

Evaluation of patients' satisfaction in cardiac emergency of tertiary care hospitals of Quetta

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Abstract

Objective: To evaluate and compare patient satisfaction in cardiac emergency departments of tertiary care hospitals in an urban setting.

Method: The comparative, cross-sectional study was conducted from November 2023 to April 2024 at the cardiac emergency departments of three tertiary care centres in Quetta, Pakistan, after approval from the institutional ethics review board of Quetta Institute of Medical Sciences QIMS, Quetta and comprised patients aged >20 years who presented to the cardiac department. Data was collected using a self-designed, validated questionnaire. Data was analysed using SPSS 26.

Results: Of the 425 patients, 113(26.58%) were from Bolan Medical College Hospital, 212(49.89%) from Sheikh Muhammad Bin Zayed Al Nahyan Institute of Cardiology Quetta, and 100(23.52%) from Civil Hospital Quetta. Overall, there were 241(56.7%) males and 184(43.3%) females. There were 159(37.41%) patients aged 30-50 years. Sheikh Muhammad Bin Zayed Al Nahyan Institute of Cardiology recorded the highest mean accessibility score 7.721 ± 1.37 , and the highest mean score in terms of physical environment 31.146 ± 4.01 . It also excelled in providing information regarding treatment and procedures 37.623 ± 2.91 . Overall satisfaction level was 94.34%(n=212) for Sheikh Muhammad Bin Zayed Al Nahyan Institute of Cardiology, 69.03%(n=113) for Bolan Medical College Hospital and 56%(n=100) for Civil Hospital Quetta.

Conclusion: Overall satisfaction level was high in Sheikh Muhammad Bin Zayed Al Nahyan Institute of Cardiology in all domains compared to those at Bolan Medical College Hospital and Civil Hospital Quetta.

Keywords: Patient satisfaction, Quality of healthcare, Cardiac emergency, Tertiary care centre, Healthcare survey.

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Introduction

Measuring patient satisfaction is crucial in evaluating the quality and productivity of any healthcare system, including treatment outcomes.¹ The emergency department (ED) is a critical healthcare setting for delivering acute care services, and understanding the relationship between patient satisfaction and the level of care in the ED is becoming increasingly important.² The core objective of an emergency care system is to provide timely services, including pre-hospital care, transportation to ED, and ensuring timely access to necessary medical and surgical treatments.³

Healthcare quality and satisfaction measurement are essential for effective resource management. It enables a focus on user preferences, allowing for the creation of customised health services tailored to their needs and expectations.⁴ Additionally, patient satisfaction is an internationally accepted factor that needs to be evaluated

regularly to complement other methods of quality assessment, and help maintain efficient healthcare delivery.⁵

The physical environment of the cardiac ED, including factors like cleanliness, comfort and accessibility, greatly influences patients' perceptions of care quality and their overall satisfaction.⁶ Moreover, the attitude, availability and skill of medical staff play a crucial role in determining patient satisfaction.⁷ In healthcare units, the quality index serves as a metric to measure patient satisfaction.⁸ These measures are commonly used as quality indicators to assess a patient's satisfaction with their doctor, the hospital environment and the processes involved.

Shared decision-making in the ED can enhance patient engagement, particularly for those presenting with chest pain. Patient engagement refers to the degree to which patients are actively involved in their healthcare, including making medical decisions and adhering to recommended behaviours.⁹ A 2002 study emphasised that patients presenting with chest pain require not only timely clinical management, but also reassurance, clear communication and attentive follow-up, particularly during their stay in the observation unit. A common concern among patients was the perception that their condition was not taken seriously, or that they were discharged without a clear explanation

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of their symptoms. This highlights the critical importance of effective communication in addressing patient concerns, ensuring understanding and improving overall satisfaction with care.¹⁰

A “see and treat” approach, using low-cost interventions, can also improve patient satisfaction. Additionally, by enhancing communication between providers, redesigning patient flow, and addressing bottlenecks in ED, patients’ perceptions of waiting times in hospitals and primary care settings can be changed, which leads to measurable improvement in patient satisfaction levels.¹¹ Given the significant impact of patient satisfaction on the quality and effectiveness of acute hospital care, as well as the complex nature of cardiovascular diseases (CVDs), evaluating patient satisfaction in CVD patients in low- and middle-income countries (LMICs) is essential for enhancing both patient experiences and health outcomes.

The methods for evaluating patient satisfaction have been a subject of ongoing debate in the literature for decades, with many considering it a challenging and complex task.¹² Studies show that patients who are satisfied with their care are more likely to follow treatment plans and continue utilising healthcare services. Additionally, there is evidence of a relationship between satisfaction levels and outcomes, such as hospital readmission rates.¹³

A study at the Combined Military Hospital (CMH) in Lahore found that in the ED, patient satisfaction is a multifactorial and multidimensional process that includes demographic, medical and non-medical aspects.¹⁴ Patient satisfaction requires a punctual and effective delivery of services, price control, and management strategies within health structures.

Meeting patients’ expectations and needs relies on the efficient delivery of accessible, high-quality services. This approach helps in resolving patient issues promptly, reducing the adverse effects of long waiting lists.¹⁵ The importance of evaluating patient satisfaction in hospitals of Pakistan was highlighted by another study, which emphasised that assessing healthcare delivery across different hospitals not only revealed system-specific strengths and weaknesses, but also provided actionable insights based on patient feedback to address shortcomings and improve overall care quality.¹⁶

It has been proposed that the effectiveness of healthcare can be assessed by examining its organised system, procedures and outcomes. Although the aims of the healthcare system, meaning efficacy and safety, are general, different countries and organisations vary in the emphasis they place on aims like patient-centeredness,

promptness, productivity and equity. Healthcare metrics, such as process metrics, are developed for diverse audiences who may use them for healthcare utilisation, purchasing decisions, or improved performance.¹⁷

Patient satisfaction is valuable for designing evaluations based on patient experience regarding inpatient care, and is significant from an organisational management perspective. Therefore, patient satisfaction and the quality of health services are important for the prolonged success of healthcare departments.²

The current study was planned to evaluate and compare patient satisfaction in cardiac EDs of tertiary care hospitals in an urban Pakistani setting.

Subjects and Methods

The comparative, cross-sectional study was conducted from November 2023 to April 2024 at the cardiac EDs of three tertiary care centres in Quetta, Pakistan, after approval from the institutional ethics review board of Quetta Institute of Medical Sciences QIMS, Quetta and permission from the managements of the participating tertiary care centres; the Civil Hospital Quetta (CHQ), the Bolan Medical College Hospital (BMCH) and the Sheikh Muhammad Bin Zayed Al Nahyan Institute of Cardiology Quetta (SMBZAN-ICQ). The sample was raised using non-probability convenience sampling technique. Those included were all patients aged >20 years presenting to the cardiac ER. Patients reporting to other departments of the hospitals were excluded. The sample size was calculated using Cochran’s formula with a 95% confidence level and 5% margin of error.¹⁸ A prevalence of 50% was used based on a previous study conducted at CMH Lahore.¹⁴ A 10% non-response rate was added to the calculated sample size. Prior to data collection, a pilot study was conducted to assess the questionnaire’s reliability, yielding a reliability coefficient >0.70. Data was collected using the pretested and validated questionnaire after taking verbal consent from all the participants.

The 38-item questionnaire was in both English and Urdu to reduce any possible language bias. The questionnaire had three sections. Section A consisted of demographic data, including age, gender, education, family background, income and occupation, while Section B assessed ED service dimensions, including accessibility (2 items), arrival at the cardiac ED (3 items), physical environment (09 items), healthcare professionals’ attitude (12 items) and information to patients (09 items). Section C assessed the level of overall satisfaction as either ‘yes’ or ‘no’. Section B was scored using a five-point Likert scale, ranging from 1=strongly disagree to 5=strongly agree.

Overall satisfaction of the patients was assessed in three domains: performance, administration and machinery. The questionnaire was filled up by the respondents in the presence of the reserchers who helped those who were unable to fill out the questionnaire themselves. The questionnaire was verified and coded before analysis.

Data was analysed using SPSS 26. Data was expressed as mean $\pm$ tandard deviation or as frequencies and percentages. Chi-square test was used to compare the data. $P<0.05$ was considered statistically significant.

Results

Of the 425 patients, 113(26.58%) were from BMCH, 212(49.89%) from SMBZAN-ICQ, and 100(23.52%) from CHQ. Overall, there were 241(56.7%) males and 184(43.3%) females. There were 159(37.41%) patients aged 30-50 years. While gender was not significantly associated with the level of satisfaction ($p>0.05$), age, academic qualification, income, occupation and background had significant impact on the patients' level of satisfaction ($p<0.05$) (Table 1).

SMBZAN-ICQ recorded the highest mean accessibility score 7.721 $\pm$ 1.37 compared to CHQ 7.24 $\pm$ 1.69 and BMCH 6.398 $\pm$ 2.15.

Table-1: Comparison of satisfaction level with demographic variables (n=425).

Variable	Population overall Satisfied	Population overall Unsatisfied	p-value
Gender			0.841
Male	197	44	
Female	149	35	
Age (years)			0.013
20-35	60	20	
30-50	137	22	
50-65	72	26	
65 and above	77	11	
Qualification			0.001
Illiterate	206	39	
Matric	61	8	
Intermediate	34	16	
undergraduate	22	13	
Postgraduate	23	3	
Background			0.005
Urban	142	19	
Rural	204	60	
Monthly income (PKR)			0.032
25k-40k	224	54	
40k-70k	70	20	
70k-100k	18	5	
100k and above	34	0	
Occupation			0.001
Industrial worker	107	43	
Businessman	135	17	
Doctor	7	3	
Civil/Army	91	16	
Other	6	0	

6.398 $\pm$ 2.15. It also recorded the highest mean score in terms of physical environment 31.146 $\pm$ 4.01, in providing information regarding treatment and procedures 37.623 $\pm$ 2.91, arrival on time at cardiac emergency department 10.292 $\pm$ 1.8, healthcare professionals' attitude towards patients 41.976 $\pm$ 2.93 (Figure 1).

In general, the patients showed the highest level of satisfaction with the attitude of healthcare professionals, and the clarity of the information they received (Table 2). There was potential for improvement in navigation and first contact, as evidenced by the modest satisfaction with accessibility and arrival procedures (Table 2). Responses to the physical environment were mixed; although basic upkeep and warmth were scored favourably, issues with noise, overcrowding and restroom cleanliness persisted (Table 2). Administrative fairness had the lowest grade, especially when it came to perceived favouritism and additional charges (Table 2).

Overall satisfaction level was 94.34%(n=212) for SMBZAN-ICQ, 69.03%(n=113) for BMCH and 56%(n=100) for CHQ (Figure 2).

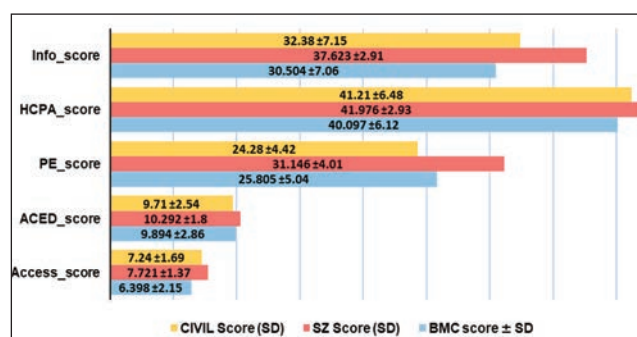


Figure-1: Mean score of health services dimensions.

Info-score: Information to patient, HCPA-score: Healthcare provider attitude, PE-score: Physical environment, ACED-score: Arrival at cardiac emergency department, Access-score: Accessibility score.

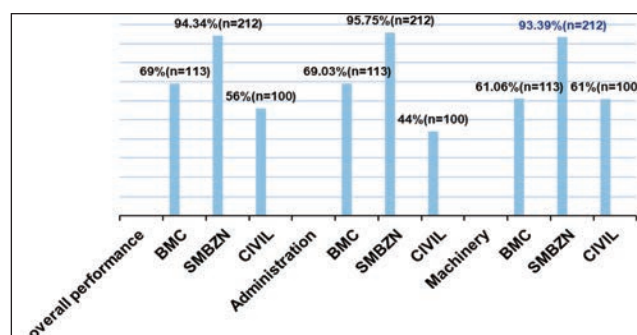


Figure-2: Comparison of overall satisfaction level of tertiary care centres.

BMC: Bolan Medical College, SMBZN: Sheikh Muhammad Bin Zayed Al Nahyan Institute of Cardiology, Civil: Civil Hospital Quetta.

Table-2: Satisfaction scores for individual items under five categories.

Accessibility	Strongly disagree score [n (%)]	Disagree score [n (%)]	Neutral score [n (%)]	Strongly agree score [n (%)]	Agree score [n (%)]	Mean
1 Is your access to cardiac ER is easy?	12(2.8)	67(15.8)	20(4.7)	311(73.2)	15(3.5)	3.58
2 Cardiac department ER entrance from all parts is appropriate and reachable?	13(3.1)	61(14.4)	18(4.2)	295(69.4)	38(8.9)	3.66
Arrival at cardiac department						
3 How did you travel to the hospital and time taken to reach?	201(47.3)	30(7.1)	44(10.4)	39(9.2)	111(26.1)	2.59
4 Are you satisfied by the directions provided to you about what to do and where to go?	9(2.1)	59(13.9)	21(4.9)	277(65.2)	59(13.2)	3.74
5 Receptionist at hospital reception was very much courteous	17(4.0)	53(12.5)	24(5.6)	276(64.9)	55(12.9)	3.70
Physical Environment						
6 The hospital has clean and neat environment inside the department and waiting area	57(13.4)	91(21.4)	21(4.9)	147(34.6)	109(25.6)	3.37
7 The waiting area is well maintained and have facilities for patients and attendants	27(6.4)	84(19.8)	21(4.9)	185(43.5)	108(25.4)	3.61
8 Suitable temperature is maintained.	11(2.6)	45(10.6)	24(5.6)	229(53.9)	116(27.3)	3.92
9 Lab and pharmacy facilities within the A&E	24(5.6)	95(22.4)	8(1.9)	252(53.9)	46(10.8)	3.47
10 Welfare facilities in waiting's area are provided	25(5.9)	65(15.3)	29(6.8)	248(59.3)	58(13.6)	3.58
11 Are you satisfied with toilet's cleanliness of cardiac department?	87(20.5)	64(15.1)	33(7.8)	198(46.6)	43(10)	3.10
12 Were you ever bothered by noise in ER of Cardiac department	123(28.9)	96(22.6)	21(4.9)	176(41.4)	9(2.1)	2.65
13 Did anyone ask for extra charges for free tests?	150(35.3)	166(39.1)	23(5.4)	84(19.3)	2(0.5)	2.11
14 Did you feel bothered or threatened by other patients or staff in ER of cardiac department	144(33.9)	150(35.3)	18(4.2)	103(24.2)	10(2.4)	2.25
Health care professional attitude						
15 How promptly did the medical staff attend to your need upon reporting symptoms?	236(55.5)	26(6.1)	19(4.5)	78(18.4)	66(15.5)	2.32
16 Did you timely receive pain management of your angina pain or relief on reporting	14(3.3)	82(19.3)	13(3.1)	287(67.5)	29(6.8)	3.55
17 Treats the patient politely	9(2.1)	32(7.5)	14(3.3)	359(84.5)	11(2.6)	3.77
18 Behaviour of doctors, nurses and support staff towards patients?	21(4.9)	40(9.4)	16(3.8)	325(76.5)	23(5.4)	3.68
19 Behaviour of doctors, nurses and support staff towards patients?	14(3.3)	31(7.3)	16(3.8)	355(83.5)	9(2.1)	3.73
20 Provide a good description of the recommended treatment plan to the patient for his cardiac problem	8(1.9)	36(8.5)	16(3.8)	339(79.8)	26(6.1)	3.79
21 Have an understanding of the patient's problems	6(1.4)	38(8.9)	19(4.5)	336(79.1)	26(6.1)	3.79
22 Complete and careful attention to the patient's words	6(1.4)	39(9.2)	18(4.2)	336(79.1)	26(6.1)	3.79
Neatly dressed and adornment	5(1.2)	22(5.2)	9(2.1)	351(82.6)	38(8.9)	3.92
23 Careful and complete examination of the patient is conducted	7(1.6)	25(5.9)	12(2.8)	350(82.3)	31(7.3)	3.97
24 Did you feel that you would get better treatment and care if you have any personal recommendation?	62(14.6)	153(36.0)	8(1.9)	160(37.6)	42(9.9)	2.92
25 Did you have to bribe to get favours?	154(36.2)	186(43.8)	17(4.0)	61(14.4)	7(1.6)	2.01
Information to patient						
26 The doctor explains the examinations and treatment plan to the patient.	7(1.6)	48(11.3)	5(1.2)	338(79.5)	27(6.4)	3.77
27 The doctor explains the drug's side effects.	7(1.6)	60(14.1)	6(1.4)	324(76.2)	28(6.6)	3.72
28 Were family members involved appropriately in your care discussion?	4(0.9)	40(9.4)	12(2.8)	318(74.8)	51(12.0)	3.87
29 The doctor explains the treatment decision and reasons why they have been chosen	4(0.9)	51(12)	16(3.8)	287(67.5)	67(15.8)	3.85
30 The doctor answers the patient's questions.	3(0.7)	33(7.8)	17(4)	323(76)	49(11.5)	3.89
31 The doctor provides information regarding future changes in the patient's health process.	4(0.9)	46(10.8)	14(3.3)	316(74.4)	45(10.6)	3.82
32 The doctor gives the patient additional information on the lifestyle modification (diet, exercise. etc.)	4(0.9)	52(12.2)	14(3.3)	301(70.8)	54(12.7)	3.82
33 The doctor gives the patient the necessary information on the follow-ups.	4(0.9)	44(10.4)	13(3.1)	316(74.4)	48(11.3)	3.84
Will you be satisfied in referring and suggesting this cardiac center to others?	10(2.4)	41(9.6)	16(3.8)	282(66.4)	76(17.9)	3.87

Chi-square test was used

Discussion

The ED often serves as the first point of contact for many patients, shaping their initial impression of the hospital. A positive experience in the ED can increase the likelihood that patients will return to the same hospital for follow-up care.¹⁴ Both patient satisfaction and perceived quality of healthcare (PQHC) serve as distinct mediators that influence how factors contributing to satisfaction, such as service quality or communication, translate into outcomes, like patient trust, adherence and future healthcare use.¹⁹ In the ED setting, it is crucial to identify and prioritise areas for improvement based on the desired outcomes, while also acknowledging the different roles that patient satisfaction and PQHC play in shaping these results.¹⁹

Coronary artery disease (CAD) is the most frequent underlying cause of sudden cardiac death, with 75.9% of out-of-hospital sudden cardiac deaths having been attributed to ischaemic heart disease.²⁰ Given the time-sensitive nature and high mortality associated with cardiac emergencies, rapid recognition and intervention are critical in improving patient outcomes. Timely access to expert medical care at the cardiac ED is essential in cases like myocardial infarction (MI), cardiac arrest and arrhythmias, all of which need immediate intervention to avoid any serious complications or loss of life.²¹ Despite the success of improving MI management and resulting in increased survival rates in high-income regions, many barriers still remain which present a greater challenge in LMICs.²² In South Asia, studies have demonstrated that outcomes have

been worse for MI patients due to delayed care, limited availability of the most advanced diagnostic and treatment modalities, and increased risk factor burden, including diabetes and hypertension.²²

The current study explored patient satisfaction in the cardiac ED of three tertiary care centres in Quetta, the provincial capital of Balochistan. For patients from remote areas of Balochistan, reaching a tertiary care cardiac ED represents a significant step, often characterised by limited trust in the healthcare system due to differing perceptions and experiences compared to those from urban areas. In such high-turnover settings, care must be efficient, compassionate and culturally sensitive to ensure compliance, and foster lasting trust. Assessing patient satisfaction in this context helps identify gaps, enhance care delivery, and strengthen future healthcare engagement.

The key current findings shed light on various demographic and socioeconomic aspects involved in patient satisfaction. A similar study reported that demographic and socioeconomic variables, including age, gender, marital status, education level, income and location, significantly influenced patient satisfaction scores.²³ The primary focus of the current research was to assess the level of patient satisfaction within cardiac ED.

The majority of the current patients comprised males. There was a noticeable distribution of patients in different age groups, with 37.4% aged 30-50 years.

There were 57.6% patients who reported being illiterate, suggesting possible comprehension issues with medical information. Low literacy limits understanding of basic health information, reduces recognition of early warning signs, hampers adherence to medication, and delays medical care. A study found that patients with lower education levels were less satisfied with healthcare services than those with higher qualifications.²⁴ This was similarly noted in a Moroccan study, which explained that patients with higher education may better understand medical information, engage more effectively in discussions, and acknowledge the significance of effective management in their care.²⁵

The patients in the current study came from a variety of professional backgrounds, socioeconomic classes, and income groups. These results offer insightful information about the socioeconomic and patient demographics that impact satisfaction levels in cardiac EDs which can be used to plan informed strategies targeted at raising the standard of care and optimising the patient experience in a crucial healthcare environment. To improve patient satisfaction

and lessen the financial difficulties connected with cardiac emergencies, financial assistance programmes and support services can be implemented.

In the current study, SMBZAN-ICQ's patient satisfaction scores were higher than those of BMCH and CHQ, confirming SMBZAN-ICQ as a top-notch medical facility. Although the scores of BMCH and CHQ were acceptable, they consistently underperformed compared to SMBZAN-ICQ in all the evaluated areas, indicating potential areas for improvement in patient satisfaction within their cardiac EDs.

The current study has certain limitations. It had a cross-sectional design, and was conducted over six months. A long-term study would provide more comprehensive and accurate insights. Additionally, the modest sample size limited the generalisability of the findings. Future research with a larger sample would be beneficial to evaluate patient satisfaction more thoroughly.

Conclusion

There were significant variations in terms of patient satisfaction levels across cardiac emergency departments in Quetta. SMBZAN-ICQ had the highest satisfaction scores, highlighting the importance of structured processes, a supportive environment, skilled staff, cleanliness and effective communication. SMBZAN-ICQ outperformed BMCH and CHQ in aspects like accessibility, arrival time, staff attitude, and information provision. The findings provide valuable direction for enhancing cardiac emergency services and improving overall patient experiences in this critical healthcare domain.

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References

1. Afrashtehfar KI, Assery MKA, Bryant SR. Patient Satisfaction in Medicine and Dentistry. *Int J Dent* 2020;2020:6621848. doi: 10.1155/2020/6621848.
2. West E. Management matters: the link between hospital organisation and quality of patient care. *Qual Health Care* 2001; 10:40-8. doi: 10.1136/qhc.10.1.40.
3. Kharel R, Thapa GB, Voor T, Pant SR, Adhikari SK, Bist BS, et al. Emergency unit assessment of seven tertiary hospitals in Nepal using the WHO tool: a cross-sectional study. *Int J Emerg Med* 2023;16:13. doi: 10.1186/s12245-023-00484-2.
4. Ferreira DC, Vieira I, Pedro MI, Caldas P, Varela M. Patient Satisfaction with Healthcare Services and the Techniques Used for its Assessment: A Systematic Literature Review and a Bibliometric

- Analysis. *Healthcare (Basel)* 2023;11:639. doi: 10.3390/healthcare11050639.
5. Asamrew N, Endris AA, Tadesse M. Level of Patient Satisfaction with Inpatient Services and Its Determinants: A Study of a Specialized Hospital in Ethiopia. *J Environ Public Health* 2020;2020:2473469. doi: 10.1155/2020/2473469.
 6. Gharaveis A, Hamilton DK, Pati D. The Impact of Environmental Design on Teamwork and Communication in Healthcare Facilities: A Systematic Literature Review. *HERD* 2018;11:119-37. doi: 10.1177/1937586717730333.
 7. Sughra U, Siddiqui M, Noorani S, Mansoor H, Kausar S. Patient Satisfaction: A Tool towards Quality Improvement: Pakistan Journal of Ophthalmology 2021;37:1150. doi.org/10.36351/pjo.v37i2.
 8. Georgoudi E, Kyriazis S, Mihalache A, Kourkouta L. Measurement of patient satisfaction as a quality indicator of hospital health services: the case of outpatient clinics in general hospital. *Sci J Public Health* 2017;5:128-35. doi:10.11648/j.sjph.20170502.10.
 9. Probst MA, Tschatscher CF, Lohse CM, Bellolio MF, Hess EP. Factors Associated With Patient Involvement in Emergency Care Decisions: A Secondary Analysis of the Chest Pain Choice Multicenter Randomized Trial. *Acad Emerg Med* 2018;25:1107-7. doi: 10.1111/acem.13503.
 10. Richards CR, Richell-Herren K, Mackway-Jones K. Emergency management of chest pain: patient satisfaction with an emergency department based six hour rule out myocardial infarction protocol. *Emerg Med J* 2002;19:122-5. doi: 10.1136/emj.19.2.122.
 11. Abass G, Asery A, Al Badr A, AlMaghlouth A, AlOtaiby S, Heena H. Patient satisfaction with the emergency department services at an academic teaching hospital. *J Family Med Prim Care* 2021;10:1718-25. doi: 10.4103/jfmpc.jfmpc_8_20.
 12. Hwang J, Vu GT, Tran BX, Nguyen TH, Nguyen BV, Nguyen LH, et al. Measuring satisfaction with health care services for Vietnamese patients with cardiovascular diseases. *PLoS One* 2020;15:0235333. doi: 10.1371/journal.pone.0235333.
 13. van Veghel D, Soliman-Hamad M, Schulz DN, Cost B, Simmers TA, Dekker LRC. Improving clinical outcomes and patient satisfaction among patients with coronary artery disease: an example of enhancing regional integration between a cardiac centre and a referring hospital. *BMC Health Serv Res* 2020;20:494. doi: 10.1186/s12913-020-05352-w.
 14. Khan SK, Bokhari U, Khan SA, Shoaib U, Rana ZH, Omer Z. Original Article Patient satisfaction regarding Emergency Department services at Combined Military Hospital (CMH) Lahore—A cross-sectional study. *Journal of Akhtar Saeed Medical & Dental College* 2023;4:163-71. doi.org/10.51127/JAMDCV4I4OA02.
 15. Alibrandi A, Gitto L, Limosani M, Mustica PF. Patient satisfaction and quality of hospital care. *Eval Program Plann* 2023;97:102251. doi: 10.1016/j.evalproplan.2023.102251.
 16. Farooq A, Khaliq MA, Toor MA, Amjad A, Khalid W, Butt F. Assessment of Patient Satisfaction in a Military and Public Hospital: A Comparative Study. *Cureus* 2020;12:10174. doi: 10.7759/cureus.10174.
 17. Aljarallah NA, Almuqbil M, Alshehri S, Khormi AMS, AlReshaidan RM, Alomran FH, et al. Satisfaction of patients with health care services in tertiary care facilities of Riyadh, Saudi Arabia: A cross-sectional approach. *Front Public Health* 2023;10:1077147. doi: 10.3389/fpubh.2022.1077147.
 18. Lwanga SK, Lemeshow S. Sample size determination in health studies: a practical manual. *Manual. Journal of the American Statistical Association* 1991;15:1-88. DOI:10.2307/2290547
 19. Abidova A, Silva PAD, Moreira S. The mediating role of patient satisfaction and perceived quality of healthcare in the emergency department. *Medicine (Baltimore)* 2021;100:25133. doi: 10.1097/MD.00000000000025133.
 20. Byrne R, Constant O, Smyth Y, Callagy G, Nash P, Daly K, et al. Multiple source surveillance incidence and aetiology of out-of-hospital sudden cardiac death in a rural population in the West of Ireland. *Eur Heart J* 2008;29:1418-23. doi: 10.1093/eurheartj/ehn155.
 21. Felix Hospital. how Felix Hospital ensure rapid responses and care [Internet]. [online] 2024 [cited 2024 August 27]. available from URL: <https://www.felixhospital.com/blogs/cardiac-emergencies>.
 22. Shah S, Uddin J, Hashim M, Khan DM, Ali H, Kakar SU. Frequency of Left Main Anterior Wall Myocardial Infarction Presenting in Emergency Department of Tertiary Care Hospital Quetta. *Indus Journal of Bioscience Research* 2025;3:762-8. DOI:doi.org/10.70749/ijbr.v3i1.587
 23. McKinley RK, Roberts C. Patient satisfaction with out of hours primary medical care. *Qual Health Care* 2001;10:23-8. doi: 10.1136/qhc.10.1.23.
 24. Takele GM, Weldesenbet NA, Girmay N, Degefe H, Kinfe R. Assessment patient satisfaction towards emergency medical care and its determinants at Ayder comprehensive specialized hospital, Mekelle, Northern Ethiopia. *PLoS One* 2021;16:0243764. doi: 10.1371/journal.pone.0243764.
 25. Damghi N, Belayachi J, Armel B, Zekraoui A, Madani N, Abidi K, et al. Patient satisfaction in a Moroccan emergency department. *Int Arch Med* 2013;6:20. doi: 10.1186/1755-7682-6-20.

Author Contribution:

ZO: Concept, design, data acquisition, analysis, interpretation, drafting, revision, final approval and agreement to be accountable for all aspects of the work.

RB: Data acquisition, entry, interpretation, drafting and critically revision.

MH: Concept, design, data acquisition, analysis, interpretation, revision and final approval.

MSA: Concept, design, data acquisition, drafting, revision and final approval.

FH: Data acquisition, entry, analysis and drafting.

MH: Concept, design, data entry, analysis and drafting.