must be required if you want to become a chief physician... we have no time to write papers... Only two doctors in our hospital promoted last year." (Respondent 14)

These three main factors aside, some professionals did have an issue with the high cost of care (problematic when patients could not afford the best recommended treatment prescription) and with the management of personal emotion. Furthermore, cooperating with other healthcare professionals was deemed frequently complicated.

4.3 Theme 3: Suggestions about HSQI from healthcare professionals' perspectives

At the individual level, respondents offered suggestions regarding their most heartfelt or personally relevant issues. Since reliable medical technology is already the biggest competitive advantage of Public Class-A hospital, first of all, they believed that healthcare professionals working for Public Class-A hospitals should keep improving medical technology. Secondly, they reckoned that hospitals should keep updating their medical equipment to ensure superior healthcare quality for patients.

The majority of healthcare professionals' suggestions were focused on non-medical aspects. Most held the view that hospital staffs in Public Class-A hospitals should further improve their service conscientiousness as well as care more humanly for patients. These behavioural changes would be helpful for patients, as their experiences and impressions would improve, and they would also benefit practitioners.

"If we (healthcare professionals) care more about humane concerns and

communication skills during the treatment, we can easily help patients reduce their burden and pain psychologically to a certain extent... every patient has life, thinking and emotion, we should consider more than treatment." (Respondent 3)

"Healthcare professionals should make patients feel warm... Some hospitals in developed countries did very well in this part such as Japan... Only when the staffs care about customer experience can the reputation of Public Class-A hospitals being further improved... a staff's warm heart services can improve patients' impression about the whole hospital. " (Respondent 5)

Meanwhile, participants further pointed out that healthcare professionals also need support, humane care and protection from their hospitals and from society to maintain their motivation and increase their working efficiency.

"Front-line healthcare professionals need humane care from all the administration and logistic departments since our moods can influence service quality... including strong logistics support and relevant administrative strategies." (Respondent 15)

"If the leader group gives more humane care to us, I am sure that we will get a strong sense of belonging to improve service attitude and care about the honor of hospital." (Respondent 7)

"Hospitals must protect doctors and patients by reducing the number of registration... Most of doctors in Public Class-A hospitals are working overtime everyday... many doctors died suddenly... how can we guarantee the healthcare service quality if our own safety cannot be guaranteed?"(Respondent 2)

Moreover, most respondents expressed their wish for a more balanced and beneficial return on their work, efforts and dedication in terms of salary, welfare and promotion channels. They also mentioned the improvement of their working environment to increase their enthusiasm for work. Their collective view was that only when they

were enthusiastic about work and enjoyed reasonably comfortable working conditions, could they better treat patients.

> "...Our working environment needs to be changed... I am an expert but I share one office with ten colleagues." (Respondent 1)

> "Various incentive systems can stimulate our enthusiasm for service. We need a balance of pains and gains." (Respondent 6)

With regard to help "overcrowding" which was the root of many problems, healthcare professionals emphasised that setting up and strengthening the hierarchical medical system would be the best and most effective solution for improving the overall efficiency of the healthcare system and HSQ. It entails grading diagnosis and treatment according to the priorities and complexity of diseases, and tasking medical institutions at different levels deal with different problems (Fu, 2015). Some respondents also disclosed that a significant portion of high-quality medical resources in Public Class-A hospitals were occupied by patients with common and frequently-occurring diseases. Therefore, the development of a strategically directed hierarchical medical system could help rationalise medical resource allocation. Furthermore, it could thereby help significantly reduce the pressure and burden on the healthcare professionals working in Public Class-A hospitals.

> "We have policy in this sector, but patients do not trust much in primary hospitals. It is a normal phenomenon to go to Class-A hospitals just for common colds and fevers... We should let primary hospitals to do with small ailments and let big hospitals rescue and cure critical patients. Two-way referral is important." (Respondent 2)

> "....it is also a waste to let the basic medical resources idles. We must let patients believe in basic medical and health institutions... encourage the elderly, children, pregnant women and patients without severe or difficult diseases to contract with general practitioners in basic-level hospitals and receive regular medical services

at first." (Respondent 12)

A few participants suggested improving convenience for both doctors and patients by optimising the treatment process. They focused on two main points. Firstly, strengthening information building, and secondly, elaborating a highly effective reservation system in which a reasonable treatment process can be organised, waiting time can be shortened and the entire level of service for the out-patient clinic can be increased.

"The process of visit and waiting time should be shortened... better reservation system is needed... Hope consultation rooms can be reserved in Public Class-A hospitals in the future as well... and mobile payment. " (Respondent 4)

"...simplify the hospitalizing and discharge procedures to make both patients and doctors easier. We can save time from dealing with documents and spend more time on our patients to give them better service quality. " (Respondent 13)

"Hope we will have perfect reservation system so that doctors could have more time to prepare... service system must be humanized to make treatment process easier." (Respondent 1)

Besides, healthcare professionals expressed the absolute necessity of changing the hospital environment. A few ideas were suggested, including "one patient, one consulting room", and infrastructure construction either in or around hospitals.

"There are always many people near the consulting rooms... we need protect patient's privacy. One patient one consulting room will be better. " (Respondent 4)

"Perfect the auxiliary facilities... More clear guidance such as signboards are needed to help patient find the right way quickly." (Respondent 2)

Finally, a majority of participants emphasised the importance of publicity and education. They considered that local governments and Public Class-A hospitals were responsible for helping the greater public know how and when to see a doctor correctly, trust the healthcare professionals and go for medical examination in regular hospitals.

> "We can prepare some leaflets for patients to read when they are waiting for consultation... They should know what kind of expression and chief complaint can help with the efficiency and accuracy of diagnosis and treatment." (Respondent 9)

> "Government should popularize related knowledge especially to help the teenagers and residents with lower educational level... Do not believe the information on the Internet easily. Try to guide them trust doctors and hospitals instead of multifarious information online which can be a good way to improve interaction. " (Respondent 13)

The summary of findings is shown in Table 4.

5. Discussion

In this study, healthcare professionals' perceptions of HSQ were explored, as they showed existing problems in the healthcare service sector in Chinese Class-A hospitals, and made HSQI suggestions. According to these findings, most of problems mentioned in interviewees were related to non-medical rather than medical aspects. All the interviewed healthcare professionals considered medical technology, advanced equipment and reliable curative effect as a vital competitive advantage of Chinese Public Class-A hospital, with technical quality most important factor of HSQ, which is a support of Qian et al., (2009). Good technical quality caused Public Class-A hospitals to be popular and receive more funds for further development, which had achieved a virtuous circle. The existing problems lied mainly in service attitude and

humane care, physician-patient communication, service process and process management, and medical environment. The corresponding suggestions, for instance, strengthening the hierarchical medical system, implementing "people oriented development strategy" put forward by Korten (1984) and optimizing the treatment process provided an important reference for HSQI in Chinese Public Class-A hospitals and for reducing the contradictions between physicians and patients.

In this study, most of the interviewees realized that there were obvious problems in the customer/patient service attitude of the some medical staffs in the Class-A hospitals in China, especially compared with some private hospitals. They did not give sufficient humane care to patients in the process of diagnosis and treatment. This result is in line with some investigations of patient satisfaction which show the dissatisfaction with the customer/patience service attitude of the big hospitals (Liu, 2017; Zhao et al., 2011). This is mainly because healthcare professionals in Public Class-A hospitals are suffering from great work intensity, and some of them really lack professionalism. Others treat their works with a one-way attitude, which lead to their daily services being carried out with a passive and indifferent service consciousness.

It is worth mentioning that people-centered healthcare is getting more international attention and recognition over the past few years. Tokyo Declaration on UHC emphasized the importance of people-centered health services (UHC, 2018). Similarly, African Lancet Commission proposed people-centered health systems as the future direction of healthcare system to deliver better healthcare outcomes and high-quality services to people (the Lancet Commission, 2017). Facing the 21st century challenges in healthcare sector, five strategies were put forward by WHO to achieve people-centered care which are engaging and empowering people and communities, strengthening governance and accountability, reorienting the model of care, coordinating services within and across sectors, and creating an enabling environment (WHO, 2018).

Nowadays, customers "buy" not just technology, but expectations. Previous studies (e.g. Wendt, 2009; Zhang, 2007) have shown the importance of "patient first" and take good care of patients physically and mentally. Not only do they want to be cured, but they also want to obtain good results and psychological satisfaction during diagnosis and treatment. Compared with medical service research in some developed countries, such as America, Japan and Singapore, service marketing had become a means for hospitals in developed countries. For example, to gain patient trust by a humanized service, and to fully respect patient's personality and self-esteem are the important characteristics of Japanese medical service marketing. The service concept of "person-centered" has greatly improved the medical service level (Wei, 2017).

Patients are the target population that medical workers need to serve, and the aim of service is people-oriented, which means giving full emotional support to the patient. Respondents suggested that the staffs of Public Class-A hospitals should love their work more, improve professional ethics through medical ethics education in clinical teaching, and establishing service consciousness. Healthcare professionals should not be too affected by other factors. Medical ethics education is an important component in clinical teaching. In general, as a doctor, he/she needs to not only improve medical skills, but also to develop a good service attitude. Service attitude has an important influence on patient's perception of HSQ and patient satisfaction level in Chinese public Class-A hospitals.

Although the majority of participants realized that the service attitude of the medical staffs in the Public Class-A hospitals and the humane care were insufficient in the course of their work and should be improved, under the current situation of Chinese medical industry, it is difficult to improve service quality simply by improving the service awareness of healthcare professionals unilaterally. According to our research and to related articles in recent years, we can find that the traditional "patient-centered" approach has started to change to "people-centered". There were limitations in the past studies with regards to the "patient-centered" and "patient-first"

views. For instance, Zhang (2007) considered that "patient first" can help with building a harmonious doctor-patient relationship. These studies emphasized the self-management and dedication of the doctors. Nowadays, as one of the stakeholders in hospitals, doctors are as important as patients. The staff treat patients well only if they are treated well. Quality services cannot be guaranteed if the emphasis is on patient-centered and patient-oriented approaches, without paying attention to the working environment of the staff and taking care of healthcare providers. These results support the study in Iran hospitals (Mosadehrad, 2013) demonstrating that the achievement of high-quality HSQ must satisfy both the needs of patients and doctors. In order to improve the HSQ in Public Class-A hospitals, healthcare professionals submitted that their psychological needs and demanded humane care and protection from their hospitals and whole society. There is no doubt that this study reinforces the perspective on the importance of "person-centered "approaches.

As direct providers of medical services, the front-line medical technicians in China's Class-A hospitals are difficult. In interviews, they generally reflected great work pressure and burnout, unequal payment and reward, and the ill-mannered and poorly educated patients were obstacles to offering good medical services. Interviewees generally expressed a desire for getting care and support from hospital, as well as understanding from community. Some interviewees held the view that doctors' jobs should not be "dedication", but reasonable payment and proper working hours. The concerns interviewees stressed ranged from monetary rewards, reasonable promotion system, to close collaboration among healthcare professionals and teamwork among hospital departments.

Interviewees indicated tension caused by the stress in work and the high number of patients as the main factor and hindrance to the quality of medical service. It clearly shows the contradiction between people's ever-increasing demand for healthcare services and the current capabilities of healthcare services. In order to satisfy patients' needs, physicians and nurses have to lengthen their working hours and overdraft their

health. In this study about the interviewees' working conditions, it is showed that healthcare professionals in Class-A hospitals work over eight hours on average. Each doctor needed to contact more than 20 patients per day, and nurses needed to contact more than 100 patients per day. All of them had the experience to work overtime. The data on the workload is correct since it is broadly in line with the data in Wen's (2015) survey about the working pressure of Chinese doctors. Wen (2015: 136) expressed that "The higher the hospital grade, the more the number of patients, the more doctors needs to manage and face. Apart from a large number of outpatients, they have to deal with a large number of hospitalized patients." Long hours of overwork will lead to burnout (Wada et al., 2008), and will reduce the enthusiasm and initiative of doctors, resulting in a decline of job satisfaction. In addition, doctor-patient relationship is relatively tense in China, violent injuries are frequent, which hurts healthcare professionals both physically and mentally. Many respondents worried about medical errors and hoped to get protection from hospitals. In the study of Mccay and Wu (2012: 726), "many errors are built into existing routines and devices, setting up the unwitting patient and physician for disaster. Although patients are the first and obvious victims of medical errors, doctors are the second victims who need help as well." If the healthcare professionals are stressed, they cannot guarantee the safety and quality of healthcare service.

The findings indicated that common diseases and frequently-occurring diseases occupy too many high quality medical resources in Public Class-A hospitals. These cause "overcrowding" and bring great pressure to healthcare professionals together, which is in line with the previous studies about the shortcomings of Chinese medical system. Grading treatment is a prevailing practice model applied in many countries (Fu, 2015). However, the implementation of a hierarchical medical system has not really taken shape although the hierarchical medical system was scrutinized in the Chinese New Medical Reform, and medical insurance was also used as a lever to help achieve this (Zheng & Nong, 2017) due to the lack of specific operating guide

principles, the lack of corresponding incentive and restraint mechanisms (Jin, 2015; Zhao & Fu, 2014). Huang and He (2017) also pointed out that the hierarchical system was much more common in developed countries such as the US. Different levels of medical institutions have clear positions and responsibilities, and cooperate well with each other in the US. They have smoother information platforms to share patient information and to provide high quality medical care for residents together, while Chinese organizations, primary medical institutions and higher level hospitals are internal competitors. "It is hard to achieve effective two-way referral when the higher level institutions are pursuing maximum benefits（He et al., 2015: 21)." Another author (Ke, 2010) disclosed that the number of general practitioners in China was small, and that they are not trusted by residents. It is difficult for them to bear all responsibility for the first visit. Therefore, the respondents suggested that the most important way to strengthen the hierarchical diagnosis and treatment, and a two-way referral system, to enhance publicity and education to help the public accept it as the main ways, to fundamentally reduce the working pressure on the medical staff in Public Class-A hospitals, and to improve the HSQ.

Salary is another factor that impacts the HSQ healthcare professionals provided, and was pointed out to better meet the pursuit of material interests. The majority of participants were not satisfied with their salary compared with their efforts and the difficult of promotion in this study. Therefore, they suggested building a more reasonable salary and promotion system to truly achieve "getting more for more work" and improving healthcare professionals' enthusiasm. The Chinese Medical Doctor Association released a "White Paper on the Occupational Status of the Chinese Medical Doctor", which disclosed the income of Chinese medical doctors, with the average yearly income of 89648 Yuan (11 953 euro) for "health and social work" practitioner in 2017, ranking 5th in 19 industry categories. The "White paper" also pointed out that compared with the western developed countries, there was a real gap between medical doctors' income in China. Similarly, according to international

practice, doctor's wages should be 4 to 6 times the social average, while they are only 1.19 times in China. Chinese doctors have poor social identities, poor salaries, great work pressure and heavy workloads (Fan, 2016). In the future, the characteristics of the medical staff and the objective differences between the present situation and the industry should all be fully taken into consideration when the relevant departments set up the income standards. When the relevant departments are formulating reform strategies, the actual issue level should be taken as the basis, and aligned with the universal position of doctors in the national income system. Similarly, Xie (2012) considered that a reasonable performance compensation system should be established in combination with work intensity and risk coefficient, as well as a good spiritual and material reward mechanism for medical staff.

Wiig et al (2014) expressed that quality improvement requires collaboration and alignment between professionals, managers and policy makers from different disciplines. In this study, interviewed healthcare professionals highlighted patients as another important stakeholder who can help with HSQI. The problem of doctor-patient communication shows that patient's politeness and interpersonal skills was the main factors affecting HSQ. The “low quality” patients was an obstacle to the quality of medical services. Another study showed that "80% of the conflicts between doctors and patients are due to poor communication" (Xie, 2012: 33). The doctor-patient relationship in China is currently awkward. We read from some patient satisfaction surveys for Public Class-A Hospitals and related articles that some patients think the medical staff in Public Class-A hospitals are arrogant, indifferent and lack communication initiative (Zhao et al., 2011). However, this study clearly reveals that healthcare workers thought that many patients were not literate, obstinate, and difficult to communicate with, and scorn communication. Communication is therefore one of the main factors that intensifies the contradiction between doctors and patients. As mentioned above, medical staffs need to be more aware of patient service attitude and show additional patience in communicating with patients. At the

same time, we should stress that treatment is a matter for both doctors and patients. Only when patients respect doctors, trust, and cooperate with them, can good communication and relationship between doctors and patients being established. It is thus beneficial to improve the efficiency and HSQ.

Besides, the environmental problems in Public Class-A hospitals affected both patient and healthcare professionals' experience and satisfaction levels, which need to be improved in the future. In this study, participants expressed the necessity for the hospital to implement grading treatment to reduce the number of patients, and to increase investment in order to comprehensively improve the medical environment and to build infrastructure.

This study calls to the attention of the leaders of Public Class-A hospitals, the relevant government healthcare departments and to the whole society to care about the problems viewed by healthcare professionals as influencing HSQ, and to hear their valuable suggestions. In addition, hospital administration should listen to employees' opinions to protect and change their working conditions in order to improve their job satisfaction and service enthusiasm. In the healthcare sector, healthcare professionals and patients are both the main participants in the diagnosis and treatment activities. Healthcare professionals are a bridge connecting the hospital and the patient. Patients can generally convey problems through the healthcare professionals. If the administrative logistics can really solve the problem for doctors and patients, and if the implemented solution is smooth and effective, it will ultimately affect positively healthcare professionals' confidence and patients' impressions, and finally help improve the HSQ in Public Class-A hospitals.

6. Conclusion

This study is not without limitations. Firstly, the interviews invited healthcare professionals from Chinese Class-A hospitals who had worked in Public Class-A hospitals for at least 3 years, because they were more experienced and knew Public

Class-A hospital better. However, overall, the interviewed healthcare professionals were older, with very long years of service and high positions. Thus, we may lose the perceptions and perspectives from junior healthcare professionals who are the beginners. In addition, only the front-line doctors and nurses were involved in this study and expressed their subjective views. Other stakeholders, for instance, patients and hospital managers were not included in this research. It is also valuable to explore the HSQI of Public Class-A hospitals from patients' perspectives and other stakeholders' perspectives in the future, to make a comparison with healthcare professionals' perspectives. Lastly, the interviewed healthcare professionals were mostly from Public Class-A hospital in big cities like Guangzhou, Beijing, Shenzhen and Xiamen. All the Public Class-A hospitals in China are recognized according to strict and fixed national standards and following the same national policies, thus the research was applicable for most of the Public Class-A hospitals. But although each Public Class-A hospital has its medical capabilities and operating conditions, it can be affected by regional factors including population, regional economic level and so on. In the future, finer research on the HSQ of Public Class-A hospitals according to different regions will be a valuable research issue. A more systematic comparison with other hospitals would allow for better distinguishing Class-A hospitals from their counterparts. These limitations notwithstanding, our study offered a useful preliminary literature on HSQI in Chinese Public Class-A hospitals from healthcare professionals' perspectives.

HSQ should be the priority for every hospital. Chinese Public Class-A hospitals also need to keep improving HSQ to maintain their leading position in the Chinese medical market. Research on HSQ from healthcare professionals' perspectives is a very good way to learn more about hospital issues in details, and can help find effective solutions to specific problems. There is clear evidence among healthcare professionals that "person-centered" which means safeguarding the rights and psychological needs of both doctors and patients, was an important issue to HSQI in

Public Class-A hospitals. Moreover, communication between healthcare professionals and patients, treatment process and environmental problems should clearly be strengthened and emphasized. Finally, HSQI is a long-term process. It requires the joint efforts of professionals, patients, hospital managers, government and the whole society.

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Appendix: Questions for interviews.

Information about the research: The core aim of our research is related to healthcare service quality management in healthcare. The outcome of this research will be collected and summarized as the perspectives of healthcare professionals. Hence, your views will be used for guiding hospital managers working in administrative departments to improve the healthcare service quality in Chinese Public Class-A hospitals further. Information collected from this interview will be used only for personal academic research; interviewees' privacy will be protected.

Personal information:
Gender: Male / Female Age:
Occupation: Doctor / Nurse Specialty:

（1） How many years have you worked in healthcare industry
（2） How many years have you worked for Public Class-A hospital?
（3） How many hours do you work everyday?
（4） How many patients do you contact everyday?

General question:

（1） We are very interested with what aspects do you associate healthcare service quality in regard to your healthcare occupation? Is it important for hospitals?

Follow-up questions: What do you mean by it? Why is it important?

（2） Do you think patients are satisfied with healthcare service quality in your hospital?

If yes, which part do you think they are mostly satisfied with?
If no, what are they usually unsatisfied with?

（3） We know it is hard for healthcare professionals to offer the high-quality services to everyone at all times. What factors could influence (improve or damage) the service quality that you/ healthcare professionals provide?

（4） Could you please evaluate the healthcare service quality of Chinese Public Class-A hospitals compared with other hospitals? From technical quality and non-medical aspects（functional, environment, administration, physician and staff）

（5） What are the shortages of service quality in Public Class-A hospitals?

Follow-up questions: What are the reasons?

(6)Could you please give some suggestions to help Chinese Public Class-A hospitals improve healthcare service quality in the future? What are urgent to do from your opinion?