

EXPLORING THE INFLUENCE OF SERVICE QUALITY (SQ) ON PATIENT SATISFACTION (PS): A CASE STUDY OF UNIVERSITI MALAYSIA PAHANG HEALTH CENTRE (UMPHC)

Khairul Salleh Abdul Basit ^{1*}, and Suhaidah Hussain ¹

¹Faculty of Industrial Management, Universiti Malaysia Pahang, Lebuhraya Tun Razak, 26300 Gambang, Pahang, Malaysia

ABSTRACT – Patient satisfaction and healthcare service quality has been studied for ages. Primary care centre such as UMP Health Centre (UMPHC) is the intermediaries between patients and hospital referral. Hence, they have the most contact and influence on customers because they are convenient and strategic, and become the primary direct contact with patients on a daily basis, especially the university community. As healthcare organizations are trying to improve their return on investment, UMPHC has started to implement steps in curbing patient dissatisfaction issues with the study of service quality and patient satisfaction. In this paper, the author looks into the dimensions of service quality that influence patient satisfaction in their visits and appointments at UMPHC. The impact of various service quality dimensions on patient satisfaction is studied to understand how those factors relate to the patient's expectations and perceptions. In this qualitative case study, semi-structured interviews were conducted with fourteen students and four staff who visited UMPHC and the results were analyzed through thematic analysis. In this research, seven themes namely responsiveness, reliability, assurance, empathy, tangible, technical quality, and elements that could improve patient satisfaction are created which further branches to a total of 21 sub-themes. The location of UMPHC or accessibility to the services, dental services, staff's attitude and communication skills, consistency in following the standard operating procedures, waiting time, technical quality as well as health education were amongst the most important factors affecting patient satisfaction. The UMPHC health managers are recommended to focus on the above aspects and implement appropriate management decisions to improve patient satisfaction.

ARTICLE HISTORY

Received: 22-7-2022

Revised: 26-9-2022

Accepted: 24-11-2022

KEYWORDS

Primary Healthcare

Service Quality

Patient Satisfaction

INTRODUCTION

Numerous studies on the relationship between service quality (SQ), patient satisfaction (PS) and the factors influencing them in healthcare sectors has been established since the 1980s (Abu-Rummanet al., 2021; Ampaw et al., 2020; Amyx et al., 2000; Chow et al., 2009; Hayek et al., 2020; McGhan et al., 2019; Xu et al., 2021). However, similar studies in a primary care setting like a university health center are still scarce, especially in Malaysia (Larasanty et al., 2019; Lim et al., 2021; Tan & Lee, 2019). Ernawaty et al. (2020), Setyawan et al. (2020), and Supriyanto et al. (2020) said that patient satisfaction is the yardstick by which healthcare quality is measured. They analyzed the impact of the perceived SQ in the healthcare sector on patients' satisfaction, which ultimately leads to patient loyalty. This argument has been supported by Asif et al. (2019), Baek et al. (2017), Hussain et al. (2019), Jameel et al. (2019), Lam et al. (2018), and Yeo et al. (2021). Patients and the general public perceive SQ in a healthcare organization as a service that could meet their expectations and is arranged in such a way that it is polite, timely, responsive, and capable of resolving complaints and preventing the spread of disease. Patients or the community's perspectives are critical because satisfied patients will stick to therapy, wish to return for treatment, and become loyal customers. The experience of patients with their visits to the health centre will determine whether or not they will return for follow-up and comply with the treatment prescribed (Ganasegeran et al., 2015; Noor Hazilah Abd Manaf et al., 2007; Pillay et al., 2011; Rahim et al., 2021).

The UMP Health Centre operates on a central budget provided by the university in a public university setting. It offers outpatient therapy as well as other services such as medical laboratory, pharmacy, and ambulance services to the university community. Its primary patients are students, as UMP has an accommodation policy for undergraduate students. Apart from students, the UMP Health Centre also serves employees and their families, as well as vendors. The service quality of UMPHC can be measured through various indicators such as patient satisfaction. Despite the fact that there has been numerous research on PS in Malaysia, there is not much research focusing on PS in university healthcare clinics. Furthermore, the latest advancements in public university healthcare clinics, as well as a predicted increase in patient expectations with service delivery, necessitate additional research to assess current patient satisfaction (Anderson et al., 2001; Ballard et al., 2020; Canel & Anderson Fletcher, 2001; Gliesche et al., 2020; Jackson et al., 2001; James et

al., 2021; Kowalski et al., 2021; Lapane et al., 2016; Lee et al., 2018; Margalit et al., 2004; Sharma et al., 2020; Sounderajah et al., 2021; Wang et al., 2017; Yam et al., 2009). The author's goals are to better understand patient experiences through narratives and viewpoints, as well as to identify patient concerns, dimensions of SQ at UMPHC that influence patient satisfaction, and reasons for dissatisfaction with the current services. This study aimed to explore and investigate patient satisfaction towards outpatient care as well as emergency service qualities at UMP Health Centre. The significance of this research is to enhance the SQ of health care at UMPHC, leading to better consequences, for example, enhanced quality of life and reduced morbidities. The authors argue that there is a need to explore and investigate both the functional and technical quality of UMPHC and its relationship with PS. By knowing and understanding the patients' experiences as well as expectations, the author may offer a diagnosis, strategic alternatives, and practicable solutions to the problems or related issues towards continuous improvement.

LITERATURE REVIEW

An Overview of The Literature Review

Patient satisfaction and service quality are two important aspects of healthcare evaluation. Healthcare services are difficult to be measured due to their intangibility and are considered perishable. Researchers have claimed that assessing the quality of healthcare services is more challenging than assessing the quality of tangible products. Patients usually rate their satisfaction based on the outcomes perceived at the end of treatment or their experiences going through all the procedures starting from appointment registration until they received their medications at the outpatient counter or discharged from admission (Oppel et al., 2017). Based on the existing literature, the author noticed that the discussion about the impact of service quality on patient satisfaction in primary care is still scarce. Primary care is a critical component of all health services around the globe (Hizlinda, 2012). It is the first level of care in the national healthcare system to which communities have access, delivering not only curative treatment but also health promotion, preventative, and rehabilitative services (Chen et al., 2018; Larasanty et al., 2019; Liu et al., 2013; Majeed Alhashem et al., 2011; Pascoe, 1983; Tan & Lee, 2019; Tohid et al., 2012).

In Malaysia, studies on patient satisfaction have been more common in the last twenty years. These studies were conducted in a variety of healthcare settings, including public and private hospitals and primary care clinics. The majority of studies conducted in primary-care settings in Malaysia have shown a greater level of customer happiness (Md Hamzah et al., 2021; Noor Hazilah Abd Manaf et al., 2007; Pillay et al., 2011; Rahim et al., 2021). Patient satisfaction, as explained by Asubonteng et al. (1996), Lenka & Suar (2008), Mamta Brahmabhatt et al. (2011), Mohd Suki et al. (2011), Parasuraman et al. (1985), is defined as a patient's experience and impression that meets or exceeds their expectations. This concept focuses on the service's functional process. Nevertheless, Rashid et al. (2009) argued that patient satisfaction has expanded to include technical features of the service such as technical expertise and competency of the service providers. This argument has been supported by Nwosu & Schwab (2018) and Platonova et al. (2019). According to Mallat et al. (2020), Vogus et al. (2020), and Vogus and McClelland (2016), improper communication of information about the ailment and treatment is the most common source of dissatisfaction. Hence, these clinical issues, as well as comparative competence, experience, and the healthcare provider-patient rapport can be explored as one of the main elements for analysis.

Understanding how experience influences satisfaction can help in explaining why customers who understand life before the existence of UMPHC are more content with UMPHC's services than someone who has never experienced it. A study by Zawisza et al. (2020) revealed that patient-doctor interactions, healthcare access, and other sociodemographic factors have all been identified as potential predictors of patient satisfaction in later life. The ability to talk about private matters, clear communications, being actively involved in decision-making, being handled courteously, lesser waiting time, and easy accessibility to a preferred doctor or other healthcare professional were all used to develop rapport with patients and access to outpatient care. Another study by Ellina et al. (2020), Nursalam et al. (2017), Saxena et al. (2017), and Threapleton et al. (2017) found that satisfaction is higher when doctors follow patients' psychological expectations and demonstrate the ability to combine professional ethics and competencies concerning compassion, and desire to engage in the psychological struggles of older people. Researchers also found out that patients want more specific goals. They preferred Clinical Practice Guidelines (CPG) to serve as reference points for both patients and providers. They felt more comfortable and confident discussing issues pertaining to health if the Standard Operating Procedure (SOP) or Clinical Practice Guidelines (CPG) are made available (Kam et al., 2002). They also mentioned that routine follow-up is a valuable and necessary part of being cared for by health professionals with specialized knowledge (Kyrölä et al., 2019; Lai et al., 2018; Takahashi et al., 2020).

Analytical Features of The Literature Review

In this research, the authors refer to SQ as the healthcare service provider's ability to satisfy customers effectively and efficiently, thereby allowing them to improve their service centre's performance (Mosadeghrad, 2013). There are numerous studies discussing the relationship between functional quality and patient satisfaction. However, not many researchers include both variables of functional as well as technical SQ and study their relationship towards PS, especially in a public university primary health care. According to Becker et al. (2018) and Gatuguta et al. (2021) in the context of healthcare, technical quality refers to the technical precision of clinical diagnosis and management, as well as adherence to job roles, clinical practice guidelines, and standard operating procedures. Studies done by Johnson et al. (2016), Schoeb (2016), and Stefanini et al. (2021) have shown that customer satisfaction levels correlated positively with expert-developed technical quality indexes. It could be due to healthcare professionals that provide excellent technical treatment

taking pleasure in their work, which raises morale and hence affects satisfaction levels. On the other hand, there is other research that argued that patients are in a weaker position in vivo and are clearly unable to discern (Ampaw et al., 2020; Islam & Muhamad, 2021).

When evaluating service quality in a healthcare setting, customers typically focus on variables such as infrastructure, hygiene, food standard, and employees' disposition instead of technical features. Other researchers include service scape such as the interior design and ambience of the physical buildings as the functional quality of health care sectors (Biresaw et al., 2021; Lapin et al., 2019; Tyagiet al., 2019). Whenever patients receive healthcare services, the functional and technical quality of the treatment may have an impact on how he or she perceives SQ. The scenario happened because patients compare their assessment of the healthcare services experience to their expectations before and after the encounter. As a result, a medical service encounter is considered to be of high quality when it reaches or exceeds the degree of patients' expectations (Agarwal & Singh, 2016; Giménez-Díez et al., 2020; Grolet et al., 2021; He & Tang, 2021; Kim-Soon et al., 2021; Lim et al., 2021; Rahman et al., 2021).

This research will close the gap by covering both the technical as well as functional quality. The authors argued that the trend of digitalization and IR4.0 as well as the pandemic crisis has pushed the management of healthcare to review their functional as well as technical service quality and continuously update all their customers about the latest management of healthcare so that their patients can choose the best evidence-based treatment options in order to improve their quality of life.

METHODOLOGY

The research purpose is to explore the effect of SQ dimensions on PS at UMPHC. In this research, the author chose a qualitative approach as a method to collect and analyze the data. This method is more suitable as the author is searching for deeper issues, meanings, and reasons behind the day-to-day activities happening at UMPHC that relate to service quality and patient satisfaction. The authors adopted a case study approach as it is most suitable to reveal the experience and the opinion of the customers who received treatment at UMPHC. The data collection used semi-structured interviews via online platforms as well as face-to-face, based on the latest SOP from the Ministry of Health. The data focused on the expectations and experiences of the respondents receiving treatment at UMP Health Centre. The information was transcribed, translated, coded and analysed using ATLAS ti 22. All of these items are the main input for patient satisfaction or dissatisfaction to justify the service quality of UMP Health Centre. UMP has a population of 12,320 students, 814 academic staff, and 975 administrative staff. The research was conducted by interviewing students and staff (top management, middle managers, supporting staff, and academic as well as non-academic staff). The sampling population was selected from students and staff who have been treated at UMP Health Centre in the year 2018- 2022. This will enrich the data since their sociodemographic backgrounds are different, hence the authors may get a different angle of perspectives in relation to service quality dimensions as well as patient satisfaction. For example, the elderly staff may prefer a detailed consultation with great skills of tender, loving, care. Meanwhile, younger aged students may prefer a fast and prompt treatment and cure. The sample size was determined by saturation, as this is considered the primary means of verification for thematic analysis. Saturation occurred when the interviewing of additional participants did not generate any new themes. Overall saturation was achieved for 14 participants.

RESULTS

Service Quality Dimensions that Influence Patient Satisfaction

For this research, two types of interviews were done with UMPHC stakeholders. The first type was the online focal group amongst students. The second type was face-to-face personal interviews among supporting staff, professionals, and administrators. The interviews were done between 1st March to 30th April 2022. The interviewees gave insights regarding their perception as well as their experience with UMPHC service quality, focusing more on functional quality. During the interview, they also explained their opinion about the technical quality of UMPHC staff. There are eighteen participants in total, comprising fourteen students and four staff. The age of students ranged from 21-26 years old, meanwhile, the age of the staff ranged from 42-53 years old. Out of fourteen students, five are males and nine are females. Meanwhile, there are three male and one female staff participated in this study. Amongst the students' focal group, eight of them stay in Gampang and six students stay in Pekan. Meanwhile, 3 staff work in Gampang and only one staff works in Pekan. From the interviews, six main themes were derived for RQ1, namely Assurance, Empathy, Responsiveness, Reliability, Tangibles, and Technical Quality. Meanwhile, three main themes are derived for RQ2, namely Health Education, Extended Services, and Visibility. These themes were explored to match the research questions and to see if any other factors are left out or new topics related to patient satisfaction and service quality. The findings from the interview answered the first research question: "What are the service quality dimensions that influence patient satisfaction at UMP Health Centre?" were as follows:

Theme 1: Technical Quality

Based on findings from the interviews, the informants described technical quality as the competency of UMPHC staff in history taking, clinical examination, and diagnosis as well as the performance of clinical procedures.

Sub Theme 1(a): History Taking, Clinical Examination & Diagnosis

The interviewees explained how the doctors, staff nurses, and physiotherapist took their clinical history pertaining to their illnesses, examined the affected area professionally, and derived a proper clinical diagnosis. The informants have a mixture of good and poor experiences as stated in the following statements: "...*Oh, it is just a fever, you're just dizzy a bit only, take Panadol and you'll be okay. Is there anything else?*" (Student#5). "...*the way she held my hands is quite rough, and it caused pain*" (Student#13).

Sub Theme 1(a): Clinical Procedure

The interviewees explained their experience in receiving continuous clinical monitoring and detailed clinical procedures such as physiotherapy sessions, venipuncture, and diabetes screening. The informants have a mixture of good, fair, and poor experiences as stated in the following statements: "...*and I was referred to the physiotherapist in this clinic, and he is very professional and examined me systematically...*" (Staff#2). "...*Again, the continuous monitoring and care from the doctors here avoided me from being dependent to the insulin injections, so far...*" (Staff#2). "...*As regards to other UMPHC's staff like the nurses or the Assistant Medical Officers, there aren't many circumstances I can test their competency*" (Staff#4). "...*the way that the needle inserted into my vein was improper and caused a swelling, redness and pain at the puncture site...*" (Staff#2). "...*It was brought to our attention that the patient's hand (cubital-fossa) was swollen, in pain and bruising at the punctured area...*" (Student#11).

Theme 2: Reliability and Patient Satisfaction

Based on findings from the interviews, the informants described reliability as privacy and confidentiality of their medical data as well as the consistency in following the SOPs as per CPG (Clinical Practice Guidelines).

Sub Theme 2(a): Privacy and Confidentiality

The interviewees explained how well the UMPHC staff takes care of their clinical case records in terms of patients' privacy as well as confidentiality. The statement is as follows: "*Yes, I trust them because I have never heard of any talk or any leaked information about my medical history...*" (Staff#1). Besides that, some of the informants experienced poor service quality in terms of privacy and confidentiality as the statement below: "...*one of the attending staff talk very loud to her colleague about my illnesses. I was annoyed that she did not take care of my privacy and confidentiality*" (Student#13).

Sub Theme 2(b): Consistency in Following the SOPs

According to the feedback from the informants, some of them feel good while others feel fair with regard to the consistency of UMPHC staff in following the SOPs (CPG). The interviewees expressed their happiness in terms of the clinician's consistency in following the SOPs, especially during the prescription of the medications. The statements are as follows: "*In my experience, all doctors here were extremely careful in prescribing the medicines...*" (Staff#2). "...*UMPHC needs to be more up to date with regard to the current situation and latest information from MOH...*" (Student#3). Besides that, some of the informants expressed their concerns about the inconsistencies of SOPs in managing COVID-19 issues, as well as the operating hours of UMPHC. It is found in the following statement: "*There have been many times such cases where the operation of the UMPHC is closed before 4:30 pm...*" (Student#8). "*A student tested positive for COVID-19 and he was not brought into the campus for quarantine...*" (Student#12).

Theme 3: Responsiveness

Based on findings from the interviews, the informants described responsiveness as waiting time as well as the appointment and follow-up.

Sub Theme 3(a): Waiting Time

In terms of waiting time, the informants expressed their satisfaction in terms of responsiveness and speed in receiving treatment at UMPHC. They have a mixture of good, fair, and poor experiences as stated in the following statements: "*Based on my experience, the services delivered by UMPHC are quite fast and responsive*" (Student#1). "...*UMPHC seems to be okay. The waiting time for treatment is acceptable*" (Student#3). "*Patients have to wait for a long queue outside the building. They felt uncomfortable as the weather is very hot*" (Student#11).

Sub Theme 3(b): Appointment and Follow-up

The interviewees expressed their satisfaction with the regular appointment and follow up that they received at UMPHC assisted them to improve their quality of life. They experienced good, fair, and poor situations stated in the following statements: "*The continuous health education and regular follow-up that I received from the doctors here are extraordinary...*" (Staff#2). "...*every time I went there, the appointment and follow up, is okay and I don't feel irritable or annoyed...*" (Staff#4). "...*when I reached UMPHC, the staff rejected the appointment and set another appointment. It's quite depressing and too much hassle*" (Student#11).

Theme 4: Empathy

Sub Theme 4(a): Customer Engagement, Openness, And Hospitality

UMPHC staff showed excellent customer engagement, and were very helpful to their customers, especially to the senior staff. However, some of the interviewees explained their concerns about poor customer engagement, especially at the registration counter. The informants' mixture of good, fair and poor experiences is stated below: "...and now UMPHC has developed so fast to actually become one of the most efficient service units in this university. And I have always been treated well whenever I visit the UMPHC" (Staff#1). "...they knew why I visit UMPHC just by looking at my ID. I always get the respect right from the registration counter until I exit the clinic" (Staff#2). "...in terms of empathy of UMPHC staff towards me, they are very helpful" (Staff#3). "The doctor explained the details of everything. The pharmacy's staff was also very professional with a detailed explanation about the medicines prescribed" (Student#14). "There are times when UMPHC staff like moody and they don't seem to be customer-friendly" (Student#3). "However, me and my friends had a bad experience when it comes to the telephone conversation answered by front desk/registration counter staff" (Student#1).

Sub Theme 4(b): Communication Skills

The staff category of informants revealed that good communication skill was demonstrated by the UMPHC staff. However, the student category said that the attending staff at the registration counter were rude to customers: "...they asked whether the patients are comfortable in the waiting area, in a while, they come back to me and mentioned that there are a few more people waiting and told us to be patient" (Staff#1). "The front desk staff are very friendly. They explain to me the need to be registered before seeing the doctors" (Staff#2). "...the UMPHC staff at the registration counter asked "May I help you? What can we do for you?" (Student#14). "I have a bad experience with UMPHC staff. To me, their attitude is not professional and very rude to customers" (Student#9). "The way they answered the call is rather rude" (Student#1). "...when I told him that, he asked me to refer the cases to MPP first and the way he told me was kind of rude" (Student#1).

Theme 5: Assurance Sub

Theme 5(a): Safety

The majority of the interviewees felt very safe and assured when their clinical issues were resolved immediately. "So far, I felt very safe in terms of that because I never had to seek a second opinion in whatever problem that I have when I consulted the UMPHC clinician..." (Staff#1). "I think everything is fine and I'm fairly satisfied with the services offered" (Student#14). However, an interviewee expressed his feeling unsafe when he was doing his work after office hours. "I don't know what number to call if there's any emergency...there is a feeling of unsafe..." (Staff#4). "That's the level of safety and security that I see we're far behind" (Staff#4).

Theme 6: Tangible Factors and Patient Satisfaction

Sub Theme 6(a): Medicines or medications

The interviewees explained their concerns on the side effects of the medicines prescribed as well as the unavailability of chronic illnesses medications: "In terms of giving medicines, so far, no complications or adverse reactions" (Staff#4). "So, most of my medications, I take from this clinic for almost 11 years" (Staff#2). "Sometimes, some medications were not available here, only for a short duration of time, which I need to buy from outside" (staff#2). "There is also feedback from students who said that they usually received a similar type of medicine every time they go to UMPHC" (Student#2).

Sub Theme 6(a): Servicescape, Ambience, Interior Design

The interviewees explain their feeling of calmness and soothing ambience at UMPHC. However, an interviewee explained her unhappiness with the designated canopy for the patients during the COVID-19 pandemic: "So far, the infrastructure available at UMPHC Pekan is good, however, if there is a snacking area in the lobby, it will be better" (Student#5). "For me, okay, UMPHC has a waiting room, there's a registration counter, a procedure room, a lab room, a doctor's examination room, a pharmacy counter, everything is okay for me" (Student#14). "I feel very calm whenever I get treatment at UMPHC, it's a soothing environment" (Student#14). "I think UMPHC needs to provide a dedicated canopy due to the hot and uncomfortable weather to customers" (Student#3).

Sub Theme 6(b): Medical Equipment

The interviewees from the senior staff category expressed their satisfaction with the development of infrastructures at UMPHC over the years, where they have observed new medical equipment made available for patients: "In terms of diagnostic and analytical availabilities when I compared the services 11 years ago and what we have now, I think UMPHC Gambang is more equipped than before" (Staff#2). Whereas few interviewees were concerned about poor emergency equipment as well as ambulance services that may lead to dissatisfaction among patients. "UMPHC needs to improve in terms of emergency equipment, ambulance service, a complete first-aid set and ready to use at any time" (Staff#3).

Sub Theme 6(c): Physiotherapy Unit

The interviewee expressed her concerns about the poor facilities in terms of physiotherapy equipment at UMPHC that may lead to patient dissatisfaction: *“I noticed several weaknesses in terms of facilities and physiotherapy equipment”* (Staff#3).

Sub Theme 6(d): Location/Accessibility

The strategic location of UMPHC Gambang made its services easily accessible to all stakeholders, especially students who do not have transport: *“In terms of location, UMPHC Gambang is strategically located in the middle of the campus”* (Staff#3). The location of UMPHC Pekan is quite isolated from the students' residential area, leading to difficulty in accessing the services, especially during odd hours: *“It (UMPHC Pekan) is very far from students' residential area”* (Student#8). *“The building of UMPHC Pekan is quite isolated and quite far away from other buildings”* (Staff#3).

Theme 7: Other Elements That Could Improve Patient Satisfaction

The findings from the interview with regard to the second research question: *“What are other elements or factors that could improve patient satisfaction at UMP Health Centre?”* is as follows.

Sub Theme 7(a): Health Education and Regular Medical Checkups

The interviewees put high expectations on health education and regular medical check-up as the important element to increase their satisfaction: *“The education is the primary thing that I would like to receive whenever I go to clinic”* (Staff#2). *“... it is probably better if we could have a very regular medical check-up and health education for all staff”* (Staff#2). *“I would like to recommend a compulsory complete medical check-up for all staff”* (Staff#2). *So, in terms of its approach, it is better for UMPHC to prepare video contents of health programs that are more interesting to young people through Instagram and TikTok”* (Student#2). *“I would like to recommend UMPHC to explore varieties of blood tests”* (Staff#3).

Sub Theme 7(b): Extended Services (Emergency Cases)

The interviewees expressed their hopes on the importance of emergency services made available especially to serve cases that usually happen during odd hours. *“Another element, in terms of emergency standby services, I think it's possible for UMPHC to improve”* (Staff#3). *“...when our student or staff had an activity on the pitch or field and suddenly, he or she had an injury, UMPHC should be the first in their mind to be contacted”* (Staff#3). *“I hope that UMPHC can facilitate the student's affairs during the emergency hours, especially after office hours”* (Student#14).

Sub Theme 7(c): Extended Services (Pharmacy outlet)

The interviewees (students) prefer to have a separate entity of pharmacy outlet (like Guardians or Watsons) where they could purchase the supplements or vitamins. *“Usually, they look for the supplements on social media, then they will go directly to the pharmacy outlet to purchase them. I think if UMPHC had a pharmacy like this, it would be able to improve the services in UMPHC and increase health awareness among the students”* (Student#2).

Sub Theme 7(d): Extended Services (Dental)

The interviewees realized the importance of having dental services at UMPHC that could reduce their waiting time at an outside clinic. *“...then only I realized how important is a dental system in our lives and what could happen if it is not working properly. It is good to have them here”* (Staff#2). *“...it is appropriate if UMPHC provides other services such as dental”* (Staff#3). *“I really hope that UMPHC will move forward to include dental services”* (Student#14).

Sub Theme 7(e): Extended Services (X-ray)

The interviewees revealed cases whereby the service of an x-ray is very much needed to improve patient satisfaction. *“If there is an x-ray service in UMPHC, it is much better and easier for student affairs”* (Student#8).

Sub Theme 7(f): Extended Services (Mental Health)

The students explained their concerns about the importance of mental health management. *“This is because we trusted UMPHC staff, and it is easy to express mental health issues to attending doctors rather than counsellors”* (Student#3).

Sub Theme 7(g): Visibility

Interviewees repeatedly mentioned that UMPHC should plan strategically for more programs that stand out to be visible since visibility is a very important aspect to be considered in order to improve patient satisfaction. *“I think what UMPHC could explore may be the visibility of UMPHC amongst the university community”* (Staff#1). *“We need to intensify such campaigns in the near future, in order to provoke or invite UMP citizens to cultivate a healthy lifestyle. This is the easiest way to make UMPHC programmes more “visible”* (Staff#3). *“... I think many students did not aware of the range of services offered by UMPHC! I think UMPHC should advertise all programs and services offered on the e-community platform because all students can access the platform easily”* (Student#14).

DISCUSSION

The demographic characteristics of patients had a significant effect on satisfaction. Staff showed more satisfaction as compared to students. This is probably due to their seniority in service where they could see the development of UMPHC service quality from the very beginning until it matures today. *"I had the opportunity to witness the development of this UMPHC right from its inception from very beginning in 2003 where we had a small unit behind this building [He is referring to the location behind his office]. With only one medical officer at that time. And then, at that moment, I think the development was really phenomenal because even at its beginning the UMPHC was able to deliver a very good service to the patients, to the university community, staff as well as students..."* (Staff#1, Personal Interview, March 2022). *"Probably because I am a senior staff here and a regular visitor for the past 11 years. They treat me well..."* (Staff#2, Personal Interview, March 2022). There were many factors influencing patient satisfaction, and through this study, the key factors that affect patient satisfaction have been identified. "Customer engagement, openness and hospitality" as well as "communication skills", "consistency in following the SOPs", "waiting time", "health education", as well as "extended services (dental)" were among the most important factors affecting patient satisfaction.

As for the staff's attitude (customer engagement, openness, and hospitality) and communication skills, the informants have different views. The informants from the category of staff rated it as good and satisfied with the empathy shown by the staff of UMPHC. *"Maybe I get a different respect whenever I came here as compared to my junior staff. They knew why I visit UMPHC just by looking at my ID. I always get the respect right from the registration counter until I exit the clinic..."* (Staff#2, Personal Interview, March 2022). *"The doctors here are very friendly and always have time to listen to my problems"* (Staff#2, Personal Interview, March 2022). *"Majority of UMPHC staff have given me a special treatment, as compared to students maybe..."* (Staff#1, Personal Interview, March 2022). *"There are circumstances where I have seen students being treated you know not to the standards that should be rendered to them. Like probably we call the level of courtesy used when we compared the services given to staff versus the students. So, sometimes we tend to patronise the students. We tend to see the students as you know like students just like second grade to the staff. That particular area, I think should be given a little bit more emphasis by the UMPHC staff to ensure that everybody should be treated equally. Because they are our patients no matter whether they are students, they are staff children, or they are vendors. So, everybody should be treated the same in terms of service perceptions. I could be wrong, but I have seen certain circumstances"* (Staff#1, Personal Interview, March 2022).

On the contrary, some of the students experienced poor service quality in terms of empathy. *"...the attended staff is quite rude, in my opinion"* (Student#1, Focal Interview, March 2022). *"...the service at the registration counter and pharmacy, maybe they need to be more friendly with the customer. There are times when UMPHC staff like moody and they don't seem to be customer-friendly"* (Student#3, Focal Interview, March 2022). From the interviews, our stakeholders also pointed out the inconsistencies in following the SOPs and operating hours as per the client's charter. *"In my opinion, there are inconsistencies in the current SOP related to COVID-19 amongst students who stayed inside the campus versus those who stayed outside the campus"* (Student#5, Focal Interview, March 2022). *"I would like to comment on the UMPHC's operation hours, as there have been several complaints from students that UMPHC closed operations as early as 4 pm or 4:15 pm"* (Student#8, Focal Interview, March 2022). Another important issue that has been highlighted by the informants is the poor accessibility of the UMPHC Pekan which is located quite far away from the student's residential area and lecture halls. *"The building of UMPHC Pekan is quite isolated and quite far away from other buildings"* (Staff#3, Personal Interview, March 2022). *"... I would also like to address the issue of the non-strategic location of UMPHC Pekan. It is very far from students' residential area"* (Student#8, Focal Interview, March 2022).

On the topic of elements to improve PS, extended services (dental as well as emergency services), visibility and health education emerge as the most important factors that could lead to PS. The majority of the informants realized how important dental services are to be included in the UMPHC organization so that they could reduce the waiting time for appointments at the outside clinic. *".... then I realised how important is dental services to be included in a wellness centre like UMPHC. That only happened after I suffered severe pain from that dental cavity. Before that, I was not aware of how important dental service is. I realized how important is a dental system in our lives and what could happen if it is not working properly. It is good to have them here"* (Staff#2, Personal Interview, March 2022). *"... it is appropriate if UMPHC provides other services for example Dental, x-ray and better emergency assistance..."* (Staff#3, Personal Interview, March 2022). *"I expect that UMPHC provides dental services. But when I came to the clinic, to my surprise I've found out that there was no dental service. It is very frustrating..."* (Student#14, Focal Interview, March 2022).

With the growth of more students enrolling on UMP, video content of health education through social media like TikTok and Instagram could be beneficial in improving patient satisfaction. *"Most of my expectations are education. So, when I am coming with some issues, if the doctors are explaining to me why this is happening to me and what are the contributing factors to it, ah that's my most expectations"* (Staff#2, Personal Interview, March 2022). *"...in terms of its approach, it is better for UMPHC to prepare video contents of health education or programs that are more interesting to young people through Instagram and TikTok..."* (Student#2, Focal Interview, March 2022).

IMPLICATIONS OF THE STUDY

The main focus of this study was to explore and investigate the dimensions of service quality at UMPHC and to find out how these SQ dimensions affected patient satisfaction. In addition, the author also would like to find out whether there are other elements that could improve patient satisfaction. The author discussed the implication of this study in three groups: the customer (patient), the service provider (UMPHC), and the policymakers (UMP top management).

The Customer

UMPHC Gambang has been operating since 2004, meanwhile, UMPHC Pekan started its operation in 2010. The informants in the staff category are senior staff who have seen UMPHC develop over time. Meanwhile, students were relatively very new to the services available at UMPHC. Hence, we could see the different views among them. The findings of this study could benefit the customer in getting better treatment, infrastructure, and a variety of extended healthcare services such as dental and wellness hubs. Hence, it will improve the customers' quality of life leading to patient satisfaction.

The Service Provider

The findings revealed that in a public university like UMP with a population of more than 12 thousand people, UMPHC faced a handful of negative feedback and customer complaints pertaining to service quality and patient satisfaction. As a result, UMPHC being a service provider could strategically benefit from the findings of this study to improve staff quality in terms of clinical competency, customer engagement, openness, hospitality, and effective communication skill, leading to job satisfaction and loyalty.

The UMP's Top Management

This study is in line with the current UMP Strategic planning 2025 where UMP has a KPI to improve the service quality of its service centre. This KPI has been thoroughly documented under the fifth strategic objective (OS5A). UMPHC is one of the service centres in UMP. Hence, the management of UMP could use the findings in this study to improve the SQ at UMPHC, thus achieving the KPI of UMP Strategic planning 2025.

CONCLUSIONS OF THE STUDY

As the issue of service quality is one of the main concerns of UMP's top management in trying to improve customer satisfaction, this study shows insights into how various factors influence patient satisfaction. The interviewed participants are chosen from two opposite backgrounds, staff and students, purposely done in order to get different views. "Staff's attitude and communication skill, "consistency in following the SOPs", "location of UMPHC or accessibility to the services", "health education", as well as "extended services (dental)" were among the most important factors affecting patient satisfaction. Health managers should focus on the above aspects and implement appropriate management decisions to improve patient satisfaction.

As a conclusion, this study can be further enhanced with the knowledge and background of the customers and how their expectations affect service quality as well as enforcement of the UMPHC management in encouraging its workforce to be more empathetic to the patients. With the enhancements in the infrastructure of UMPHC, excellent communication skills as well as intensive health education of UMP community, the purpose of improving service quality and patient satisfaction will be achieved sooner.

Limitation

This study was a cross-sectional study. It could only obtain the views of patients at that time and could not compare the situation before and after. The categories of some influencing factors in this study were not detailed enough, which will be further improved in subsequent studies. The findings in this study cannot be generalized to represent the quality of other primary care clinics in this country, as there were a few limitations. First, this study was conducted in a university-based primary care clinic, which is run by a group of trained medical officers and paramedics. The service providers are different from those in the public primary care clinics who are mainly medical officers with postgraduate qualifications. In addition, public primary care clinics usually operate with limited manpower.

Recommendation for Future Research

This study can be used as a base reference for future researchers to do a deeper study into the relationship between service quality and patient satisfaction, especially in a public or private university without hospital or medical courses. However, future research should include adequate samples from various stakeholders. In addition, a mixed method would be recommended in order to dig for more information pertaining to service quality and patient satisfaction.

ACKNOWLEDGEMENT

We would like to thank the Dean and his deputy, Faculty of Industrial Management, Universiti Malaysia Pahang for their great assistance throughout this research.

REFERENCES

- Abu-Rumman, A., Al Shraah, A., Al-Madi, F., & Alfalah, T. (2021). The impact of quality framework application on patients' satisfaction. *International Journal of Human Rights in Healthcare*, 15(2), 151-165.
- Agarwal, A., & Singh, M. R. P. (2016). Service Quality and Patient Satisfaction: An Exploratory Study of Pathology Laboratories in Jaipur. *Hospital Topics*, 94(2), 23-32.

- Ampaw, E. M., Chai, J., Liang, B., Tsai, S.-B., & Frempong, J. (2020). Assessment on health care service quality and patients' satisfaction in Ghana. *Kybernetes*, 49(12), 3047–3068.
- Amyx, D., Mowen, J. C., & Hamm, R. (2000). Patient satisfaction: a matter of choice. *Journal of Services Marketing*, 14(7), 557-572.
- Anderson, R. T., Barbara, A. M., Weisman, C., Hudson Scholle, S., Binko, J., Schneider, T., Freund, K., & Gwinner, V. (2001). A Qualitative Analysis of Women's Satisfaction with Primary Care from a Panel of Focus Groups in the National Centers of Excellence in Women's Health. *Journal of Women's Health & Gender-Based Medicine*, 10(7), 637–647.
- Asif, M., Jameel, A., Sahito, N., Hwang, J., Hussain, A., & Manzoor, F. (2019). Can Leadership Enhance Patient Satisfaction? Assessing the Role of Administrative and Medical Quality. *International Journal of Environmental Research and Public Health*, 16(17), 3212-3240.
- Asubonteng, P., McCleary, K. J., & Swan, J. E. (1996). SERVQUAL revisited: A critical review of service quality. In *Journal of Services Marketing*, 10(6), 62-81.
- Baek, W. Y., Byun, I. H., Kim, Y. S., Lew, D. H., Jeong, J., & Roh, T. S. (2017). Patient satisfaction with implant based breast reconstruction associated with implant volume and mastectomy specimen weight ratio. *Journal of Breast Cancer*, 20(1), 98-103.
- Ballard, M., Bancroft, E., Nesbit, J., Johnson, A., Holeman, I., Foth, J., Rogers, D., Yang, J., Nardella, J., Olsen, H., Raghavan, M., Panjabi, R., Alban, R., Malaba, S., Christiansen, M., Rapp, S., Schechter, J., Aylward, P., Rogers, A., ... Palazuelos, D. (2020). Prioritising the role of community health workers in the COVID-19 response. *BMJ Global Health*, 5(6), e002550.
- Becker, V., Heesch, V., Schuh, K., Schieb, H., & Ziemssen, T. (2018). Patient satisfaction and healthcare services in specialized multiple sclerosis centres in Germany. *Therapeutic Advances in Neurological Disorders*, 11, 1–12.
- Biresaw, H., Mulugeta, H., Endalamaw, A., Yesuf, N. N., & Alemu, Y. (2021). Patient satisfaction towards health care services provided in Ethiopian health institutions: a systematic review and meta-analysis. *Health services insights*, 14, 11786329211040689.
- Canel, C., & Anderson Fletcher, E. A. (2001). An analysis of service quality at a student health center. *International Journal of Health Care Quality Assurance*, 14(6), 260-267.
- Chen, C. Y., Gan, P., & How, C. H. (2018). Approach to frailty in the elderly in primary care and the community. *Singapore Medical Journal*, 59(5), 240–245.
- Chow, A., Mayer, E. K., Darzi, A. W., & Athanasiou, T. (2009). Patient-reported outcome measures: The importance of patient satisfaction in surgery. *Surgery*, 146(3), 435–443.
- Ellina, A. D., Nursalam, N., Yunitasari, E., & Rusmawati, A. (2020). Patient satisfaction about nurse caring behavior: Based on Swanson's theory of caring and transcultural nursing theory. *International Journal of Psychosocial Rehabilitation*, 24(9), 737-743.
- Ernawaty, Supriyanto, S., Krisbianto, & Visianti. (2020). The effect of hospital service quality on inpatient satisfaction in piru hospital. *Journal of Health and Translational Medicine*, 23, 1-8.
- Ganasegeran, K., Perianayagam, W., Abdul Manaf, R., Ali Jadoo, S. A., & Al-Dubai, S. A. R. (2015). Patient Satisfaction in Malaysia's Busiest Outpatient Medical Care. *The Scientific World Journal*, 2015, 1–6.
- Gatuguta, A., Colombini, M., Seeley, J., Soremekun, S., & Devries, K. (2021). Supporting children and adolescents who have experienced sexual abuse to access services: Community health workers' experiences in Kenya. *Child Abuse & Neglect*, 116(1), 104244.
- Giménez-Díez, D., Maldonado Alía, R., Rodríguez Jiménez, S., Granel, N., Torrent Solà, L., & Bernabeu-Tamayo, M. D. (2020). Treating mental health crises at home: Patient satisfaction with home nursing care. *Journal of Psychiatric and Mental Health Nursing*, 27(3), 246–257.
- Gliesche, P., Agraz, C. N., Kowalski, C., & Hein, A. (2020). Comparison between a Continuous and Proactive Robot Assistance Approach for the Execution of Collaborative Tasks in Nursing Care. 2020 IEEE International Conference on Healthcare Informatics, ICHI 2020.
- Grol, S., Molleman, G., van Heumen, N., Muijsenbergh, M. van den, Scherpbier-de Haan, N., & Schers, H. (2021). General practitioners' views on the influence of long-term care reforms on integrated elderly care in the Netherlands: a qualitative interview study. *Health Policy*, 125(7), 930–940.
- Hayek, S., Derhy, S., Smith, M. L., Towne, S. D., & Zelber-Sagi, S. (2020). Patient satisfaction with primary care physician performance in a multicultural population. *Israel Journal of Health Policy Research*, 9(1), 13-23.
- Hizlinda, T., Teoh, S. Y., Siti Nurbaiah, K. E., Azrina, A. S., Hafizuddin, M. M. T., & Chang, L. H. (2012). A Cross-Sectional Study on Patient Satisfaction with Universiti Kebangsaan Malaysia Medical Centre (UKMMC) Primary Care Clinic. *Med and Health*, 7(1), 12-23.

- Hussain, A., Asif, M., Jameel, A., & Hwang, J. (2019). Measuring OPD Patient Satisfaction with Different Service Delivery Aspects at Public Hospitals in Pakistan. *International Journal of Environmental Research and Public Health*, 16(13), 2340-2350.
- Islam, S., & Muhamad, N. (2021). Patient-centered communication: an extension of the HCAHPS survey. *Benchmarking: An International Journal*, 28(6), 2047-2074.
- Jackson, J. L., Chamberlin, J., & Kroenke, K. (2001). Predictors of patient satisfaction. *Social Science & Medicine*, 52(4), 609–620.
- Jameel, A., Asif, M., Hussain, A., Hwang, J., Bukhari, M. H., Mubeen, S., & Kim, I. (2019). Improving patient behavioral consent through different service quality dimensions: Assessing the mediating role of patient satisfaction. *International Journal of Environmental Research and Public Health*, 16(23), 4736-4750.
- James, S., Ashley, C., Williams, A., Desborough, J., Mcinnes, S., Calma, K., Mursa, R., Stephen, C., & Halcomb, E. J. (2021). Experiences of Australian primary healthcare nurses in using telehealth during COVID-19: a qualitative study. *BMJ Open*, 11(8), e049095.
- Johnson, D. M., Russell, R. S., & White, S. W. (2016). Perceptions of care quality and the effect on patient satisfaction. *International Journal of Quality and Reliability Management*, 33(8), 1202-1229.
- Kam, D., Wong, P., & Fong, S. (2002). A qualitative study of patient satisfaction with follow-up cancer care : the case of Hong Kong. 47, 13–21.
- Kim-Soon, N., Abdulmaged, A. I., Mostafa, S. A., Mohammed, M. A., Musbah, F. A., Ali, R. R., & Geman, O. (2021). A framework for analyzing the relationships between cancer patient satisfaction, nurse care, patient attitude, and nurse attitude in healthcare systems. *Journal of Ambient Intelligence and Humanized Computing*, 13, 87–104
- Kowalski, C., Gliesche, P., Fifelski-Von Böhlen, C., Brinkmann, A., & Hein, A. (2021). Handling comparison between a human and a patient simulator for nursing care related physical human- robot interaction. *HEALTHINF 2021 - 14th International Conference on Health Informatics; Part of the 14th International Joint Conference on Biomedical Engineering Systems and Technologies, BIOSTEC 2021*.
- Kyrölä, K., Kautiainen, H., Pekkanen, L., Mäkelä, P., Kiviranta, I., & Häkkinen, A. (2019). Long-term clinical and radiographic outcomes and patient satisfaction after adult spinal deformity correction. *Scandinavian Journal of Surgery*, 108(4), 343–351.
- Lai, P. S. M., Chung, W. W., Toh, L. S., & Othman, S. (2018). Development and validation of an Ambulatory Care Patient Satisfaction Questionnaire to assess pharmacy services in Malaysia. *International journal of clinical pharmacy*, 40(5), 1309-1316.
- Lam, W. W. T., Kwong, A., Suen, D., Tsang, J., Soong, I., Yau, T. K., Yeo, W., Suen, J., Ho, W. M., Wong, K. Y., Sze, W. K., Ng, A. W. Y., & Fielding, R. (2018). Factors predicting patient satisfaction in women with advanced breast cancer: a prospective study. *BMC Cancer*, 18(1), 162-178.
- Lapane, K. L., Dubé, C. E., & Jesdale, B. M. (2016). Worker Injuries In Nursing Homes: Is Safe Patient Handling Legislation The Solution? *The Journal of Nursing Home Research Sciences*. 2, 110–117.
- Lapin, B. R., Honomichl, R. D., Thompson, N. R., Rose, S., Sugano, D., Udeh, B., & Katzan, I. L. (2019). Association Between Patient Experience With Patient-Reported Outcome Measurements and Overall Satisfaction With Care in Neurology. *Value in Health*, 22(5), 555–563.
- Larasanty, L. P. F., Cahyadi, M. F., Sudarni, N. M. R., & Wirasuta, I. M. A. G. (2019). Patient satisfaction with pharmaceutical care services provided at primary-level and secondary-level health facilities in Indonesia's health coverage system. *Journal of Health Research*, 33(1), 80-88.
- Lee, C., Knight, S. W., Smith, S. L., Nagle, D. J., & DeVries, L. (2018). Safe patient handling and mobility: Development and implementation of a large-scale education program. *Critical Care Nursing Quarterly*, 41(3), 253-263.
- Lenka, U., & Suar, D. (2008). A holistic model of total quality management in services. *The Icfai Journal of Management Research*, 7(3), 56-72.
- Lim, M. T., Ong, S. M., Tong, S. F., Groenewegen, P., & Sivasampu, S. (2021). Comparison between primary care service delivery in Malaysia and other participating countries of the QUALICOPC project: a cross-sectional study. *BMJ open*, 11(5), e047126.
- Liu, S., Yam, C. H. K., Huang, O. H. Y., & Griffiths, S. M. (2013). Willingness to pay for private primary care services in Hong Kong: Are elderly ready to move from the public sector? *Health Policy and Planning*, 28(7), 717–729.
- Majeed Alhashem, A., Alquraini, H., & Chowdhury, R. I. (2011). Factors influencing patient satisfaction in primary healthcare clinics in Kuwait. *International Journal of Health Care Quality Assurance*, 24(3), 249-262.
- Mallat, A., Vrontis, D., & Thrassou, A. (2020). Patient satisfaction in the context of public–private partnerships. *International Journal of Organizational Analysis*, 29(6), 1395-1422.

- Mamta Brahmabhatt, D., Narayan Baser, D., & Nisarg Joshi, P. (2011). Adapting The Servqual Scale To Hospital Services: An Empirical Investigation Of Patients' Perceptions Of Service Quality. *International Journal of Multidisciplinary Research*, 1(8), 27-42.
- Margalit, A. P. A., Glick, S. M., Benbassat, J., & Cohen, A. (2004). Effect of a biopsychosocial approach on patient satisfaction and patterns of care. *Journal of General Internal Medicine*, 19(5), 485–491.
- McGhan, G., Clement, F., Ludlow, N., Lee, J., Cheng, M., & McCaughey, D. (2019). Value-Based Healthcare As A Framework Of Care For Older Adults And Their Family Caregivers. *Innovation in Aging*, 3(1), 1-13.
- Md Hamzah, N., Yu, M. M., & See, K. F. (2021). Assessing the efficiency of Malaysia health system in COVID-19 prevention and treatment response. *Health Care Management Science*, 24(2), 273-285.
- Mohd Suki, N., Chiam Chwee Lian, J., & Mohd Suki, N. (2011). Do patients' perceptions exceed their expectations in private healthcare settings? *International Journal of Health Care Quality Assurance*, 24(1), 42-56.
- Mosadeghrad, A. M. (2013). Healthcare service quality: towards a broad definition. *International Journal of Health Care Quality Assurance*, 26(3), 203–219.
- Noor Hazilah Abd Manaf, Phang Siew Nooi, Abd Manaf, N. H., & Phang, S. N. (2007). Patient Satisfaction as An Indicator of Service Quality In Malaysian Public Hospitals. *Asian Journal on Quality*, 10(1), 77–86.
- Nursalam, N., Hanafi, M. C., & Ulfiana, E. (2017). The Elderly's Satisfaction with the Service Quality of a Community Geriatric Health Programme in Indonesia: a Cross-Sectional Study. *Jurnal Ners*, 12(2), 225-35.
- Nwosu, K., & Schwab, J. (2018). Patient reported outcome measures for spinal disorders. *Seminars in Spine Surgery*, 30(2), 84–91.
- Oppel, E.-M. M., Winter, V., & Schreyögg, J. (2017). Evaluating the link between human resource management decisions and patient satisfaction with quality of care. *Health Care Management Review*, 42(1), 53-64.
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 49(4), 41-50.
- Pascoe, G. C. (1983). Patient satisfaction in primary health care: A literature review and analysis. *Evaluation and Program Planning*, 6(3–4), 185–210.
- Pillay, D., Johari Dato Mohd Ghazali, R., Hazilah Abd Manaf, N., Hassan Asaari Abdullah, A., Abu Bakar, A., Salikin, F., Umopathy, M., Ali, R., Bidin, N., Ismefariana Wan Ismail, W., Ir M., D., Johari Dato Mohd Ghazali, R., Hazilah Abd Manaf, N., Hassan Asaari Abdullah, A., Abu Bakar, A., Salikin, F., Umopathy, M., Ali, R., Bidin, N., & Ismefariana Wan Ismail, W. (2011). Hospital waiting time: The forgotten premise of healthcare service delivery? *International Journal of Health Care Quality Assurance*, 24(7), 506–522.
- Platonova, E. A., Qu, H., & Warren-Findlow, J. (2019). Patient-centered communication: dissecting provider communication. *International Journal of Health Care Quality Assurance*, 32(2), 15-30.
- Rahim, A. I. A., Ibrahim, M. I., Musa, K. I., Chua, S. L., & Yaacob, N. M. (2021). Patient satisfaction and hospital quality of care evaluation in malaysia using servqual and facebook. *Healthcare (Switzerland)*, 9(10), 1-10.
- Rahman, M. K., Newaz, M. S., Hemmati, M., & Mallick, S. M. Y. (2021). Analyzing health-care service environment with Malaysian general practice clinics. *Health Education*, 121(3), 246-264.
- Rashid, W. E. W., Jusoff, H. K., Edura Wan Rashid, W., & Kamaruzaman Jusoff, Hj. (2009). Service quality in health care setting. *International Journal of Health Care Quality Assurance*, 22(5), 471– 482.
- Saxena, N., You, A. X., Zhu, Z., Sun, Y., George, P. P., Teow, K. L., Chong, P.-N., Sim, J., Wong, J. E. L., Ong, B., Foo, H. J., Soh, E. F., Tham, L., Heng, B. H., & Choo, P. (2017). Singapore's regional health systems-a data-driven perspective on frequent admitters and cross utilization of healthcare services in three systems. *The International Journal of Health Planning and Management*, 32(1), 36–49.
- Schoeb, V. (2016). Healthcare Service in Hong Kong and its Challenges. *China Perspectives*, 2016(4), 51–58. <https://doi.org/10.4000/CHINAPERSPECTIVES.7118>
- Setyawan, F. E. B., Supriyanto, S., Ernawaty, E., & Lestari, R. (2020). Understanding patient satisfaction and loyalty in public and private primary health care. *Journal of public health research*, 9(2), 1-10.
- Sharma, T., Sharma, S., Eastwood, J., Jackson, R., & Wells, J. (2020). Patient satisfaction with patient- led follow-up for endometrial cancer. *British Journal of Nursing*, 29(17), 4-10.
- Sunderajah, V., Patel, V., Varatharajan, L., Harling, L., Normahani, P., Symons, J., Barlow, J., Darzi, A., & Ashrafian, H. (2021). Are disruptive innovations recognised in the healthcare literature? A systematic review. *BMJ Innovations*, 7(1), 208–216.
- Stefanini, A., Aloini, D., Gloor, P., & Pochiero, F. (2021). Patient satisfaction in emergency department: Unveiling complex interactions by wearable sensors. *Journal of Business Research*, 129, 600–611.
- Supriyanto, S., & Ester, M. (2020). Links Among Health Care Quality, Patients Satisfaction, and Loyalty: The Domino Effect. *European Journal of Molecular & Clinical Medicine*, 7(5), 608-615.

- Takahashi, H., Katayama, H., Uwajima, Y., Koda, M., Sasaki, H., Tanito, K., Hagiwara, M., Matsuo, K., & Nakagawa, H. (2020). Patient satisfaction and efficacy of calcipotriol plus betamethasone dipropionate gel in plaque psoriasis patients with poor adherence. *The Journal of Dermatology*, 47(11), 1249–1256.
- Tan, K. B., & Lee, C. E. (2019). Integration of primary care with hospital services for sustainable universal health coverage in Singapore. *Health Systems and Reform*, 5(1), 18–23.
- Threapleton, D. E., Chung, R. Y., Wong, S. Y. S., Wong, E., Chau, P., Woo, J., Chung, V. C. H., & Yeoh, E. (2017). Integrated care for older populations and its implementation facilitators and barriers: A rapid scoping review. *International Journal for Quality in Health Care*, 29(3), 327–334.
- Tohid, H., Teoh, S., Siti Nurbaiyah, K., Azrina, A., Mohammad Hafizzudin, M., Chang, L., & Noraliza, M. (2012). A Cross-Sectional Study on Patient Satisfaction with Universiti Kebangsaan Malaysia Medical Centre (UKMMC) Primary Care Clinic. *Medicine & Health*, 7(1), 12–23.
- Tyagi, S. C., Calligaro, K. D., Fukuhara, S., Greenberg, J., Pineda, D. M., Zheng, H., Dougherty, M. J., & Troutman, D. A. (2019). Patient satisfaction and chronic illness are predictors of postendovascular aneurysm repair surveillance compliance. *Journal of Vascular Surgery*, 69(4), 1066–1071.
- Vogus, T. J., Gallan, A., Rathert, C., El-Manstrly, D., & Strong, A. (2020). Whose experience is it anyway? Toward a constructive engagement of tensions in patient-centered health care. *Journal of Service Management*, 31(5), 979–1013.
- Vogus, T. J., & McClelland, L. E. (2016). When the customer is the patient: Lessons from healthcare research on patient satisfaction and service quality ratings. *Human Resource Management Review*, 26(1), 37–49.
- Wang, H., Kline, J. A., Jackson, B. E., Robinson, R. D., Sullivan, M., Holmes, M., Watson, K. A., Cowden, C. D., Phillips, J. L., Schrader, C. D., Leuck, J., & Zenarosa, N. R. (2017). The role of patient perception of crowding in the determination of real-time patient satisfaction at Emergency Department. *International Journal for Quality in Health Care*, 29(5), 722–727.
- Xu, X., Sun, B. L., Huang, F., Chia, H. L. A., Sultana, R., Teo, A., & Tuner, B. S. (2021). The impact of music on patient satisfaction, anxiety, and depression in patients undergoing gynecologic surgery. *Journal of PeriAnesthesia Nursing*, 36(2), 122–127.
- Yam, H. K., Mercer, S. W., Wong, L. Y., Chan, W. K., & Yeoh, E. K. (2009). Public and private healthcare services utilization by non-institutional elderly in Hong Kong: Is the inverse care law operating? *Health Policy*, 91(3), 229–238.
- Yeo, S. F., Tan, C. L., & Goh, Y.-N. (2021). Obstetrics services in Malaysia: factors influencing patient loyalty. *International Journal of Pharmaceutical and Healthcare Marketing*, 15(3), 389–409.
- Zawisza, K., Galas, A., & Tobiasz-Adamczyk, B. (2020). Factors associated with patient satisfaction with health care among Polish older people: results from the polish part of the COURAGE in Europe. *Public Health*, 179, 169–177.

CONFLICT OF INTEREST

The author(s), as noted, certify that they have NO affiliations with or involvement in any organisation or agency with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, jobs, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, expertise or beliefs) in the subject matter or materials addressed in this manuscript.