



ORIGINAL ARTICLE

## Assessment of patient satisfaction in inpatient department of Ayub Teaching Hospital Abbottabad, Pakistan.

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**Article Citation:** Obaid Ur Rehman, Mujeeb Ur Rehman, Rahim N, Zubair M, Bibi P, Sulaman S, Ali S. Assessment of patient satisfaction in inpatient department of Ayub Teaching Hospital Abbottabad, Pakistan. Professional Med J 2023; 30(07):929-935.  
<https://doi.org/10.29309/TPMJ/2023.30.07.7392>

**ABSTRACT... Objective:** To assess level of patient satisfaction in inpatient department of Ayub teaching hospital Abbottabad. **Study Design:** Cross-sectional Observational study. **Setting:** Different Wards of Ayub Teaching Hospital (ATH) Abbottabad. **Period:** July 2022 to September 2022. **Material & Methods:** Three hundred five sample size was calculated by WHO sample size calculator. Data was collected through a self-administered questionnaire by convenient sampling technique. Six parameters were marked on a Likert scale from 0-4 and total score were categorized into high satisfaction, mediocre satisfaction and low satisfaction. Data was analyzed on SPSS Version 23. **Results:** 240(78.69%) patients were highly satisfied, 38(12.46%) were mediocely satisfied, while 27(8.85%) had low satisfaction with registration process. 252(82.62%) patients were highly satisfied, (10.49%) were mediocely satisfied while 21(6.89%) patients had low satisfaction with the courtesy received from the staff. 158(51.80%) patients were highly satisfied, 86(28.2%) were mediocely satisfied while 61(20%) had low satisfaction from hygiene of hospital. Similarly patient satisfaction during hospital stay, technical and professional expertise of hospital staff and affordability of medical treatment was also measured. Overall patients satisfaction with all six parameters combined was: 177(58.03%) patients were highly satisfied, 100(32.79%) were mediocely satisfied and 28(9.18%) patients had low satisfaction. **Conclusion:** The results of this study confirm that patient satisfaction was high in the setup studied. However this study was conducted in one hospital to make it generalize there is a need of more studies at larger scale involving more hospitals.

**Key words:** Abbottabad, Assessment, Ayub Teaching Hospital, Inpatient Department, Pakistan, Patient Satisfaction.

### INTRODUCTION

The perception of patient about health care has been accepted as an essential measure of quality of health care and a critical component of performance improvement and clinical effectiveness.<sup>1</sup> Donabedian defined patient satisfaction as the measurement of the feedback given by patient.<sup>2</sup> Patients satisfaction with health care is an integral component of quality monitoring in health care systems: "Providers must get first-hand information from their clients, which should help them to reorient their services by adopting a more client centered approach, transforming their attitude and introducing a convivial ambience at health service outlets based on feedback of their clients".<sup>3</sup> According to a Gallup Survey, Pakistan has scored the lowest in the world on the Global

Doctor-Patient Communication Assessment test in year 2011 with five points in contrast to the highest score 66 points was recorded for Ireland.<sup>1</sup> The evaluation of patient care is a realistic tool to provide opportunity for improvement of care and enhancing strategic decision making. It helps in reducing cost, meeting patients' expectations, making effective plans for management, monitoring execution of health plans, and provide comparison across health care institutions.<sup>2,4-6</sup> The three domains of patient satisfaction are delivery of essential medical care, treatments given to the patients and the healthcare provider activities and behaviors.<sup>7-9</sup> It is very important for doctors to satisfy their patients by maintaining good technical as well as interpersonal skills.<sup>10</sup>

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**Article received on:** 28/12/2022  
**Accepted for publication:** 13/04/2023

In addition, the doctors are required to maintain professionalism and ethical practice to meet the expectations of patients.<sup>11</sup> The technical expertise of physicians is defined as : maintaining an appropriate level of experience, ability to diagnose, performance of clinical procedures, prescribing medicine and learning about the latest medical developments.<sup>12</sup> Patient satisfaction is a multidimensional construct that depends on technical, infrastructural, functional, environmental, and interpersonal components of health services.<sup>10</sup> Furthermore, a satisfied patient selects the health services and becomes more compliant to treatment and follow-up advice.<sup>11,12</sup> Experimental literature shows that dissatisfied patients discontinue seeking healthcare with a physician whom they perceive as incompetent.<sup>13,14</sup> Similarly, the delays in seeking healthcare and self-medication are also often seen among dissatisfied patients.<sup>10</sup> Patient satisfaction is important criterion for improvement in the transition to high-quality health systems in low-income and middle-income countries.<sup>13</sup> Tertiary care institutes in the public sector are the referral centers for specialized services, and assessment of patients' satisfaction becomes crucial for improving the quality of health care at this level. For this purpose our study was conducted in tertiary care hospital. it was a questionnaire based cross sectional study.

This study was carried out to assess the patients' satisfaction in order to generate the data which can help not only doctors but also the hospital administration to recognize the issues and solve them. In this study, we assessed patients' opinion on different dimensions in hospital during their stay in different wards such as admission process, courtesy shown by staff, hospital environment and hygiene, their stay experience, their opinion on technical and professional expertise of the health services provided and cost affordability.

## MATERIAL & METHODS

This cross sectional study was carried out on 305 admitted patients (sample size calculated by World Health Organization WHO sample size calculator) in different wards of Ayub teaching hospital (ATH) Abbottabad between July 2022

to September 2022 after the approval from institutional ethical review committee (RC-2022/EA-01/104) and hospital administration. A self-administered, structured questionnaire was used to collect data using non-probability convenience sampling technique. All those patients who did not want to be part of this research or incomplete questionnaires were excluded. A pre validated questionnaire containing demographic details and Likert scale for six parameters of patient satisfaction (Admission process, staff courtesy, hospital environment and hygiene, their stay experience, their perception on technical and professional expertise and cost affordability) was used. Each Likert scale received a score between 0 and 4. For each of the six parameters, the Likert scale score was determined, and the total score was then calculated. The scores were converted to percentages and divided into three groups: highly satisfied (above 70%), moderately satisfied (between 50% and 70%), and low satisfied (below 50%). The questionnaire was developed in English with back and forth translated to national language Urdu for the better understanding of patients. Patient anonymity was maintained and informed consent was obtained. Data was analyzed on SPSS version 23 and presented in the form of tables. Data is described in terms of frequencies and percentages for categorical variables and continuous variables are described in terms of Mean±SD.

## RESULTS

Our sample size was 305 admitted patients in different ward of Ayub teaching hospital. The mean age of our subjects is  $33.37 \pm 20.59$ .

There were 153(50.2%) males and 152(49.8%) females in our study. Out of total 305 patients, 82(26.9%) patients lived in urban while 223(73.1%) patients lived in rural area. 206(67.5%) patients were married while the remaining patients were unmarried. In our study 124(40.7%) patients had no formal education, 47(15.4%) patients had primary education, 82(26.9%) patients had higher secondary education, with 25(8.2%) middle school passed, 18(5.9%) graduates and 9(3%) had post-graduation as their highest qualification. 43(14.1%) of the patients were employed while

remaining 262(85.9%) patients were unemployed. 77(25.2%) patients were living in rented house while 228(74.8%) patients had their own house. 35(11.5%) patients had their monthly income less than 10000 PKR (Pakistani Rupees), 134(43.9%) patients had their monthly income in range of 10000-20000 PKR while 32(10.5%) patients were dependent on others for their income. (Table-I)

The sample collected from different wards includes: Medical Ward 39(12.8%) patients , Surgical Ward 54(17.7%) patients, Gynecology and Obstetrics ward 48(15.7%) patients, Pediatrics Ward 26(8.5%) patients, Eye 12(3.9%) patients, ENT 10(3.3%) patients, Urology 12(3.9%) patients, Psychiatry 14(4.6%) patients, Neurosurgery 19(6.2%) patients, Cardiothoracic Surgery 4(1.3%) patients, Neurology 3(1%) patients, Cardiology 18(5.9%) patients, Pulmonology 1(0.3%) patients, Gastroenterology 18(5.9%) patients, Covid isolation 11(3.6%) patients, Orthopedic 12(3.9%) patients and Burn unit 4(1.3%) patients. Table-II

Two hundred forty (78.69%) patients were highly satisfied with registration process, 38(12.46%) rated registration process as moderate, while 27(8.85%) patients were unsatisfied with registration process. Similarly 252(82.62%) Patients were highly satisfied with the courtesy received from the doctors and nurses, 32(10.49%) patients were moderately satisfied while 21 (6.89%) patients were unsatisfied from doctor and nurses behavior. 158(51.80%) patients were satisfied from hygiene of hospital, 86(28.2%) rated hospital hygiene as moderate while 61(20%) patients were unsatisfied from hospital hygiene. 115(37.70%) patients had very satisfactory experience during their hospital stay, 126(41.31%) patients rated their hospital stay experience as moderate, while 64(20.98%) patients were unsatisfied during their hospital stay. 253(82.95%) patients were highly satisfied with technical and professional expertise of hospital, 46(15.08%) patients were moderately satisfied while 6(1.97%) of patients were unsatisfied with technical and professional expertise of hospital. 170(55.74%) patients were unsatisfied with affordability of medical treatment is hospital,65(21.31%) patients were moderate

while only 70(22.95%) patients were highly satisfied with affordability of medical treatment. Overall patients satisfaction with all six parameters combined was: 177(58.03%) patients were highly satisfied, 100(32.79%) patients satisfaction was moderately satisfied and 28 (9.18%) patients were unsatisfied. (Table-III)

Categories		Frequency (n) (%)
Residence	Urban	82 (26.9%)
	Rural	223 (73.1%)
Gender	Male	153 (50.2%)
	Female	152 (49.8%)
Marital Status	Married	206 (67.5%)
	Unmarried	99 (32.5%)
Education	Uneducated	124 (40.7%)
	Primary	47 (15.4%)
	Middle school	25 (8.2%)
	Higher Secondary	82 (26.9%)
	Graduation	18 (5.9%)
Occupation	Employed	43 (14.1%)
	Unemployed	262 (85.9%)
House	Rented	77 (25.2%)
	Own	228 (74.8%)
Monthly Income (Pkr)	No Income	32 (10.5%)
	<10,000	35 (11.5%)
	10,000-20,000	134 (43.9%)
	20,000-50,000	84 (27.5%)
	>50,000	20 (6.6%)

**Table-I. Sociodemographic characteristics (n=305)**

Wards	Frequency (%)
Medical Ward	39 (12.8%)
Surgical Ward	54 (17.7%)
Gynecology/Obstetrics	48 (15.7%)
Pediatric Ward	26 (8.5%)
Eye	12 (3.9%)
ENT	10 (3.3%)
Urology	12 (3.9%)
Psychiatry	14 (4.6%)
Neurosurgery	19 (6.2%)
Cardiothoracic Ward	4 (1.3%)
Neurology	3 (1%)
Cardiology	18 (5.9%)
Pulmonology	1 (0.3%)
Gastroenterology	18 (5.9%)
Covid Isolation	11 (3.6%)
Orthopedic Ward	12 (3.9%)
Burn Unit	4 (1.3%)

**Table-II. Wards (n=305)**

Variables	Low Satisfaction	Moderately Satisfaction	High Satisfaction
Registration process satisfaction	27(8.85%)	38(12.46%)	240(78.69%)
Satisfaction level of courtesy received from doctors and nurses	21(6.89%)	32(10.49%)	252(82.62%)
Hospital hygiene satisfaction	61(20%)	86(28.2%)	158(51.80%)
Hospital stay experience satisfaction	64(20.98%)	126(41.31%)	115(37.70%)
Technical and Professional Expertise Satisfaction	6(1.97%)	46(15.08%)	253(82.95%)
Affordability of medical treatment satisfaction	170(55.74%)	65(21.31%)	70(22.95%)
Overall Patient Satisfaction	28(9.18%)	100(32.79%)	177(58.03%)

Table-III. Patient satisfaction (n=305)

## DISCUSSION

Patients' satisfaction with health care is an important and commonly used component for quality monitoring. The purpose of assessment of patients' satisfaction is to evaluate the quality of treatment and care provided, identify areas of improvement to provide better services in future. Our study shows that overall patients satisfaction with all six parameters combined was: 177(58.03%) patients were highly satisfied, 100(32.79%) were moderately satisfied and 28(9.18%) patients had low satisfaction in contrast to the study conducted by Ahsen et al[15] in ATH in 2012 where the satisfaction was 68% and 76.1% in medical and surgical wards respectively. One of the reasons for the less satisfaction could be because we conducted our study in different wards not just medical and surgical wards. In study conducted by Kaur et al.<sup>16</sup> inpatients' satisfaction as whole was 78%. Whereas study conducted by Pande et al.<sup>17</sup> shows satisfaction of 82.4-97.45%. The study by Paniyadi et al.<sup>18</sup> shows patients' satisfaction of 92.7%, and study by Verma et al<sup>19</sup> in North India shows patient satisfaction around 77%. Another study carried out on patients admitted to obstetrics and gynecology wards of public hospitals of Ethiopia by Murama et al<sup>20</sup> reported overall satisfaction rate of 79.7%. All these statistics are much higher compared to our study. This tells us that there is significant and prompt need for improvement in provision of healthcare services. The overall satisfaction level of our study is almost comparable to study conducted in Nigeria where almost 55% of correspondents were satisfied with hospital services.<sup>21</sup> Whereas they are high compared to the study conducted by Rajkumari and Nula<sup>22</sup> where they were 32.5% and in South Africa where it was 50%.<sup>23</sup>

In our study 78.69% patients were satisfied with registration process which is higher compared to the study by Verma at al<sup>19</sup> where satisfaction with registration process was 26%. Whereas the study conducted by Pande et al<sup>17</sup> shows higher satisfaction with registration process which was 87.68%. One of the reasons of decrease satisfaction with registration process could be less number of service providers at registration desk and overload of patients.

Politeness and courtesy are dependent on context and culture and is different in different cultures. However the behavior should be acceptable. In our study 82.62% patients were satisfied with the attitude and courtesy shown by the staff which is almost equal to study conducted by Murama et al<sup>20</sup> which was 85.7%. It is less compared to the 98% and 96.4% seen in study by Kaur et al<sup>16</sup> and Paniyadi et al<sup>18</sup> respectively, but is higher compared to 75% and 53.8% seen in the study conducted by Verma et al<sup>19</sup> and in Akoijam et al<sup>24</sup> respectively. Some of the reasons of less satisfaction with the attitude shown by the staff could be overburden of work, working tirelessly and less time for their own mental health.

Cleanliness is one of the important parameter to be maintained in hospital and is a key factor in patients' satisfaction. 51.8% patients were satisfied with cleanliness of wards in our study which is approximately similar to that of the study conducted by Akoijam et al<sup>24</sup> which was 53.3%. It is relatively higher compared to previous study by Ahsen et al<sup>15</sup> where patients' satisfaction in regards to cleanliness was only 44% which means that there has been slight improvement in hygiene conditions of the hospital. Our study results are higher than the studies conducted by



Kaur et al<sup>16</sup> where it was 46% and by Verma et al<sup>19</sup> where it was 47%. It is low compared to that seen in South Africa<sup>23</sup> and Ethiopia<sup>20</sup> where hygiene satisfaction is 80% and 72.6% respectively. Poor hygiene could be attributed to unavailability of water, sanitation worker not performing their duties and lack of patients/attendants compliance to cleanliness.

Patients' satisfaction was 37.70% in regards to their stay experience in hospital. This is less compared to previous study by Ahsen et al<sup>15</sup> where attitude of nurses was highly friendly. It is also less compared to the study of Verma et al<sup>19</sup> where stay experience was 55.4% and the study by Kaur et al<sup>16</sup> showed 78% of satisfaction regarding care received and attitude of nurses. The study by Akoijam<sup>24</sup> also showed high satisfaction of 71.5% regarding stay experience. It is higher than that of study conducted by Anwar et al<sup>25</sup> where 84% of patients had negative experience during their stay in hospital. Patients are highly unsatisfied with their stay in the hospital which is contributed to the unprofessional behavior of nurses and the failure of the pain control measurements in ward.

In our study 82.9% patients were satisfied with technical and professional expertise provided in hospital. This included attitude of doctor, explanation of their disease, diagnosis and treatment facility provision. This is higher as compared to previous studies by Ahsen et al<sup>15</sup> where it was 70%, by Verma et al<sup>19</sup> and by Kaur et al<sup>16</sup> where satisfaction was 67% and 78% respectively. It is less compared to study by Paniyadi et al<sup>18</sup> and Pande et al<sup>17</sup> where 94.7% and 97.3% of patients were satisfied with care provision by doctor and explanation of their disease and treatment respectively. Reason for the less satisfaction with technical and professional expertise could be lack of proper communication and counseling of patients.

Patients' satisfaction regarding the cost affordability was 55.74%. This is higher compared to the studies by Ahsen et al<sup>15</sup> and Sultana et al<sup>26</sup> where cost affordability was 22-29% and 43% respectively.

## CONCLUSION

In our study most of the patient were living in rural areas and had their own house. About half of patients had no formal education, majority of them were unemployed and unmarried. About half of the patient had monthly income 10,000-20,000 PKR. In our study majority of the patients were satisfied with the registration process, courtesy received from doctors and nurses and technical and professional expertise. More than half of the patients had moderate or low satisfaction with hospital hygiene and hospital stay experience. Overall about half of the patients were satisfied while the remaining had moderate or low satisfaction. There are areas of improvement in the service provision. Registration process should be streamlined to ensure the fast provision of health services and to reduce the delay and waiting time. Patients were quite pleased with the behavior of staff and doctors. They were satisfied with the expertise by the doctors and the information provided by them regarding their illness and its treatment. However they were not satisfied with the ward experience which means nurses should be trained regarding their unprofessional behavior in the ward. Hygiene in ward was highly criticized by patients and there is prompt need for measures to ensure cleanliness in the ward. Patients' satisfaction regarding cost affordability is low and there is increase need for patients to be educated regarding the services provided by the hospital. This highlights a number of areas for policymakers and hospital administration to improve hospital services and consequently patients' satisfaction. Finally, a system of patients' feedback must be put in place in order to record and improve quality of healthcare.

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




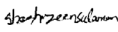
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2	Mujeeb Ur Rehman	Conception, Study design, Interpretation, Developing questionnaire, Data collection, Data Analysis.	
3	Noor Ul Huda Rahim	Developing questionnaire, Data collection, Discussion manuscript writing.	
4	Muhammad Zubair	Data collection, Data analysis.	
5	Parveen Bibi	Data collection, Analysis, Discussion writing.	
6	Shahzeen Sulaman	Data collection, Manuscript writing.	
7	Sobia Ali	Study design, Developing questionnaire, Proof reading.	