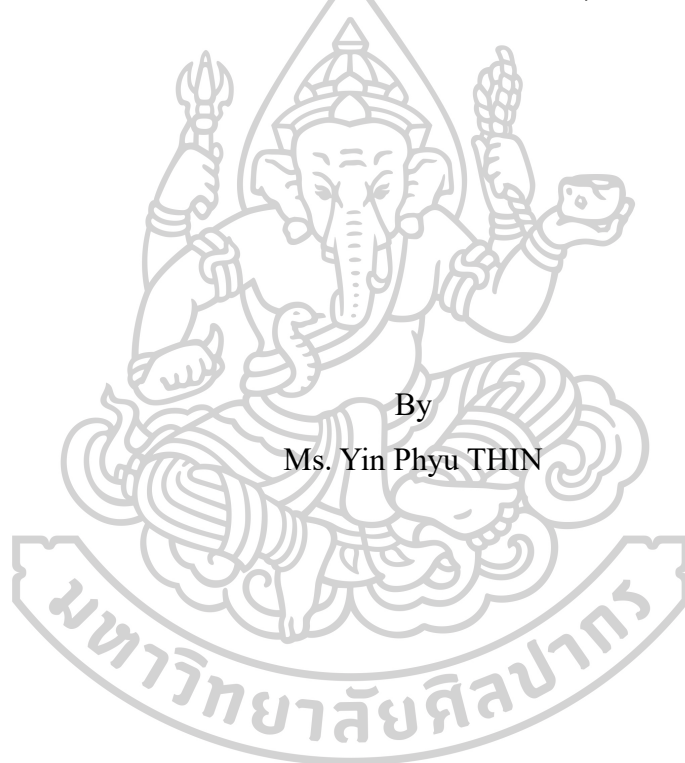




ASSESSMENT OF SERVICE QUALITY IN THE OUTPATIENT DEPARTMENT
OF PUBLIC HOSPITALS IN YANGON, MYANMAR



By
Ms. Yin Phyu THIN

A Thesis Submitted in Partial Fulfillment of the Requirements
for Doctor of Philosophy SOCIAL AND ADMINISTRATIVE PHARMACY

Silpakorn University

Academic Year 2023

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Assessment of Service Quality in the Outpatient Department of Public
Hospitals in Yangon, Myanmar



วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรเภสัชศาสตรดุษฎีบัณฑิต

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ลิขสิทธิ์ของมหาวิทยาลัยศิลปากร

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Field of Study SOCIAL AND ADMINISTRATIVE PHARMACY

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Services are intangible in nature and difficult to assess as compared to the products. Measuring the quality of intangible service products has become a great challenge for managers and technical staffs in the health services industry. In Myanmar, the network of hospitals and health centers provides preventive and curative services ranging from primary to tertiary care. The service quality of public hospitals can be affected due to an imbalance between supply and demand resulting in the decline of customer satisfaction level. The assessment of patients' expectation and perception would be necessary for policymakers and government officials to reform and rebuild the operating system and service quality in public hospitals. Therefore, this research aims to assess service quality in the outpatient department of public hospitals in Yangon, Myanmar. The study employed the SERVQUAL framework, comprising five dimensions – namely tangible, reliability, responsiveness, assurance, and empathy – to evaluate the quality of services provided in the outpatient department of public hospitals in Yangon, Myanmar. After developing a questionnaire relevant to Myanmar culture, the data collection was collected from the Yangon region because this is the most crowded and has the highest population among the 15 states and regions. So, the 806 patients were asked from the outpatient department (OPD) of the hospitals of 18 primary, 2 secondary and 6 tertiary curative care levels. Based on data collection, the scores between the perception and expectation on service quality dimensions showed positive scores in all dimensions. The mean perception score exceeded the mean expectation score and it could explain that the patients were satisfied with perceived service quality. Moreover, the result showed that residence was significantly related to the tangible, reliability, responsiveness and empathy dimensions. The monthly income was significantly related to the reliability and responsiveness dimensions. The marital status was significantly related to the assurance dimension. The results emphasize the importance of understanding the local context and demographic characteristics when designing interventions or improvements in healthcare services. Understanding the underlying factors contributing to these variations could provide valuable insights for healthcare providers to enhance their service quality based on the specific needs of different patient groups. To validate the association between the observed and the latent variables, the measurement model was assessed by the first-order and second-order confirmatory factor analyses. Based on the fit indices, the second-order confirmatory factor model did not adequately represent the data. Therefore, it could not confirm the hypothesized two-factor model of service quality, where service expectation and perception were higher-order factors encompassing the individual five dimensions of service quality. Due to the diverse nature of service industries and the complexities inherent in healthcare services, it is needed to emphasize the importance of tailoring the SERVQUAL scale to each sector's specific needs, cultural context and national

context.



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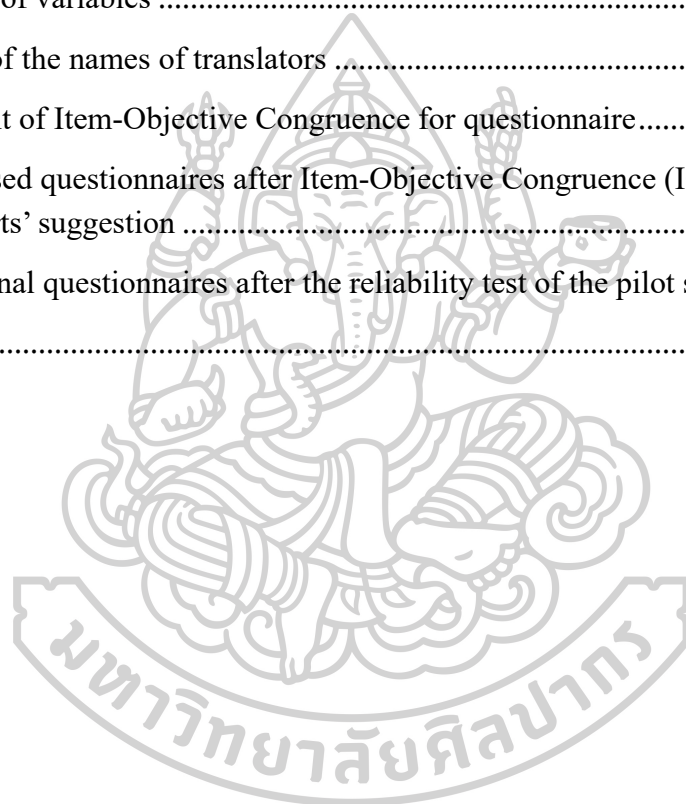


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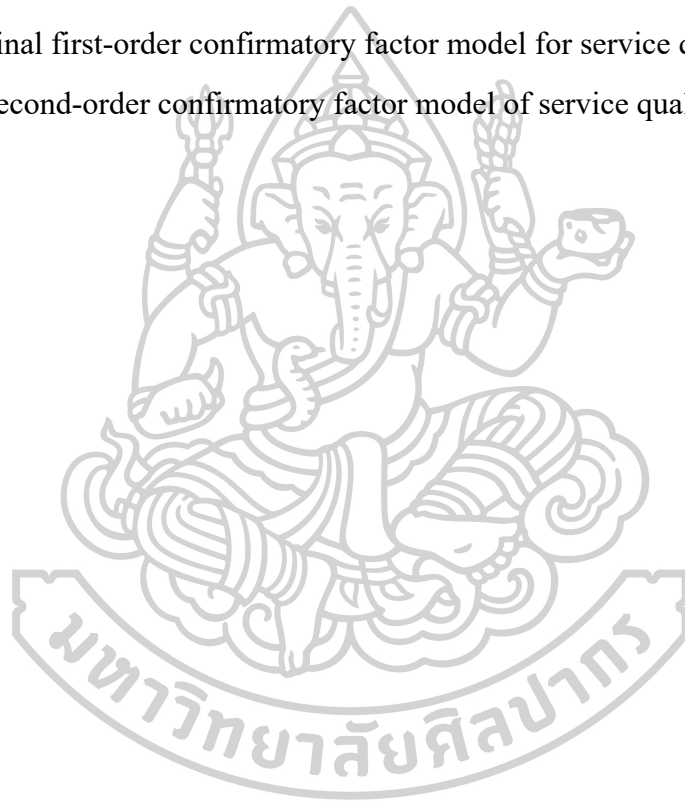


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CHAPTER 1

INTRODUCTION

The evaluation of service quality from the patient's perception is important for many reasons. Firstly, high service quality has a relationship with issues such as patient satisfaction, willingness to re-use the services, complying with physician prescription, etc. Secondly, patient feedbacks have to be an essential part of many accreditations and evaluation programs of hospital services. Currently, patient feedbacks are considered as an important element in planning and policy-making. They also aid and provide in the better effective management of the services because of using optimal, available resources (1).

Moreover, the patient's perception of hospital services and the relationship between patients and the hospital are mainly influenced by functional and technical quality dimensions (2). Based on the patient's perception, patient satisfaction is an important element in measuring the hospital service quality and in predicting the patient's behavioral intentions after they receive the services. If the hospital provides good service quality, the patients will, therefore, have better satisfaction, speak positively about the hospital to other patients and they are more willing to return to the same hospital (3). Low satisfaction level alarms the management to fill the needs of customer requirements and improve the process of service delivery. Therefore, patient satisfaction is critical not only for the hospital but also for any healthcare service provision so that it is needed to identify the influencing factors that determine the level of patient satisfaction. These behaviors are in the form of the patient's perception that many hospitals make effort to achieve. There is a significant relationship between the patient's perceptions of service quality and overall patient satisfaction. So, it has become imperative for hospitals to create patient satisfaction through effective management of service quality (4).

In Myanmar, the healthcare system evolves with changing the political and administrative system and relative roles performed by the key providers are also changing. The Ministry of Health (MOH) remains the major provider of comprehensive healthcare. It has a pluralistic mix of the public and private systems both in the financing and provision of service. The public, private (not for profit)

institutions are run by Community Based Organizations (CBOs) and Religious based society and private (for profit) institutions contribute to the needs of healthcare for the nation. The network of hospitals and health centers (which extends down to village level) provides preventive and curative services ranging from primary to tertiary care (5).

Besides, hospitals in Myanmar have shortcomings in the area of service provision sector. The consequences are patient complaints and customer dissatisfaction. These are arising from both qualitative and quantitative shortages of hospital services. The quantitative shortage becomes the demands exceeding than the supplies which lead to the exacerbation of qualitative limitations (6). Therefore, this research aims to assess the service quality of public hospitals by studying the factors which influence patient satisfaction.

1.1. Statement of the problem

Healthcare industries throughout the world are struggling with the challenges of setting up economic ways and means of satisfying the human wants for healthcare services. The hospital guarantees its quality of service to satisfy or to exceed the expectations and requirements of its external (patients) and internal (employees) customers (7). So, the process of healthcare service quality can be improved by measuring the customer satisfaction level and filling the gaps. High satisfaction level indicates that the service process level meets with the customers' preferences and low satisfaction level points out the management to fill the needs of customer requirements and to improve the service quality.

In Myanmar, healthcare financing was chiefly funded by the government. The government health investment is uncovered to the total population and healthcare is poor. Although the government put more investment into three-folds between 2001 and 2006, health is still under resource. There is no balance in access to healthcare services, e.g., between rural and urban areas, between the rich and the poor. Also, the service quality provided in the private hospitals is good but the people have to use their out-of-pocket money to receive this service. Therefore, the poor population cannot afford to go to private hospitals for their health problems. This is the reason why public hospitals are overcrowded with too many patients (6, 8).

Besides, the country follows the urbanization. The migration of the population from rural areas to urban areas as well as from less urban cities to more urban cities is increasing rapidly which causes the increasing burden of health service system and demand on more health workforce in urban areas. According to the 2014 Myanmar Population and Housing Census, the percentage of the urban and rural population in Yangon region is 70 percent and 30 percent (9). Myanmar is short of human resources for health, mainly due to a mismatch between supply and demand for health professionals. Unequal distribution of health professionals and increasing need for health professionals due to population growth and increasing life expectancy remains challenging for Myanmar. Working in the public health sector is unattractive to health professionals due to long working hours, the heavy burden of workload, unfavorable working environment and low remuneration (10).

Moreover, the loss of health human resources represents a loss in the capacity of health systems to deliver health care equitably (6). Increased demand for the patients could provide inadequate services such as infrastructures and facilities. The service quality in public hospitals can be affected due to the imbalance between supply and demand resulting in the decline of the customer satisfaction level (11, 12).

Research questions

- What are the patients' expectations and perceptions regarding the service quality of the outpatient department in public hospitals in Yangon, Myanmar?
- What are the important factors surrounding patients' service quality expectations and perceptions of the outpatient department in public hospitals in Yangon, Myanmar?

1.2. Objective

- To assess the service quality of patients' expectations and perceptions using SERVQUAL domains in the outpatient department of public hospitals in Yangon, Myanmar
- To investigate the factors influencing patient satisfaction on improving the healthcare service quality of outpatient department in public hospitals in Yangon, Myanmar
- To confirm the dimensions of service quality in outpatient department of public hospitals in Yangon, Myanmar

1.3. Definition of terms

(a) SERVQUAL

It is a diagnostic tool that uncovers an organization's broad weaknesses and strengths where service quality is concerned. It is efficient for measuring perceptions and expectation of the customers about service quality by using the SERVQUAL dimensions. These dimensions are tangible, reliability, responsiveness, assurance and empathy (13).

(b) Tangible

It concerns the physical facilities, equipment, personnel and materials that can be perceived by the five human senses (13).

(c) Reliability

It depicts the consistent performance, free of non-compliance, in which the user can trust. The supplier must comply with what was promised, without the need for rework (13).

(d) Responsiveness

It refers to the provider's availability to attend voluntarily to users, providing a service attentively with precision and speed of response. It concerns the availability of employees of the institution to assist users and provide the service promptly (13).

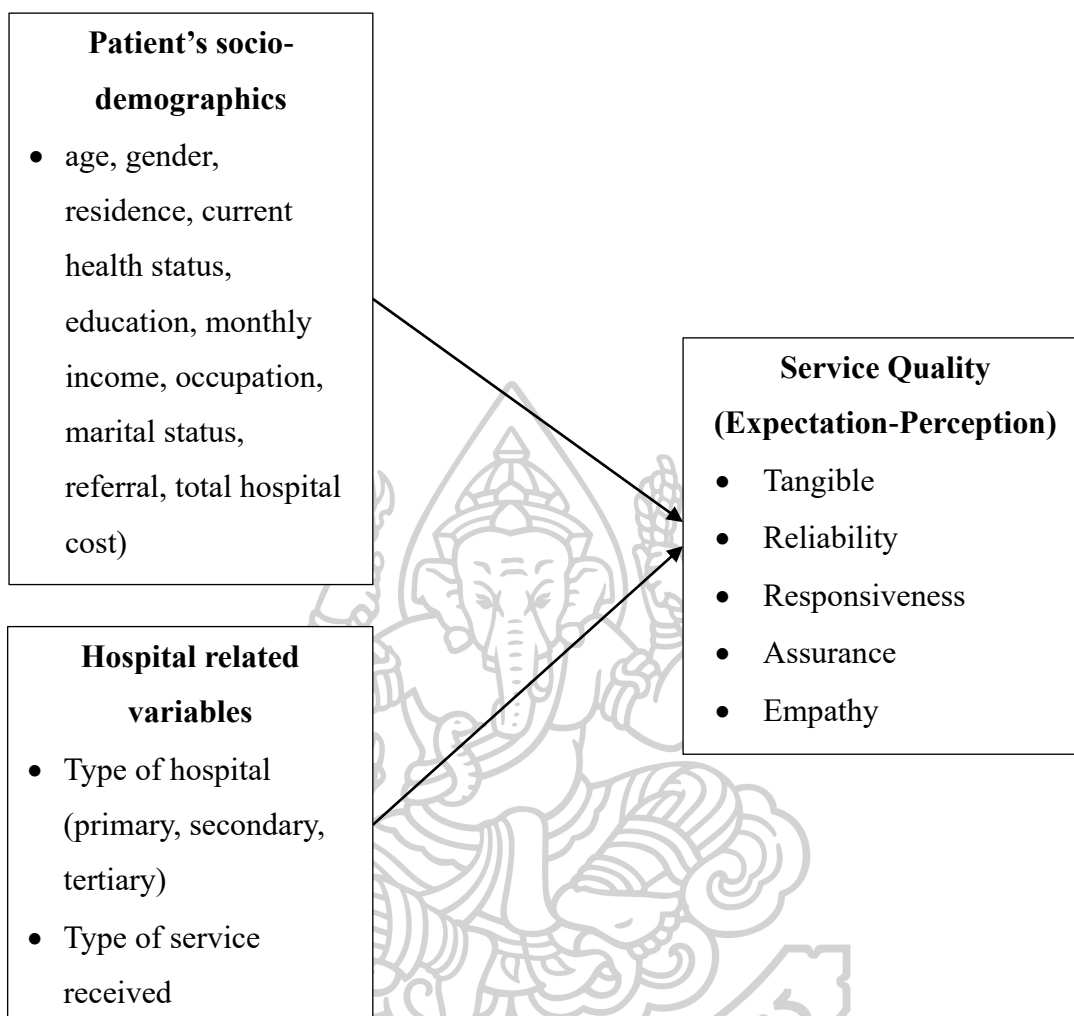
(e) Assurance

It is identified as the courtesy, knowledge of employees and their ability to convey trust (13).

(f) Empathy

It is related to whether the organization cares for the user and assists him in an individualized manner, referring to the ability to demonstrate interest and personal attention. Empathy includes accessibility, sensitivity and effort in understanding the needs of users (13).

1.4. Conceptual framework



The list of type of variables was shown in appendix 1.

CHAPTER 2

LITERATURE REVIEW

2.1. Service Quality

Service quality is the consequence of an evaluation process and measures of how well the service level delivered matches customer expectations. It is based on customers' judgments that how services fulfill or exceed their expectations. If service performance fulfills or surpasses the expectations of customers then the perceptions as regards the service quality will be satisfactory (2).

Generally, services in hospitals are intangible, such as the skills of doctors, the hospital atmosphere, a caring staff and hygiene. While intangible factors i.e. rooms and equipment are also important, they represent a combination of tangible and intangible products. Patients' assessment of services is based on their entire understanding and shaped by the effectiveness of the operation, the hospital atmosphere, hygiene in rooms and wards and the devotion of surgeons, nurses and staff. Nonetheless, based on patient perceptions, expectations and observations, both technical and nontechnical aspects of services can be evaluated. Patient feelings are crucial to improving services. Patient arguments are important, in line with the "marketing concept," which focuses on ensuring customer satisfaction and considering that patients are neither right nor wrong but satisfied.

Identifying the relative weight of the different dimensions of healthcare quality service which concur together to determine patient satisfaction is very important as it can help managers to find out which service dimensions are crucial to satisfy patients. This, in turn, can result in more effective resource allocation and managerial actions, able to guarantee higher levels of patient satisfaction. More generally knowing the relative influence of service quality dimensions on patient satisfaction is critical for its implications for decision making (14).

SERVQUAL, created by Parasuraman et al., is a widely used scale for measuring service quality in the service sector. It is also suitable for measuring service quality in hospitals; however, its suitability must be evaluated in different contexts. Patients from various parts of the world have different expectations and perceptions of service quality based on the social, cultural and economic conditions in which they

live. In hospitals, the customers are patients and the service providers are doctors, paramedical staffs or nurses, who vary in terms of their intellectual skills, knowledge competencies and professional attitude.

SERVQUAL was developed for the measurement of service quality in a broad range of services such as banking, credit card services, repair and maintenance and long-distance telephone services. SERVQUAL originally measured ten aspects of service quality: reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding or knowing the customer and tangibles. It measures the gap between customer expectations and experience. By the early nineties, its creators had refined the model to the five dimensions namely tangible, reliability, responsiveness, assurance and empathy (15).

2.1.1. Tangible

Tangible dimension is related to the physical aspects of what is provided to users (16). The studies of Cho et al. in 2004, Shaikh et al. in 2008 and Chakravarty in 2011 stated that up to date equipment, availability of waiting facilities, cleaning condition, neat and tidy of health professionals and the condition of easy to find the places were parts of tangible dimension (17-19). The research of Khamis and Njau in 2014 described the tangible dimension as the accessibility of basic amenities and hospital facilities, cleanliness of environment and adequate waiting facilities (20). Ogunnowo et al. in 2015, Al Fraihi and Latif, Aman and Abbas in 2016 expressed as maintenance of equipment, cleaning and adequacy of waiting facilities and basic amenities, availabilities of information on hospital services, appearance of health professionals, good directional signs, availabilities of medicines and hospital location in their researches (21-23). The maintenance of equipment, availability of waiting facilities and hospital facilities, good directional signs and availabilities of medicines were recorded as the tangible dimension in the study of Mulisa et al. in 2017 (24). The researches of Došen and Umoke et al. in 2020 expressed the tangible dimension as equipment, accessibility of hospital facilities and waiting facilities, cleanliness of environment, hospital location and appearance of health professionals (25, 26). Moreover, in addition to the items of good directional signs and availability of medicines, the items that showed in the researches of Došen and Umoke et al. in 2020

were mentioned as tangible dimension in the studies of Riaz and Sughra and Kassa et al. in 2021 (27, 28).

Table 1: Summary of the components of tangible

Components	Cho et al.	Shaikh et al.	Chakravarty	Khamis and Njau	Ogunnowo et al.	Al Fraihi and Latif	Aman and Abbas	Mulisa et al.	Došen	Umoke et al.	Kassa et al.	Riaz and Sughra
Up to date and well-maintained equipment	✓	✓	✓		✓	✓	✓	✓	✓			✓
Waiting facilities			✓	✓		✓	✓	✓		✓		✓
Cleanliness of environment	✓	✓	✓	✓	✓	✓				✓	✓	
Availability of hospital facilities	✓			✓		✓	✓	✓	✓	✓		
Hospital location							✓		✓			
Good directional signs	✓						✓	✓			✓	
Availability of information on hospital services					✓	✓						
Appearance of health professionals			✓		✓	✓	✓		✓	✓	✓	
Availability of medicine				✓			✓	✓			✓	✓

2.1.2. Reliability

Reliability is the ability to fulfil what was promised accurately (16). Cho et al. in 2004 mentioned reliability dimension as staffs give the right medical treatment in understandable way to patients and financial expenses in their study (17). And also, providing services as promised, reliability in handling patient's problem and error free

record were stated as reliability dimension in the studies of Shaikh et al. in 2008 and Chakravarty in 2011 respectively (18, 19). Khamis and Njau in 2014, Mulisa et al. in 2017 and Riaz and Sughra in 2021 explained as staffs give the right medical treatments, has good communication and information skill, convenience of operating hours and give prompt service (20, 24, 27). The researches of Ogunnowo et al. in 2015, Al Fraihi and Latif, Aman and Abbas in 2016 described as communication, error free record, adequate medical examination time, providing service, handling of patient's problem, fast and easy admission procedure, financial expenses and convenience of operating hours as the reliability (21-23). Došen in 2020 and Umoke et al. in 2020 explained as the staffs provide services as promised, follow the treatment protocols, medical expenses and error free record in their studies (25, 26). The explanation to the patients in understandable way, handling of patient problem and financial expenses were the part of reliability dimension in the study of Kassa et al. in 2021 (28).

Table 2: Summary of the components of reliability

Components	Cho et al.	Shaikh et al.	Chakravarty	Khamis and Njau	Ogunnowo et al.	Al Fraihi and Latif	Aman and Abbas	Mulisa et al.	Došen	Umoke et al.	.Kassa et al.	Riaz and Sughra
Right medical diagnosis and treatments				✓	✓	✓				✓		✓
Explanation to tests, diagnosis and treatments in understandable way	✓			✓				✓			✓	
Providing services as promised		✓		✓		✓	✓		✓	✓		✓
Reliability in handling patient's problem		✓	✓		✓		✓	✓	✓	✓	✓	
Communication				✓		✓						

2.1.3. Responsiveness

Responsiveness is the ability to attend to the users and provide the service promptly, capturing the notion of flexibility and ability to adapt to the needs of the service user (16). The study of Shaikh et al. in 2008, Khamis and Njau in 2014, Ogunnowo et al. in 2015 and Al Fraihi and Latif in 2016 explained as prompt attention to requests, willingness to help and waiting time as the responsiveness dimension (18, 20-22). The item of giving adequate medical information, easy appointment system and accept patient opinion and suggestions were also stated in the researches of Khamis and Njau in 2014, Ogunnowo et al. in 2015 and Al Fraihi and Latif in 2016 (20-22). The study of Cho et al. in 2004 described as prompt attention to requests, waiting time, easy appointment system and giving adequate medical information were the part of responsiveness dimension (17). The studies of Chakravarty in 2011, Aman and Abbas in 2016, Umoke et al. in 2020 and Riaz and Sughra in 2021 showed the responsiveness in terms of prompt attention to requests and willingness to help, easy appointment system, giving adequate medical information and prescription of affordable medicines (19, 23, 26, 27). Mulisa et al. in 2017 mentioned as prompt attention to requests, easy appointment system and accept patient opinion and suggestions (24). The adequate medical information and willingness to help were described as responsiveness dimension in the researches of Došen in 2020 and Kassa et al. in 2021 (25, 28). Moreover, Kassa et al. in 2021 also mentioned waiting time and prescription of affordable medicines as the items in responsiveness dimension (28).

Table 3: Summary of the components of responsiveness

Components	Cho et al.	Shaikh et al.	Chakravarty	Khamis and Njau	Ogunnowo et al.	Al Fraihi and Latif	Aman and Abbas	Mulisa et al.	Došen	Umoke et al.	.Kassa et al.	Riaz and Sughra
Easy and adequate medical information	✓			✓		✓	✓		✓		✓	

Prompt attention to requests	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓
Willingness to help		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Waiting time	✓	✓		✓	✓	✓					✓	
Easy appointment system	✓		✓			✓		✓				
Accept patient opinion and suggestions					✓			✓				
Prescription of affordable medicines							✓				✓	

2.1.4. Assurance

Assurance is competency and courtesy extended to the users and the security provided by the operations (16). For the assurance dimension, competence of staffs, feeling of confident and safe, courteous to the patients and coordination of staffs for delivering services were the part of assurance in Cho et al. in 2004 and Chakravarty in 2011 (17, 19). The studies of Shaikh et al. in 2008, Khamis and Njau in 2014, Aman and Abbas in 2016, Došen in 2020 and Kassa et al. in 2021 stated confidentiality of information and competence of staffs as assurance dimension (18, 20, 23, 25, 28). The item of courteous to the patients was considered as the part of assurance in the researches of Shaikh et al. in 2008, Aman and Abbas in 2016, Ogunnowo et al. in 2015, Al Fraihi and Latif in 2016 and Mulisa et al. in 2017 (18, 21-24). Khamis and Njau in 2014 showed the assurance dimension related with coordination of staffs for delivering services, having adequate staffs and patient recommendation (20). The studies of Aman and Abbas in 2016, Došen in 2020 and Kassa et al. in 2021 also mentioned feeling of confident and safe, having adequate staffs and good professional knowledge (23, 25, 28). The competence of staffs was described in the studies of Al Fraihi and Latif in 2016 and Mulisa et al. in 2017, Umoke et al. in 2020 and Riaz and Sughra in 2021 (22, 24, 26, 27). Al Fraihi and Latif in 2016 also mentioned feeling of confident and safe, coordination of staffs for delivering services and good

professional knowledge (22). Umoke et al. mentioned the coordination of staffs for delivering services in their study in 2020 (26) and also good professional knowledge are part of assurance dimension in the study of Riaz and Sughra in 2021 (27).

Table 4: Summary of the components of assurance

Components	Cho et al.	Shaikh et al.	Chakravarty	Khamis and Njau	Ogunnowo et al.	Al Fraihi and Latif	Aman and Abbas	Mulisa et al.	Došen	Umoke et al.	.Kassa et al.	Riaz and Sughra
Confidentiality of information		✓		✓			✓		✓		✓	
Competence of staffs	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Feeling of confident and safe when receiving treatments	✓		✓			✓	✓		✓		✓	
Coordination of staffs for delivering services	✓		✓	✓		✓				✓		
Courteous to the patients	✓	✓	✓		✓	✓	✓	✓				
Good professional knowledge					✓	✓					✓	✓
Having adequate staffs				✓			✓		✓			
Patient recommendation				✓								

2.1.5. Empathy

Empathy is individualized attention to the users. Cho et al. in 2004 mentioned empathy dimension as giving enough time to patients and referral to higher level of care when need arise (16). The studies of Shaikh et al. in 2008, Al Fraihi and Latif in 2016 and Kassa et al. in 2021 described as individualized attention and treatment with dignity and respect (18, 22, 28). Al Fraihi and Latif in 2016 also showed

compassionate to patient as the part of empathy dimension (22). Chakravarty in 2011 noted as individualized attention, referral to higher level of care when need arise and understanding the patient's feeling (19). Khamis and Njau in 2014 and Aman and Abbas in 2016 stated as individualized attention, treatment with dignity and respect, compassionate to patient and giving enough time to patients in their researches (20, 23). Aman and Abbas also mentioned empathy dimension as having well-mannered and understanding the patient's feeling (23). Ogunnowo et al. in 2015 expressed as treatment with dignity and respect and understanding towards the patient's feeling (21). The studies of Mulisa et al. in 2017, Došen in 2020 and Umoke et al. in 2020 stated as individualized attention, having well-mannered and understanding the patient's feeling (24-26). The compassionate to patient, concern to patient family and referral to higher level of care when need arise were the part of empathy dimension in the study of Umoke et al. in 2020 (26). Besides, the research of Riaz and Sughra in 2021 describes as individualized attention, treatment with dignity and respect, giving enough time to patients, having well-mannered and understanding the patient's feeling (27).

Table 5: Summary of the components of empathy

Components	Cho et al.	Shaikh et al.	Chakravarty	Khamis and Njau	Ogunnowo et al.	Al Fraihi and Latif	Aman and Abbas	Mulisa et al.	Došen	Umoke et al.	.Kassa et al.	Riaz and Sughra
Individualized attention		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Treatment with dignity and respect		✓		✓	✓	✓	✓				✓	✓
Compassionate to patient				✓		✓	✓			✓		
Giving enough time to patients	✓			✓			✓					✓
Having well-mannered							✓	✓				✓

Concern to patient family										✓		
Referral to higher level of care when need arise.	✓		✓							✓		
Understanding towards feelings of discomfort			✓		✓		✓		✓			✓

In healthcare services, decision makings are driven by inputs such as needed resources, including medical staff, equipment and systems, patients and/or medicine. Analysis of how these resources is used to treat the patient (wellness/illness) and also to address the patient experience, including requests for empathetic staff, comfortable and safe structures and advanced equipment and systems, is important. Thus, healthcare organizations make inventory and allocation decisions based on the measurement of these resources. Also, as efficiency is positively and strongly correlated to the utilization of resources, it may impact the improvement of care service—as the most valuable item for the patient (29).

Furthermore, hospital administrators have constantly adopted strategies to deliver services that satisfy patients and have focused on continually assessing and trying to improve the quality level that their institutions offer. The quality of hospital service is measured by administering instrumentation to patients that measure the degree to which patients are satisfied with services received while in hospitals. So, the identification and measurement of quality dimensions is necessary for patient satisfaction and continuous improvement (30).

2.2. Satisfaction Theory

Satisfaction is a concept that has appeared in many fields such as in-office evaluation by employee satisfaction, hospital evaluation by patient satisfaction, and site evaluation by visitor satisfaction amongst others. However, satisfaction has been fundamental to the marketing concept for over three decades; as the most extensive use of satisfaction has been in literature concerned with customer satisfaction. Porter in 1961 pointed out that the theory of satisfaction has its origins in the discrepancy

theory. Discrepancy theory described the study of inevitable irregularities of distributions, in measure-theoretic and combinatorial settings. In 1980, Day claimed that while everyone knows what satisfaction means, it does not mean the same thing to everyone. Wilton and Nicosia in 1986 informed that several models of satisfaction have emerged over time in this field and others (31).

The Disconfirmation – Expectancy paradigm as proposed by Oliver in 1980 is one of the most widely used theories in the measure of customer satisfaction. This model suggests that consumers purchase goods or services with certain preconceived expectations in mind. If the service encounter matches their expectations, confirmation occurs. Failure to meet minimum performance criteria result in disconfirmation, of which there are two possible outcomes. Negative disconfirmation ensues as a result of the encounter is less than anticipated while positive disconfirmation refers to the service has exceeded expectation (32).

Some theoretical approaches which have been advanced amongst others include assimilation theory, contrast theory, assimilation-contrast theory and negativity theory.

(i) Assimilation Theory

Florin and Sergiu pointed out that, the theory of assimilation has its basis on the theory of cognitive dissonance which states that the consumer makes a sort of cognitive comparison between the expectations regarding the product and the product's perceived performance. The assimilation theory presumes the consumers are motivated enough to adjust both their expectations and their product performance perceptions. Therefore, the control of the actual product performance can lead to a positive relationship between expectations and satisfaction (31).

(ii) Contrast Theory

Dawes et al. defined contrast theory as the tendency to magnify the discrepancy between one's attitudes and the attitudes represented by opinion statements. Contrast theory presents an alternative view of the consumer post-usage evaluation process than was presented in assimilation theory in that post-usage evaluations lead to results in opposite predictions for the effects of expectations on satisfaction. Contrast theory holds that a surprise effect occurs leading to the discrepancy being magnified or exaggerated (31).

(iii) Assimilation-Contrast Theory

The theory suggests that if performance is within a customer's latitude (range) of acceptance, even though it may fall short of expectation, the discrepancy will be disregarded – assimilation will operate and the performance will be deemed as acceptable. If performance falls within the latitude of rejection, the contrast will prevail and the difference will be exaggerated, the product/service deemed unacceptable (31).

(iv) Negativity Theory

Terry stated that this theory was developed by Carlsmith and Aronson in 1963. It suggests that any discrepancy of performance from expectations will disrupt the individual, producing “negative energy.” Affective feelings toward a product or service will be inversely related to the magnitude of the discrepancy (31).

2.3. Relationship between Satisfaction Theory and Service Quality

The healthcare community has been assessing patients. Developments in the medical environment and the increase in competition have promoted the health care organizations to recognize the patients as valuable customers. In the last few years, health systems changed the way of thinking and delivering care, the patient has become the center of the overall care process, and providing patient-centered services has become an important focus. Patient satisfaction is a very important measure and is a primary means of measuring the effectiveness of health care delivery.

Improving the quality of patient care in hospitals is very necessary. Listening to the patients is the single most critical component of establishing a long-term relationship with the patients. From the patient's feedback, we can measure the patient satisfaction level and accordingly offers an insight into the healthcare provider's level of success (33).

2.3.1. Patient Satisfaction

Patient satisfaction is defined as the extent of agreement between what a patient expects to receive from the healthcare experience and the perception of the level of care they receive. A patient satisfaction may not be influenced by the quality of the physician available but it reflects how medical care has been delivered (34). Thus, patient perceptions have become a major indicator in the evaluation and improvement of the quality in healthcare (35).

Many studies have suggested that patient satisfaction should be regarded as an important indicator for the quality of care. There are several motives for evaluating patient satisfaction. Firstly, although the quality of medical services can be evaluated from multiple perspectives (e.g., patient, provider, insurer, etc.), patients should still be considered as the ultimate estimator of the quality of care. Secondly, patient satisfaction represents an assessment of their medical experience based on their values, perceptions and interactions with the healthcare environment. Thirdly, patients' thoughts can affect their future behaviors and patients with differing levels of satisfaction may behave differently. Patients with a high level of satisfaction tend to be more cooperative with medical staff and the recommended treatment plans. In contrast, patients with a low level of satisfaction may have less effective medical services, refuse to seek care or disobey physicians' suggestions and prescribed course of treatment. Lastly, healthcare providers can improve the effectiveness of medical services based on feedback regarding patient satisfaction (36).

Patient satisfaction is considered to be a measure of healthcare and hospitals worldwide use it to improve the quality of healthcare. In the past, this was used to evaluate the quality of medical services by evaluating the objective outcomes of patients' physical condition. Recently, however, researchers have begun to pay close attention to patient satisfaction as a yardstick for assessing the effectiveness and quality of medical care. Patient opinions and satisfaction status may affect their future behaviors related to the treatment outcomes. Analysis of the patients' subjective feedback can fully understand the areas that need to be improved which can upgrade the quality of medical care. As a result of the increasing value of patient satisfaction, various kinds of measurement tools are being developed and tested. Suggestion boxes, formal complaints, qualitative methods, audits and satisfaction questionnaires are being used to assess the level of patient satisfaction. Among them, the satisfaction questionnaires are the most effective and widely used method (37).

2.3.2. Current Situation in Myanmar

Patient satisfaction includes the degree of patient's positive feeling on satisfaction, quality of service, interpersonal behavior, communication, financial aspects, time spent with physicians, nurses, administrative staff, pharmacy service, accessibility to health care service, convenience, availability of care and condition of

facilities during their health care services (38). Patient's satisfaction depends primarily on the outcome of care; since it is the ultimate well-being that results from acceptable care. Satisfaction or dissatisfaction can also result from a patient's judgment on certain aspects of care, calibrating the degree of their acceptability (33).

Moreover, patient's satisfaction surveys can be a tool for learning. They also serve as a means of holding doctors and other staff accountable. Doctors and other staff can be asked to prove that they have acceptable levels of patient satisfaction, which can be used as a performance indicator. Patient's satisfaction data can also be used to document the quality of health care, to accrediting bodies nationally and internationally. Patient's satisfaction surveys are important as they can identify and resolve potential problems before they even break into major issues. They could also be used to assess and measure the benefits of any specific initiatives or projects in service delivery. They can identify those faulty operations and processes that require a better explanation to patients. Most importantly, they can increase patient loyalty amongst the patients by demonstrating that they care about their perceptions and are looking for ways to improve the experience. The individual factors of patients had a positive relationship with their satisfaction. Sociodemographic variables such as gender, marital status, age, rank, education, race, health status and income were associated with satisfaction (39, 40). According to Ammo et al., patient satisfaction was influenced by age, educational level and medical insurance coverage class. They were also found that patient satisfaction with hospital care was significantly influenced by the patient's provider interactions during the episodes of care and the surrounding physical environment (41).

In the research of Zarei in 2015 (1), the researcher assessed the service quality of hospital outpatient departments from patients' perspective. The result showed that physician's consultation, information to the patient, physical environment, admission process, accessibility, perceived waiting time, appointment and perceived service costs were determining factors for the service quality of outpatient departments of hospital in Tehran, Iran. Similarly, service-related factors and provider-related factors such as clinic waiting time, clinical contact time, empathy, trust, communication and expectation were found to influence patient satisfaction (42).

According to the study of Tin Tin Khaing (43) in Yangon General Hospital, the area of least satisfaction was with basic amenities regarding with toilet and bathroom cleanliness. Most of the patients satisfied with other areas such as quality of care, dignity and confidentiality, autonomy, information and explanation, convenience, financial expense and overall general performance. It was found that female patients had higher level of satisfaction than male patients.

In the study conducted at the outpatient services of Waibargi Specialist Hospital, Yangon (44) and the study also performed for satisfaction of patient's care-giver attending to outpatient department of Yangon Children Hospital (45) physical facilities, doctor's services, nurse's services, waiting time, respect for dignity and confidentiality, autonomy, information and explanation, financial expense and overall general performance were the components to influence patient satisfaction.

The study using SERVQUAL model was undertaken in the outpatient department of Yangon General Hospital in 2016. It was found that the significant service gaps in the dimensions of tangibility, responsiveness, reliability and empathy for service quality although there were some positive service gaps. The largest service gap was found on responsiveness dimension (46).

However, the research conducted in patient who admitted to the medical ward of Yangon General Hospital in 2017. It was mentioned that positive quality gaps were revealed in all domains with tangibility, reliability, responsiveness, assurances and empathy. Most of respondents were satisfied with the services and willingness to return to hospital if further admission is needed and willingness to recommend the hospital (47).

Consequently, a number of factors—environmental, sociocultural, psychological, and individual personality—can have a significant impact on satisfaction. In particular, the type of satisfaction being evaluated and the participants' assessments of it will have a significant impact. However, the individual or group's knowledge base, world view (belief and value systems), the perception which in itself is a function of knowledge; choice reflecting personality and the environment are considered by the authors as strong facilitators or inhibitors of satisfaction in many situations (48).

2.4. Levels of Public Hospitals in Myanmar

Myanmar healthcare mostly relies on the public sector. Under the Ministry of Health (MOH), it has six departments, Department of Public Health, Department of Medical Services, Department of Human Resources for Health, Department of Medical Research, Department of Food and Drug Administration and Department of Traditional Medicine (49). The government used to be the main source of financing with the provision of services virtually free until user charges were introduced in the form of cost-sharing in 1993 when private out-of-pocket (OOP) payment became the main source of finance.

The Department of Medical Services, one of six departments under the Ministry of Health plays a major role in providing comprehensive healthcare throughout the country including remote and hard to reach border areas. Primary care infrastructure starts from the sub-rural health center (Sub-RHC) at the grassroots levels, to rural health center (RHC) where ambulatory services including delivery care are provided by the basic health staff (BHS).

In addition to basic medical care, hospitals in rural locations have 16-bed station hospitals staffed by 17 medical professionals under the direction of a Station Medical Officer. Townships typically have a 25-bed township hospital staffed by 55 employees. The hospital offers clinical services including general medicine, surgery, obstetrics and gynecology, and pediatrics, as well as emergency care and treatment, primary care for common diseases, general administrative and auxiliary services. Some townships' urban districts house a maternal and child health (MCH) center that tends to expectant mothers and young children under the age of five, in addition to an urban health center that offers general patients ambulatory care and dental treatment. Certain township hospitals have been expanded to 50 or 100 beds, depending on population coverage.

With 200 beds, district hospitals offer the same services as township hospitals in addition to nine specialty areas, including pathology, orthopedics, ophthalmology, gynecology, pediatrics, anesthesia, orthopedics, and eye and dental care. As a result, these hospitals are classified as secondary. There is a general guideline that a region/state should have between two and six districts, or a main hospital with 200 beds. There are 300-bed general hospitals in a few states or areas. Physician, surgeon,

obstetrics and gynecology, pediatrics, anesthesia, orthopedics, eye, ear, nose, and throat (ENT), radiology, pathology, psychiatry, dentistry, forensic medicine, microbiology, physical therapy, neuro medicine, and neurosurgery are among the 17 specialty disciplines offered at the region/state level hospital. They also offer a clinical laboratory and supporting radiology in addition to these disciplines.

There are tertiary hospitals in Mandalay, Nay Pyi Taw, and Yangon. These 1000-bed facilities house over 20 different specializations and are well-furnished to provide tertiary treatment, including intensive care. In addition, tertiary hospitals serve as teaching and training facilities for physicians pursuing undergraduate and doctoral degrees. Yangon, Mandalay, Taunggyi, and Nay Pyi Taw are home to specialty hospitals like the central women's hospitals, children's hospitals, orthopedic hospitals, eye-ENT hospitals, and mental institutions. There are 68 secondary care hospitals, 54 tertiary care specialist hospitals, and 1047 primary care hospitals in all (5, 49).

Table 6: Distribution of health care facilities and beds

	Type of Centers/Hospitals		Quantity
Ambulatory Care	RHCs		1849
	Sub RHCs		8700
	Urban HCs		87
	MCH centers		348
Hospital Care	Primary Curative Care	16-bed station hospitals	780
		25- bed township hospitals	149
		50- bed township hospitals	118
	Secondary Curative Care	100-, 150-, 200-& 300- bed district/region/state hospitals	68
	Tertiary Curative Care	500-& 1000- bed specialist hospitals	54

Source: The Republic of the Union of Myanmar health system review, 2014 and Ministry of Health in April, 2021.

RHC: rural health center; Sub-RHC: sub-rural health center; HC: health center;

MCH: maternal and child health

In Myanmar, public health services are provided to communities by rural health centers (RHCs) and sub-rural health centers (Sub-RHCs). These health facilities receive support and technical help from the state health departments as well as the relevant township, district, and region. All outpatient departments that manage outpatient care, including those at hospitals, urban health centers, MCH centers, school health teams, RHCs, and Sub-RHCs, often offer primary ambulatory care. Hospitals at all levels manage specialized inpatient, ambulatory, and emergency care in accordance with their capability. Both private specialist clinics and hospitals as well as state tertiary hospitals offer specialized inpatient care.

2.5. Factor Analysis

Factor analysis is a collection of methods used to examine how underlying constructs influence the responses on a number of measured variables (50). It operates on the view that measurable and observable variables can be reduced to fewer latent variables that share a common variance and are unobservable, which is known as reducing dimensionality. These unobservable factors are not directly measured but are essentially hypothetical constructs that are used to represent variables. It is to summarize data so that relationships and patterns can be easily interpreted and understood. It is normally used to regroup variables into a limited set of clusters based on shared variance (51).

There are two types namely exploratory factor analysis and confirmatory factor analysis. Exploratory factor analysis (EFA) attempts to discover the nature of the constructs influencing a set of responses. Confirmatory factor analysis (CFA) tests whether a specified set of constructs is influencing responses in a predicted way. Factor analyses are performed by examining the pattern of correlations (or covariances) between the observed measures. Measures that are highly correlated (either positively or negatively) are likely influenced by the same factors, while those that are relatively uncorrelated are likely influenced by different factors. The recommended sample size for factor analysis is at least 300 participants (50, 51). Moreover, the recommended sample size for performing confirmatory factor analysis is the rate between 400 and 1000 (52).

Factor analysis is useful for studies that involve a few or hundreds of variables, items from questionnaires or tests which can be reduced to a smaller set, to

get at an underlying concept and to facilitate interpretations. It is easier to focus on some key factors rather than having to consider too many variables that may be trivial and so factor analysis is useful for placing variables into meaningful categories. Many other uses of factor analysis include data transformation, hypothesis-testing, mapping and scaling (51).



CHAPTER 3

METHODOLOGY

This chapter begins with the questionnaire development and then the method for data collection and analysis is described.

3.1. Questionnaire development

The research process used in this study was based on Churchill's research process development (53). The research design applied for this study was a cross-sectional descriptive study via a self-administered questionnaire completed by the patients who came to the outpatient department of public hospitals in Yangon, Myanmar.

3.1.1. Development of scale attributes for assessment of service quality in outpatient departments of public hospital

According to the review of the literature, SERVQUAL is a widely used tool developed to measure the quality of services. It consists of five dimensions (tangible, reliability, responsiveness, assurance and empathy) that were developed to be used in the marketing industry, but with slight modification, it can be used by any organization because of its comprehensiveness and practical applicability. The tool has also been widely used in healthcare to evaluate its services (17-28).

For the tangible dimension, the results of the reviewed items were shown as follows: (1) Up-to-date and well-maintained equipment, (2) Waiting facilities, (3) Cleanliness of environment, (4) Availability of hospital facilities, (5) Hospital location, (6) Good directional signs, (7) Availability of information on hospital services, (8) Appearance of health professionals and (9) Availability of medicine.

For the reliability dimension, the reviewed items are (1) Right medical diagnosis and treatment, (2) Explanation to tests, diagnosis and treatments in understandable way, (3) Providing services as promised, (4) Reliability in handling patient's problem, (5) Communication, (6) Financial expense, (7) Error free record, (8) Admission procedures and (9) Convenience of operating hours.

For the responsiveness dimension, the reviewed items were (1) Easy and adequate medical information, (2) Prompt attention to requests, (3) Willingness to

help, (4) Waiting time, (5) Easy appointment system, (6) Accept patient opinion and suggestions and (7) Prescription of affordable medicines.

For the assurance dimension, the reviewed items were (1) Confidentiality of information, (2) Competence of staffs, (3) Feeling of confident and safe when receiving treatments, (4) Coordination of staffs for delivering services, (5) Courteous to the patients, (6) Good professional knowledge, (7) Having adequate staffs and (8) Patient recommendation.

For the empathy dimension, the reviewed items were (1) Individualized attention, (2) Treatment with dignity and respect, (3) Compassionate to patient, (4) Giving enough time to patients, (5) Having well-mannered, (6) Concern to patient family, (7) Referral to higher level of care when need arise and (8) Understanding towards feelings of discomfort.

The question for each item was written as a positively worded statement. Subjects were asked to rate how satisfied the service quality of the outpatient department by comparing it with their expectations and perceptions. Subjects rated the satisfaction of each service quality dimension using a 5-point Likert scale. The scale was presented in a symmetric format and labeled:

- 1 = very dissatisfied
- 2 = relatively dissatisfied
- 3 = neither satisfied nor dissatisfied
- 4 = relatively satisfied
- 5 = very satisfied

3.1.2. Descriptive variables

Patient's socio-demographic and key variables related to the assessment of hospital service quality were included in this section. The section consisted of general questions relating to the respondents such as their age, gender, residence, what education level they obtained, marital status, income and occupation. The respondents were asked about the hospital name, what type of service they received from the hospital, their previous experience of attending this outpatient department of the hospital, their current health status, who referred them to this hospital and their total hospital costs. The reason to include these variables in this study because they have

been shown in the literature review that they significantly influence patient satisfaction and service quality (39-41).

3.1.3. Survey translation

Vocabulary, idiomatic, grammatical-syntactical, experimental and conceptual equivalencies were considered when the questionnaire was translated into the Myanmar language. To ensure the equivalence between the original and translated versions of the questionnaire, three major steps in translation were executed. This translation technique was used before in other studies on the translation of questionnaire with the satisfactory results (54-56).

In the preliminary forward translation, the original questionnaire was initially translated independently into the Myanmar language by one bilingual translator. Subsequently, to evaluate the preliminary translation, a second bilingual translator, blind to the original questionnaire, was asked to translate the questions back into the English language. The back-translated questionnaire then was compared with the original version and retranslated for discrepancies. To ensure cross-cultural equivalencies, particularly the experiential and conceptual was performed by a group composed of the translators, the experts who had strong academic backgrounds and were knowledgeable on the related subjects in their respective fields. The names of the translators are shown in appendix 2. Each question and its response option in the original and translated versions of the questionnaire was read and the group made the final phrasing of the questionnaire. Attention in this step was the conceptual issues of the translation, particularly whether the content in the original version was relevant to the experience in the Myanmar culture.

3.1.4. Questionnaire pretest

A pretest of the questionnaire was conducted to assess the content validity, clarity and general readability of the instrument. The questionnaires were checked by asking 5 experts; Assoc. Prof. Dr. Burin T. Sriwong, Assoc. Prof. Dr. Luerat Anuratpanich and the other three were Ms. Nyein Aye Zan, Ms. Dae Wah Moe and Ms. Khin Su Su Lwin working in practice as pharmacists in public hospitals in Myanmar. The experts were selected and included based on their strong academic background such as a bachelor's degree or above with at least 5 years of working experience, knowledge of the related subjects in their respective field and years of

working experience (not less than the 5 years of experience) in their respective positions (57, 58). Item- Objective Congruence (IOC) was used to evaluate the items of the questionnaire based on the score range from -1 to +1. The items that had scores lower than 0.5 were revised (59).

The IOC score was calculated in two ways. The first was calculated based on the rating of a total of 5 experts. The second came from the calculation according to the rating of local experts. If the calculated total 5 experts' IOC score is lower than 0.5 in the item of the questionnaire, this score will be compared with the calculated IOC score from the 3 local experts. If the score of local experts is higher than 0.5, the item will be acceptable.

From the IOC results, question number 10 "Number of family member" in section A was rejected according to the suggestion of the experts that was not related to this research. The other IOC scores were acceptable (i.e., the value is higher than 0.5) and the questionnaire format was modified based on the suggestions of the experts. The results of the IOC and revised questionnaires after the IOC according to the experts' suggestions were shown in appendixes 3 and 4.

3.1.5. Pilot test of the questionnaire

After revising the questionnaire, the pilot test was conducted for reliability testing. The pilot test of the questionnaires is important because it can reduce the flaws and ambiguity of the questions. Therefore, the pilot test of the questionnaires has been conducted by asking the questions to the patients who are not in the survey's target group. The pilot test was done at Pyin Oo Lwin General Hospital, Pyin Oo Lwin District, Mandalay Region from the 25th to 28th of October, 2022. The hospital in the Mandalay Region was chosen because it has similar characteristics to the hospital service setting in the Yangon Region. So, a convenience sample of 30 outpatients who had previous experience from this hospital was selected as pilot samples. The questionnaire was composed of three parts; the first part was the patient's socio-demographics and hospital-related variables, the second part was the questions that contained service quality of the outpatient of the hospital and the last part was the questions regarding overall satisfaction. The five dimensions of service quality (tangible, reliability, responsiveness, assurance and empathy) were included in the second part of the question. According to the pilot study results, some items were

eliminated because of a high non-response rate, and some items were amended if the responses showed multiple answers or poor variability. Cronbach's alpha coefficient at 0.7 and up criteria must be met before actual data collection can be done (60).

Pilot survey results

Of the 30 pilot sample respondents, 66.7% were female. The average age was 36.2 years old. All patients came to the outpatient department of this hospital to get the service regarding their medical problems i.e., 40% from obstetrics and gynecology, 30% from medicine, 16.7% from orthopedic and 13.3% from surgery respectively. It was found that 63.4% of patients rated their health status as good, 33.3% of patients rated as poor and 3.3% of patients rated as worst. Among them, nearly 87% of the respondent's residences were in Pyin Oo Lwin. Most of the patients, 43.3% have middle school education. The majority of the respondents, 86.7% were married. For their monthly income, half of the respondents earned 100,001-200,000 kyats, 36.6% earned 200,001-300,000 kyats, 6.7% earned less than 100,000 kyats and the other 6.7% of respondents earned above 300,000 kyats. The approximate exchange rate from Baht to Kyat is 1 Baht $\approx$ 95 Kyats. Among the 30 respondents, 36.6% were self-employed and 56.7% worked other jobs such as farmers, drivers and daily wage workers but the other 6.7% were unemployed. More than half of the respondents, 63.3% came to the hospital due to their medical doctors while the rest of the respondents, 36.7% came to the hospital by their own decision. The total hospital cost ranged from 4000 kyats to 100,000 kyats. The detailed results are shown in Table 7.

Table 7: Pilot study of patient's socio-demographics and hospital-related variables

Variable	Number of respondents	Percent
Age		
18-29 years	9	30.0%
30-39 years	12	40.0%
40-49 years	5	16.7%
50-59 years	3	10.0%
60 and over	1	3.3%
Gender		
Male	10	33.3%
Female	20	66.7%

Variable	Number of respondents	Percent
Residence		
Pyin Oo Lwin	26	86.7%
Other cities	4	13.3%
Type of service received		
Medicine	9	30.0%
Surgery	4	13.3%
Obstetrics and gynecology	12	40.0%
Others	5	16.7%
Current health status		
Good (Medicine/ regular follow-up)	19	63.4%
Poor (increase drug dosage/frequent follow-up)	10	33.3%
Worst (take more medicines/very frequent follow-up)	1	3.3%
Education		
Primary school education	3	10.0%
Middle school education	13	43.3%
High school education	11	36.7%
Graduate	3	10.0%
Monthly income		
Less than 100000 kyats	2	6.7%
100001-200000 kyats	15	50.0%
200001-300000 kyats	11	36.6%
Above 300000 kyats	2	6.7%
Marital status		
Yes	26	86.7%
No	4	13.3%
Occupation		
Unemployed	2	6.7%
Self-employed	11	36.6%
Others	17	56.7%
Referral		
By healthcare provider	19	63.3%
By my own decision	11	36.7%

The reliability of the questionnaire items was tested in the pilot study to obtain Cronbach's alpha value. To collect the required data, the SERVQUAL instrument was

used to assess patient's expectations and perceptions of service from the hospital's outpatient department. The Cronbach's alpha values for expectation and perception of service quality before item deletion were 0.984 and 0.842. If the five items from expectation and six items from perception were deleted, the value after item deletion will be increased. But these items were not the same. Among these items, the same items included in both expectation and perception of service quality were chosen for item deletion.

The value for the perception of service quality was increased from 0.842 to 0.846 after the three items were deleted. However, the value of Cronbach's alpha remained the same in the expectation of service quality questionnaire after these three items were deleted. So, the items "When you go to the hospital, you can get the right medical diagnosis and treatments." and "The health professionals provide services to you as they promised." from the reliability dimension and the item "When the health professionals give treatment to you, they always consider to you as well as your family." from the empathy dimension were deleted from both sides of the questionnaire. The Cronbach's alpha value for overall satisfaction was 0.897. The final questionnaire after the reliability test is shown in appendix 5. The reliability as measured by Cronbach's alpha coefficient was determined in both expectation and perception of the service quality before and after item deletion was given in Table 8.

Table 8: Cronbach's alpha coefficient of SERVQUAL questionnaire before and after item deletion in pilot study

Dimensions of Service Quality	Cronbach's Alpha Coefficient			
	Before Item deletion		After Item deletion	
	Expectation ($\alpha = 0.984$)	Perception ($\alpha = 0.842$)	Expectation ($\alpha = 0.984$)	Perception ($\alpha = 0.846$)
Tangible	0.936	0.765	0.936	0.765
Reliability	0.940	0.789	0.939	0.894
Responsiveness	0.938	0.777	0.938	0.777
Assurance	0.944	0.755	0.944	0.755
Empathy	0.914	0.770	0.917	0.794

3.2. Data collection

3.2.1. Population and sample

The study area was the Yangon Region because this is the most crowded and has the highest population among 15 states and regions. There are 83 hospitals in Yangon Region divided into Primary Curative Care (59 hospitals), Secondary Curative Care (5 hospitals), and Tertiary Curative Care (19 hospitals). Multistage sampling design including stratified sampling, simple random sampling and convenience sampling methods were used to identify respondents for the research study (61).

Sample size calculation

The Cochran formula was used to calculate the appropriate sample size 95% confidence level was assumed (62).

$$n = \frac{Z^2 pq}{e^2}$$

n = sample size

Z^2 = the abscissa of the normal curve that cuts off an area α at the tails

p = the estimated proportion of an attribute that is present in the population

$q = 1-p$.

e^2 = the desired level of precision = 5% i.e., 0.05

$$n = \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2} = 384.16 = 385$$

Hence; Sample size, $n = 385 \approx 400$ patients

The sample size was be doubled from 400 to 800 because of consideration of other implications and factors. The framework of Green in 1991, to make the study valid, a regression or correlation analysis was conducted with no less than 50 respondents gathered with the number increased by the total number of independent variables or the predictors of dependent variables. The formula of Green in 1991 suggested that when using the multiple R^2 , the formula is $N > 50 + 8p$ (where p is the number of variables). According to Hair et al. in 2010, sample of fewer than 50 observations cannot be done by factor analysis and preferably sample should be 100 or larger. The more acceptable size would have a 10:1 ratio. So, the actual sample size was 800 for statistically valid (63, 64).

(a) Hospital sampling technique

Stratified sampling

There are 83 hospitals in Yangon Region divided into Primary Curative Care (59 hospitals), Secondary Curative Care (5 hospitals), and Tertiary Curative Care (19 hospitals). So, 30% of hospitals from each type of public hospital were selected among three levels of curative care in the Yangon Region (65). Therefore, 18 hospitals from primary, 2 hospitals from secondary and 6 hospitals from tertiary curative care level were chosen for the description of patients' hospital service quality perception of outpatient departments (OPD) in public hospitals. The calculated total sample size of the study was 800 as stated in the aforementioned sample size calculation. For the distribution of patients, at least 30 samples were taken from each hospital for statistical valid. According to the Central Limit Theorem, it justifies the use of normal distribution and can conduct a test if the sample size is large enough (66). So, the number of samples that should be collected from each level of the hospital and the number of samples per hospital were described as follows.

Yangon Region	Number of selected hospitals	Number of samples per each hospital (800/26)	Sample distribution of 800 total samples
Primary Curative Care	18	31	558
Secondary Curative Care	2	31	62
Tertiary Curative Care	6	31	186
	26		806

Simple random sampling

Numbers were assigned for every public hospital in primary curative care level in Yangon and randomly were picked up by using the lottery method to get the representative hospital. A similar procedure was applied to get the representative hospitals in secondary and tertiary curative levels.

(b) Patient sampling technique

A convenience sampling procedure was applied by asking the patient who came to the outpatient department of the hospital to complete the questionnaires at the representative hospital.

Inclusion Criteria

- The outpatients of the hospital whose ages were 18 years or above.
- The outpatients who were willing to give consent.
- The outpatients who were able to communicate with the researcher.
- The outpatients who had made at least one visit.

Exclusion Criteria

- The outpatients who had mental problems.
- The outpatients who needed emergency attention.

3.2.2. Data collection procedure

A self-administered questionnaire was developed and used to collect data from patients aged 18 years or above, who visited the OPD of 26 hospitals that were willing to participate in this study during the period of December, 2022 to May, 2023. The questionnaire composed of three parts; the first part was patient's socio-demographics and hospital-related variables, the second part questions contained service quality of the outpatient department of the hospital and the last part was questions regarding overall satisfaction. The questionnaire asked patients to rate their feelings about each statement on a five-point Likert scale: very satisfied (5), relatively satisfied (4), neither satisfied nor dissatisfied (3), relatively dissatisfied (2) and very dissatisfied (1). The data were collected at different times of the day and days of the week for day- and time-related bias to be eliminated.

3.3. Data analysis

The data collected were put and analyzed by using the Statistical Package for Social Science (SPSS) version 23 and Analysis of Moment Structures (AMOS) version 23. The descriptive and inferential analyses were used for analyzing the data to determine the patient's level of satisfaction on hospital service quality. Data were first analyzed descriptively by computing the means and standard deviations for continuous variables and frequencies and percentages for categorical variables.

For the objective 1, the mean gap scores for service quality of patients' expectations and perceptions of the following procedures were calculated for each dimension (e.g., Tangibles). The total gap score was derived by subtracting perception score (%) from expectation score (%). Paired t- test was used to assess the service quality of patients' expectations and perceptions whether the two scores were statistically different from each other.

For the objective 2, multiple linear regression analysis was done to find the factor that influence patient satisfaction. Before using the analysis, the assumptions for multiple linear regression analysis were checked. For the objective 3, the hospital's outpatient service quality dimensions were confirmed by conducting confirmatory factor analysis (CFA). Before doing CFA, the preliminary analysis was carried out the data were suitable for factor analysis. To prevent the inappropriate application of factor analysis, several criteria were applied (67).

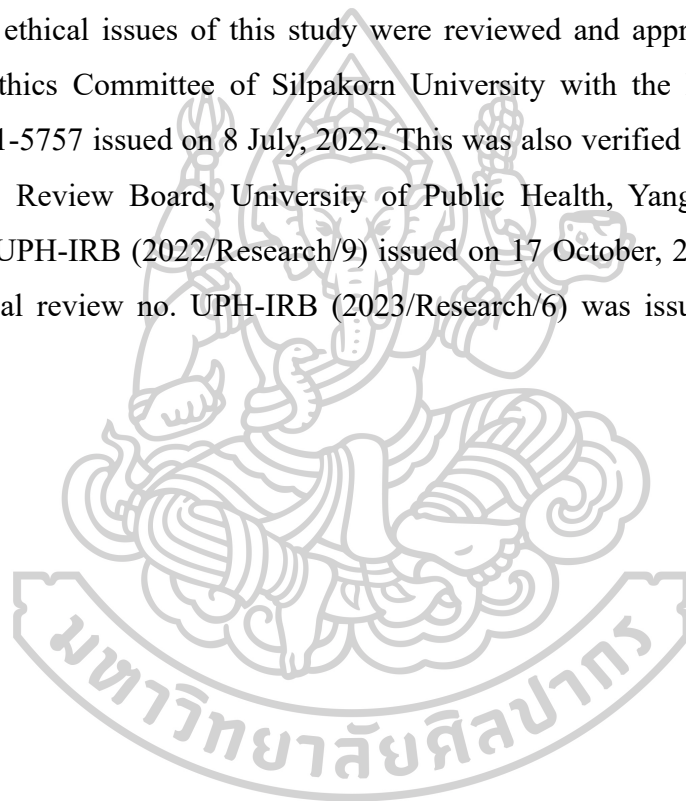
- (1) The ratio of subjects to items were met the minimum ratio 10:1 required by Hair et al. in 2010 for factor analysis (63).
- (2) The Bartlett's test of sphericity, the hypothesis that the correlation matrix came from a population of independent variables was rejected at a significance level of P value, which indicates its suitability for factor analysis. This is because the failure to reject the hypothesis implied an inappropriate data set.
- (3) The Kaiser-Meyer-Olkin Measure of Sampling Adequacy for the entire data set was computed. The value is greater than 0.5 which indicates the data is suitable for factor analysis.
- (4) The communality estimates for individual scale items were examined. The communality of 0.5 or greater is acceptable for appropriateness of factor analysis.
- (5) The reliability was tested by the internal consistency method using Cronbach's Alpha as a measure. The value is higher than 0.7 and is considered acceptable reliability.

After the criteria of preliminary analysis had been met, the confirmatory factor analysis (CFA) was done to validate the association between the observed and the latent variables. To assess the measurement model, first-order and second-order confirmatory factor analyses were conducted. The model was assessed using the maximum likelihood procedure and evaluated using Chi-square, Comparative Fit

Index (CFI), Tucker-Lewis Index (TLI), Normed Fit Index (NFI) and Root Mean Square Error of Approximation (RMSEA) indices. The Chi-square value divided by its degrees of freedom (χ^2/df) was with an acceptable ratio of 2 to 1 to as high as 5. The CFI, TLI, and NFI values should be equal to or above 0.90 to indicate a satisfactory model fit, with values close to 1 suggesting a very good fit on any of the indexes; for RMSEA, a value of < 0.11 indicates a reasonable fit and a value of < 0.05 or less indicates good model fit concerning the degrees of freedom (68, 69).

3.4. Ethical Issues

The ethical issues of this study were reviewed and approved by the Human Research Ethics Committee of Silpakorn University with the REC Number: REC 65.0704-101-5757 issued on 8 July, 2022. This was also verified and approved by the Institutional Review Board, University of Public Health, Yangon with the ethical review no. UPH-IRB (2022/Research/9) issued on 17 October, 2022 and the renewal of the ethical review no. UPH-IRB (2023/Research/6) was issued on 2 November, 2023.



CHAPTER 4

RESULTS

4.1. Patient's socio-demographics and hospital-related variables

Of the eight hundred and six patients, 71.1% were female while the remaining population was male with the age ranging from 18 to above 60 years and the average age was 46.8 years old. All of the patients had previous experience with these hospitals. It was found that 91.8% of the patients lived in Yangon while only 8.2% came from other cities. The levels of hospitals ranged from primary to tertiary levels and the patients who came to the hospitals were 69.2% from primary, 7.7% from secondary and 23.1% from tertiary levels of care hospitals respectively. All patients went to the outpatient department of these hospitals to get service regarding their medical problems i.e., 39.3 % from medicine, 25.6% from others such as orthopedic, eye, ear, nose and throat, 23.4% from obstetrics and gynecology and 11.7% from surgery respectively. It was noticed that 59.3 % of patients rated their health status as good, 38.8% rated as poor and 1.9% rated as worst.

Moreover, most of the patients who came to the hospitals had high school education which accounted for 34%. The monthly income of the patients was that 50.1% earned less than 100,000 kyats, 20.5% earned 100,001-200,000 kyats, 28.3% earned 200,001-300,000 kyats and 1.1% earned above 300,000 kyats respectively. The approximate exchange rate from Baht to Kyat is 1 Baht $\approx$ 95 Kyats. 86.2% of the patients were married. It was found that 3.6% of respondents were students, 46.3% were unemployed, 23.2% were self-employed, 3.3% were government staff, 3.7% were private staff and 19.9% worked other jobs such as farmers, drivers and daily wage workers. More than half of the respondents, 70.8% came to the hospital due to their medical doctors' referral while the rest 29.2% came to the hospital by their own decision. The total hospital cost was ranged from free of charge to 10000 kyats. The detailed results are shown in Table 9.

Table 9: Patient's socio-demographics and hospital-related variables

Variable	Number of respondents	Percent
Age		
18-29 years old	142	17.6%
30-39 years old	146	18.1%
40-49 years old	159	19.7%
50-59 years old	158	19.6%
60 years and over	201	25.0%
Gender		
Male	233	28.9%
Female	573	71.1%
Residence		
Yangon	740	91.8%
Other cities	66	8.2%
Level of Hospital		
Primary	558	69.2%
Secondary	62	7.7%
Tertiary	186	23.1%
Type of service received		
Medicine	317	39.3%
Surgery	94	11.7%
Obstetrics and gynecology	189	23.4%
Others	206	25.6%
Current health status		
Good (Medicine/ regular follow-up)	478	59.3%
Poor (increase drug dosage/frequent follow-up)	313	38.8%
Worst (take more medicines/very frequent follow-up)	15	1.9%
Education		
Illiterate	12	1.4%
Read and write	19	2.4%
Primary school education	116	14.4%
Middle school education	252	31.3%
High school education	274	34.0%
University (currently attending)	27	3.3%
Graduate	106	13.2%

Variable	Number of respondents	Percent
Monthly income		
Less than 100000 Kyats	404	50.1%
100001-200000 Kyats	165	20.5%
200001-300000 Kyats	228	28.3%
Above 300000 Kyats (1 Baht $\approx$ 95 Kyats)	9	1.1%
Marital status		
Yes	695	86.2%
No	111	13.8%
Occupation		
Students	29	3.6%
Unemployed	373	46.3%
Self-employed	187	23.2%
Government staffs	27	3.3%
Private staffs	30	3.7%
Others	160	19.9%
Referral		
By healthcare provider	571	70.8%
By my own decision	235	29.2%

4.2. Patient's expectation and perception of service quality of outpatient department of public hospitals

In this study, the SERVQUAL (16) five dimensions namely tangible, reliability, responsiveness, assurance and empathy were used to assess the service quality in the outpatient department of public hospitals in Myanmar. The tangible (eleven statements), reliability (seven statements), responsiveness (nine statements), assurance (ten statements) and empathy (seven statements) were divided into two parts. The first part was to measure the expectations of patients and the second part was to measure their perceptions.

The significant difference between each item and each dimension was calculated by paired t-test. An overview of the patient's expectations and perceptions of each dimension of service quality in the outpatient department is provided in Table 10. The mean and standard deviation for each item were given along with values of service quality. The values of service quality were calculated by subtracting the perception of patients from their expectations regarding the service quality provided by the outpatient departments of public hospitals. The mean values of perception in

each dimension of service quality were higher than their expectation in each dimension of service quality. Each item's service quality mean value was statistically significant ($p < 0.05$).

For the tangible dimension, the service quality mean values for all items were positive values. However, the lowest gap value, 0.64 was from the item "The directional signs in hospital are good and easy to find." After that the item "All facilities of hospitals are easily available when they are needed." was the second lowest score, 0.66 and the item "When you come to the hospital, you conveniently get medicines from that hospital." was the third lowest score, 0.68. On the other hand, the highest gap value, 0.86 was from the item "The waiting facilities (e.g., benches and chairs) are convenient and available." which was followed by the value of "The environment of the hospital is clean." 0.83.

The service quality mean values for all items in the reliability dimension were positive. Among them, the values of the items "The medical record of the hospital is free from error." and "The admission procedures are accurate when it is needed." were the lowest gap scores which were 0.62. On the one hand, the item "When the health professionals explain your test results, diagnosis and treatments, they can explain you in an understandable way." was the highest gap value, 1.10.

For the responsiveness dimension, all items of the service quality mean values were positive. The value of the item "When the health professionals prescribe the medicines, they manage the drugs that are affordable to you." was the lowest gap score, 0.56 which was accompanied by the value of "The health professionals have willingness to help to you." 0.63. Moreover, the item "You can receive a quick appointment system to the health professionals." was the highest gap value, 0.86. After that the value of the items "You get the prompt service from OPD reception desk." and "You take a long waiting time before you meet your health professionals." were the second highest gap values, 0.83 respectively.

Moreover, the service quality mean values for all items in the assurance dimension were positive. The values of the items "When you receive medical services, the health professionals cooperate with each other for delivering services." and "You get the clear instructions of how to take your medication." were the lowest gap scores, 0.61. And after that the value, 0.69 was the second lowest value from the

item “The label on the medication supplied to you is clear to read and easy to understand.” On the one hand, the highest gap value, 0.83 was from the item “There have the adequate staffs in the hospital.”.

After that, the service quality mean values of all items in the empathy dimension were positive like other dimensions. The item “When you need more medical treatment that is not available in this hospital, the health professionals refer you to higher level of hospital.” was the lowest gap score, 0.52. The values of the items “The doctors and other staffs have compassionate to patients.” and “The staffs are consistently well mannered and polite.” were the highest gap values, 1.00 among the items.

Lastly, the total mean of each dimension of service quality is shown in Table 11. The value of service quality for each dimension was calculated by subtracting the perception of patients from their expectations about the service quality dimensions and revealing that all dimensions used in the study were positive. The mean scores of perceptions of the dimensions were higher than that of expectations. This showed that the perception of patients on service quality has exceeded the initial expectation. The total mean score of the assurance dimension was the lowest (0.72) and that of the empathy dimension was the highest (0.87) among the five dimensions.



Table 10: Summary of the mean of 5 dimensions of service quality

Dimensions	Items	Mean Expectation, E (SD)	Mean Perception, P (SD)	Service Quality (P – E) (SD)	P value
Tangible	1. The waiting facilities (e.g., benches and chairs) are convenient and available.	3.27 (0.442)	4.12 (0.337)	0.86 (0.553)	< .001*
	2. The environment of the hospital is clean.	3.30 (0.587)	4.13 (0.351)	0.83 (0.575)	< .001*
	3. The location of hospital is convenient for you.	3.27 (0.443)	4.06 (0.267)	0.79 (0.480)	< .001*
	4. When you go to the hospital, you will get up-to-date and well-maintained equipment.	3.20 (0.399)	3.97 (0.174)	0.78 (0.429)	< .001*
	5. The health professionals are neat in appearance.	3.27 (0.512)	4.03 (0.305)	0.77 (0.497)	< .001*
	6. The basic amenities of hospital facilities are adequate for the patients and their attendants.	3.27 (0.442)	3.99 (0.183)	0.73 (0.467)	< .001*
	7. The basic amenities of hospital facilities are hygienic.	3.27 (0.442)	4.00 (0.150)	0.73 (0.472)	< .001*
	8. The pharmacy department is near to your care services or easy to find.	3.30 (0.526)	3.99 (0.190)	0.69 (0.546)	< .001*
	9. When you come to the hospital, you conveniently get medicines from that hospital.	3.33 (0.471)	4.01 (0.111)	0.68 (0.487)	< .001*
	10. All facilities of hospitals are easily available when they are needed.	3.47 (0.617)	4.13 (0.349)	0.66 (0.592)	< .001*
	11. The directional signs in hospital are good and easy to find.	3.33 (0.471)	3.97 (0.181)	0.64 (0.490)	< .001*

Table 10: Summary of the mean of 5 dimensions of service quality (cont.)

Dimensions	Items	Mean Expectation, E (SD)	Mean Perception, P (SD)	Service Quality (P – E) (SD)	P value
Reliability	1. When the health professionals explain your test results, diagnosis and treatments, they can explain you in an understandable way.	3.23 (0.423)	4.33 (0.522)	1.10 (0.543)	< .001*
	2. The operating hours of hospital is good for you.	3.17 (0.373)	4.16 (0.369)	0.99 (0.275)	< .001*
	3. The medical expenses of the hospital are accurate.	3.37 (0.482)	4.19 (0.393)	0.83 (0.387)	< .001*
	4. When you face with the medical problem, they are reliable in handling that problem.	3.40 (0.490)	4.16 (0.367)	0.76 (0.427)	< .001*
	5. The communication of health professionals is reliable for you.	3.43 (0.559)	4.16 (0.365)	0.73 (0.514)	< .001*
	6. The admission procedures are accurate when it is needed.	3.51 (0.500)	4.13 (0.338)	0.62 (0.488)	< .001*
	7. The medical record of the hospital is free from	3.51 (0.500)	4.13 (0.418)	0.62 (0.546)	< .001*
Responsiveness	1. You can receive a quick appointment system to the health professionals.	3.23 (0.422)	4.09 (0.305)	0.86 (0.505)	< .001*
	2. You take a long waiting time before you meet your health professionals.	3.23 (0.422)	4.06 (0.286)	0.83 (0.528)	< .001*

Table 10: Summary of the mean of 5 dimensions of service quality (cont.)

Dimensions	Items	Mean Expectation, E (SD)	Mean Perception, P (SD)	Service Quality (P – E) (SD)	P value
Responsiveness	3. You get the prompt service from OPD reception' s desk.	3.27 (0.442)	4.09 (0.314)	0.83 (0.455)	< .001*
	4. You take a long waiting time before you get your medications.	3.27 (0.442)	4.08 (0.308)	0.81 (0.460)	< .001*
	5. You take a long waiting time before you meet your health professionals.	3.20 (0.399)	4.00 (0.117)	0.80 (0.403)	< .001*
	6. The health professionals have willingness to help to you.	3.30 (0.584)	4.08 (0.309)	0.78 (0.603)	< .001*
	7. You can receive an quick appointment system to the health professionals.	3.40 (0.554)	4.09 (0.296)	0.69 (0.542)	< .001*
	8. When you tell about your complaint, the health professionals give response rapidly.	3.51 (0.500)	4.14 (0.411)	0.63 (0.654)	< .001*
	9. When the health professionals prescribe the medicines, they manage the drugs that are affordable to you.	3.51 (0.500)	4.07 (0.333)	0.56 (0.553)	< .001*
	1. There are the adequate staffs in the hospital.	3.30 (0.458)	4.13 (0.341)	0.83 (0.575)	< .001*
	2. The health professionals have good professional knowledge.	3.30 (0.458)	4.07 (0.283)	0.77 (0.505)	< .001*
Assurance					

Table 10: Summary of the mean of 5 dimensions of service quality (cont.)

Dimensions	Items	Mean Expectation, E (SD)	Mean Perception, P (SD)	Service Quality (P – E) (SD)	P value
Assurance	3. All health professionals are competence.	3.23 (0.423)	4.01 (0.106)	0.77 (0.425)	< .001*
	4. You come to this hospital due to the recommendation of the others.	3.30 (0.458)	4.05 (0.302)	0.75 (0.518)	< .001*
	5. When you receive treatments, you feel confident and safe.	3.17 (0.371)	3.92 (0.311)	0.75 (0.563)	< .001*
	6. The health professionals are courtesy to the patients.	3.27 (0.443)	3.98 (0.404)	0.71 (0.587)	< .001*
	7. The hospital keeps your information confidentially	3.30 (0.458)	4.00 (0.079)	0.70 (0.463)	< .001*
	8. The label on the medication supplied to you is clear to read and easy to understand.	3.23 (0.423)	3.92 (0.301)	0.69 (0.536)	< .001*
	9. You get the clear instructions of how to take your medication.	3.30 (0.458)	3.91 (0.329)	0.61 (0.620)	< .001*
	10. When you receive medical services, the health professionals cooperate with each other for delivering services.	3.40 (0.554)	4.01 (0.136)	0.61 (0.554)	< .001*
	1. The staffs are consistently well mannered polite.	3.13 (0.340)	4.14 (0.423)	1.00 (0.483)	< .001*
	2. The health professionals have compassionate to patients.	3.17 (0.371)	4.17 (0.373)	1.00 (0.479)	< .001*
Empathy					

Table 10: Summary of the mean of 5 dimensions of service quality (cont.)

Dimensions	Items	Mean Expectation, E (SD)	Mean Perception, P (SD)	Service Quality (P – E) (SD)	P value
Empathy	3. The health professionals give treatment to you with dignity and respect.	3.13 (0.341)	4.11 (0.334)	0.97 (0.465)	< .001*
	4. The health professionals have an understanding of your feelings of discomfort.	3.17 (0.373)	4.12 (0.325)	0.95 (0.417)	< .001*
	5. When you consult with the health professionals, the health professionals give enough time to you.	3.20 (0.399)	4.09 (0.292)	0.89 (0.407)	< .001*
	6. The health professionals give individualized attention to you.	3.33 (0.471)	4.10 (0.331)	0.77 (0.441)	< .001*
	7. When you need more medical treatment that is not available in this hospital, the health professionals refer you to higher level of hospital.	3.51 (0.500)	4.03 (0.410)	0.52 (0.614)	< .001*

Note: significant P value; *p < 0.05

Table 11: The total mean score of 5 dimensions of service quality

Dimension	Total Mean Expectation, E	Total Mean Perception, P	Service Quality (P – E)	P value
Tangible	3.29	4.03	0.74	< .001*
Reliability	3.37	4.18	0.81	< .001*
Responsiveness	3.32	4.08	0.76	< .001*
Assurance	3.27	3.99	0.72	< .001*
Empathy	3.23	4.10	0.87	< .001*

Note: significant P value; * $p < 0.05$

After conducting the mean scores for each item in each dimension for the whole sample size, the sub-group analysis based on the patient's socio-demographic and hospital-related variables was carried out to see any differences in the service quality dimensions. So, a one-way ANOVA test was undertaken to know the differences in the hospital service quality dimensions due to patient's socio-demographic and hospital-related variables. The patients' residence was significantly associated with the mean gap scores of tangible, responsiveness, assurance and empathy dimensions among the variables. The type of service received was also significantly associated with the mean gap scores of responsiveness and empathy dimensions. The results are shown in Tables 12 and 13.

Table 12: One-way analysis of variance (ANOVA) of residence variable on service quality dimension

		Sum of squares	df	Mean square	F	P value
Tangible	Between groups	1.375	1	1.375	9.410	0.002*
	Within groups	117.460	804	0.146		
	Total	118.835	805			
Responsiveness	Between groups	0.772	1	0.772	5.512	0.019*
	Within groups	112.668	804	0.140		
	Total	113.440	805			
Assurance	Between groups	0.716	1	0.716	3.973	0.047*
	Within groups	144.828	804	0.180		
	Total	145.544	805			
Empathy	Between groups	0.438	1	0.438	5.112	0.024*
	Within groups	68.804	804	0.086		
	Total	69.241	805			

Note: significant P value; * $p < 0.05$

Table 13: One-way analysis of variance (ANOVA) of type of service received variable on service quality dimension

		Sum of squares	df	Mean square	F	P value
Responsiveness	Between groups	1.234	3	0.411	2.940	0.032*
	Within groups	112.206	802	0.140		
	Total	113.440	805			
Empathy	Between groups	0.677	3	0.226	2.640	0.048*
	Within groups	68.564	802	0.085		
	Total	69.241	805			

Note: significant P value; * $p < 0.05$

4.3. Influencing factors on patient's satisfaction of service quality dimension in outpatient department of public hospitals

The regression analysis was applied to measure the influencing factors on patient's satisfaction of outpatient service quality in public hospitals. Therefore, the data from the independent (socio-demographics and hospital-related variables) and dependent variables (service quality dimensions) were used for multiple linear regression analysis. Before using the multiple linear regression method, the assumption for multiple regression analysis was run. These assumptions are normality, homoscedasticity, independence of errors, the expected value of zero and multicollinearity among the variables (63).

(1) Assumption of normality

It was assumed that most of the data were lying near the 45-degree line so the data were normally distributed. The plots of the five dimensions of service quality are shown in Figure 1.

(2) Assumptions of homoscedasticity, independence of errors and expected value of zero

The scatter plot of the regression standardized residual via the regression standardized predicted value showed that most of the data were lying randomly around the X-axis (zero value) with no any patterns so the errors had the expected value of zero with constant variance (homoscedasticity) and the errors were independent. The plots of the five dimensions of service quality are shown in Figure 2.

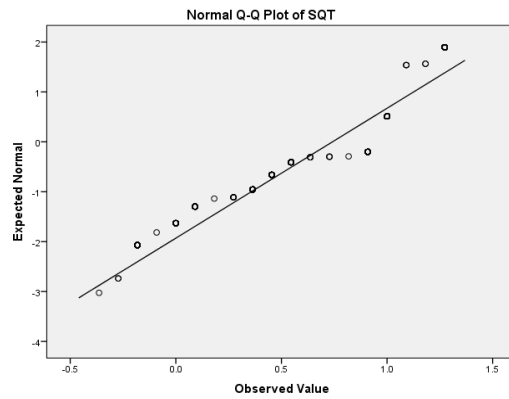


Figure 1.1. Normal Q-Q plot of tangible dimension

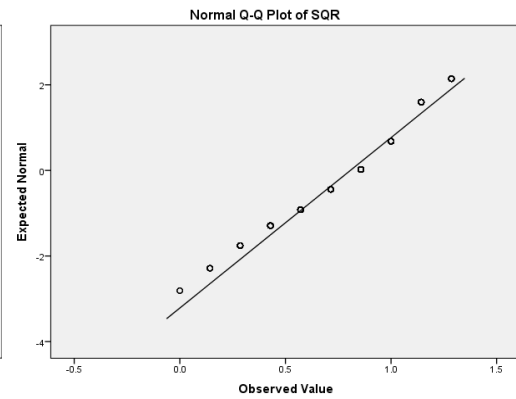


Figure 1.2. Normal Q-Q plot of reliability dimension

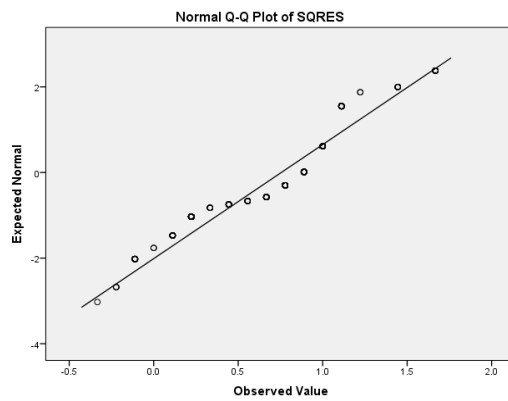


Figure 1.3. Normal Q-Q plot of responsiveness dimension

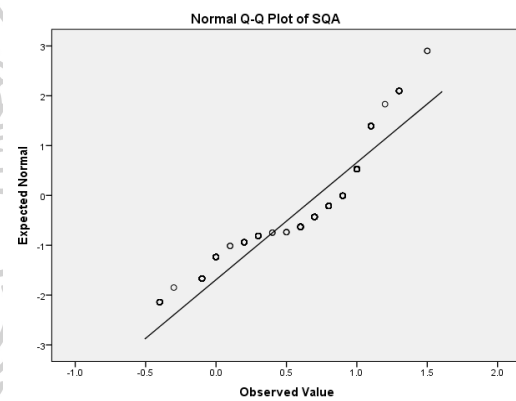


Figure 1.4. Normal Q-Q plot of assurance dimension

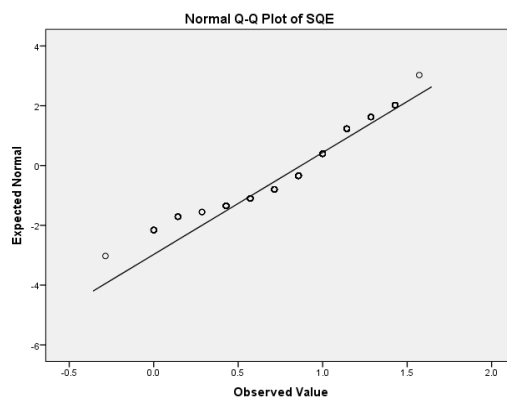


Figure 1.5. Normal Q-Q plot of empathy dimension

Figure 1: Normal Q-Q plot of service quality dimension

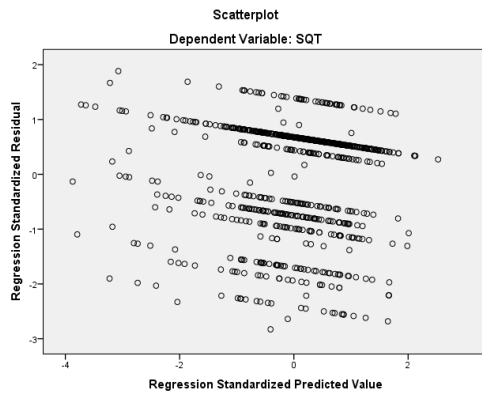


Figure 2.1. Scatter plot of tangible dimension

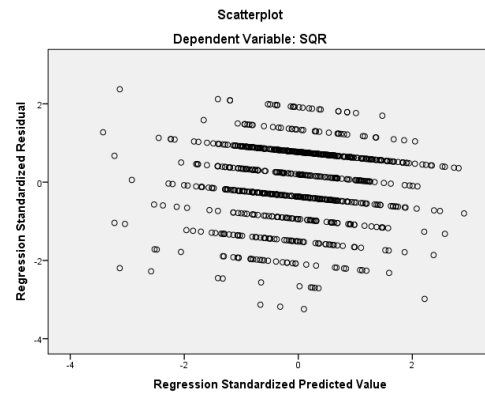


Figure 2.2. Scatter plot of reliability dimension

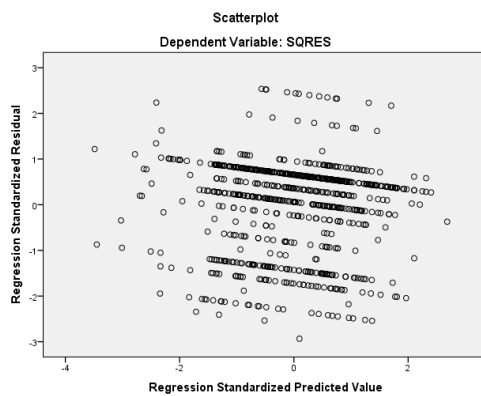


Figure 2.3. Scatter plot of responsiveness

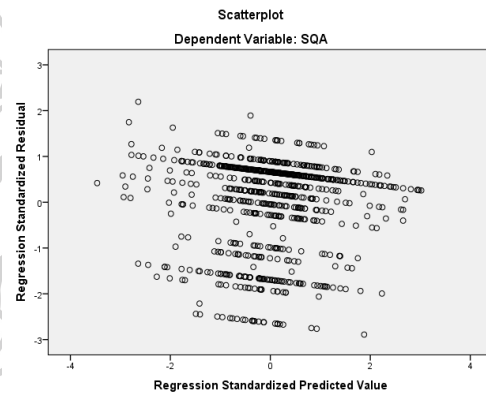


Figure 2.4. Scatter plot of assurance dimension

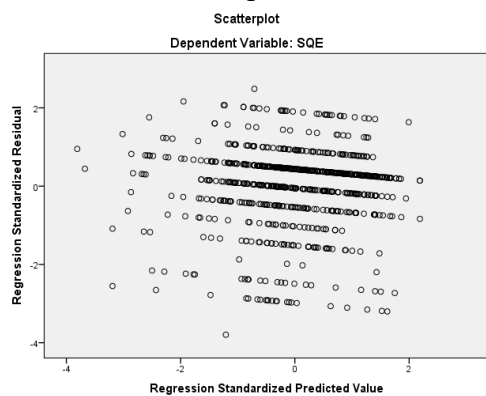


Figure 2.5. Scatter plot of empathy dimension

Figure 2: Scatter plot of service quality dimension

(3) Assumption for multicollinearity among the variables

A correlation analysis was conducted to check the associations among the independent variables and the associations between the independent variables and the dependent variables.

According to Tables 14 and 15, correlation values for all socio-demographics and hospital-related variables and service quality dimensions showed that the correlations were less than 0.6 except for the value between the 'monthly income' and 'occupation' variables. However, the correlation value between 'monthly income' and 'occupation' variables was 0.841 which could have slight or moderate collinearity issues (63).

All assumptions required for multiple regression analysis were met. Therefore, multiple regression analysis was carried out. Table 16 contains results from the multiple regression analysis using enter method calculation. The rationale for using the enter method for regression was that the independent (socio-demographics and hospital-related variables) were found significantly related to the dependent variables (service quality dimensions). The backward regression method was also applied to find the model with the best predictors for each dimension. These results turned out to be consistent with the enter method, so only the results for the enter method were shown.

The result showed that residence had a significant negative relationship to the tangible, reliability, responsiveness and empathy dimensions. The monthly income had a significant positive relationship with the reliability and responsiveness dimensions. The marital status had a significant positive relationship to the assurance dimension. The R-squared of 0.159 for tangible and 0.135 for empathy meant that 15.9 % of the variation in tangible dimension and 13.5 % of the variation in empathy dimension were explained by residence variable. The R-squared of 0.146 for reliability and 0.160 for responsiveness represented that 14.6 % of the variation in the reliability dimension and 16.0 % of the variation in the responsiveness dimension were explained by the residence and monthly income variables. Then, the R-squared of 0.134 for assurance indicated that 13.4 % of the variation in assurance dimension was explained by marital status variable.

Table 14: Correlations for socio-demographics, hospital-related variables and service quality dimensions

Variable	1	2	3	4	5	6	7	8	9	10	11
SQT	0.064	0.025	-0.108**	0.020	-0.071*	0.001	0.003	0.005	0.023	-0.032	-0.005
SQR	0.018	0.006	-0.067	0.001	-0.056	0.059	-0.025	0.055	0.040	0.002	-0.014
SQRES	0.066	-0.017	-0.083*	0.008	-0.087*	0.030	0.017	0.047	0.042	-0.010	-0.016
SQA	0.037	0.007	-0.070*	-0.007	-0.040	-0.045	-0.002	0.026	0.057	0.009	0.013
SQE	0.047	0.026	-0.079*	-0.037	-0.087*	0.027	-0.010	0.024	-0.007	0.001	-0.019

Note:

** Correlation is significant at the 0.01 level (two-tailed)

* Correlation is significant at the 0.05 level (two-tailed)

1 = Age

2 = Gender

3 = Residence

4 = Level of hospital

5 = Type of service received

6 = Current health status

7 = Education

8 = Monthly income

9 = Marital status

10 = Occupation

11 = Referral

SQT = Tangible

SQR = Reliability

SQRES = Responsiveness

SQA = Assurance

SQE = Empathy



Table 15: Correlations for socio-demographic and hospital-related variables

Variable	1	2	3	4	5	6	7	8	9	10	11
1	1.000										
2	-0.184**	1.000									
3	0.034	-0.069*	1.000								
4	0.099**	-0.109**	0.270**	1.000							
5	-0.215**	0.072*	0.115**	0.037	1.000						
6	0.154**	-0.094**	0.081*	0.108**	-0.124**	1.000					
7	-0.215**	-0.113**	-0.104**	-0.104**	0.000	0.012	1.000				
8	-0.228**	-0.113**	0.063	-0.051	-0.001	-0.052	0.239**	1.000			
9	-0.200**	-0.126**	0.064	0.136**	0.016	0.073*	0.166	0.066	1.000		
10	-0.189**	-0.165**	0.132**	0.013	0.007	-0.066	0.103	0.841**	0.032	1.000	
11	-0.096**	0.030	-0.062	-0.037	0.115**	-0.004	-0.021	-0.036	0.021	-0.010	1.000

Note:

** Correlation is significant at the 0.01 level (two-tailed)

* Correlation is significant at the 0.01 level (two-tailed)

1 = Age

4 = Level of hospital

7 = Education

2 = Gender

5 = Type of service received

10 = Occupation

3 = Residence

6 = Current health status

8 = Monthly income

11 = Referral

9 = Marital status

Table 16: Multiple Regression Models for 5 Dimensions of Service Quality (Using Enter Method)

Dimension	R Square	Predictor Variable	Standardized Coefficients	t	Sig
Tangible	0.159	Residence	-0.115	-3.057	0.002*
Reliability	0.146	Residence	-0.080	-2.109	0.035*
		Monthly income level	0.116	2.333	0.020*
Responsiveness	0.160	Residence	-0.088	-2.322	0.020*
		Monthly income level	0.106	2.124	0.034*
Assurance	0.134	Marital status	0.083	2.218	0.027*
Empathy	0.135	Residence	-0.075	-1.987	0.047*

Note: significant P value; *p < 0.05 for each variable and model prediction

4.4. Confirmation of service quality dimensions in outpatient department of public hospitals

The confirmatory factor analysis (CFA) was performed to confirm the service quality dimensions in the outpatient department of public hospitals. The five expectation and perception dimensions were used as reflective indicators (16). Each reflective indicator variable was calculated as a composite score from its respective subscale. Reflective indicators suggest that the change in these measured indicators is caused by the underlying latent construct. Therefore, the conformity model points from latent to observed variables (70). The correlation matrix was created based on these reflective indicators. The five expectation dimensions and reliability perception dimension were highly correlated with each other. The detailed results are shown in Table 17.

Before doing CFA, the preliminary analysis was carried out the data were suitable for factor analysis. To prevent the inappropriate application of factor analysis, several criteria were applied (67).

(1) The ratio of subjects to items was 18:1 which exceeded the 10:1 minimum ratio required by Hair et al in 2010 for factor analysis.

- (2) The Bartlett's test of sphericity, the hypothesis that the correlation matrix came from a population of independent variables was rejected at a significance level of 0.001, which indicates its suitability for factor analysis. This is because the failure to reject the hypothesis implied an inappropriate data set.
- (3) The Kaiser-Meyer-Olkin Measure of Sampling Adequacy for the entire data set was computed to be 0.796. This value is greater than 0.5 which indicates the data is suitable for factor analysis.
- (4) The communality estimates for individual scale items ranged from 0.737 to 0.939. The communality of 0.5 or greater is acceptable. So, it was assumed that the communality estimates for individual scale items were appropriate for factor analysis.
- (5) The reliability was tested by the internal consistency method using Cronbach's Alpha as a measure. The Cronbach's Alpha for the entire instrument was 0.903. The value is higher than 0.7 and is considered acceptable reliability.

After the criteria of preliminary analysis had been met, the confirmatory factor analysis (CFA) was done to validate the association between the observed and the latent variables. The measurement model described how well the observed indicators serve as a measurement instrument for the latent variables. To assess the measurement model, first-order and second-order confirmatory factor analyses were conducted. For the first-ordered confirmatory factor analysis, the model examined how well service perception and expectation indicator variables fit the data. The model was assessed using the maximum likelihood procedure and evaluated using Chi-square, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Normed Fit Index (NFI) and Root Mean Square Error of Approximation (RMSEA) indices. According to Muhammad Butt and Cyril de Run in 2010 and Shek and Yu in 2014, the Chi-square value divided by its degrees of freedom (χ^2/df) was with an acceptable ratio of 2 to 1 to as high as 5. The CFI, TLI, and NFI values should be equal to or above 0.90 to indicate a satisfactory model fit, with values close to 1 suggesting a very good fit on any of the indexes; for RMSEA, a value of < 0.11 indicates a reasonable fit and a value of < 0.05 or less indicates good model fit concerning the degrees of freedom (68, 69).

Table 17: Correlation matrix: composite service quality indicators formed from expectation and perception dimensions

Variable	ET	ER	ERes	EA	EE	PT	PR	PRes	PA	PE
ET	1.000									
ER	0.890*	1.000								
ERes	0.822*	0.906*	1.000							
EA	0.899*	0.887*	0.906*	1.000						
EE	0.861*	0.836*	0.920*	0.908*	1.000					
PT	0.183*	0.027	0.054	0.064	0.205*	1.000				
PR	0.804*	0.744*	0.841*	0.862*	0.931*	0.237*	1.000			
PRes	0.198*	0.179*	0.277*	0.261*	0.235*	0.199*	0.218*	1.000		
PA	-0.023	-0.123*	-0.176*	-0.157*	-0.027	0.488*	0.037	-0.570*	1.000	
PE	0.365*	0.258*	0.365*	0.343*	0.447*	0.405*	0.467*	0.502*	-0.028	1.000

Note:

* Correlation is significant at the 0.01 level (two-tailed)

ET = Tangible (Expectation)

ER = Reliability (Expectation)

ERes = Responsiveness (Expectation)

EA = Assurance (Expectation)

EE = Empathy (Expectation)

PT = Tangible (Perception)

PR = Reliability (Perception)

PRes = Responsiveness (Perception)

PA = Assurance (Perception)

PE = Empathy (Perception)

The results showed that Chi-square was significant ($\chi^2 = 3838.424$, degree of freedom (df) = 38, χ^2/df ratio = 101.011, $p < 0.05$). Other indices also indicated that the values of CFI, TLI and NFI were 0.618, 0.547 and 0.646 which were lower than the acceptable level. The Root Mean Square Error of Approximation (RMSEA) value was 0.352. The value of RMSEA should be less than 0.05 for model fit. So, it was assumed that the first-order model was insufficiently fit to the current data. The original model of the first-order confirmatory factor model for service quality is shown in Figure 3.

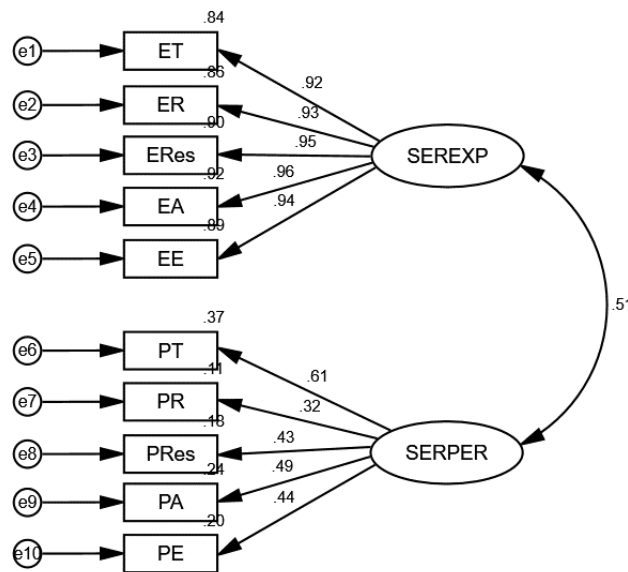


Figure 3: Original model of first-order confirmatory factor model for service quality

Therefore, to detect the model misspecification, the model modification was checked by using modification indices (MIs), MIs of values > 80 and 50 considered for covariances and regression weights, respectively (69). The MIs and expected parameter change value (EPCV) for possible covariances and regression weights for the original model are listed in Tables 18 and 19.

Table 18: Modification indices of covariances for the original model

Covariances	MI	EPCV	Covariances	MI	EPCV
e9 <--> e10	69.599	-0.010	e3 <--> e10	4.136	0.002
e8 <--> e10	124.316	0.015	e3 <--> e9	36.818	-0.005
e8 <--> e9	375.101	-0.023	e3 <--> e8	31.182	0.005
e7 <--> e10	56.207	0.014	e3 <--> e6	33.376	-0.004
e7 <--> e9	43.994	-0.011	e3 <--> e5	64.924	0.004
e6 <--> e10	4.491	0.002	e3 <--> e4	6.870	-0.001
e6 <--> e9	192.647	0.011	e2 <--> e10	44.050	-0.007
e6 <--> e7	31.158	-0.007	e2 <--> e7	22.453	-0.007
e5 <--> e10	48.396	0.005	e2 <--> e6	18.871	-0.003
e5 <--> e9	8.791	0.002	e2 <--> e5	123.651	-0.007
e5 <--> e8	15.507	-0.003	e2 <--> e3	51.561	0.005
e5 <--> e7	81.085	0.010	e1 <--> e9	19.202	0.004
e5 <--> e6	44.914	0.004	e1 <--> e8	17.169	-0.005
e4 <--> e9	21.990	-0.003	e1 <--> e6	36.277	0.005
e4 <--> e8	16.921	0.004	e1 <--> e4	30.520	0.004
e4 <--> e7	15.313	0.004	e1 <--> e3	169.988	-0.010
e4 <--> e6	28.718	-0.003	e1 <--> e2	71.423	0.007

Table 19: Modification indices of regression weights for the original model

Regression weight	MI	EPCV	Regression weight	MI	EPCV
PE <--- SEREXP	38.380	0.121	PR <--- ERes	7.127	0.008
PE <--- SERPER	63.443	0.065	PR <--- ER	5.352	0.006
PA <--- SEREXP	139.709	-0.207	PR <--- ET	6.387	0.007
PA <--- SERPER	142.609	-0.087	PT <--- SEREXP	61.928	-0.106
PRes <---SERPER	18.829	-0.037	EE <--- SERPER	97.724	0.050
PR <--- SEREXP	608.859	0.674	EA <--- SERPER	11.690	-0.018
PR <--- SERPER	134.851	0.135	ERes <---SERPER	7.669	-0.016
PR <--- EE	6.207	0.007	ER <--- SERPER	50.830	-0.047
PR <--- EA	7.465	0.008	ET <--- SERPER	15.562	0.028

In reviewing the parameters in the covariance part, five parameters showed particularly large values, representing the covariances between the same construct PRes and PE (e8 and e10: MI=124.316), between the same construct PRes and PA (e8 and e9: MI=375.101), between the same construct PT and PA (e6 and e9: MI=192.647), between the same construct ER and EE (e2 and e5: MI=123.651) and

between the same construct ET and ERes (e1 and e3: MI=169.988). These MI values represented mis-specified error covariances that might come from characteristics specific to the items or to the respondents (69). For the regression weights, although three items showed cross-loadings, the cross-loading of item PR on SEREXP factor had the highest MI value 608.859 which accounted for substantial misspecification of the hypothesized factor loading.

Therefore, the next step was to re-specify the original model (M0). Six modified models were proposed based on the above analyses. Model M1 included a correlated error between PRes and PE. Model M2 included a correlated error between PRes and PA. Model M3 included a correlated error between PT and PA. Model M4 included a correlated error between ER and EE. Model M5 included a correlated error between ET and ERes. Model M6 included an error of the item the path from factor SEREXP to items PR was specified as a free parameter. The goodness-of-fit indices of the six modified models as well as the initial model are summarized in Table 20. As can be seen, all indices increased after model modifications. However, the values of CFI (0.878) and NFI (0.875) were close to 0.9 in model M6 and the values of χ^2/df , TLI and RMSEA did not meet the acceptable criteria. The final modification (M6) of the first-order confirmatory factor model for service quality is shown in Figure 4.

Table 20: Goodness-of-fit statistics for the modified first-order CFA models

Model	Modification	χ^2	df	χ^2/df	CFI	TLI	NFI	RMSEA
M0	original model	3838.424	38	101.011	0.618	0.547	0.616	0.352
M1	M0 + correlated errors of e8 and e10	3704.656	37	100.126	0.631	0.551	0.629	0.351
M2	M1 + correlated errors of e8 and e9	2996.410	36	83.234	0.702	0.628	0.700	0.320
M3	M2 + correlated errors of e6 and e9	2918.517	35	83.386	0.710	0.627	0.708	0.320

M4	M3 + correlated errors of e2 and e5	2664.292	34	78.362	0.735	0.650	0.733	0.310
M5	M4 + correlated errors of e1 and e3	2406.550	33	72.926	0.761	0.674	0.759	0.299
M6	M5 + path PR to SEREXP	1245.348	32	38.917	0.878	0.828	0.875	0.217

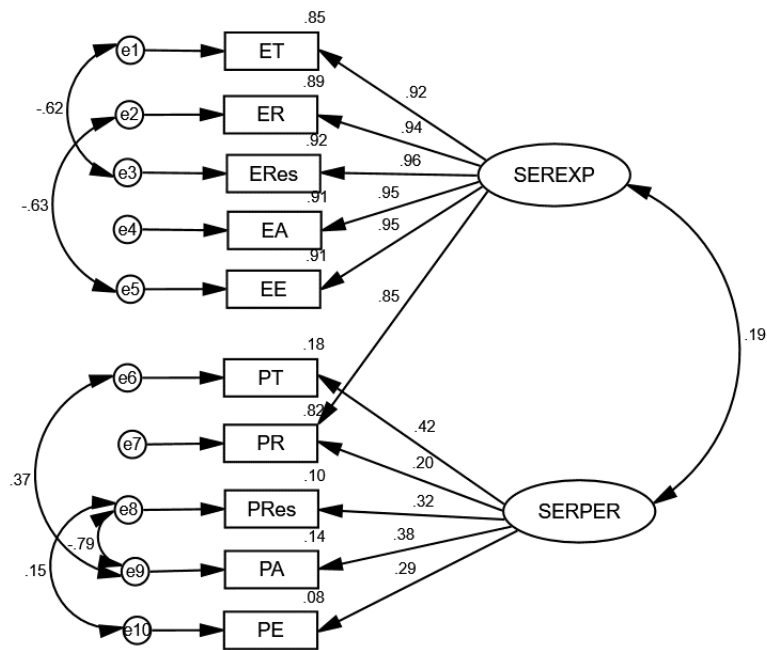


Figure 4: Final first-order confirmatory factor model for service quality

Based on model M6, the representation was tested for second-order confirmatory factor analysis to demonstrate that service quality is a two-factor model (service expectation and perception). For the second-order confirmatory factor analysis, the result showed that Chi-square was significant ($\chi^2 = 1245.348$, degree of freedom (df) = 32, χ^2/df ratio = 38.917, $p < 0.05$). Other indices also indicated that the values of CFI, TLI and NFI were 0.878, 0.828 and 0.875 which were lower than the acceptable level. The Root Mean Square Error of Approximation (RMSEA) value was 0.217. The value of RMSEA should be less than 0.05 for model fit. According to the results, the second-order model did not fit the data and it could not confirm that the

service quality has the two-factor model with five service quality dimensions in each factor. The second-order confirmatory factor model of service quality is shown in Figure 5.

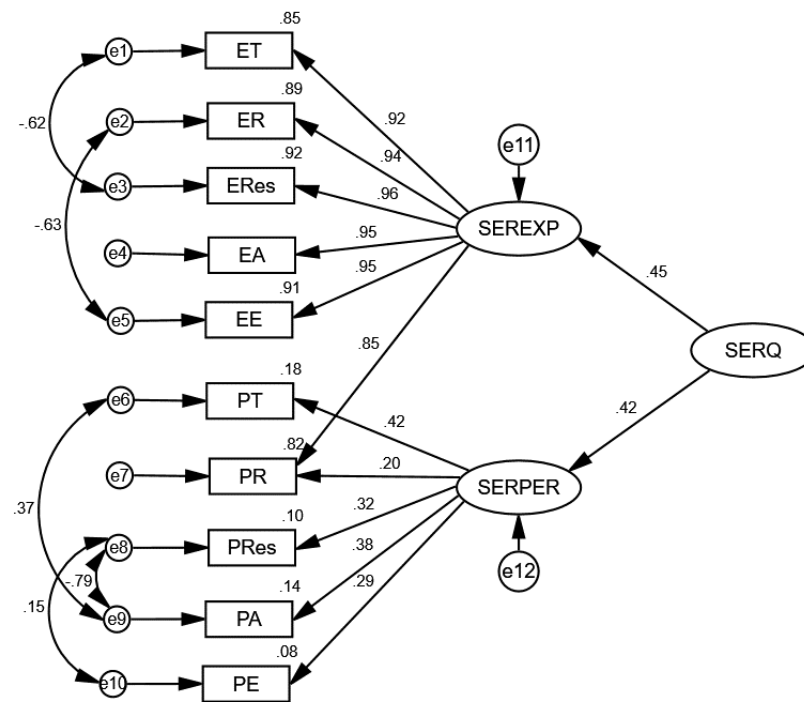


Figure 5: Second-order confirmatory factor model of service quality

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1. Patient's socio-demographics and hospital-related variables

Firstly, the demographic distribution of the patient population is noteworthy. The majority of patients, 71.1% were female (See Table 9 in result section for more details), similar in the studies of Papanikolaou and Zygiaris in 2014, Al-Damen in 2017 and Raiz and Sughra in 2021 indicating a potential gender imbalance in the utilization of healthcare services (14, 15, 27). The age distribution of the patients with individuals was ranging from 18 to above 60 years and an average age of 46.8 years old. The overwhelming majority, 91.8% resided in Yangon. The majority of patients, 69.2% sought services from primary care hospitals. Additionally, the distribution across various medical departments within hospitals reflected the diverse healthcare needs of the population, with notable percentages, 39.3% seeking services in medicine, other specialties (orthopedic, eye, ear, nose, and throat), obstetrics and gynecology, and surgery. The self-reported health status of patients was a subjective yet important measure. The fact that 59.3% rated their health status as good suggests an overall positive perception of health among the surveyed population. However, the 38.8% who rated their health as poor and 1.9% as worst highlight areas where healthcare providers can focus on improving patient outcomes and satisfaction.

The education level of the patients is a key aspect to consider. The fact that most patients, 34% had a high school education indicates a baseline level of education that can impact health literacy and the ability to understand and navigate healthcare systems. This information is crucial for healthcare providers in tailoring communication and education efforts to meet the needs of patients with varying educational backgrounds. The distribution of patients based on monthly income provides insights into the economic status of the population seeking healthcare. A significant portion, 50.1% earning less than 100,000 kyats (1 Baht $\approx$ 95 Kyats) suggested a substantial proportion of the population might face financial constraints in accessing healthcare services. The costs of out-of-pocket in private hospitals are higher than that of public hospitals. So, low-income patients come and seek public hospitals for their healthcare conditions (71). Most of the patients, 86.2% were

married. Marital status can influence the support system available to individuals during illness, affecting healthcare decisions and outcomes.

Occupational diversity among the patients is highlighted, with a remarkable percentage, 46.3% being unemployed and others engaged in various occupations such as self-employment, government and private sector employment, and miscellaneous jobs. This diversity provides a nuanced understanding of the economic activities of the patient population and underscores the need for healthcare services to be adaptable to different occupational contexts. The mode of hospital entry is a critical factor in understanding healthcare utilization patterns. The fact that a significant majority, 70.8% of patients came to the hospital based on their medical doctors' referrals suggests a reliance on professional guidance in seeking healthcare. This finding emphasizes the role of healthcare providers as influencers in the healthcare decision-making process.

5.2. Patient's expectation and perception of service quality of outpatient department of public hospitals

The study employed the SERVQUAL framework (16), comprising five dimensions – tangible, reliability, responsiveness, assurance, and empathy – to evaluate the quality of services provided in the outpatient department of public hospitals in Myanmar. The value of service quality for each item in each dimension was computed by subtracting patients' expectations from their perceptions of the service quality dimensions, which revealed that all measures employed in the study were positive. Each item's service quality mean value in each dimension was statistically significant.

In the tangible dimension, all items exhibited positive service quality mean values (See Table 10 in result section for more details). Among these, the item "The directional signs in the hospital are good and easy to find" had the lowest gap value of 0.64, indicating that it was relatively close to meeting the expectations of the respondents. This indicates that respondents perceive the directional signs in the hospital to be relatively good and easy to locate, and their perception is close to meeting their expectations. The finding contradicts the previous study conducted by Ogunnowo et al., in 2015 however it aligns with the study done by Aman and Abbas in 2016 (21, 23). These findings agree with the studies carried out by Khamis and

Njau in 2014, Ogunnowo et al., in 2015 and Al Fraihi and Latif in 2016 (20, 21, 23). The items “All facilities of hospitals are easily available when they are needed” and the items “When you come to the hospital, you conveniently get medicines from that hospital” were the second and third lowest scores, with gap values of 0.66 and 0.68. While these aspects still perform relatively well, there is room for improvement to better meet expectations. Then, the item “The waiting facilities (e.g., benches and chairs) are convenient and available.” has a value of 0.86, suggesting the highest gap among the tangible dimension items. Additionally, the subsequent item, “The environment of the hospital is clean.” stood out the second highest gap with a value of 0.83, indicating a slightly lower level of satisfaction in comparison to other tangible dimension items. While the tangible dimension overall received positive assessments, careful attention should be given to these specific items to address any potential areas for improvement, especially in aspects related to the cleanliness of the hospital environment and the convenience of waiting facilities. This is agreed with previous studies that emphasized the cleanliness of the hospital environment and basic amenities and hospital facilities (43, 44).

All items within the reliability dimension exhibited statistically significant positive service quality mean values (See Table 10). Among them, the values of the items “The medical record of the hospital is free from error.” and “The admission procedures are accurate when it is needed.” were the lowest gap scores which were 0.62. This indicates that these aspects of service quality have the smallest value between perceived importance and actual performance among all the items assessed in the study. These low gap scores suggest that the hospital excels in maintaining accurate and error-free medical records and conducting admission procedures with precision and efficiency. Such performance is crucial for ensuring patient safety, continuity of care, and overall satisfaction with the hospital experience. These findings same as the previous studies done by Khamis and Njau in 2014 and Aman and Abbas in 2016 (20, 23). However, these are different from the researches carried out by Al Fraihi and Latif in 2016 and Umoke et al., 2020 (22, 26). Specifically, the item "When the health professionals explain your test results, diagnosis, and treatments, they can explain you in an understandable way" had the highest gap value of 1.10. This indicated a significant value between patient expectations and

perceptions, with patients feeling that healthcare professionals may not adequately explain medical information in a clear and understandable manner. The finding of the reliability aligns with the research conducted by Ogunnowo et al. in 2015 but contradicts the previous studies conducted by Tin Tin Khaing in 2016 and Zaw Linn in 2017 (21, 43, 44). The reduced workforce may contribute to an increased workload, potentially impacting the efficiency and convenience of various processes. Addressing the identified issues may necessitate strategic measures to optimize staffing levels, streamline processes and allocate resources more effectively. By acknowledging and addressing these workforce-related challenges, public hospitals can work towards enhancing the reliability of their services and ensuring a more convenient experience for patients. Healthcare providers may consider implementing strategies to enhance communication skills among healthcare professionals, such as providing training on effective patient communication techniques and ensuring that medical information is conveyed clearly and understandably.

Within the responsiveness dimension, all items demonstrated strongly significant positive service quality mean values (See Table 10). The item "When the health professionals prescribe the medicines, they manage the drugs that are affordable to you" had the lowest gap score of 0.56. This indicates that patients perceive health professionals as being relatively successful in prescribing affordable medicines, with their perception closely aligning with their expectations. This finding is supported by the previous research conducted by Khamis and Njau in 2014 and Aman and Abbas in 2016 (20, 23). The item "The health professionals have willingness to help to you" had a gap value of 0.63, which is slightly higher than the affordability of medicines. This suggests that patients perceive health professionals as generally willing to help, but there may be a slight gap between their perceptions and expectations in this aspect. These findings same as the previous studies done by Chakravarty in 2011 and Aman and Abbas in 2016 (19, 23). Moreover, the item "You can receive a quick appointment system to the health professionals." was the highest gap value, 0.86. This indicates a larger gap between patients' expectations and their perception of the appointment system's speed and efficiency. Patients may perceive longer waiting times for appointments than they expect. After that the value of the items "You take a long waiting time before you meet your health professionals." and

“You get the prompt service from OPD reception desk.” were the second highest gap values, 0.83 respectively. These present findings are supported by many early studies that had been described by Chakravarty in 2011, Aman and Abbas in 2016 and Al Fraihi and Latif in 2016 (19, 22, 23). The identified challenges related to waiting times before meeting health professionals and improving promptness at reception desks suggest the potential area for improvement in the responsiveness of healthcare services. Strategies to address these challenges may involve optimizing scheduling processes, improving workflow efficiency and ensuring timely access to medical professionals. By focusing on these aspects, healthcare providers can work towards enhancing the overall responsiveness of their services and providing a more satisfactory experience for patients.

Furthermore, all items within the assurance dimension exhibited statistically significant positive service quality mean values (See Table 10). The item "When you receive medical services, the health professionals cooperate with each other for delivering services" had a gap score of 0.61, which is relatively low. This suggests that patients perceive a relatively high level of cooperation among health professionals in delivering services, with their perception closely aligning with their expectations. This finding differs from the study conducted in 2014 by Khamis and Njau (20). The item "You get clear instructions of how to take your medication" also had a low gap score of 0.61, indicating that patients perceive clear instructions regarding medication usage. This suggests that health professionals effectively communicate medication instructions to patients, meeting their expectations in this aspect. This is agreed with previous studies that emphasized the clear instruction for medication (21, 22, 26). And after that, the item "The label on the medication supplied to you is clear to read and easy to understand" had a slightly higher gap score of 0.69 compared to the previous items. While patients still perceive the labels on medications as relatively clear and understandable, there may be a slight gap between their expectations and their perception of label clarity. This finding is supported by the previous studies conducted by Al Fraihi and Latif in 2016 and Umoke et al., in 2020 (22, 26). The value for the item “There are adequate staffs in the hospital.” was the highest gap score, 0.83. These findings align with the previous studies conducted by Chakravarty in 2011, Khamis and Njau in 2014 and Ogunnowo et al. in 2015 (19-21).

The identified areas emphasize the importance of ongoing efforts to improve aspects such as the clarity of medication labels, staffing adequacy and communication clarity. So, some public hospitals in Yangon are setting up to overcome these conditions by using online booking systems. The mention of the implementation of online booking systems reflects an initiative towards enhancing service quality and patient satisfaction, though further implementation across all public hospitals is recognized as a necessary step.

Finally, the service quality mean values for all items within the empathy dimension were statistically significant and positive, mirroring the trend observed in other dimensions (See Table 10). The item "When you need more medical treatment that is not available in this hospital, the health professionals refer you to a higher level of hospital" having a low gap score of 0.52 indicates that patients perceive a high level of effectiveness in the referral process. This suggests that patients feel confident that if they require additional medical treatment beyond what the current hospital can provide, the health professionals will facilitate their referral to a higher-level hospital. The earlier research by Khamis and Njau in 2014 and Umoke et al. in 2020 supports this finding (20, 26). Notably, the items "The health professionals have compassionate to patients." and "The staffs are consistently well-mannered and polite." had the highest gap value among all items, scoring 1.00. These findings are contrary to the previous researches conducted by Aman and Abbas in 2016, Ei Nwe Ni, 2016 and Mulisa et al. in 2017 (23, 24, 46). Improving the interpersonal skills of healthcare staff and ensuring consistent courteous behavior may contribute to an even more positive patient experience in terms of empathy. Identifying and addressing such specific areas within the empathy dimension can lead to enhancements in the overall quality of healthcare services and patient satisfaction.

Besides, the value of service quality for each dimension was computed by subtracting patients' expectations from their perceptions of the service quality dimensions, which revealed that all measures employed in the study were positive. The mean scores for perceptions of the dimensions exceeded those for expectations. This demonstrated that patients' perceptions of service quality had statistically significant positive values when compared to original expectations. Among the five service quality dimensions, the total mean score of the empathy dimension was the

highest which was 0.87 (See Table 11). This could suggest that the healthcare providers are compassionate to patients and give care to the patients with dignity and ultimate respect. After that, the staff are consistently well-mannered and polite to the patient. These findings contradict the previous research conducted at the outpatient department at Yangon General Hospital. This study stated that there were statistically significant negative service gaps in four dimensions: tangibility, responsiveness, reliability and empathy and that service quality at the outpatient department was low during the healthcare delivery process. The responsiveness dimension had the largest service gap, with a mean score difference of -2.375 (46). Service quality dimensions can vary depending on the context of the study. For example, service quality dimensions for healthcare may differ from those in hospitality or retail industries due to the unique nature of each service environment. Variations in sample characteristics such as demographics, cultural backgrounds and experiences can affect how they perceive the service quality dimensions. Therefore, studies conducted with different populations may yield different results.

However, the current findings align with earlier studies conducted at Malaysian private hospitals in 2003, as well as investigations in the general medical wards of Yangon General Hospital in 2017 and Thingangyun Sanpya General Hospital in Yangon in 2020 (47, 72, 73). These previous researches mentioned that the positive service quality gaps were revealed in all service quality dimensions. These also showed that the patients were satisfied in all service quality dimensions and had relatively low expectations for healthcare service (73). Therefore, it may be mentioned that people did not have high expectations of public hospitals in Myanmar and gave a positive gap score when receiving the actual service.

5.3. Influencing factors on patient's satisfaction of service quality dimension in outpatient department of public hospitals

The study utilized a method to ascertain the impact of various independent (predictor) variables on the five dimensions of service quality. This approach allows for a nuanced understanding of the factors influencing specific aspects of service provision. The analysis revealed the statistically significant relationships between the independent variables and dimensions of service quality. This suggests a thorough examination to identify key factors influencing different aspects of service quality.

Notably, residence emerged as a significant factor influencing multiple dimensions of service quality, including tangible, reliability, responsiveness, and empathy (See Table 16). Moreover, the analysis revealed that patients' residences had a significant negative relationship between the tangible, reliability, responsiveness, and empathy dimensions. This could be suggested that patients live in other cities may have limited access to modern healthcare facilities or may perceive the physical environment of healthcare facilities in their area to be inadequate compared to those in Yangon. Contrarily, the previous studies conducted by Al-Damen in 2017 and Than Naing Htut in 2019 reported that the patient's living place was not significantly influenced by the service quality dimensions (14, 74). However, Kassa et al. in 2021 agreed that the patient's residence was significantly related to the service quality dimensions (28). This suggests that where people live have a significant impact on how they perceive these aspects. This geographical distinction indicates that the location of residence plays a substantial role in shaping patients' perceptions across various dimensions of service quality.

Monthly income was significantly related to the reliability and responsiveness dimensions (See Table 16). This indicates that variations in monthly income levels are associated with differences in perceptions of reliability and responsiveness. Higher-income individuals may have greater access to resources, enabling them to seek out and afford services that are consistently reliable and responsive. The higher monthly income levels may provide individuals with more options and flexibility in accessing healthcare services. They may be able to afford private healthcare providers or facilities that prioritize reliability and responsiveness. This finding was contrary to the previous research conducted by Al-Damen 2017 (14). This present finding is supported by early studies that have been described by Than Naing Htut in 2019 and Raiz and Sughra in 2021 (27, 74). Healthcare service providers may need to consider income-related variations in perceptions of reliability and responsiveness when designing and delivering services, ensuring that all patients receive consistent and timely care regardless of income level. This implies that individuals' economic status, as reflected in their monthly income, influences how they perceived the reliability and responsiveness of services provided.

Marital status was identified as significantly related to the assurance dimension (See Table 16). People's feelings of trust and confidence in healthcare providers may be impacted by their marital status, which can also have an impact on their social support systems, financial security, and general well-being. This finding contradicts the previous research done by Al Fraihi and Latif in 2016 and Than Naing Htut in 2019 (22, 74). On the one hand, this is agreed by the early studies that have been stated by Kassa et al. and Raiz and Sughra in 2021 (27, 28). This implies that marital status could be a key factor in shaping perceptions related to trust and confidence in healthcare services.

These findings have practical implications for healthcare providers, as they suggest the need for tailored approaches to address the diverse preferences and expectations of patients based on their geographical location, income levels and marital status. The results emphasize the importance of understanding the local context and demographic characteristics when designing interventions or improvements in healthcare services. This tailored approach can enhance the effectiveness of initiatives aimed at improving patient satisfaction and experience. Understanding the underlying factors contributing to these variations can provide valuable insights for healthcare providers to enhance their services based on the specific needs of different patient groups (75, 76).

5.4. Confirmation of service quality dimensions in outpatient department of public hospitals

This study employed the confirmatory factor analysis (CFA) which provided valuable insights into the structure and interrelationships of service quality dimensions (SERVQUAL) in the outpatient department of public hospitals in Yangon, Myanmar. By using reflective indicators and assessing correlations between dimensions, the study contributed to the understanding of the multidimensional nature of service quality and its measurement in healthcare settings.

Before conducting the CFA, a correlation matrix was constructed based on the reflective indicators to assess the relationships among the expectation and perception dimensions. The correlation matrix revealed high correlations between the five expectation dimensions and the reliability perception dimension (See Table 17). This finding suggested these dimensions were closely related and might share common

underlying factors. High correlations between dimensions could indicate redundancy or overlap in the measurement of service quality constructs, warranting further investigation into the conceptual distinctions between them (68, 77).

Based on the results of the goodness-of-fit indices of the six modified models as well as the initial model, were compared to assess their adequacy in representing the observed data (See Table 20). Among the six modified models, model M6 showed relatively improved goodness-of-fit indices compared to the initial model (M0) and other modified models. However, the values of CFI and NFI in model M6 as the final modification of the first-order confirmatory factor model for service quality were close to the acceptable threshold of 0.9 and other fit indices did not meet the predefined criteria. Despite the improvements, further adjustments may be needed to achieve a satisfactory model fit.

Moreover, the second-order CFA aimed to validate the conceptual framework suggesting that service quality consisted of two higher-order factors: service expectation and perception which consisting five dimensions of service quality. Based on the fit indices, the second-order confirmatory factor model did not adequately represent the data. Therefore, it could not confirm the hypothesized two-factor model of service quality, where service expectation and perception were higher-order factors encompassing the individual dimensions of service quality. The findings suggest that the hypothesized conceptualization of service quality as a two-factor model may not align with the observed data in this study. This finding contradicts the previous research done by Muhammad Butt and Cyril de Run in 2010 (68). On the other side, this is agreed with the study of Lam in 1997 found that SERVQUAL was a reliable scale to measure healthcare service quality. However, his study also did not confirm the five dimensions of SERVQUAL (78). According to the review of hospital service quality by Pai and Chary in 2013, most studies have revealed that SERVQUAL items did not load onto their respective dimensions, with some exceptions (79). The research of Kansra and Jha in 2016 did not support the five dimensions of Parasuraman SERVQUAL in India and thus, are reduced to four factors (dimensions) for measuring the service quality of hospitals in Jalandhar, India (80). Besides, the study of Cengiz and Fidan in 2017 stated that the domain-specific scale was superior to SERVQUAL within the context of a healthcare environment and using/modifying a

generalized scale is not a good approach when we have domain-specific alternatives available (77).

Generally, SERVQUAL as a robust scale is widely used for measuring service quality across various service sectors. Developed by Parasuraman et al. in 1985, SERVQUAL assessed the expectation and perception of service quality based on five dimensions: tangibles, reliability, responsiveness, assurance, and empathy (16). Despite its widespread use, the importance of carefully evaluating and modifying SERVQUAL scale items was suited to the specific needs of particular industries. In the healthcare service quality research, using the SERVQUAL model has yielded mixed results.

SERVQUAL is a tool for measuring service quality while underscoring the importance of adaptation and customization to ensure its effectiveness across diverse industries, including the healthcare industry. While some studies have found SERVQUAL to be a reliable instrument for assessing healthcare service quality, others have suggested limitations, indicating that certain dimensions of healthcare service may not be fully captured by the original SERVQUAL scale. Given the diverse nature of service industries and the complexities inherent in healthcare services, it is needed to emphasize the importance of tailoring the SERVQUAL scale to each sector's specific needs, cultural context and national context (81, 82).

5.5. Managerial Implications

The healthcare sector in Myanmar is periodically expanding. The rapid expansion of the public sector necessitates a keen understanding of the current state of public hospitals, especially concerning service quality. As public hospitals play a crucial role in providing healthcare services to a significant portion of the population, assessing their performance in terms of service quality is paramount. Decision-makers must have access to comprehensive and up-to-date information to make informed decisions about resource allocation, policy development and quality improvement initiatives.

Based on demographic data, the most of patients in public hospitals come from lower socioeconomic backgrounds and they primarily choose government hospitals because treatment prices there are generally lower and government subsidies cover the majority of the expenditures. To ensure equitable access to healthcare for all

low-income families across the country, medical costs should be kept as low as feasible. Early detection of the disease's signs and symptoms is beneficial for the patient, as it allows for early treatment and a simple recovery. There is a chance to treat fewer chronic patients in hospitals. So, emphasizing preventive healthcare services can help reducing the need for expensive medical treatments and hospitalizations in the long run. Health education programs, screening initiatives, and vaccination campaigns can help prevent diseases and promote overall health and well-being, particularly among low-income populations. Therefore, the number of sick people in the community will be lower and there will be fewer reasons for the population to go to hospitals.

Improving the process for scheduling quick appointments for the next visit to the hospital can be enhanced by implementing the following strategies: streamlining registration processes, improving appointment scheduling systems and enhancing staff productivity. Additionally, hospitals can prioritize patients based on the severity of their condition to ensure timely access to care. Moreover, increasing the number of staff to schedule appointments by establishing clear key performance indicators (KPIs), such as the average time to schedule an appointment or the percentage of appointments scheduled within a specific timeframe, to monitor staff performance and ensure accountability. Then, the system is set up to back up the data by a computer system. This can also help improve resource allocation and optimize staff productivity.

Moreover, hospital resources may be strained and service quality may be impacted by staff shortages. To determine areas of need, hospitals should evaluate staffing levels and workload distribution. The implementation of staff scheduling optimization and employing more employees are among the strategies that can assist in alleviating manpower shortages and guarantee that patients receive timely and effective care. Conducting regular assessments of staffing levels and workload distribution is essential for identifying areas of need and allocating resources effectively. By analyzing patient volume, acuity levels and staff-to-patient ratios, hospitals can determine where additional resources are required to address manpower shortages and prevent burnout among existing staff. Optimizing staff schedules is essential for ensuring adequate coverage during peak demand periods and minimizing

overstaffing during slower times. Hospitals can use data analytics and predictive modeling to forecast patient volume and acuity levels, allowing them to adjust staffing levels accordingly. Additionally, flexible scheduling options, such as part-time and per diem positions, can help hospitals adapt to fluctuating staffing needs while providing employees with greater work-life balance. In cases where manpower shortages persist despite efforts to optimize staffing levels and workload distribution, hospitals may need to consider hiring additional employees. This may involve recruiting new graduates, incentivizing experienced professionals to join the workforce or partnering with academic institutions to offer training programs and internships.

Implementing a comprehensive training program for hospital staff is crucial for enhancing service quality and improving patient outcomes. It is needed to conduct an assessment to identify areas for improvement in service quality. This can be done through staff surveys, patient feedback, and performance evaluations. Common areas for training may include communication skills, patient-centered care, infection control and clinical skills. The effectiveness of training programs through pre- and post-training evaluations can assess feedback surveys and performance metrics by measuring the changes in staff knowledge, skills, attitudes and behaviors following training implementation. Use this feedback to refine and improve training programs over time. By fostering a culture of continuous learning and improvement within the organization, the staffs can be encouraged to actively participate in training opportunities for their professional development. This may lead to a commitment to service excellence and continuous improvement.

By closely monitoring the service quality of public hospitals, decision-makers can identify areas of strength and weakness, prioritize areas for improvement and allocate resources effectively to enhance overall service delivery. This proactive approach is essential for ensuring that public hospitals meet the evolving healthcare needs of the population and maintain high standards of care.

5.6. Limitations of the study

The study was conducted in the outpatient departments of public hospitals located in the Yangon region, Myanmar. It does not represent all outpatient departments of public hospitals in Myanmar and might restrict how far the results can be applied to other areas. Regional variations in sociodemographic factors and

cultural variances can all have a significant impact on study results. As a result, care should be used when applying the study's findings to other contexts. Moreover, the study was done based on quota sampling of the numbers of hospital sizes from primary to tertiary level in Yangon, Myanmar.

5.7. Recommendation for further research

To get a complete vision of hospital service quality of public hospitals in Myanmar, the research should be carried out not only in the outpatient departments but also in the inpatient departments of public hospitals. Besides, the study should be done in public hospitals located in other areas in Myanmar. Since the current study was based on the quota sampling of the hospital sizes, further research should be done by quota sampling of the patient sample in public hospitals in Myanmar. Based on the new findings of future research, it could benefit and new insights to policymakers, hospital administrators and healthcare providers to investigate the effectiveness of specific quality improvement interventions, such as staff training programs or workflow redesign initiatives, in enhancing service quality and the patient will get more satisfaction.



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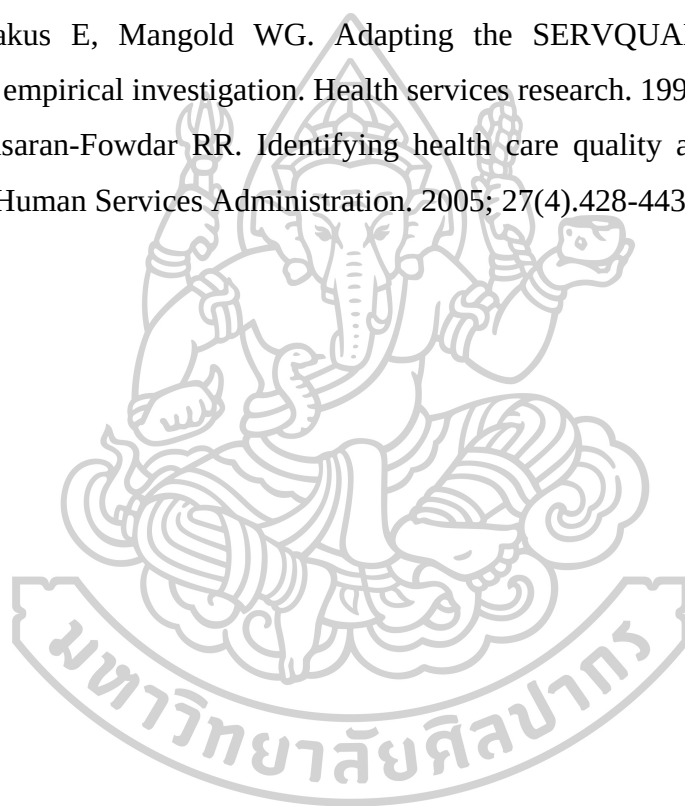
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APPENDIX

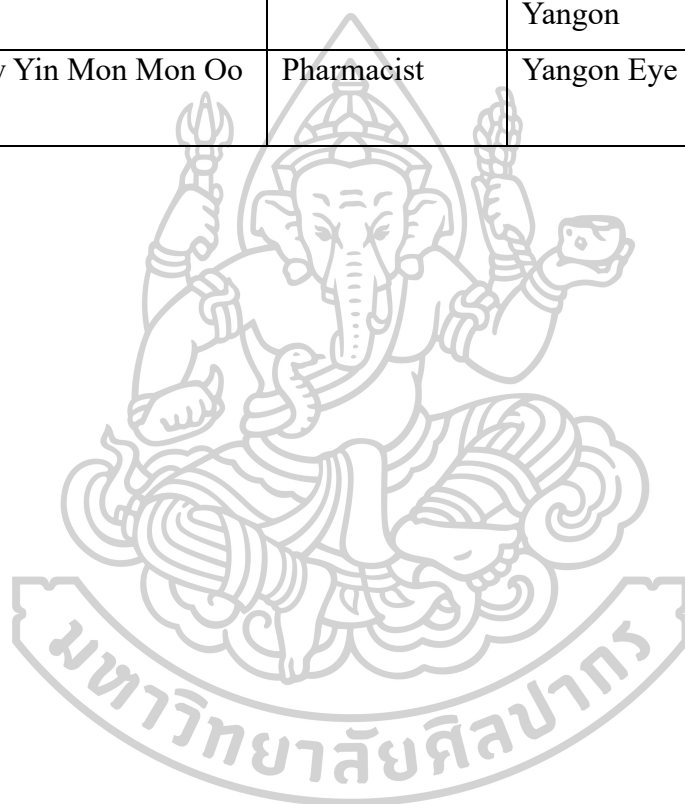
1. Type of variables

Type of variables	Operational definitions	Scale of measurement
Independent variable		
Age	Completed age in years of respondents	Ratio
Gender	Sex of respondents	Nominal
Residence	Address of respondent	Nominal
Current health status	Current health status of respondents It is divided into - Good (medicine/ regular follow up) - Poor (increase drug dosage/ frequent follow up) - Worst (take more medicines/ very frequent follow up)	Ordinal (level)
Education	Educational status of respondents It is divided into - Illiterate - Read and write - Primary school education - Middle school education - High school education - University (currently attending) - Graduate	Ordinal (level)
Monthly income	Monthly income of respondent It is divided into - Less than 100,000 kyats - 100,001 – 200,000 kyats - 200,001 – 300,000 kyats - Above 300,000 kyats	Ratio
Occupation	Occupation of respondent It is divided into - Students - Unemployed - Self-employed - Government staffs - Private staffs - Others	Nominal

Marital status	Marital status of respondent It is divided into - Yes - No	Nominal
Referral	Self-reported referral to the current hospital due to illness It is divided into - By healthcare provider - By my own decision	Nominal
Type of hospital	Type of hospital It is divided into - Primary level - Secondary level - Tertiary level	Ordinal (level)
Type of service received	Type of treatment given by hospital It is divided into - Medicine - Surgery - Obstetrics and gynaecology - Others	Nominal
Dependent variable Service quality (Expectation score)	Total mean expectation score gets by averaging items' 5 points Likert scale in each dimension of service quality	Ratio
Service quality (Perception score)	Total mean perception score gets by averaging items' 5 points Likert scale in each dimension of service quality	Ratio
Gap score	Different between mean perception scores and mean expectation scores	Ratio

2. List of the names of translators

No.	Name	Position	Occupation
1.	Daw Aye Aye Myint	Lecturer/Head	Department of Myanmar, University of Pharmacy, Yangon
2.	Daw Soe Moe Thu	Lecturer/Head	Department of English, University of Pharmacy, Yangon
3.	Daw Yin Mon Mon Oo	Pharmacist	Yangon Eye Hospital



3. Result of Item-Objective Congruence for questionnaire

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
Q1	Age	1	1	1	1	1	5	1	1	Age
Q2	Gender ☐ Male ☐ Female	1	1	1	1	1	5	1	1	Gender ☐ Male ☐ Female
Q3	Residence	0	1	1	1	1	4	0.8	1	Residence
Q4	Hospital name	0	1	1	1	1	4	0.8	1	Hospital name (Please specify)
Q5	Type of service received ☐ Medicine ☐ Surgery ☐ Obstetrics and gynecology ☐ Others (Please specify)	1	0	1	1	1	4	0.8	1	Type of service received ☐ Medicine ☐ Surgery ☐ Obstetrics and gynecology ☐ Others (Please specify)
Q6	Previous experience of attending this outpatient department ☐ Yes ☐ No	0	1	1	1	1	4	0.8	1	Previous experience of attending this outpatient department ☐ Yes ☐ No

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
Q7	Current health status ☐ Good (No medicine/ follow up) ☐ Good (Medicine / regular follow up) ☐ Poor ☐ Worst	0	0	0	1	1	2	0.4	0.67	Current health status ☐ Good (medicine/ regular follow up) ☐ Poor (increase drug dosage/ frequent follow up) ☐ Worst (take more medicines/ very frequent follow up)
Q8	Education ☐ Illiterate ☐ Read & write ☐ Primary education ☐ Middle education ☐ High school education ☐ University (currently attending) ☐ Graduate	0	0	1	0	1	2	0.4	0.67	Education ☐ Illiterate ☐ Read & write ☐ Primary education ☐ Middle education ☐ High school education ☐ University (currently attending) ☐ Graduate
Q9	Monthly family income (Kyats)	0	0	0	0	1	1	0.2	0.33	Monthly income (Kyats)

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
Q 10	Number of family members	0	0	0	1	1	2	0.4	0.67	It will be rejected because of the suggestion that it is not related with my research.
Q 11	Marital status	0	1	0	1	1	3	0.6	0.67	Marital status ☐ Yes ☐ No
Q 12	Occupation	-1	1	1	1	1	3	0.6	1	Occupation ☐ Student ☐ Unemployed ☐ Self-employed ☐ Government staff ☐ Private staff ☐ Others (Please specify)
Q 13	Referral ☐ By healthcare provider ☐ By self	-1	0	1	0	1	1	0.2	0.67	Referral ☐ By healthcare provider ☐ By my own decision
Q 14	Total hospital cost	0	0	1	0	1	2	0.4	0.67	Total hospital cost (Kyats)

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
T1	When you go to the hospital, you will get up-to-date and well-maintained equipment.	1	1	1	1	0	4	0.8	0.67	When you go to the hospital, you will get up-to-date and well-maintained equipment.
T2	All facilities of hospitals are easily available when they are needed.	1	1	1	1	1	5	1	1	All facilities of hospitals are easily available when they are needed.
T3	The directional signs in hospital are good and easy to find.	0	1	1	1	1	4	0.8	1	The directional signs in hospital are good and easy to find.
T4	The basic amenities of hospital facilities are hygienic.	1	1	1	1	1	5	1	1	The basic amenities of hospital facilities are hygienic.
T5	The basic amenities of hospital facilities are adequate for the patients and their attendants.	1	1	1	1	1	5	1	1	The basic amenities of hospital facilities are adequate for the patients and their attendants.
T6	The waiting facilities (e.g., benches and chairs) are convenient and available.	1	1	1	1	1	5	1	1	The waiting facilities (e.g., benches and chairs) are convenient and available.

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
T7	The health professionals are neat in appearance.	1	1	1	1	1	5	1	1	The health professionals are neat in appearance.
T8	The environment of the hospital is clean.	1	1	1	1	1	5	1	1	The environment of the hospital is clean.
T9	The pharmacy department is near to your care services or easy to find.	-1	1	1	1	1	3	0.6	1	The pharmacy department is easy to find.
T10	When you go to the hospital, you are available medicines.	-1	0	1	1	1	2	0.4	1	When you come to the hospital, you conveniently get medicines from that hospital.
T11	The location of hospital is convenient for you.	0	1	1	1	1	4	0.8	1	The location of hospital is convenient for you.
R1	When you go to the hospital, you can get the right medical diagnosis and treatments.	1	1	1	1	1	5	1	1	When you go to the hospital, you can get the right medical diagnosis and treatments

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
R2	When the health professionals explain your test results, diagnosis and treatments, they can explain you in an understandable way.	1	1	1	0	1	4	0.8	0.67	When the health professionals explain your test results, diagnosis and treatments, they can explain you in an understandable way.
R3	The health professionals provide services to you as they promised.	1	1	0	1	1	4	0.8	0.67	The health professionals provide services to you as they promised.
R4	When you face with the medical problem, they are reliable in handling that problem.	1	1	1	1	1	5	1	1	When you face with the medical problem, they are reliable in handling that problem.
R5	The communication of health professionals is warmly welcome to you.	-1	1	1	1	1	3	0.6	1	The communication of health professionals is reliable for you.
R6	The medical expenses of the hospital are accurate.	1	1	0	1	1	4	0.8	0.67	The medical expenses of the hospital are accurate.

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
R7	The medical record of the hospital is free from error.	1	1	1	1	1	5	1	1	The medical record of the hospital is free from error.
R8	The admission procedures are easy and fast when it is needed.	-1	1	1	1	1	3	0.6	1	The admission procedures are accurate when it is needed.
R9	The operating hours of hospital is convenient for you.	-1	1	1	1	1	3	0.6	1	The operating hours of hospital is good for you.
RE S1	The health professionals give medical information to you easily and adequately.	-1	1	1	1	1	3	0.6	1	The health professionals give medical information to you as fast as possible.
RE S2	When you request about their medical problem, the health professionals give prompt attention to those issues.	-1	1	1	0	1	2	0.4	0.67	When you request about your medical problem, the health professionals give prompt attention to those issues.
RE S3	You get the prompt service from OPD reception desk.	0	1	1	0	1	3	0.6	0.67	You get the prompt service from outpatient's reception desk.

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
RE S4	You take a long waiting time before you get your medications.	0	1	1	1	1	4	0.8	1	You take a long waiting time before you get your medications.
RE S5	You take a long waiting time before you meet your health professionals.	0	1	1	1	1	4	0.8	1	You take a long waiting time before you meet your health professionals.
RE S6	The health professionals have willingness to help to you.	1	1	1	1	1	5	1	1	The health professionals have willingness to help to you.
RE S7	You can receive an easy appointment system to the health professionals.	-1	1	1	1	1	3	0.6	1	You can receive a quick appointment system to the health professionals.
RE S8	When you talk about your complaint, the health professionals give response rapidly.	1	1	1	0	1	4	0.8	0.67	When you talk about your complaint, the health professionals give response rapidly.
RE S9	When the health professionals prescribe the medicines, these are affordable to you.	-1	1	1	1	1	3	0.6	1	When the health professionals prescribe the medicines, they manage the drugs that are affordable to you.

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
A1	The hospital keeps your information confidentially.	1	1	1	1	1	5	1	1	The hospital keeps your information confidentially.
A2	All health professionals are competence.	1	1	1	1	1	5	1	1	All health professionals are competence.
A3	When you receive treatments, you feel confident and safe.	1	1	1	1	1	5	1	1	When you receive treatments, you feel confident and safe.
A4	There have the adequate staffs in the hospital.	0	1	1	1	1	4	0.8	1	There are the adequate staffs in the hospital.
A5	The health professionals are courteous to the patients.	-1	1	1	1	1	3	0.6	1	The health professionals are courtesy to the patients.
A6	The health professionals have good professional knowledge.	1	1	1	1	1	5	1	1	The health professionals have good professional knowledge.
A7	When you receive medical services, the health professionals have coordination for delivering services.	0	1	1	1	1	4	0.8	1	When you receive medical services, the health professionals cooperate with each other for delivering services.

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
A8	You get the clear instructions of how to take your medication.	1	1	1	1	0	4	0.8	0.67	You get the clear instructions of how to take your medication.
A9	The label on the medication supplied to you is clear to read and easy to understand.	0	1	1	1	0	3	0.6	0.67	The label on the medication supplied to you is clear to read and understand.
A10	You come to this hospital due to the recommendation of the others.	0	1	1	1	0	3	0.6	0.67	You come to this hospital due to the recommendation of the others.
E1	The health professionals give individualized attention to you.	1	1	1	1	1	5	1	1	The health professionals give individualized attention to you.
E2	The health professionals give treatment to you with dignity and respect.	1	1	1	1	1	5	1	1	The health professionals give treatment to you with dignity and respect.
E3	The doctors and other staffs are compassionate to patients.	0	1	1	1	1	4	0.8	1	The health professionals are compassionate to patients.

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
E4	When you consult with the health professionals, the health professionals give enough time to you.	0	1	1	1	1	4	0.8	1	When you consult with the health professionals, they give enough time to you.
E5	When the health professionals give treatment to you, they always consider to you as well as your family.	0	1	0	1	1	3	0.6	0.67	When the health professionals give treatment to you, they always consider to you as well as your family.
E6	The staffs are consistently well mannered and polite.	0	1	1	1	1	4	0.8	1	The staffs are consistently well mannered and polite.
E7	When you need more medical treatment that is not available in this hospital, the health professionals refer to higher level of hospital.	0	1	1	1	1	4	0.8	1	When you need more medical treatment that is not available in this hospital, the health professionals refer you to higher level of hospital.

Item	Question	Item-Objective Congruence (IOC) score								Revised question according to experts' suggestion
		Expert 1	Expert 2	Expert 3 (L)	Expert 4 (L)	Expert 5 (L)	Total Score	Average Score (Total)	Average Score (Local)	
E8	The health professionals have understanding towards your feelings of discomfort.	1	1	1	0	1	4	0.8	0.67	The health professionals have understanding towards your feelings of discomfort.
OS 1	Do you satisfy the services which are given by the hospital? If not, please specify?	0	1	1	1	1	4	0.8	1	Do you satisfy the services which are given by the hospital? If not, please specify?
OS 2	Would you recommend this hospital to your family and friends?	-1	1	1	1	1	3	0.6	1	Would you recommend this hospital to your family and friends?
OS 3	Is there any suggestion would you like to recommend to improve the service quality of this hospital? Please give your opinion.	0	1	1	1	1	4	0.8	1	Is there any suggestion would you like to recommend to improve the service quality of this hospital? Please give your opinion.

4. Revised questionnaires after Item-Objective Congruence (IOC) according to experts' suggestion

Questionnaires (English)

The questionnaire consists of 3 sections. Section A is the questionnaire concerning the patient's socio-demographic and hospital-related variables. Section B is the questionnaire assessing patient's expectations and perceptions on service quality of outpatient department. Section C is overall satisfaction.

Instruction

When you answer the question, please mark (✓) your answer under the number column which is the relevant with your expectation and perception on service quality of outpatient department.

Definition:

- (a) **Expectation** means that patients coming to the outpatient department of public hospitals expect to receive from outpatient hospital services in terms of Tangibles, Reliability, Responsiveness, Assurance, Empathy.
- (b) **Perception** means that patients' actual feelings of the quality of service provided by the outpatient department of public hospitals after receiving the outpatient hospital services in terms of Tangibles, Reliability, Responsiveness, Assurance, Empathy.
- (c) **Service quality** means the difference between perception and expectation, if perceived service quality is greater than expectation it is classified as patient satisfaction and if perceived service quality is lower than expectation it is classified as patient dissatisfaction about service quality
- (d) Explanation for the number regarding expectation and perception

Numbers 1 to 5 indicate the level of service that you expected before receiving the service and the level of service that you actually received with this service. The levels are in the order of very dissatisfied, relatively dissatisfied, neither satisfied nor dissatisfied, relatively satisfied and very satisfied.

Section A. Questionnaires concerning with patient's socio-demographic and hospital-related variables

1.	Age	
2.	Gender	☐ Male ☐ Female
3.	Residence	
4.	Hospital name (Please specify_____)	
5.	Type of service received	☐ Medicine ☐ Surgery ☐ Obstetrics and gynecology ☐ Others (Please specify_____)
6.	Previous experience of attending this outpatient department	☐ Yes ☐ No
7.	Current health status	☐ Good (Medicine/ regular follow up) ☐ Poor (increase drug dosage/frequent follow up) ☐ Worst (take more medicines/very frequent follow up)
8.	Education	☐ Illiterate ☐ Read & write ☐ Primary education ☐ Middle education ☐ High school education ☐ University (currently attending) ☐ Graduate
9.	Monthly income (Kyats)	
10.	Marital status	☐ Yes ☐ No
11.	Occupation	☐ Student ☐ Unemployed ☐ Self-employed ☐ Government staff ☐ Private staff ☐ Others (Please specify_____)
12.	Referral	☐ By healthcare provider ☐ By my own decision
13.	Total hospital cost (Kyats)	

Questionnaires (Myanmar)

**ရန်ကုန်တိုင်းဒေသကြီးရှိ ပြည်သူ့ဆေးရုံများ၏ ပြင်ပလူနာဌာနများတွင်
ဝန်ဆောင်မှုအရည်အသွေးအပေါ်လူနာများ၏ စိတ်ကျေနပ်မှုအခြေအနေ**

သုတေသနမေးခွန်းလွှာအမှတ် -----

ရက်စွဲ-----

မေးခွန်းလွှာတွင် အပိုင်း ၃ ပိုင်း ပါဝင်ပါသည်။ အပိုင်း(က)သည် လူနာ၏ လူမှုစီးပွားဆိုင်ရာ အချက်အလက်များနှင့် လူနာ၏ဆေးရုံနှင့်သက်ဆိုင်သောအချက်အလက်များနှင့်ပတ်သက်သောမေးခွန်းများဖြစ်သည်။ အပိုင်း(ခ)သည်ပြင်ပလူနာဌာန၏ဝန်ဆောင်မှုအရည်အသွေးအပေါ် လူနာ၏မျှော်လင့်ချက်နှင့် အမှန်တကယ်ရရှိမှုအပေါ် အကဲဖြတ်သည့်မေးခွန်းများဖြစ်သည်။ အပိုင်း(ဂ)သည် ယေဘုယျကျေနပ်မှုကို ဆန်းစစ်သော မေးခွန်းများပါဝင်ပါသည်။

ရှင်းလင်းချက်

မေးခွန်းဖြေဆိုသည့်အခါ ပြင်ပလူနာဌာန၏ ဝန်ဆောင်မှုအရည်အသွေးအပေါ် ဝန်ဆောင်မှုမရမီ သင့်မျှော်မှန်းချက် နှင့် အမှန်တကယ်ရရှိမှုနှင့် သက်ဆိုင်သည့် နံပါတ်ကော်လံအောက်တွင် သင့်အဖြေကို အမှန်ခြစ် (✓) ဖြင့် အမှတ်အသားပြုပါ။

အဓိပ္ပာယ်ဖွင့်ဆိုချက်

(က) ဝန်ဆောင်မှုအပေါ်မျှော်လင့်ခြင်း ဆိုသည်မှာ ပြည်သူ့ဆေးရုံများ၏ ပြင်ပလူနာဌာနသို့ ရောက်ရှိလာသော လူနာများသည် မြင်သာထင်သာရှိမှု၊ ယုံကြည်အားထားနိုင်မှု၊ တာဝန်ယူမှု၊ ယုံကြည်စိတ်ချမှု၊ မျှဝေခံစားပေးမှု စသည့် သတ်မှတ်ချက်များဖြင့် ဆေးရုံဝန်ဆောင်မှုများကို ရရှိရန် မျှော်လင့်ထားခြင်းဖြစ်သည်။

(ခ) ဝန်ဆောင်မှုအပေါ်အမှန်တကယ်ရရှိခြင်း ဆိုသည်မှာ ယုံကြည်အားထားနိုင်မှု၊ တာဝန်ယူမှု၊ ယုံကြည်စိတ်ချမှု၊ မျှဝေခံစားပေးမှု စသည့်သတ်မှတ်ချက်များဖြင့် ပြည်သူ့ဆေးရုံများ၏ ပြင်ပလူနာဌာနမှ ဆေးရုံဝန်ဆောင်မှုများကို အမှန်တကယ် လက်ခံရရှိခြင်းဖြစ်ပါသည်။

(ဂ) ဝန်ဆောင်မှုအရည်အသွေးဆိုသည်မှာအမှန်တကယ်ရရှိခြင်းနှင့်မျှော်မှန်းချက်ကြား ကွာခြားချက်ဖြစ်ပါသည်။ ဝန်ဆောင်မှုအရည်အသွေးသည် မျှော်လင့်ထားသည်ထက် ကြီးမားပါက လူနာသည် စိတ်ကျေနပ်မှုရရှိမည်ဖြစ်ပြီး ဝန်ဆောင်မှုအရည်အသွေးသည် မျှော်လင့်ထားသည်ထက်နည်းပါးနေပါက ဝန်ဆောင်မှုအရည်အသွေးနှင့်ပတ်သက်၍ လူနာသည်စိတ်မကျေနပ်မှု ရရှိမည်ဖြစ်ပါသည်။

(ဃ) ဝန်ဆောင်မှုအပေါ်သင့်မျှော်မှန်းချက်နှင့် သင်၏အမှန်တကယ်ရရှိမှုနှင့်စပ်လျဉ်းသည့် နံပါတ်အတွက် ရှင်းလင်းချက်

နံပါတ် ၁ မှ ၅ သည် ဝန်ဆောင်မှုကိုမလက်ခံမီ သင်မျှော်လင့်ထားသည့် ဝန်ဆောင်မှုအဆင့်နှင့် ဤဝန်ဆောင်မှုဖြင့် သင်အမှန်တကယ်လက်ခံရရှိသည့် ဝန်ဆောင်မှုအဆင့်ကိုဖော်ပြသည်။ ဝန်ဆောင်မှုအဆင့်များသည် အလွန်မကျေနပ်၊ မကျေနပ်၊ မသေချာပါ၊ ကျေနပ်၊ အလွန်ကျေနပ် စသည့် အစီအစဉ်တိုင်း ဖြစ်ပါသည်။

အပိုင်း(က) လူမှုစီးပွားဆိုင်ရာအချက်အလက်များ

၁	အသက်	
၂	ကျား/မ	☐ ကျား ☐ မ
၃	နေရပ်လိပ်စာ	
၄	ဆေးရုံအမည်	
၅	ရရှိသောဝန်ဆောင်မှု အမျိုးအစား	☐ ဆေးပညာဌာန ☐ ခွဲစိတ်ဌာန ☐ မီးယပ်နှင့်သားဖွားဌာန ☐ အခြား(ဖော်ပြပေးပါရန်_____)
၆	ယခင်အတွေ့အကြုံ	☐ ရှိ ☐ မရှိ
၇	လက်ရှိကျန်းမာရေး အခြေအနေ	☐ ကောင်းမွန်(ဆေးဝါးသောက်သုံးမှုမရှိ/ဆေးစစ်ခြင်း) ☐ ဆိုးဝါး (ဆေးပမာဏတိုးခြင်း/မကြာခဏဆေးစစ်ခြင်း) ☐ အလွန်ဆိုးဝါး(ဆေးအရေအတွက်ပိုများခြင်း/ အမြဲဆေးစစ်ခြင်း)
၈	ပညာအရည်အချင်း	☐ စာမတတ် ☐ ရေးတတ်/ဖတ်တတ် ☐ မူလတန်းအောင် ☐ အလယ်တန်းအောင် ☐ အထက်တန်းအောင် ☐ တက္ကသိုလ်တက်ရောက်ဆဲ ☐ ဘွဲ့ရ
၉	လစဉ်ဝင်ငွေ(ကျပ်)	
၁၀	အိမ်ထောင်ရေးအခြေအနေ	☐ ရှိ ☐ မရှိ
၁၁	အလုပ်အကိုင်	
၁၂	ဆေးရုံသို့လာရန်ထောက်ခံ ပေးခြင်း	☐ ဆရာဝန် ☐ မိမိဆန်အလျောက်
၁၃	စုစုပေါင်းဆေးရုံကုန်ကျ စရိတ်(ကျပ်)	

အပိုင်း(ဂ) ယေဘုယျကျေနပ်မှု

၁။ ဆေးရုံမှပေးသောဝန်ဆောင်မှုများကို သင်ကျေနပ်မှုရှိပါသလား။ မရှိပါကကျေးဇူးပြုပြီး အသေးစိတ်ဖော်ပြ ပေးပါ။

(၁) အလွန်မကျေနပ်ပါ။

(၂) မကျေနပ်ပါ။

(၃) မသေချာပါ။

(၄) ကျေနပ်ပါသည်။

(၅) အလွန်ကျေနပ်ပါသည်။

၂။ ဤဆေးရုံကို သင့်မိသားစုနှင့် သူငယ်ချင်းများကို အကြံပြု ထောက်ခံမှုပေးချင်ပါသလား။

(၁) လုံးဝထောက်ခံမှု မပေးပါ။

(၂) ထောက်ခံမှုမပေးပါ။

(၃) မဖြေဆိုလိုပါ။

(၄) ထောက်ခံပေးပါမည်။

(၅) လုံးဝထောက်ခံပေးပါမည်။

၃။ ဆေးရုံ၏ဝန်ဆောင်မှုအရည်အသွေးအပေါ်တွင် တိုးတက်မှုရှိစေရန် အကြံပြုစရာများ ရှိပါသလား။ ကျေးဇူးပြု၍ သင့်၏တင်ပြချက်ကို ဖော်ပြပါ။

သင်၏ဖြေကြားပေးမှုအတွက် ကျေးဇူးတင်ရှိပါသည်။

5. The final questionnaires after the reliability test of the pilot study

Informed consent form (English)

Name of Principal Investigator - Ma Yin Phyu Thin

Name of Organization - University of Pharmacy, Mandalay

Title of Study - Assessment of Service Quality in the Outpatient
Department of Public Hospitals in Yangon, Myanmar

Part (A) Participant information sheet

(1) Introduction

I am Ma Yin Phyu Thin, working as an assistant lecturer of Department of Pharmaceutics of University of Pharmacy, Mandalay. I am also a Ph.D. student in Social and Administrative Pharmacy Program attending at the Faculty of Pharmacy, Silpakorn University, Thailand. I am doing research on the "Assessment of Service Quality in the Outpatient Department of Public Hospitals in Yangon, Myanmar".

I am going to give you information and invite you to be the part of this research. Before you decide, you can talk to anyone you feel comfortable with, about the research. This consent form may contain words that you do not understand. Please ask me to stop and we go through the information and I will take time to explain. If you have questions later, you can ask them to me.

(2) Purpose of the research

In this study, I would like to study the assessment of outpatient department's service quality and evaluate the major factors influencing patient satisfaction on improving the healthcare service quality of outpatient department in public hospitals in Yangon, Myanmar. This information gathered from this study might help us to learn where and why the service quality defect can occur, how service quality can be improved based on the patient's satisfaction.

(3) Type of research

This research is the descriptive study. This will involve your participation in about 20 minutes to answer the questionnaire.

(4) Participant selection

You are being invited to take part in this research because you are an outpatient of this hospital.

(5) Voluntary participation

Your participation in this research is entirely voluntary. It is your choice whether to participate or not. Whether you choose to participate or not, all the services you receive at this hospital will continue and nothing will change. You may change your mind later and stop participating even though you agreed earlier.

(6) Procedures

I would like to invite you to take part in this research project. If you accept, you will be asked to answer the face-to-face interview with survey questionnaire. This will take about twenty minutes. The interview will be taken at a place which is comfortable for you. The interview questionnaire will include information about your sociodemographic characteristics, questionnaires assessing service quality and overall satisfaction. If you do not wish to answer any of the questions during the interview, you may say no and the interviewer will move on to the next question. You can express your feelings and opinions freely.

(7) Duration

The research takes place about twenty minutes. During that time, the data will be collected from you when you come to the study site.

(8) Risks and discomforts

You do not have to answer any question or take part in the discussion if you feel the issues are too personal or if talking about them makes you uncomfortable.

(9) Benefits

There will be no directly benefit to you but your participation is likely to help us find the answer to the research question.

(10) Incentives

You will not be provided any incentive to take part in the research. However, I will give you a token (phone bill card) for your time.

(11) Confidentiality

The information that we collect from this research project will be kept confidential and no one but the researchers will be able to see it. Any information about you will have a number on it instead of your name. Only the researchers will know what your number is and we will keep it safely.

(12) Sharing the results

The knowledge that we get from doing this research will be shared to the persons who have the responsibility for the hospital and healthcare system. Confidential information will not be shared. We will publish the results in order that other interested people may learn from the research.

(13) Right to refuse or withdraw

You have a right to withdraw from the study at any time and for any reason, without penalty or loss of benefits that you would otherwise be entitled to receive.

(14) Who to contact

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact Ma Yin Phyu Thin, Department of Pharmaceutics, University of Pharmacy (Mandalay), Phone no – 09448013254 or via e-mail yinphyuthin@gmail.com.

Part (B) Consent form

I have been invited to participate in research of "Assessment of Service Quality in the Outpatient Department of Public Hospitals in Yangon, Myanmar". I understand that I will participate in face-to-face interview and will last about thirty minutes. I have been informed that the risks are minimal. I am aware that there may be no benefit to me personally. I have been given with the name and address of a researcher who can be easily contacted.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this research and understand that I have the right to withdraw from the research at any time without in any way affecting my hospital care and personal life.

Name of Participant _____

Signature of Participant _____

Date (Day/month/year) _____

If illiterate

A literate witness must sign (if possible, this person should be selected by the participant and should have no connection to the research team). Participants who are illiterate should include their thumb-print as well.

Name of witness _____

Thumb-print of participant

Signature of witness _____



Date (Day/month/year) _____

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of witness _____

Signature of witness _____

Date (Day/month/year) _____

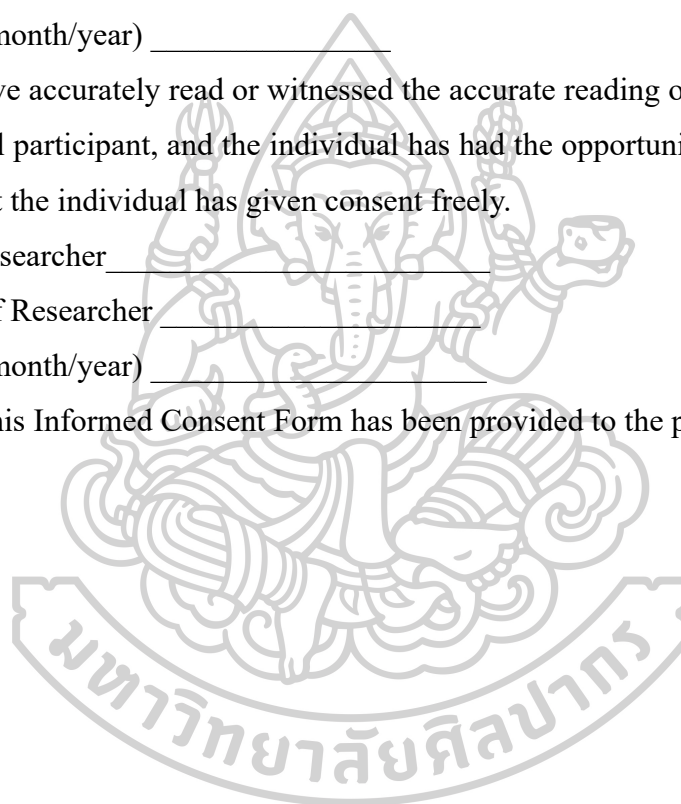
I have accurately read or witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of Researcher _____

Signature of Researcher _____

Date (Day/month/year) _____

A copy of this Informed Consent Form has been provided to the participant.



Informed consent form (Myanmar)

သုတေသနသဘောတူညီချက်ပုံစံ

ဤသဘောတူခွင့်ပြုလွှာသည် “ရန်ကုန်တိုင်းဒေသကြီးရှိပြည်သူ့ဆေးရုံများ၏ပြင်ပလူနာဌာနများတွင် ဝန်ဆောင်မှုအရည်အသွေးကိုလေ့လာခြင်းသုတေသန” ကိုပြုလုပ်ရန်အတွက်ပြင်ပလူနာဌာနများသို့ လာရောက် သော လူနာများကို သုတေသနစီမံချက်တွင် ပါဝင်ရန်ဖိတ်ခေါ်အပ်ပါသည်။

အဓိကသုတေသီ၏အမည် - မယဉ်ဖြူသင်း

အဖွဲ့အစည်းအမည် - ဆေးဝါးတက္ကသိုလ်(မန္တလေး)

သုတေသနခေါင်းစဉ် - ရန်ကုန်တိုင်းဒေသကြီးရှိ ပြည်သူ့ဆေးရုံများ၏ ပြင်ပလူနာဌာနများတွင် ဝန်ဆောင်မှု အရည်အသွေးကို လေ့လာခြင်း သုတေသန

အပိုင်း (က) သုတေသနဆိုင်ရာအချက်အလက်များ

(၁) မိတ်ဆက်

ကျွန်မသည် ဆေးဝါးတက္ကသိုလ်(မန္တလေး)၊ ဆေးဝါးဖော်စပ်ရေးဗေဒဌာနတွင် တာဝန် ထမ်းဆောင် နေသော ဒေါ်ယဉ်ဖြူသင်းဖြစ်ပါသည်။ ထိုင်းနိုင်ငံရှိ Silpakorn University တွင် ပါရဂူဘွဲ့တက်ရောက်နေသော ကျောင်းသူလည်းဖြစ်ပါသည်။ ကျွန်မသည် ရန်ကုန်မြို့ရှိ ပြည်သူ့ ဆေးရုံများ၏ ပြင်ပလူနာဌာနများတွင် ဝန်ဆောင်မှုအရည်အသွေးကိုလေ့လာခြင်း သုတေသန ကို လုပ်ဆောင်နေပါသည်။ သင့်ကို ဤသုတေသနဆိုင်ရာ အချက်အလက်များ ကိုရှင်းလင်းပြပြီး ဤ သုတေသနလုပ်ငန်းတွင်ပါဝင်ရန်ဖိတ်ခေါ်မည် ဖြစ်ပါသည်။ သင်မဆုံးဖြတ်မီ သင်ဆွေးနွေးလိုသူ တစ်ဦးဦးနှင့်လည်း ဆွေးနွေးနိုင်ပါသည်။ ယခု သဘောတူညီချက်ပုံစံတွင် သင်နားမလည်နိုင်သော စကားလုံးများ ပါဝင်နိုင်ပါသည်။ မရှင်းလင်းသည်များကို မေးမြန်းလိုပါက ကျွန်မ ပြောပြနေစဉ် အတွင်း ကြားဖြတ်၍မေးမြန်းနိုင်ပါသည်။ ကျွန်မလည်းအချိန်ယူ၍ ပြန်လည်ရှင်းပြပါမည်။ နောက်မှ မေးမြန်းလိုလျှင်လည်းကျွန်မကိုမေးမြန်းနိုင်ပါသည်။

(၂) ရည်ရွယ်ချက်

ရန်ကုန်မြို့ရှိ ပြည်သူ့ဆေးရုံများ၏ ပြင်ပလူနာဌာနများတွင် ဝန်ဆောင်မှုအရည်အသွေးနှင့် ကျန်းမာရေး စောင့်ရှောက်မှုတိုးတက်ကောင်းမွန်ရေးအတွက် လူနာများ၏ကျေနပ်မှုကို လွှမ်းမိုးသော အဓိက အချက်များကို အကဲဖြတ်လေ့လာရန်ဖြစ်ပါသည်။ ဤသုတေသနရလဒ်များမှတစ်ဆင့် လူနာ စိတ်ကျေနပ်မှုအပေါ် အခြေခံ၍ ဆေးရုံများရှိ ပြင်ပလူနာဌာနများ၏ ဖြစ်ပေါ်နိုင်သည့် ဝန်ဆောင်မှု အရည်အသွေး ချို့ယွင်းချက်များကိုသိရှိနိုင်ပြီး ကောင်းမွန်သောပြောင်းလဲမှုမူဝါဒများ ချမှတ်နိုင်ရန် အထောက်အကူပေးနိုင် မည်ဖြစ်ပါသည်။

(၃) သုတေသနလုပ်ငန်းဆောင်ရွက်မည့်ပုံစံ

ဤသုတေသနလုပ်ငန်းသည် ပြန်လည်ဖော်ပြခြင်းသုတေသနတစ်ခုသာဖြစ်၍ အရေးယူ ဆောင်ရွက်ခြင်း၊ ဝင်ရောက်ပြုပြင်ခြင်းများမပါဝင်ပါ။ ဤသုတေသနတွင် တစ်ဦးချင်းမေးခွန်းများကို ဖြေဆိုရမှာဖြစ်ပြီး အချိန်မီနစ်နစ်ဆယ်ခန့် ကြာမှာဖြစ်ပါသည်။

(၄) သုတေသနတွင်ပါဝင်သူအဖြစ်ရွေးချယ်ခြင်း

သင့်ကို ဤသုတေသနလုပ်ငန်းတွင် ပါဝင်ရန်ဖိတ်ခေါ်ခြင်းမှာ သင့်အနေနဲ့ ဤဆေးရုံ၏ ပြင်ပလူနာ ဖြစ်သောကြောင့် ဖြစ်ပါသည်။

(၅) မိမိဆန္ဒအလျောက် သုတေသနတွင်ပါဝင်ခြင်း

ဤသုတေသနတွင် ပါဝင်ရန်ဆုံးဖြတ်ရန်မှာ သင့်ဆန္ဒအလျောက်သာဖြစ်ပါသည်။ အကယ်၍ သင် သဘောမတူပါကလည်း သင့်ကို မည်သို့မျှထိခိုက်နိုင်မည် မဟုတ်ပါ။ သင်ယခုခံယူနေရသည့် ဆေးရုံ၏ကုသစောင့်ရှောက်မှုများနှင့် နောင်ပြန်လည်ပြသည့်အခါများ၌ စောင့်ရှောက်ပေးမှုများ ပြောင်းလဲခြင်း မရှိစေရပါ။ သင့်အနေဖြင့် ဤသုတေသနတွင် ပါဝင်နေစဉ်အတွင်းတွင်လည်း ဆန္ဒ မရှိလျှင် ပါဝင်ခြင်းမှရပ်စဲနိုင်ပါသည်။

(၆) ဆောင်ရွက်မည့်လုပ်ငန်းများ

ဤသုတေသနတွင် ပါဝင်ရန် သင့်ကိုဖိတ်ခေါ်ပါသည်။ ဤသုတေသနတွင် ပါဝင်ရန် သဘော တူညီပါကမေးခွန်းလွှာကိုအသုံးပြု၍မိနစ်နှစ်ဆယ်ကြာခန့်မေးမြန်းမည်ဖြစ်ပါသည်။ သင်အဆင်ပြေ သည့် နေရာတွင်သာမေးမြန်းပါမည်။ သင့်အား ပြင်ပလူနာဌာန၏ဝန်ဆောင်မှုနှင့် ၎င်းဝန်ဆောင်မှု အပေါ်စိတ်ကျေနပ်ခြင်းများ ပါဝင်သော မေးခွန်းများကိုမေးမြန်းမည်ဖြစ်ပါသည်။ သင်မဖြေဆို လိုသောမေးခွန်းများပါရှိခဲ့လျှင် မဖြေဆိုဘဲ နောက်မေးခွန်းတစ်ခုကို မေးမြန်းပေးသွားပါမည်။ ထို့အပြင် သင်၏ ခံစားချက်များ၊ အတွေးအမြင်များကို လွတ်လပ်စွာပြောပြနိုင်ပါသည်။

(၇) အချိန်ကြာမြင့်မှု

ဤသုတေသနပြုလုပ်ရန် သင့်အနေဖြင့် မိနစ်နှစ်ဆယ်ခန့်အချိန်ပေးရမည်ဖြစ်ပါသည်။

(၈) ထိခိုက်နိုင်မှုနှင့်ကိုယ်စိတ်အနှောင့်အယှက်ဖြစ်စေခြင်းများ

မေးခွန်းများဖြေဆိုရာတွင် စိတ်အနှောင့်အယှက်ဖြစ်၍ မဖြေဆိုလိုသော မေးခွန်းများရှိပါက သင့်ဆန္ဒအလျောက် မဖြေဆိုဘဲငြင်းဆိုနိုင်ပါသည်။

(၉) အကျိုးကျေးဇူးများ

ဤသုတေသနတွင်ပါဝင်ခြင်းဖြင့် သင့်အတွက်တိုက်ရိုက်အကျိုးကျေးဇူးမရှိနိုင်ပါ။ သို့သော် သင်၏ပါဝင်မှုသည် သုတေသနမေးခွန်းအတွက်အဖြေကို ရှာဖွေရန် ကျွန်ုပ်တို့အားအထောက်အကူပြု လိမ့်မည်။

(၁၀) ကျေးဇူးတုန့်ပြန်မှု

သင်သည် ဤသုတေသနတွင်ပါဝင်မှုအတွက် ကျွန်ုပ်တို့သည်ကျေးဇူးတုန့်ပြန်သည့်အနေဖြင့် ဖုန်းငွေဖြည့် ကဒ်လက်ဆောင်ပေးမည်ဖြစ်ပါသည်။

(၁၁) လျှို့ဝှက်ခြင်း

ဤသုတေသနမှရရှိသောသတင်းအချက်အလက်များကိုလျှို့ဝှက်ထားမည်။ သင့်အကြောင်း ကို ယခုသုတေသနအဖွဲ့ဝင်များမှလွဲ၍ အခြားသူများနှင့် ပြောဆိုခြင်းပြုမည်မဟုတ်ပါ။ လျှို့ဝှက်ထား မည်ဖြစ်ပါသည်။ အကြောင်းအရာအချက်အလက်များကို သင့်အမည်ဖြင့်မမှတ်ဘဲ၊ ဂဏန်းအမှတ် အသားဖြင့်သာမှတ်ပါမည်။ ၎င်းဂဏန်းအမှန်ကိုလည်း သုတေသနအဖွဲ့ဝင်များသာ သိရှိမည်ဖြစ်ပြီး အကြောင်းအရာများကို လုံခြုံစွာ သိမ်းဆည်းထားမည်ဖြစ်ပါသည်။ အခြားသူများမသိရှိစေရပါ။

(၁၂) သုတေသနရလဒ်များကိုဖြန့်ဝေခြင်း

ဤသုတေသနမှ ရလဒ်များကိုဆေးရုံများ၏ အရည်အသွေးတိုးတက်ရေးအတွက် ဆေးရုံရှိ တာဝန်ရှိ ပုဂ္ဂိုလ်များနှင့် ကျန်းမာရေးစနစ်အတွက် တာဝန်ရှိပုဂ္ဂိုလ်များအား သိစေမှာဖြစ်ပါသည်။ ၎င်းနောက် အခြား စိတ်ဝင်စားသူများလေ့လာနိုင်ရန် စာတမ်းပြုစုထုတ်ဝေပါမည်။

(၁၃) ငြင်းပယ်မှုနှင့်နှုတ်ထွက်ခွင့်အခွင့်အရေး

သင်သည် သင်ရရှိခွင့်ရှိသော အကျိုးခံစားခွင့်များကို ဒဏ်ကြေး (သို့) ဆုံးရှုံးခြင်းမရှိဘဲ အချိန်မရွေး၊ မည်သည့်အကြောင်းကြောင့်မဆို ဤသုတေသနမှနှုတ်ထွက်ခွင့်ရှိပါသည်။

(၁၄) ဆက်သွယ်ရန်

သင့်အနေဖြင့် ဤသုတေသနနှင့်ပတ်သက်၍ မေးမြန်းရန်ရှိပါက ကျွန်ုပ်တို့ကို ယခုဖြစ်စေ နောင်တွင်ဖြစ်စေ မေးမြန်းနိုင်ပါသည်။ အကယ်၍နောင်မှမေးမြန်းလိုလျှင် ကျွန်ုပ်တို့ မယဉ်ဖြူသင်း၊ ဆေးဝါးဖော်စပ်ရေးဗေဒဌာန၊ ဆေးဝါးတက္ကသိုလ်(မန္တလေး)၊ ဖုန်း ၀၉၄၄၈၀၃၂၅၄ ၊ email-yinphyuthin@gmail.com သို့မေးမြန်းနိုင်ပါသည်။

အပိုင်း (ခ) သုတေသနလုပ်ငန်းတွင်ပါဝင်ရန် သဘောတူညီချက်

ကျွန်ုပ်တို့သည် ရန်ကုန်တိုင်းဒေသကြီးရှိ ပြည်သူ့ဆေးရုံများ၏ ပြင်ပလူနာဌာနများတွင် ဝန်ဆောင်မှု အရည်အသွေးကိုလေ့လာခြင်း သုတေသနလုပ်ငန်းတွင် ပါဝင်ရန်ဖိတ်ခေါ်ခြင်းခံရပါ သည်။ ဤသုတေသနတွင်ပါဝင်ပါက ကျွန်ုပ်တို့သည် သုတေသနနှင့်ပတ်သက်သော အချက်အလက် များကို တစ်ဦးချင်းမေးခွန်းများ မေးမြန်းခြင်းအား မိနစ် (၂၀)ခန့် ဖြေဆိုရမည်ကို သိရှိပြီးဖြစ်ပါသည်။ ဤသုတေသနတွင် ပါဝင်ခြင်းဖြင့် ကျွန်ုပ်တို့အတွက်တိုက်ရိုက်အကျိုးကျေးဇူးမရှိနိုင်ပါ။ ထို့အပြင် ဤ သုတေသနတွင် ပါဝင်သည့်အတွက်ကြောင့် ပါဝင်သူအနေဖြင့် ငွေကြေး (သို့) ပစ္စည်းတစ်စုံတစ်ရာမျှ အကျိုးခံစားခွင့်ရရှိမည် မဟုတ်ကြောင်းကို လည်း သိရှိပါသည်။

ဤသုတေသနတွင် ကျွန်ုပ်တို့သည် အထက်ဖော်ပြချက်များကိုဖတ်ရှုပြီးဖြစ်ပါသည်။ မရှင်းလင်း သည့် မေးခွန်းများကိုလည်း မေးမြန်းနိုင်၍ ၎င်းတို့ကို ကျွန်ုပ်တို့ကျေနပ်သည်အထိ ဖြေဆိုပေးပါသည်။ ကျွန်ုပ်တို့ဆန္ဒအလျောက် ဤသုတေသနလုပ်ငန်းတွင် ပါဝင်စေပါသည်။ ဤသုတေသနတွင် ပါဝင် ဆောင်ရွက်ရန် ငြင်းပယ် (သို့) နုတ်ထွက်ခြင်းဖြင့် ကျွန်ုပ်တို့ရရှိမည့်အခွင့်အရေးများ ဆုံးရှုံးစေခြင်းမရှိ ကြောင်းကိုလည်း နားလည်ထား ပါသည်။

သုတေသနတွင်ပါဝင်သူ၏ အမည် _____

သုတေသနတွင်ပါဝင်သူ၏ လက်မှတ် _____

ရက်စွဲ _____

အကယ်၍စာမတတ်မြောက်သူဖြစ်ပါက _____

သုတေသနတွင်ပါဝင်သူ၏ လက်ဗွေပုံစံ _____

ကျွန်ုပ်တို့၏ရှေ့မှောက်၌ သုတေသနတွင်ပါဝင်သူများအား သဘောတူညီချက်ကို တိကျ မှန်ကန်စွာ ဖတ်ပြပြီးဖြစ်သည်။ နားမလည်သည်များကိုမေးပိုင်ခွင့်ရှိသည်။ ထိုသူသည်ဆန္ဒအလျောက် သာ သဘောတူညီချက်ကို လွတ်လပ်စွာပေးကြောင်း ထောက်ခံအတည်ပြုပြီးဖြစ်ပါသည်။

အသိသက်သေ၏ အမည် _____

အသိသက်သေ၏ လက်မှတ် _____

ရက်စွဲ _____

သုတေသနတွင်ပါဝင်မည့်သူအား သဘောတူခွင့်ပြုချက်ပုံစံကိုတိကျစွာဖတ်ရှုခြင်း (သို့) မျက်မြင် သက်သေပြပြီးတစ်ဦးချင်းအနေဖြင့်မေးခွန်းများမေးပါသည်။ တစ်ဦးချင်းအနေဖြင့် ခွင့်ပြုချက်ကို လွတ်လပ်စွာ ပေးကြောင်း ကျွန်ုပ်အတည်ပြုပါသည်။

သုတေသီ၏ အမည် _____

သုတေသီ၏ လက်မှတ် _____

ရက်စွဲ _____

ဤသဘောတူခွင့်ပြုလွှာမိတ္တူတစ်စောင်ကို သုတေသနတွင်ပါဝင်မည့်သူအား ပေးအပ်ပြီးဖြစ်ပါသည်။



Questionnaires (English)

The questionnaire consists of 3 sections. Section A is the questionnaire concerning the patient's socio-demographic and hospital related variables. Section B is the questionnaire assessing patient's expectation and perception on service quality of outpatient department. Section C is overall satisfaction.

Instruction

When you answer the question, please mark (✓) your answer under the number column which is the relevant with your expectation and perception on service quality of outpatient department.

Definition:

- (a) **Expectation** means that patients coming to the outpatient department of public hospitals expect to receive from outpatient hospital services in terms of Tangibles, Reliability, Responsiveness, Assurance, Empathy.
- (b) **Perception** means that patients' actual feelings of the quality of service provided by the outpatient department of public hospitals after receiving the outpatient hospital services in terms of Tangibles, Reliability, Responsiveness, Assurance, Empathy.
- (c) **Service quality** means the difference between perception and expectation, if perceived service quality is greater than expectation it is classified as patient satisfaction and if perceived service quality is lower than expectation it is classified as patient dissatisfaction about service quality
- (d) Explanation for the number regarding expectation and perception

Numbers 1 to 5 indicate the level of service that you expected before receiving the service and the level of service that you actually received with this service. The levels are in the order of very dissatisfied, relatively dissatisfied, neither satisfied nor dissatisfied, relatively satisfied and very satisfied.

Section A. Questionnaires concerning with patient's socio-demographic and hospital related variables

1.	Age	
2.	Gender	☐ Male ☐ Female
3.	Residence	
4.	Hospital name (Please specify_____)	
5.	Type of service received	☐ Medicine ☐ Surgery ☐ Obstetrics and gynecology ☐ Others (Please specify_____)
6.	Previous experience of attending this outpatient department	☐ Yes ☐ No
7.	Current health status	☐ Good (Medicine/ regular follow up) ☐ Poor (increase drug dosage/frequent follow up) ☐ Worst (take more medicines/very frequent follow up)
8.	Education	☐ Illiterate ☐ Read & write ☐ Primary education ☐ Middle education ☐ High school education ☐ University (currently attending) ☐ Graduate
9.	Monthly income (Kyats)	
10.	Marital status	☐ Yes ☐ No
11.	Occupation	☐ Student ☐ Unemployed ☐ Self-employed ☐ Government staff ☐ Private staff ☐ Others (Please specify_____)
12.	Referral	☐ By healthcare provider ☐ By my own decision
13.	Total hospital cost (Kyats)	

4.	When you consult with the health professionals, they give enough time to you.												
5.	The staffs are consistently well mannered and polite.												
6.	When you need more medical treatment that is not available in this hospital, the health professionals refer you to higher level of hospital.												
7.	The health professionals have understanding towards your feelings of discomfort.												

Section C. Overall satisfaction

6. Do you satisfy the services which are given by the hospital? If not, please specify?

6. Very dissatisfied

7. Relatively dissatisfied

8. Neither satisfied nor dissatisfied

9. Relatively satisfied

10. Very satisfied

7. Would you recommend this hospital to your family and friends?

8. Will not strongly recommend

9. Will not recommend

10. Unwilling to answer

11. Will recommend

12. Will strongly recommend

13. Is there any suggestion would you like to recommend to improve the service quality of this hospital? Please give your opinion.

Thank you for your participation.

Questionnaires (Myanmar)

ရန်ကုန်တိုင်းဒေသကြီးရှိ ပြည်သူ့ဆေးရုံများ၏ ပြင်ပလူနာဌာနများတွင် ဝန်ဆောင်မှုအရည်အသွေးအပေါ်လူနာများ၏ စိတ်ကျေနပ်မှုအခြေအနေ

သုတေသနမေးခွန်းလွှာအမှတ် -----

ရက်စွဲ-----

မေးခွန်းလွှာတွင် အပိုင်း ၃ ပိုင်း ပါဝင်ပါသည်။ အပိုင်း(က)သည် လူနာ၏ လူမှုစီးပွားဆိုင်ရာ အချက်အလက်များနှင့် လူနာ၏ဆေးရုံနှင့်သက်ဆိုင်သောအချက်အလက်များနှင့်ပတ်သက်သောမေးခွန်းများဖြစ်သည်။ အပိုင်း(ခ)သည်ပြင်ပလူနာဌာန၏ဝန်ဆောင်မှုအရည်အသွေးအပေါ် လူနာ၏မျှော်လင့်ချက်နှင့် အမှန်တကယ်ရရှိမှုအပေါ် အကဲဖြတ်သည့်မေးခွန်းများဖြစ်သည်။ အပိုင်း(ဂ)သည် ယေဘုယျကျေနပ်မှုကို ဆန်းစစ်သော မေးခွန်းများပါဝင်ပါသည်။

ရှင်းလင်းချက်

မေးခွန်းဖြေဆိုသည့်အခါ ပြင်ပလူနာဌာန၏ ဝန်ဆောင်မှုအရည်အသွေးအပေါ် ဝန်ဆောင်မှုမရမီ သင့်မျှော်မှန်းချက် နှင့် အမှန်တကယ်ရရှိမှုနှင့် သက်ဆိုင်သည့် နံပါတ်ကော်လံအောက်တွင် သင့်အဖြေကို အမှန်ခြစ် (✓) ဖြင့် အမှတ်အသားပြုပါ။

အဓိပ္ပာယ်ဖွင့်ဆိုချက်

(က) ဝန်ဆောင်မှုအပေါ်မျှော်လင့်ခြင်း ဆိုသည်မှာ ပြည်သူ့ဆေးရုံများ၏ ပြင်ပလူနာဌာနသို့ ရောက်ရှိလာသော လူနာများသည် မြင်သာထင်သာရှိမှု၊ ယုံကြည်အားထားနိုင်မှု၊ တာဝန်ယူမှု၊ ယုံကြည်စိတ်ချမှု၊ မျှဝေခံစားပေးမှု စသည့် သတ်မှတ်ချက်များဖြင့် ဆေးရုံဝန်ဆောင်မှုများကို ရရှိရန် မျှော်လင့်ထားခြင်းဖြစ်သည်။

(ခ) ဝန်ဆောင်မှုအပေါ်အမှန်တကယ်ရရှိခြင်း ဆိုသည်မှာ ယုံကြည်အားထားနိုင်မှု၊ တာဝန်ယူမှု၊ ယုံကြည်စိတ်ချမှု၊ မျှဝေခံစားပေးမှု စသည့်သတ်မှတ်ချက်များဖြင့် ပြည်သူ့ဆေးရုံများ၏ ပြင်ပလူနာဌာနမှ ဆေးရုံဝန်ဆောင်မှုများကို အမှန်တကယ် လက်ခံရရှိခြင်းဖြစ်ပါသည်။

(ဂ) ဝန်ဆောင်မှုအရည်အသွေးဆိုသည်မှာအမှန်တကယ်ရရှိခြင်းနှင့်မျှော်မှန်းချက်ကြား ကွာခြားချက်ဖြစ်ပါသည်။ ဝန်ဆောင်မှုအရည်အသွေးသည် မျှော်လင့်ထားသည်ထက် ကြီးမားပါက လူနာသည် စိတ်ကျေနပ်မှုရရှိမည်ဖြစ်ပြီး ဝန်ဆောင်မှုအရည်အသွေးသည် မျှော်လင့်ထားသည်ထက်နည်းပါးနေပါက ဝန်ဆောင်မှုအရည်အသွေးနှင့်ပတ်သက်၍ လူနာသည်စိတ်မကျေနပ်မှု ရရှိမည်ဖြစ်ပါသည်။

(ဃ) ဝန်ဆောင်မှုအပေါ်သင့်မျှော်မှန်းချက်နှင့် သင်၏အမှန်တကယ်ရရှိမှုနှင့်စပ်လျဉ်းသည့် နံပါတ်အတွက် ရှင်းလင်းချက်

နံပါတ် ၁ မှ ၅ သည် ဝန်ဆောင်မှုကိုမလက်ခံမီ သင်မျှော်လင့်ထားသည့် ဝန်ဆောင်မှုအဆင့်နှင့် ဤဝန်ဆောင်မှုဖြင့် သင်အမှန်တကယ်လက်ခံရရှိသည့် ဝန်ဆောင်မှုအဆင့်ကိုဖော်ပြသည်။ ဝန်ဆောင်မှုအဆင့်များသည် အလွန်မကျေနပ်၊ မကျေနပ်၊ မသေချာပါ၊ ကျေနပ်၊ အလွန်ကျေနပ် စသည့် အစီအစဉ်တိုင်း ဖြစ်ပါသည်။

အပိုင်း(က) လူမှုစီးပွားဆိုင်ရာအချက်အလက်များ

၁	အသက်	
၂	ကျား/မ	☐ ကျား ☐ မ
၃	နေရပ်လိပ်စာ	
၄	ဆေးရုံအမည်	
၅	ရရှိသောဝန်ဆောင်မှု အမျိုးအစား	☐ ဆေးပညာဌာန ☐ ခွဲစိတ်ဌာန ☐ မီးယပ်နှင့်သားဖွားဌာန ☐ အခြား(ဖော်ပြပေးပါရန် _____)
၆	ယခင်အတွေ့အကြုံ	☐ ရှိ ☐ မရှိ
၇	လက်ရှိကျန်းမာရေး အခြေအနေ	☐ ကောင်းမွန်(ဆေးဝါးသောက်သုံးမှုမရှိ/ဆေးစစ်ခြင်း) ☐ ဆိုးဝါး (ဆေးပမာဏတိုးခြင်း/မကြာခဏဆေးစစ်ခြင်း) ☐ အလွန်ဆိုးဝါး(ဆေးအရေအတွက်ပိုများခြင်း/ အမြဲဆေးစစ်ခြင်း)
၈	ပညာအရည်အချင်း	☐ စာမတတ် ☐ ရေးတတ်/ဖတ်တတ် ☐ မူလတန်းအောင် ☐ အလယ်တန်းအောင် ☐ အထက်တန်းအောင် ☐ တက္ကသိုလ်တက်ရောက်ဆဲ ☐ ဘွဲ့ရ
၉	လစဉ်ဝင်ငွေ(ကျပ်)	
၁၀	အိမ်ထောင်ရေးအခြေအနေ	☐ ရှိ ☐ မရှိ
၁၁	အလုပ်အကိုင်	
၁၂	ဆေးရုံသို့လာရန်ထောက်ခံ ပေးခြင်း	☐ ဆရာဝန် ☐ မိမိဆန်အလျောက်
၁၃	စုစုပေါင်းဆေးရုံကုန်ကျ စရိတ်(ကျပ်)	

၂	ကျန်းမာရေးစောင့်ရှောက်မှုပေးသောသူများသည် သင်အပါအဝင် လူနာတစ်ဦးချင်းစီကို ဂုဏ်သိက္ခာရှိရှိ လေးစားစွာဖြင့် ကုသမှုပေးပါသည်။											
၃	ကျန်းမာရေးစောင့်ရှောက်မှုပေးသောသူများသည် သင့်အပေါ် သနားကြင်နာမှုရှိပါသည်။											
၄	သင်၏ကျန်းမာရေးကိစ္စများကို ဆရာဝန်နှင့် ဆွေးနွေးရာတွင် ဆရာဝန်က သင့်အား လုံလောက်သောအချိန်ပေးပါသည်။											
၅	ဝန်ထမ်းများ၏အပြုအမူများသည် အမြဲတမ်း ယဉ်ကျေးပြီး ကောင်းမွန်ပါသည်။											
၆	သင်သည် ဤဆေးရုံတွင် မရရှိနိုင်သည့် ဆေးကုသမှုခံယူရန် လိုအပ်ပါက ဆရာဝန်များက ပိုမိုမြင့်မားသော ဆေးရုံ အဆင့်ဆင့်သို့ သင့်အား ညွှန်ပြပေးပါသည်။											
၇	ကျန်းမာရေးပညာရှင်များသည်သင်၏ မသက်သာသောခံစားချက်များကိုနားလည်သဘောပေါက်ပါသည်။											



အပိုင်း(ဂ) ယေဘုယျကျေနပ်မှု

၁။ ဆေးရုံမှပေးသောဝန်ဆောင်မှုများကို သင်ကျေနပ်မှုရှိပါသလား။ မရှိပါကကျေးဇူးပြုပြီး အသေးစိတ်ဖော်ပြ ပေးပါ။

(၁) အလွန်မကျေနပ်ပါ။

(၂) မကျေနပ်ပါ။

(၃) မသေချာပါ။

(၄) ကျေနပ်ပါသည်။

(၅) အလွန်ကျေနပ်ပါသည်။

၂။ ဤဆေးရုံကို သင့်မိသားစုနှင့် သူငယ်ချင်းများကို အကြံပြု ထောက်ခံမှုပေးချင်ပါသလား။

(၁) လုံးဝထောက်ခံမှု မပေးပါ။

(၂) ထောက်ခံမှုမပေးပါ။

(၃) မဖြေဆိုလိုပါ။

(၄) ထောက်ခံပေးပါမည်။

(၅) လုံးဝထောက်ခံပေးပါမည်။

၃။ ဆေးရုံ၏ဝန်ဆောင်မှုအရည်အသွေးအပေါ်တွင် တိုးတက်မှုရှိစေရန် အကြံပြုစရာများ ရှိပါသလား။ ကျေးဇူးပြု၍ သင့်၏တင်ပြချက်ကို ဖော်ပြပါ။

သင်၏ဖြေကြားပေးမှုအတွက် ကျေးဇူးတင်ရှိပါသည်။

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