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A comparative study of Palestinian patient satisfaction with service quality in accredited government and private hospitals in the West bank

Lubna Harazni¹, Malakeh. Z. Malak^{2*} and Mohammad Dasan³

Abstract

Background The implementation of accreditation affects healthcare institutions and enhances the quality of care and patient safety. Patient satisfaction is a key indicator in healthcare institutions, serving as a measure of service quality and its impact on patient outcomes. There is a lack of studies examining patient satisfaction with service quality in accredited hospitals in Palestine. Therefore, this study aimed to assess Palestinian patient satisfaction with service quality in accredited government and private hospitals in the West Bank and compare patient satisfaction between these hospitals.

Methods A descriptive comparative design was employed, with 150 patients undergoing elective surgeries recruited for the study. Data were collected using a self-reported questionnaire, which included the Service Quality (SERVQUAL) questionnaire and demographic information, between July and August 2023.

Results The participants were satisfied with service quality in both hospitals ($M = 4.34$, $SD \pm 0.73$). The highest-rated dimension was assurance ($M = 4.47$, $SD \pm 0.60$), while responsiveness received the lowest rating ($M = 4.21$, $SD \pm 0.90$). Significant differences were found in the dimensions of tangibles, reliability, and empathy ($p < 0.05$), as well as in responsiveness ($p \leq 0.01$) between the two types of hospitals. Patients who stayed longer in the hospital reported higher satisfaction with service quality.

Conclusion These findings may motivate policymakers to introduce accreditation programs across all healthcare sectors to improve care quality and ensure patient safety. Furthermore, accredited hospitals should adopt strategies to enhance patient satisfaction with service quality and address the areas with the lowest service ratings.

Clinical trial No.

Keywords Accreditation, Government hospitals, Patient satisfaction, Private hospitals, Service quality

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Introduction

The accreditation program for healthcare organizations has gained widespread global recognition. These programs are designed to improve patient safety and the quality of care by ensuring that processes and procedures are performed correctly, safely, and in line with established standards [1–4]. This highlights the importance of tools such as the Joint Commission International Accreditation (JCIA) in reducing the risk of errors, thereby enhancing both care quality and patient safety [2, 5]. The JCIA is a globally recognized accreditation body and one of the leading organizations in healthcare accreditation. It evaluates and accredits healthcare organizations by assessing their implementation and adherence to established standards and criteria [1, 2, 6]. Specific accreditation standards, such as the timeout process, patient rights, and anesthesia surgical care, may impact the flexibility of routine operations [7]. Although these standards are intended to improve patient safety, their implementation can require extra time, potentially resulting in longer surgery durations and reduced availability of operating rooms [7–9].

Service quality refers to assessing how well a service meets or exceeds patient expectations. It is a critical aspect of service management and business strategy, as it directly impacts patient satisfaction, loyalty, and success [10–12]. Service quality can be measured in various ways, but it generally relates to how well a service is delivered compared to what the patients expect. Several dimensions of service quality are used to evaluate the different aspects of service delivery [10–12]. The most widely recognized framework for these dimensions is the Service Quality (SERVQUAL) model, developed by Parasuraman et al. [13]. This model identifies five key dimensions of service quality: tangibles (availability of physical resources, equipment, and the professional appearance of staff), reliability (the ability to consistently deliver promised services accurately and dependably), responsiveness (willingness to assist patients and provide appropriate services), assurance (staff expertise, kindness, and their ability to build trust), and empathy (providing compassionate, individualized care to patients) [13].

Patient satisfaction is a key indicator in healthcare institutions, serving as a measure of service quality and its impact on patient outcomes [6]. Health insurance companies and healthcare purchasers consider patient satisfaction with service quality when determining reimbursement and assessing the provided care to patients [14]. Previous international studies have examined patient satisfaction with service quality in both government and private hospitals, yielding varied results. Some studies found higher patient satisfaction with service quality in private hospitals compared to government hospitals. In contrast, one study found that patient

satisfaction was higher in government hospitals compared to private hospitals [15]. Most previous research focused on non-accredited hospitals, while fewer studies have explored patient satisfaction with service quality in accredited hospitals [11, 16].

In Palestine, a conflict zone, hospitals often face significant shortages in essential resources such as medical supplies, medications, and staff. The ongoing conflict disrupts supply chains, making it challenging to maintain adequate levels of care [17, 18]. Currently, only seven hospitals hold accreditation. Accredited hospitals provide consistent care and safe services, but limited resources may hinder their ability to meet these standards, potentially leading to a temporary suspension of accreditation or a decline in care quality. Despite these challenges, many Palestinian hospitals continue to deliver essential healthcare services, frequently adapting innovative ways to meet the population's needs under challenging circumstances. There is limited research on this topic. A previous study by Barghouthi and Imam [6] found no significant difference between accredited and non-accredited hospitals regarding patient satisfaction with service quality. Thus, this study is one of the first studies examining patient satisfaction with service quality and preoperative preparation time for patients undergoing elective surgeries. The findings of this study could help guide both private and government healthcare sectors, including accredited and non-accredited institutions, in adopting strategies to improve healthcare services. Therefore, this study aimed to assess patient satisfaction with service quality in accredited government and private hospitals in the West Bank, Palestine, and compare these hospitals for patient satisfaction with service quality.

Methods

This study was conducted using a descriptive comparative design. A stratified sampling method was adopted, and the hospitals were divided into government and private. Then, one government and one private hospital were selected based on the occupancy rate, where hospitals with the highest occupancy rate were chosen from each health sector. Then, five departments, including general surgery, gynecology and obstetrics, orthopedics, urology, and vascular, were selected due to the highest number of elective operations in these departments.

The total number of admissions was based on the number of elective operations in both hospitals. Formal statistics showed that the number of patients who performed elective operations during hospitalization is more than 650 patients monthly in all departments, and 300 elective operations in the selected five departments in both hospitals monthly. The sample size was calculated based on the number of elective operations from the two hospitals. The Raosoft software program (<http://www.raosoft.co>

[m/samplesize.html](#)) was adopted to calculate sample size, with the response rate of 50%, confidence interval of 90%, marginal error of 5%, and population size of 300. The recommended sample size was 143 patients. An additional 10% was added to avoid potential attrition, thus, 157 participants are required. A proportionate stratified sample based on the hospital's admission was used to recruit participants from each hospital. A convenience sample of patients was selected from each hospital.

The study included adult inpatients aged 18 years and above who underwent elective surgeries, were willing to participate, and could read and write. Patients undergoing elective surgeries were selected because these procedures are planned, providing a more consistent and controlled environment for the patient experience. Unlike emergency cases, the hospital stays and care processes for elective surgeries are typically less urgent and more structured [19]. This allows patients to have more time to evaluate various aspects of service quality, such as communication, empathy, responsiveness, and hospital facilities. As a result, they provide valuable insights into patient satisfaction with service quality in both government and private hospitals. The patients who received conservative treatment, those unable to participate due to critical illness, and illiterate patients were excluded.

Measurements

A structured, self-reported questionnaire was employed for data collection during the period from July 1 to August 31, 2023. This questionnaire consisted of the Service Quality (SERVQUAL) Questionnaire and patient demographic characteristics (e.g., gender, residence, department, educational level, type of hospital, and length of stay).

The SERVQUAL was developed by Parasuraman et al. [13] to measure patient satisfaction with service quality. SERVQUAL enables a thorough evaluation of both patient expectations and their perceptions of healthcare services provided. The tool comprised 22 items, categorized into five dimensions: tangibles (4 items), reliability (5 items), responsiveness (4 items), assurance (4 items), and empathy (5 items). Responses were measured on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). A total scale score of 3 or higher indicated satisfaction, whereas a score below 3 reflected dissatisfaction [6]. The original tool was valid (content, criterion, and convergent) and reliable, with a Cronbach's alpha of 0.94 [13]. The Arabic version of this tool, which was previously used in a Palestinian study and demonstrated validity and reliability with a Cronbach's alpha of 0.824, was adopted for this study [6]. The Cronbach's alpha in this study was 0.90.

Ethical considerations

Ethical approval for the study was granted by the Arab American University at Palestine, under approval number (# CAMS/CCNA/8/124). Participants were informed about the study's objectives, potential risks, and the voluntary nature of their participation. Informed consent was obtained from all participants before their involvement, ensuring they were aware of their rights and could withdraw at any time without penalty. To maintain confidentiality, participants were instructed not to include their names or any personal details, ensuring their responses remained anonymous. This method aimed to promote honest and accurate responses, free from the influence of perceived expectations or social desirability. Furthermore, the data were securely stored on a password-protected platform, accessible only to the research team.

Data collection procedure

A member of the research team visited the selected hospitals and met with the head nurses of the relevant departments. During these meetings, the researcher explained the objectives of the study and requested lists of eligible patients to facilitate the recruitment process. Data collection was conducted at the most appropriate and convenient time for patients after surgery, specifically after they were fully conscious, alert, and free from complications such as pain. Paper-based questionnaires were distributed to eligible participants who provided informed consent. Participants who were able to complete the questionnaires independently received self-reported forms. For elderly or ill individuals who faced difficulties in filling out the questionnaire, face-to-face interviews were conducted to ensure accurate data collection. All questionnaires were collected immediately upon completion.

Data analysis

The Software Program of Social Sciences (SPSS), version 25, was adopted for entry and analysis of the data. The data were examined for outliers, missing values, and normality using the Histogram and Kolmogorov–Smirnov test (statistic = 0.075, $p = 0.200$), which confirmed that the data were normally distributed, with no outliers or missing values. Descriptive statistics, such as the mean and standard deviation, were used to summarize numerical data, while frequencies and percentages were computed for categorical data. The inferential statistics, including t-test and ANOVA, were used to measure differences between means; the t-test was used for the variables with two samples and ANOVA for more than two samples. Also, the Tukey HSD test was used to assess the differences in patients' perception of service quality based on length of stay. The significance level was set at $p \leq 0.05$.

Table 1 Demographic characteristics of the study participants

Characteristic	Category	N	%
Gender	Female	62	41.3
	Male	88	58.7
Residence	Center	110	73.3
	North	20	13.3
	South	20	13.3
Department	General Surgery	28	18.7
	Gynecology and obstetrics	44	29.3
	Orthopedics	37	24.7
	Urology	20	13.3
	Vascular	21	14.0
Educational level	Primary	19	12.7
	Secondary	42	28.0
	Diploma	35	23.3
	Bachelor and higher	54	36.0
Hospital type	Government	90	60.0
	Private	60	40.0
Length of stay	One day (zero day of surgery)	6	4.0
	Two days	45	30.0
	Three days	28	18.7
	Four days	33	22.0
	Five days	20	13.3
	Six days and more	18	12.0
Age / Years	M = 40.3 (SD ± 6.79); Range = 19–72 years		

N/n: Number; %: Percentage; M: Mean; SD: Standard Deviation

Table 2 Patient satisfaction with service quality in accredited hospitals (N = 150)

Variables		Patient satisfaction with service quality			Total (M ± SD)
		Mean	t-test	p-value	
Tangibles	Government	4.22	-1.903	0.026*	4.30 ± 0.71
	Private	4.40			
Reliability	Government	4.41	-0.557	0.014*	4.43 ± 0.68
	Private	4.46			
Responsiveness	Government	4.06	-2.88	0.003**	4.21 ± 0.90
	Private	4.42			
Assurance	Government	4.41	-0.108	0.107	4.47 ± 0.60
	Private	4.55			
Empathy	Government	4.28	-1.32	0.014*	4.33 ± 0.70
	Private	4.41			
Total SERVQUAL	Government	4.29	-1.597	0.035*	4.34 ± 0.73
	Private	4.43			

M: Mean; SD: Standard Deviation

* p significant at ≤ 0.05; ** p significant at ≤ 0.01

Results

Of 157 distributed questionnaires, 150 were completed with a response rate of 95.5%. Of the responses, 90 were from the government hospital (60.0%), and 60 were from the private hospital (40.0%). Concerning demographics, 41.3% of the participants were female, and 58.7% were male. The average age of the participants was 40.3

Table 3 Patient satisfaction with service quality according to demographic characteristics

Variables		Patients' perception of service quality		
		Mean	t-test	p-value
Gender	Male	4.29	-0.637	0.061
	Female	4.36		
		Mean Square	F-value	p-value
Department		1.890	1.182	0.247
Level of education		1.969	1.085	0.362
Residence		0.299	1.164	0.265
Length of stay		3.299	1.698	0.017*

* p significant at ≤ 0.05

(SD ± 6.79) years. According to the residence, more than two-thirds of the participants were from the center (73.3%). Most participants had completed a bachelor's degree or higher (36.0%). One-third (30.0%) of participants' length of stay was two days (Table 1).

As shown in Table 2, patients reported satisfaction with service quality in both hospitals, with an overall mean of 4.34 (SD ± 0.73). The highest-rated dimension was assurance (M = 4.47, SD ± 0.60), while responsiveness received the lowest rating (M = 4.21, SD ± 0.90). The results revealed statistically significant differences in patient satisfaction with service quality between government and private hospitals. Private hospitals had higher patient satisfaction with service quality compared to government hospitals (t-test = -1.597, $p < 0.05$). Additionally, significant differences were found in the dimensions of tangibles, reliability, and empathy ($p < 0.05$), as well as in responsiveness ($p \leq 0.01$) between the two types of hospitals. Private hospitals scored higher in patient satisfaction across the tangibles, reliability, empathy, and responsiveness dimensions compared to government hospitals. However, no significant difference was found in the assurance dimension between the two hospitals ($p > 0.05$).

Table 3 shows no statistically significant differences in patient satisfaction with service quality based on gender, education level, department, or residence ($p > 0.05$). However, a significant difference was found in patient satisfaction with service quality based on the length of stay, with patients who stayed longer reporting higher satisfaction ($p < 0.05$). The Tukey HSD test revealed that patients with a hospital stay of six days or more reported the highest satisfaction levels with service quality (Table 4).

Discussion

This study is one of the first in Palestine to explore patient satisfaction with service quality and compare these factors between government and private hospitals.

Our study found that participants from accredited hospitals were satisfied with service quality, aligning with the

Table 4 Differences in patients' perception of service quality based on length of stay: Tukey HSD

Length of Stay/day	Patients' perception of service quality Subset for alpha = 0.05
1.00	4.45
2.00	4.56
3.00	4.67
4.00	4.69
5.00	4.83
6.00 and more	4.94
p-value	0.017*

* p significant at ≤ 0.05

findings of previous studies [6, 11, 16]. This finding could be attributed to standardized care, better resources, continuous education, and a patient-centered approach. Accredited hospitals adhere to strict standards set by national or international healthcare accreditation bodies, ensuring consistent and high-quality care [5, 20]. These standards support nursing practices and provide nurses with established protocols and training, fostering a sense of delivering high-quality care [21]. Such hospitals typically offer advanced infrastructure, medical equipment, and a higher staff-to-patient ratio, enabling nurses to perform their duties more effectively and improving care quality [21]. These hospitals have robust organizational structures with clear leadership, support systems, and policies focused on patient safety, staff well-being, and ethical care delivery [5, 20, 21]. As a result, nurses in accredited hospitals often feel valued and empowered, which enhances their perception of service quality. Accredited hospitals prioritize patient-centered care, emphasizing patient involvement, communication, and overall experience. This focus contributes to positive patient outcomes, further boosting nurses' perceptions of care quality [21, 22]. Additionally, accredited hospitals prioritize continuous quality improvement (CQI), involving nurses in initiatives that enhance patient care processes and foster a sense of pride and confidence in the care they provide [23, 24].

Our study found that assurance was the highest dimension of patient satisfaction with service quality, which aligns with a previous study [25]. In contrast, previous research identified reliability as the highest dimension [6, 11, 16]. This difference could be due to regional factors, the hospital's accreditation status, and the particular service characteristics being assessed. Additionally, this finding may be attributed to assurance's direct impact on patient trust, safety, and comfort. It reflects patients' confidence in their healthcare professionals' competence, knowledge, and professionalism, particularly nurses and doctors [26, 27]. Trust, a key element in healthcare, is reinforced through assurance. Patients are more likely to perceive high-quality care when they feel their providers

are skilled and well-trained, especially during times of anxiety or fear, such as illness or hospitalization [27, 28]. Effective communication and expertise further enhance this perception. When healthcare professionals communicate clearly and show empathy, patients feel safer and more reassured, positively influencing their view of service quality [29]. Additionally, assurance fosters a sense of safety, where patients feel their concerns are heard and addressed, improving their overall experience [30]. Consistency and reliability of care are integral to assurance, making patients feel more confident in the care process. It provides stability and reduces uncertainty in healthcare environments, helping patients feel more at ease during difficult health situations [30, 31]. Ultimately, when patients trust that their healthcare professionals are making informed decisions, it enhances their perception of care quality and patient outcomes [32].

This study's participants reported that the responsiveness dimension was the lowest, which aligns with previous studies [6, 16]. This dimension typically reflects issues such as delays in service, insufficient staff availability, or a lack of timely communication with patients [22]. This finding might be due to staffing shortages and workload. Healthcare professionals, particularly in settings with limited resources or overcrowding, may become overburdened, resulting in delays in care and unmet patient needs [33, 34]. Patients often experience long wait times for consultations, tests, treatments, and medications, which could lead to feelings of neglect and dissatisfaction [35]. Additionally, patients with complex conditions require more time and attention, and when healthcare systems are unable to manage these cases effectively, delays are further exacerbated [36]. A lack of communication regarding delays or the care status can contribute to frustration and create a perception of poor responsiveness [37].

Our study found that patients at a private hospital reported higher satisfaction with service quality than those at a government hospital, which is consistent with previous studies [38–43]. This could be due to various factors, such as differences in resource availability, staff-to-patient ratios, or the overall patient experience. Private hospitals may provide more personalized care, shorter wait times, or enhanced amenities, which could contribute to higher satisfaction [38, 39, 41]. On the other hand, government hospitals may face challenges like limited resources or high patient loads, which can cause delays in care and impact the quality of service and patient experience and satisfaction [44, 45].

A private hospital had higher patient satisfaction with tangibles, reliability, empathy, and responsiveness dimensions of service quality compared to a government hospital, which aligns with previous research [38, 46]. This finding could be interpreted as private hospitals often

investing more in the physical environment, including modern facilities, comfortable amenities, and advanced medical equipment. This creates a more pleasant and reassuring patient experience, increasing satisfaction with the tangibles dimension [47]. They also have more resources and staff, enabling consistent, reliable services that meet patient needs on time, reduce the likelihood of delays or errors, and enhance trust and satisfaction [48, 49]. Private hospitals may prioritize personalized care with smaller patient-to-staff ratios, which fosters patient satisfaction with empathy through individualized attention. Additionally, shorter wait times and efficient processes make it easier for patients to receive timely care and improve responsiveness, further increasing patient satisfaction [50]. In contrast, government hospitals, especially in conflict zones, may face challenges such as high patient loads, limited resources, and overcrowded facilities, which can negatively impact these dimensions of service quality and lower patient satisfaction [51].

Our study found no significant difference in the assurance dimension of service quality between government and private hospitals. A previous study found that private hospitals scored higher in the assurance dimension than government hospitals [39]. This discrepancy may be related to regional contexts, hospital accreditation status, and specific service attributes evaluated. The findings of this study suggest that patients in both settings perceive factors such as professional competency, patient safety, and trust in healthcare providers similarly. Both hospital types prioritize patient safety and comfort, adhering to similar healthcare regulations and standards [52, 53]. Despite differences in other service quality dimensions, both government and private hospitals focus on creating a safe and reassuring environment for patients [54]. Healthcare professionals in both types of hospitals generally have comparable qualifications and training, contributing to similar levels of perceived competence and trustworthiness, which results in similar patient satisfaction with assurance [55].

Our study found that patients who stayed longer in the hospital reported higher satisfaction with service quality. This result is inconsistent with a study conducted by Cai et al. [25] that found satisfaction decreased with increased length of stay. This difference might be related to sample characteristics and the medical environment. Furthermore, the study's finding might be interpreted as those patients experienced more comprehensive care, formed therapeutic relationships with healthcare professionals, and became more familiar with their environment [56, 57]. They also often witnessed positive health outcomes. These factors collectively contributed to a more favorable perception of their hospital experience, resulting in higher satisfaction levels. In addition, emotional, psychological, and comfort-related benefits of

extended stays enhanced their perception of care quality [56, 57].

Limitations of the study

Despite the significant findings of this study, several limitations exist. The descriptive comparative design used in the study did not allow for an examination of cause and effect between the variables. While a stratified sampling method was employed to select hospitals, the convenience sampling approach may impact the generalizability of the results. To address this, future studies should consider using random sampling for recruitment. Additionally, using a self-reported questionnaire for data collection could introduce bias, as participants may have answered based on their beliefs, social desirability, or cultural influences. Consequently, alternative data collection methods are recommended for future research.

Implications for practice

The study highlights the importance of patient satisfaction with service quality and suggests that both government and private hospitals should adopt more patient-centered care practices. This involves actively involving patients in care decisions, addressing their emotional and psychological well-being, and ensuring timely, personalized responses to their needs. The higher satisfaction scores observed in private hospitals suggest that successful practices or processes could be implemented in government hospitals. By analyzing strategies used in private institutions, particularly in areas such as tangibles, empathy, and responsiveness, government hospitals can adopt similar improvements to enhance the patient experience. Additionally, hospitals should regularly evaluate their facilities and service delivery standards, with particular attention to the tangibles dimension in government hospitals. Maintaining well-equipped facilities, high-quality medical resources, and a comfortable environment can improve patient satisfaction.

Variations in empathy and responsiveness among healthcare staff emphasize the critical need for continuous training. Regular professional development programs that focus on communication, empathy, and responsiveness are vital for enhancing patient satisfaction and creating a positive care environment. By investing in such training, both government and private hospitals can foster more compassionate and supportive healthcare experiences.

To improve patient satisfaction, healthcare administrators in government hospitals should focus on enhancing key dimensions such as tangibles (e.g., facilities, equipment), reliability (e.g., consistency in service delivery), empathy (e.g., compassionate care), and responsiveness (e.g., timely attention to patient needs). Addressing gaps

in these areas can be achieved through targeted training and resource allocation. This may include investing in upgraded facilities and equipment and providing staff with training to foster greater empathy and responsiveness in patient care.

Hospitals should regularly evaluate their facilities and service delivery standards, particularly in government hospitals, where tangibles were identified as an area for improvement. Maintaining well-equipped facilities, high-quality medical resources, and a comfortable environment is crucial for enhancing patient satisfaction. Government hospitals should consider investing in infrastructure upgrades to improve the tangible aspects of care. Improvements in comfort, cleanliness, and the overall environment can positively influence patient perceptions of service quality.

Since patients with longer hospital stays reported higher satisfaction, healthcare professionals should ensure that extended stays are supported with enhanced care. This can include additional services, comfort measures, emotional and psychological support, and effective communication between patients and healthcare teams to meet their evolving needs. Both private and government hospitals should adopt a patient-centered approach, involving patients in decision-making, offering personalized care plans, and addressing their emotional and psychological needs throughout their stay.

Further studies should examine the factors contributing to higher satisfaction in private hospitals. By identifying and understanding the strengths of private hospitals, government hospitals can implement targeted improvements to address any service gaps.

Conclusion

This study demonstrated that patients undergoing elective surgeries were satisfied with the service quality in both accredited government and private hospitals. However, the private hospital scored higher in tangibles, reliability, empathy, and responsiveness than the government hospital. Additionally, patients who stayed longer in the hospital reported greater satisfaction with the service quality. These findings could encourage policymakers to implement accreditation programs across all healthcare sectors to enhance care quality and ensure patient safety. Additionally, the accredited hospitals should adopt strategies that enhance patient satisfaction with service quality and improve the lowest dimensions of these services.

Abbreviations

SERVQUAL	Service Quality Questionnaire
SPSS	Statistical Package for Social Sciences
SD	Standard deviations

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Author contributions

L.H. and M.M. designed the study and M.D. provided the data. All authors wrote the drafting of the manuscript. M.M. edited the manuscript and provided valuable comments. All authors reviewed and approved the manuscript.

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Data availability

The data that support the findings of this study are not openly available due to reasons of sensitivity and are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate

Approval was obtained in accordance with the Declaration of Helsinki from the Helsinki Committee in Palestine and the Institutional Review Board (IRB) of Arab American University in Palestine with reference number No (# CAMS/CCNA/8/124). Participants provided informed written consent. Confidentiality of the data was maintained throughout data collection and analysis.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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