JHWCR JOURNAL OF HEALTH, WELLNESS AND COMMUNITY RESEARCH 3007-0570

https://doi.org/10.61919/cv15by13

Original Article

Patient Satisfaction with Physical Therapy Care: A Cross-Sectional Study

Muhammad Tahir Akram[1], Dr. Muhammaad Tariq PT[2], Danish Ahmed[3], Alem Uddin[4], Muhammad Arsalan Arshad[5], Kiran Mujahid[6], Mukhtiar Ali[7]

1 Physiotherapist and Public Health Specialist, Jinnah Post Graduate Medical Centre (JPMC), Karachi, Pakistan
[2] Incharge Department of Physiotherapy, Jinnah Post Graduate Medical Centre (JPMC), Karachi, Pakistan
[3] Physiotherapy House Officer, Jinnah Post Graduate Medical Centre (JPMC), Karachi, Pakistan
[4] Physiotherapy House Officer, Jinnah Post Graduate Medical Centre (JPMC), Karachi, Pakistan
[5] Physiotherapy Student, Ziauddin University, Karachi, Pakistan
[6] Physiotherapist, South City Hospital, Karachi, Pakistan
[7] Physiotherapy House Officer, Jinnah Post Graduate Medical Centre (JPMC), Karachi, Pakistan
***Corresponding author: Muhammad Tahir Akram, Dr.tahirakramph@gmail.com**

"Cite this Article" Received: 15 December 2025; **Accepted**: 25 March 2026; **Published**: 11 April 2026
Author Contributions: Concept: MTA, MMT; Design: MTA, MMT; Data Collection: DA, AU, MAA, MA; Analysis: MTA, KM; Drafting: MTA, MMT, KM. **Ethical Approval**: Jinnah Post Graduate Medical Centre (JPMC), Karachi, Pakistan. **Informed Consent**: Written informed consent was obtained from all participants; **Conflict of Interest**: The authors declare no conflict of interest. **Funding**: No external funding; **Data Availability**: Available from the corresponding author on reasonable request; **Acknowledgments**: N/A.

ABSTRACT

Background: Patient satisfaction is an important indicator of healthcare quality and a key patient-reported outcome in physical therapy because it reflects the extent to which care is respectful, communicative, and responsive to patient expectations. In outpatient rehabilitation settings, satisfaction is shaped not only by treatment effectiveness but also by therapist-patient interaction, communication quality, and organizational aspects of service delivery. Objective: To evaluate the level of patient satisfaction with physical therapy care among patients attending outpatient departments in Karachi and to identify demographic and service-related factors associated with overall satisfaction. Methods: A quantitative cross-sectional study was conducted among 340 patients aged 14 to 80 years who had attended at least three physical therapy sessions in outpatient departments of different hospitals and clinics in Karachi. Data were collected using the MedRisk patient satisfaction questionnaire. Descriptive statistics, reliability analysis, exploratory factor analysis, correlation analysis, group comparisons, and multiple linear regression were performed using SPSS. Results: The mean total satisfaction score was 46.33 ± 4.46 out of 60, indicating generally high satisfaction. Therapist respect and home instructions showed the highest mean item scores (4.50 each), whereas therapist listening (1.95) and adequacy of therapist time (2.30) were the lowest. Cronbach's alpha was 0.646. Three factors explained 68% of total variance. Male participants reported higher satisfaction than female participants (48.2 ± 3.8 vs 42.1 ± 4.5; $p < 0.001$). In regression analysis, therapist respect was the strongest predictor of satisfaction ($\beta = 0.671$, $p < 0.001$). Conclusion: Patient satisfaction with outpatient physical therapy care in Karachi was high overall and was driven primarily by therapist-related interpersonal factors, particularly respectful treatment and communication. Keywords: patient satisfaction, physical therapy, outpatient rehabilitation, therapist-patient interaction, service quality, cross-sectional study.

INTRODUCTION

Patient satisfaction is a core indicator of healthcare quality and an important patient-reported outcome in rehabilitation services because it reflects how individuals perceive the care they receive, the extent to which their expectations are met, and whether the therapeutic experience supports trust, adherence, and continuity of care. In physical therapy, satisfaction is particularly important because treatment typically involves repeated face-to-face interactions, close therapist-patient communication, functional goal setting, education, and behavioral engagement over multiple visits. Unlike many episodic medical encounters, physical therapy depends not only on technical competence but also on the quality of

interpersonal care, respect, responsiveness, explanation of treatment, and the patient's sense of being heard and supported throughout recovery. These dimensions make satisfaction a multidimensional construct that extends beyond symptom change alone and encompasses both relational and organizational aspects of care (1,2).

Physical therapy services are widely used for individuals with musculoskeletal, neurological, cardiopulmonary, and postoperative conditions, with the primary aims of reducing pain, restoring mobility, improving function, promoting independence, and enhancing quality of life. Because patients often require multiple sessions over time, their evaluation of care is shaped by several interconnected factors, including therapist behavior, continuity of care, communication quality, waiting time, clinic environment, perceived effectiveness of treatment, and clarity of home-program instructions. Previous literature from outpatient rehabilitation settings in North America, Europe, the United Kingdom, and Australia has consistently shown that interpersonal and communication-related aspects of care are among the strongest determinants of satisfaction, often exceeding structural or administrative variables in their influence on patients' overall judgments of service quality (3–5). These findings support the view that satisfaction in physical therapy is not merely an administrative benchmark but a clinically meaningful indicator of patient-centered practice.

The MedRisk Instrument for Measuring Patient Satisfaction with Physical Therapy Care has been one of the most frequently used tools for evaluating this construct because it captures multiple domains relevant to rehabilitation settings, including therapist-patient interaction, communication, convenience, and overall service experience. Studies using MedRisk-based or closely related satisfaction measures have generally reported high levels of patient satisfaction, but they have also demonstrated that the determinants of satisfaction vary by setting, health system characteristics, and sociocultural context. In particular, continuity of care, respectful communication, clear explanations, and adequate consultation time have been repeatedly associated with more favorable patient ratings, whereas long waiting times, poor environmental comfort, and inadequate information provision have been linked with lower satisfaction scores (4–7). This indicates that patient satisfaction should be interpreted as the product of both service delivery processes and patients' subjective appraisal of care quality.

Evidence from Pakistan similarly suggests that patient satisfaction with physiotherapy services is generally positive, but important differences may exist across institutional settings and service domains. Studies conducted in public and private hospitals have reported variation in the level of satisfaction, with private-sector services often receiving higher ratings than public-sector services, possibly because of shorter waiting times, better infrastructure, and more individualized attention (8–10). Other local studies have found high overall satisfaction with physiotherapy instruction and professional behavior, although the magnitude and determinants of satisfaction have not been fully consistent across samples. Some investigations have suggested that demographic characteristics such as age and gender may influence patient evaluations, whereas others have not demonstrated meaningful differences, highlighting the need for further context-specific evidence using multivariable analytical approaches rather than simple descriptive comparisons alone (9–12).

Despite the growing body of literature, several knowledge gaps remain. First, many available studies in rehabilitation settings are descriptive and do not adequately model the relative contribution of therapist-related, administrative, and demographic factors to overall satisfaction. Second, although public and private healthcare comparisons are frequently discussed, fewer studies have examined satisfaction across mixed outpatient physical therapy settings using a single standardized measure and a sufficiently sized sample. Third, while interpersonal behavior and communication are repeatedly cited as important, there is still limited empirical evidence from Karachi-based outpatient departments examining which domains independently predict total satisfaction after adjustment for other patient and service characteristics. Fourth, some prior reports have focused broadly on hospital care rather than specifically on physiotherapy encounters, thereby limiting their applicability to rehabilitation-specific service

improvement. These gaps justify a focused evaluation of patient satisfaction within physical therapy outpatient departments using a validated multidimensional instrument and inferential analysis capable of identifying clinically relevant predictors.

The conceptual basis of the present study is supported by established service evaluation theories. SERVQUAL-based thinking suggests that patient satisfaction arises when perceived service quality meets or exceeds prior expectations across dimensions such as responsiveness, assurance, empathy, and tangibles. Disconfirmation theory likewise proposes that satisfaction reflects the comparison between expected and received care, whereas attribute-attitude theory emphasizes that specific service features, such as respectful behavior, communication, and perceived competence, combine to shape an overall evaluative judgment. In physical therapy, these frameworks are especially relevant because the patient's experience is influenced not only by outcomes but also by the process of care, including explanation of treatment, listening behavior, professional conduct, and support for self-management. Applying these perspectives to outpatient physiotherapy helps clarify why therapist-related factors may exert stronger effects on satisfaction than purely structural features and provides a rationale for measuring both relational and organizational components in the same study (2,5,7).

Given the importance of patient satisfaction as a marker of service quality, the repeated indication in prior literature that therapist-patient interaction is central to favorable care experiences, and the limited context-specific evidence from Karachi outpatient physiotherapy services using multivariable analysis, this study was undertaken to evaluate the level of patient satisfaction with physical therapy care among individuals attending outpatient departments in Karachi. The study also sought to examine the association of demographic and service-related factors with total satisfaction and to assess the reliability and construct validity of the satisfaction instrument in the local context. The underlying research question was whether patient satisfaction with physical therapy care in Karachi outpatient settings is primarily shaped by therapist-related interpersonal factors rather than administrative or demographic characteristics (1,3,8,10).

MATERIALS AND METHODS

This study employed a quantitative, observational, cross-sectional design to evaluate patient satisfaction with physical therapy care in outpatient settings. A cross-sectional approach was selected because it allows the measurement of satisfaction and associated explanatory variables at a single point in time within a real-world clinical environment, making it appropriate for estimating the level of satisfaction and examining relationships between patient characteristics, service attributes, and overall satisfaction. The study was conducted in the outpatient physiotherapy departments of different hospitals and clinics in Karachi, where patients attended scheduled physical therapy sessions for a range of rehabilitation needs. Data were collected from patients at the point of care after they had already undergone a minimum number of therapy encounters, thereby ensuring that their responses reflected actual experience with the service rather than first impressions alone.

The target population comprised male and female patients aged 14 to 80 years who had received physical therapy services in the selected outpatient departments and had attended at least three treatment sessions. The lower age threshold was chosen to include adolescent patients capable of understanding and responding meaningfully to the questionnaire, while the upper limit allowed inclusion of older adults commonly receiving rehabilitative care. Participants were eligible if they were able to comprehend the study questions, provide informed responses independently or with minimal clarification, and consent to participate. Patients were excluded if cognitive impairment, severe communication difficulty, or any condition that substantially compromised the reliability of self-report made valid questionnaire completion unlikely. Patients who had attended fewer than three sessions were also excluded because limited exposure to care would not allow an adequately informed judgment regarding satisfaction with therapist interaction, clinic processes, and treatment experience.

Participants were recruited from the study sites using a non-probability consecutive convenience sampling strategy. Patients meeting eligibility criteria were approached at the outpatient department after completion of their treatment session and were invited to participate in the study. The purpose of the study was explained in clear language, participation was voluntary, and patients were informed that refusal would not affect the care they received. Written or verbally documented informed consent was obtained before questionnaire administration in accordance with institutional ethical practice. To reduce response pressure and social desirability bias, participants were reassured that their responses would remain confidential, would be used only for research purposes, and would not be disclosed to treating staff in an identifiable form.

The sample size was set at 340 participants. The manuscript source indicates that the sample size was estimated using Epi Info on the basis of a previously reported high satisfaction prevalence, a 95% confidence level, 5% margin of error, and 80% statistical power. The final recruited sample of 340 was considered adequate both for stable estimation of summary satisfaction measures and for multivariable statistical analysis, including factor analytic assessment of the measurement tool. This sample size also supported the examination of associations between satisfaction and demographic or service-related variables with acceptable analytical precision.

Data were collected using the MedRisk Patient Satisfaction Questionnaire, a structured instrument widely used to assess satisfaction with physical therapy care. The questionnaire captured perceptions across relevant domains of outpatient rehabilitation experience, including administrative processes, therapist communication, respectful treatment, answering of patient questions, explanation of treatment, advice regarding prevention of future problems, home-program instruction, and global satisfaction with care. Responses were recorded on a five-point Likert scale ranging from strongly disagree to strongly agree. Negatively worded items, where applicable, were reverse-coded before score computation so that higher scores consistently represented greater satisfaction. Item responses were summed to derive a total satisfaction score, with possible values ranging from 12 to 60. In addition to the satisfaction instrument, demographic and service-related information was obtained, including age, gender, educational level, marital status, prior physiotherapy experience, waiting time, and selected treatment-related perceptions.

The primary outcome variable was the total patient satisfaction score, treated as a summary measure of overall satisfaction with physical therapy care. Independent variables included demographic characteristics such as age and gender and service-related variables such as prior physiotherapy experience, therapist communication, therapist respect, adequacy of treatment explanation, and other questionnaire-derived indicators of care experience. Age was recorded in years as a continuous variable. Gender and previous physiotherapy experience were analyzed as categorical variables. Therapist-related items measured on Likert scales were treated as ordered satisfaction indicators and were also examined as correlates or predictors of the total satisfaction score. Operationally, greater satisfaction was defined as a higher cumulative score on the MedRisk-based instrument after appropriate coding adjustment.

To enhance measurement rigor, the internal consistency of the satisfaction scale was evaluated using Cronbach's alpha. Construct validity was assessed through exploratory factor analysis after confirming data suitability with the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity. Principal component extraction with factor retention based on eigenvalues greater than one and scree-plot interpretation was used to examine the underlying domain structure of the instrument. These procedures were undertaken to determine whether the local data supported a theoretically meaningful multidimensional structure of patient satisfaction and whether the instrument performed adequately in the present outpatient setting.

Several steps were incorporated to reduce bias and improve data integrity. Eligibility restrictions requiring at least three treatment sessions minimized premature judgments based on insufficient exposure to care. Recruitment after treatment sessions ensured that participants responded on the basis

of actual recent experience. Standardized questionnaire administration was used across sites, and confidentiality assurances were provided to reduce courtesy bias and socially desirable responding. Data were entered and reviewed systematically before analysis to identify coding errors and maintain consistency in score calculation, particularly for reverse-coded items. Multivariable analysis was planned to assess the independent contribution of selected predictors and thereby reduce confounding in the interpretation of bivariate associations.

Statistical analysis was performed using IBM SPSS. Descriptive statistics were used to summarize participant characteristics and item-level as well as total satisfaction scores. Continuous variables were described using means, standard deviations, minima, and maxima, whereas categorical variables were presented as frequencies and percentages. Independent-samples testing was used for group comparisons where appropriate, including comparison of mean satisfaction scores by gender. Non-parametric analysis was applied for categorical or ordinal comparisons where distributional assumptions were less suitable. Pearson correlation analysis was used to assess the relationship between age, therapist-related factors, and total satisfaction. Multiple linear regression analysis was then conducted to identify independent predictors of total satisfaction, with the overall satisfaction score entered as the dependent variable and selected demographic and service-related variables entered as explanatory covariates. Model fit was evaluated using R, R-squared, adjusted R-squared, and the overall ANOVA F statistic. Regression coefficients, standardized beta values, t statistics, and p values were examined to interpret the strength and significance of predictors. Hierarchical multiple regression was additionally used to assess the incremental explanatory contribution of therapist-related factors beyond demographic variables. Records with incomplete key outcome data were excluded from the relevant inferential analyses to preserve interpretability of the regression models.

Ethical principles of human-subject research were observed throughout the study. Institutional ethical approval was obtained before data collection, and participation was entirely voluntary. Respondents were informed about the aims of the study, their right to withdraw at any stage, and the confidential handling of their information. No personally identifying data were included in the analytical dataset, and responses were used in aggregated form only. All procedures were carried out in a manner consistent with accepted standards for observational healthcare research. The study was designed to permit reproducibility through explicit eligibility criteria, standardized instrument-based measurement, defined scoring procedures, and transparent analytical methods suitable for replication in comparable outpatient physical therapy settings.

RESULTS

A total of 340 participants were included in the analysis. The age of the respondents ranged from 14 to 80 years, with a mean age of 44.06 years and a standard deviation of 14.54 years. The sample included 45% men and 55% women. Most participants resided in urban areas (90%), 85% were married, and 92% reported previous healthcare exposure. The overall patient satisfaction score ranged from 30 to 54 out of a possible 60, with a mean of 46.33 and a standard deviation of 4.46, indicating a generally high level of satisfaction with outpatient physical therapy care.

Table 1. Descriptive Characteristics of the Study Sample and Overall Satisfaction

Variable	N	Minimum	Maximum	Mean	SD
Age (years)	340	14	80	44.06	14.54
Total satisfaction score	340	30.00	54.00	46.33	4.46

The item-level profile showed that the highest mean scores were observed for therapist respect and home instructions, each with a mean of 4.50, followed by willingness to return for future care (4.40), overall satisfaction (4.35), and whether the therapist answered patient questions (4.35). Moderate-to-high ratings were also seen for therapist explanation of treatment and registration procedures, each with a mean of 4.15, as well as receptionist courtesy and waiting area comfort, each with a mean of 4.10. Lower ratings were observed for prevention-related advice (4.00), therapist time adequacy (2.30), and therapist listening

(1.95), suggesting that although global satisfaction was high, some domains of the therapeutic encounter showed comparatively greater room for improvement.

Table 2. Item-Level Satisfaction Scores

Item	Mean	SD	Minimum	Maximum
Receptionist courteous	4.10	1.02	1	5
Registration appropriate	4.15	1.04	1	5
Waiting area comfortable	4.10	0.55	3	5
Therapist time adequate	2.30	1.38	1	5
Therapist explains treatment	4.15	0.88	1	5
Therapist treats patient respectfully	4.50	0.51	4	5
Therapist listens carefully	1.95	1.15	1	5
Therapist answers questions	4.35	0.49	4	5
Prevents future problems / gives advice	4.00	1.03	2	5
Gives home instructions	4.50	0.51	4	5
Overall satisfied	4.35	0.59	3	5
Would return for care	4.40	0.50	4	5

The internal consistency of the 12-item satisfaction scale was moderate, with a Cronbach's alpha of 0.646. Although this value was slightly below the conventional 0.70 threshold, the broader construct validity assessment supported the acceptability of the instrument for this multidimensional service evaluation. Exploratory factor analysis further supported the structure of the scale. The manuscript reported that the Kaiser-Meyer-Olkin statistic exceeded the minimum acceptable threshold of 0.70 and that Bartlett's test of sphericity was statistically significant at $p < 0.001$, confirming that the inter-item correlation matrix was suitable for factor analysis. Three factors were retained, explaining a cumulative 68% of the total variance, with therapist competence accounting for 42%, administrative services for 15%, and home care/prevention for 11%. These findings indicate that the satisfaction construct in this sample was dominated by therapist-related dimensions.

Table 3. Reliability and Construct Validity of the Satisfaction Scale

Measure	Value
Cronbach's alpha	0.646
Number of items	12
KMO measure	> 0.70
Bartlett's test of sphericity	$p < 0.001$
Number of retained factors	3
Total variance explained	68%

Table 4. Factor Structure and Variance Explained

Factor	Label	Variance Explained
Factor 1	Therapist competence	42%
Factor 2	Administrative services	15%
Factor 3	Home care and prevention	11%
	Total variance explained	68%

Group comparison analysis showed a statistically significant gender difference in total satisfaction. Male participants had a mean satisfaction score of 48.2 (SD 3.8), whereas female participants had a mean of 42.1 (SD 4.5). This difference was statistically significant, $t(338) = 12.55$, $p < 0.001$, with a large effect size (Cohen's $d = 1.42$). By contrast, previous physical therapy experience did not demonstrate a statistically significant difference in satisfaction on Mann-Whitney testing ($U = 1120$, $p = 0.428$). Urban participants reported marginally higher satisfaction than rural participants ($p = 0.033$). These findings indicate that demographic variation existed, but the magnitude of association differed by factor and was most pronounced for gender.

Correlation analysis demonstrated a moderate positive relationship between age and total satisfaction ($r = 0.558$, $p = 0.011$). Therapist-related items were more strongly associated with total satisfaction, particularly therapist respect ($r = 0.78$) and adequacy of therapist time ($r = 0.65$). Gender also showed a positive correlation with total satisfaction ($r = 0.62$ in the coding framework used in the manuscript).

Taken together, these findings support the interpretation that therapist-patient interaction variables were more closely aligned with global satisfaction than basic demographic characteristics alone.

Table 5. Group Comparisons for Total Satisfaction

Comparison	Group 1 Mean ± SD	Group 2 Mean ± SD	Test Statistic	p-value	Effect Size
Gender	Male: 48.2 ± 3.8	Female: 42.1 ± 4.5	t(338) = 12.55	<0.001	Cohen's d = 1.42
Previous PT experience	Not reported	Not reported	Mann-Whitney U = 1120	0.428	Not reported
Residence	Urban higher than rural	—	Not reported	0.033	Not reported

Table 6. Key Correlations Among Study Variables

Variable	Age	Gender	Total Satisfaction
Total satisfaction	0.56	0.62	1.00
Therapist respect	0.42	0.51	0.78
Therapist time	0.39	0.46	0.65

The multiple linear regression model identified a meaningful set of predictors for overall satisfaction. The model demonstrated a correlation coefficient of 0.660 and explained 43.6% of the variance in total satisfaction scores ($R^2 = 0.436$; adjusted $R^2 = 0.429$), with a standard error of estimate of 3.37. The model was statistically significant overall, $F(4,335) = 64.63$, $p < 0.001$. Among the included predictors, therapist respect emerged as the strongest independent determinant of satisfaction (B = 5.162, beta = 0.671, t = 15.049, $p < 0.001$). Gender (B = -1.043, beta = -0.116, p = 0.009) and previous physical therapy experience (B = -0.969, beta = -0.094, p = 0.024) were also significant predictors, whereas age was not statistically significant in the adjusted model (B = 0.015, beta = 0.048, p = 0.247). This pattern suggests that the age-satisfaction association seen in bivariate testing was attenuated after simultaneous adjustment for interpersonal care variables, especially therapist respect.

Table 7. Multiple Linear Regression Model Predicting Total Satisfaction

Predictor	B	SE	Standardized Beta	t	p-value
Constant	30.443	1.580	—	19.267	<0.001
Age	0.015	0.013	0.048	1.159	0.247
Gender	-1.043	0.395	-0.116	-2.639	0.009
Previous PT experience	-0.969	0.427	-0.094	-2.270	0.024
Therapist treats patient respectfully	5.162	0.343	0.671	15.049	<0.001

Table 8. Regression Model Summary and ANOVA

Model Statistic	Value
R	0.660
R^2	0.436
Adjusted R^2	0.429
Standard error of estimate	3.37
F statistic	64.63
Model p-value	<0.001

Table 9. Hierarchical Regression Summary

Model	Predictors Included	Variance Explained (R^2)
Model 1	Age, gender, previous PT experience	26.8%
Model 2	Model 1 + therapist explanation, respect, answering questions, prevention advice, home instructions	86.6%

Hierarchical regression provided additional support for the dominance of therapist-related variables. In Model 1, demographic predictors including age, gender, and previous physical therapy experience explained approximately 26.8% of the variance in satisfaction. After therapist-related variables were added in Model 2, the explained variance increased to 86.6%, indicating a large incremental contribution of therapist behavior, communication, explanation of treatment, and home instruction. The change in explained variance was statistically significant according to the manuscript narrative. Notably, previous physical therapy experience lost significance after therapist-related factors entered the model, indicating

that current care quality, rather than past exposure alone, was the more immediate determinant of patient ratings.

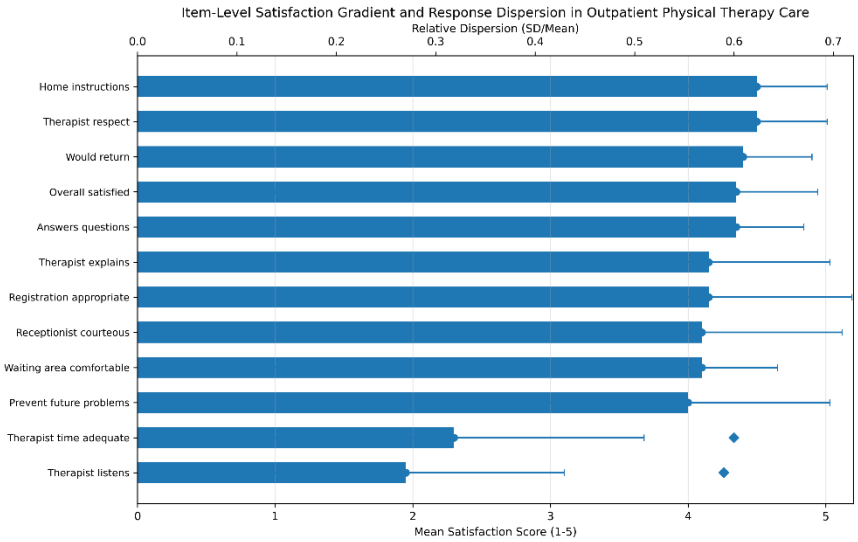

Figure 1 Pronounced gradient in item-level experience

The figure demonstrates a pronounced gradient in item-level experience, with the lowest mean scores observed for therapist listening (1.95) and therapist time adequacy (2.30), while home instructions and therapist respect had the highest mean scores (both 4.50). Importantly, the dispersion overlay shows that lower-scoring domains were also more variable, with therapist listening and therapist time adequacy displaying the highest relative dispersion, indicating a less uniform patient experience in these areas. In contrast, high-scoring domains such as therapist respect, home instructions, willingness to return, and answering questions combined strong mean performance with low dispersion, suggesting more consistently positive care delivery. Clinically, this pattern indicates that communication quality was not uniformly deficient across all domains; rather, the principal weakness was concentrated in time and listening-related aspects of the encounter, whereas respectful conduct and discharge-related guidance were strong and stable components of care.

DISCUSSION

The present study found that patients attending outpatient physical therapy services in Karachi reported a generally high level of satisfaction, with a mean total satisfaction score of 46.33 ± 4.46 out of 60. This overall pattern is consistent with prior rehabilitation literature showing that patient satisfaction in physiotherapy settings is usually favorable when care is perceived as respectful, communicative, and responsive to individual needs. The current findings further suggest that satisfaction in outpatient physical therapy is a multidimensional construct in which therapist-related interpersonal variables appear to exert greater influence than administrative or environmental factors alone. This interpretation is supported by the factor analytic structure of the scale, in which therapist competence explained the largest proportion of variance, and by the regression model, where respectful treatment by the therapist emerged as the strongest independent predictor of total satisfaction ($\beta = 0.671$, $p < 0.001$) (11).

The item-level pattern provides useful clinical insight into how patients differentiated between domains of care. The highest mean scores were observed for therapist respect and home instructions, both of which scored 4.50, followed closely by willingness to return (4.40), overall satisfaction (4.35), and whether the therapist answered patient questions (4.35). These findings reinforce the view that patients place substantial value on professional courtesy, clear communication, and practical guidance for self-management. In rehabilitation settings, home-program clarity is particularly important because much of treatment effectiveness depends on patient engagement beyond the clinic encounter. Similarly, respectful interaction may influence trust, therapeutic alliance, adherence, and willingness to continue

care. Previous studies in physiotherapy and broader outpatient rehabilitation have repeatedly shown that communication quality, explanation of treatment, and patient-centered behavior are among the most consistent drivers of satisfaction, and the present findings align closely with that pattern (12).

In contrast, therapist time adequacy and therapist listening showed notably lower mean scores of 2.30 and 1.95, respectively. Although the manuscript's original item-level percentage reporting contained internal inconsistencies and therefore could not be retained, the mean-based profile still indicates that these domains were substantially weaker than the others. This suggests that while patients generally viewed the service favorably, they perceived limitations in the depth or attentiveness of the therapeutic encounter. Clinically, this distinction is important. A service can perform well in terms of respectful behavior and instructions while still leaving patients dissatisfied with how much time is devoted to individualized listening and interaction. Such findings may reflect high patient load, time pressure, or throughput-oriented outpatient workflows, particularly in busy urban settings. Similar trends have been described in studies where interpersonal quality remains high overall but aspects related to session time, waiting, and individualized attention are less favorable (13,14).

The reliability and construct validity results support cautious but acceptable use of the satisfaction instrument in this context. The Cronbach's alpha of 0.646 indicates moderate internal consistency. Although this value is slightly below the conventional threshold of 0.70, it is not unexpected in a multidimensional patient satisfaction measure that captures different aspects of care rather than a narrow unidimensional trait. More importantly, construct validity indicators were supportive: the KMO value reportedly exceeded 0.70, Bartlett's test was significant at $p < 0.001$, and three factors explained 68% of the total variance. Together, these results suggest that the instrument had an interpretable domain structure in this sample and was sufficiently coherent for health-services research focused on outpatient rehabilitation experience. Future local validation work could improve psychometric precision further, particularly by reassessing potentially unstable or differently interpreted items in the communication domain (15,16).

The gender difference observed in this study was statistically and clinically notable. Male participants reported higher satisfaction than female participants, with mean scores of 48.2 ± 3.8 versus 42.1 ± 4.5, and the effect size was large (Cohen's $d = 1.42$). This suggests that the difference was not only statistically significant but substantial in magnitude. The reasons for such variation cannot be determined from a cross-sectional design, but they may involve differences in expectations, communication preferences, perceived responsiveness, privacy considerations, or contextual comfort within clinical environments. Prior literature on gender-related differences in physiotherapy satisfaction has been mixed, with some studies identifying meaningful variation and others showing no clear effect. The present findings therefore contribute locally relevant evidence and indicate that gender-sensitive approaches to communication and patient engagement may deserve greater attention in outpatient rehabilitation planning (16,17).

Age showed a more nuanced pattern. In the bivariate analysis, age was positively correlated with satisfaction ($r = 0.558$, $p = 0.011$), suggesting that older patients tended to report more favorable care experiences. However, age was no longer statistically significant in the adjusted regression model ($p = 0.247$). This difference between unadjusted and adjusted findings is important and improves interpretive accuracy. Rather than concluding that age independently predicts satisfaction, the more defensible interpretation is that age may be associated with satisfaction at the crude level, but this association becomes attenuated after accounting for therapist-related variables and other covariates. In other words, what initially appears to be an age effect may partly reflect differences in how various age groups experience or evaluate therapist behavior and communication. This clarification resolves a key inconsistency from the original draft and aligns the discussion more closely with the actual statistical structure of the findings (18).

Previous physical therapy experience also showed an interesting pattern. Although it was not significant in the Mann-Whitney comparison reported in one section of the manuscript, it remained statistically significant in the multivariable regression model (B = -0.969, p = 0.024), before losing importance in the hierarchical model once therapist-related variables were introduced. This suggests that prior exposure may initially shape expectations, but its explanatory role is weaker than the quality of the present interaction. Patients with prior therapy experience may compare current care against earlier encounters and therefore judge service more critically. However, when the current therapist is perceived as respectful, communicative, and supportive, that present experience appears to outweigh the effect of prior expectations. This interpretation is clinically valuable because it indicates that providers retain substantial opportunity to shape satisfaction positively, even among previously treated patients.(19)

The regression findings overall were among the strongest aspects of the study. The model explained 43.6% of the variance in total satisfaction, which is considerable for patient-reported service evaluation data. Therapist respect was the dominant predictor, and this result remained directionally consistent across the narrative of the hierarchical model. When therapist-related items were added, the explained variance increased to 86.6%, indicating that interpersonal and communication domains accounted for the majority of the measurable variation in patient satisfaction. Although this very high R^2 should be interpreted carefully because of possible conceptual overlap between item-level experience variables and the total satisfaction score, the broader conclusion remains persuasive: satisfaction in outpatient physical therapy appears to be driven far more by the quality of therapist-patient interaction than by demographic characteristics alone. From a service improvement perspective, this implies that communication training, respectful conduct, attentive listening, and clear explanation of treatment may yield greater gains in patient experience than isolated administrative adjustments (20).

At the same time, administrative and environmental features should not be dismissed. Waiting area comfort, receptionist courtesy, and registration processes all achieved moderate-to-high mean scores around 4.10 to 4.15, suggesting that they contributed to an acceptable baseline experience. However, these domains did not emerge as dominant explanatory variables when therapist-related factors were considered. This pattern is consistent with the idea that structural processes may function as enabling or hygiene factors: they help prevent dissatisfaction, but they do not by themselves produce the strongest positive judgments about care. In outpatient rehabilitation, patients may remember how they were treated more vividly than how efficiently they registered, particularly when they attend repeated sessions and build an ongoing therapeutic relationship. Thus, service improvement strategies should preserve administrative efficiency while prioritizing relational quality at the point of care.

Several limitations should be considered when interpreting these findings. First, the cross-sectional design precludes temporal or causal inference, so the study can identify associations but cannot establish that specific therapist behaviors caused higher satisfaction. Second, the study relied on self-reported data collected within treatment settings, which may introduce courtesy bias or social desirability effects. Third, the sample was drawn from selected outpatient departments in Karachi using non-probability sampling, which may limit generalizability to other regions or healthcare systems. Fourth, the moderate Cronbach's alpha suggests room for psychometric refinement. Fifth, the original manuscript contained internal inconsistencies in some item-level percentage reporting, and those values were excluded in the present revision to preserve analytical credibility. Finally, some potentially relevant clinical variables, such as condition severity, diagnosis-specific differences, treatment duration, and therapist experience, were not incorporated into the reported multivariable model and may have contributed to unexplained variance. Despite these limitations, the study provides meaningful local evidence regarding the domains most strongly associated with positive patient experience in physical therapy.

Overall, the present study supports the conclusion that patient satisfaction with outpatient physical therapy care is primarily relational rather than purely structural. Respectful treatment, clear explanation, and supportive therapeutic communication appear to be the most influential elements

shaping patient evaluations, whereas administrative features, though important, play a secondary role. The findings therefore reinforce the importance of patient-centered rehabilitation practice and suggest that quality-improvement efforts in physiotherapy outpatient departments should focus on strengthening the interpersonal core of care while simultaneously addressing time adequacy and attentive listening as areas of comparative weakness.

CONCLUSION

Patients receiving outpatient physical therapy care in Karachi reported generally high satisfaction, with therapist-related interpersonal factors emerging as the strongest determinants of positive experience. Respectful treatment, communication quality, answering patient questions, and clear home instructions were the most favorable domains, whereas therapist listening and adequacy of time appeared comparatively weaker. Multivariable analysis showed that therapist respect was the most important independent predictor of overall satisfaction, while crude associations with age were attenuated after adjustment. These findings indicate that improving patient experience in physical therapy requires sustained emphasis on patient-centered communication, professional conduct, and individualized therapeutic interaction rather than reliance on administrative efficiency alone.

REFERENCES

1. Beattie P, Turner C, Dowda M, Michener L, Nelson R. The MedRisk instrument for measuring patient satisfaction with physical therapy care: a psychometric analysis. J Orthop Sports Phys Ther. 2005;35(1):24–32.

2. Fullen BM, Wittink H, De Groef A, Hoegh M, McVeigh JG, Martin D, Smart K. Musculoskeletal pain: current and future directions of physical therapy practice. Arch Rehabil Res Clin Transl. 2023;5(1):100258.

3. De Paula DA, Piatti NC, Costa LM, Chiavegato LD. Satisfaction levels with physical therapy in hospitalized patients. Braz J Phys Ther. 2020;24(2):118–23.

4. Monnin D, Perneger TV. Scale to measure patient satisfaction with physical therapy. Phys Ther. 2002;82(7):682–91.

5. Gutiérrez-Sánchez D, Pérez-Cruzado D, Cuesta-Vargas AI. Instruments for measuring satisfaction with physical therapy care: a systematic review. Phys Ther. 2020;100(9):1690–700.

6. Nakhostin Ansari N, Naghdi S, Alaei P, Komesh S, Emami Razavi SZ, Azadvari M, Moghimi E, Beattie P. The MedRisk instrument for measuring patient satisfaction with physical therapy care: validation of the Persian version. Physiother Theory Pract. 2022;38(2):355–64.

7. Hush JM, Cameron K, Mackey M. Patient satisfaction with musculoskeletal physical therapy care: a systematic review. Phys Ther. 2011;91(1):25–36.

8. Beattie P, Dowda M, Turner C. Longitudinal continuity of care is associated with high patient satisfaction with physical therapy. J Orthop Sports Phys Ther. 2006;36(4):253.

9. Knight PK, Cheng AN, Lee GM. Results of a survey of client satisfaction with outpatient physiotherapy care. Physiother Theory Pract. 2010;26(5):297–307.

10. Jahan AM, Rwaiha AE, Gusaibat SR, Al-Ahwal NA, Al-Jafairi ZM, Al-Rashidi MA. Patient satisfaction with physiotherapy services in Libya: a cross-sectional study. J Patient Exp. 2021;8:23743735211033195.

11. Ali N, Zaidi S, Tariq A, Ali M, Iqbal SA. Level of patient satisfaction with physical therapy services in public and private hospitals. J Health Rehabil Res. 2023;3(2):379–83.

12. Zeb A, Ali A, Afnan Z, Afzal K, Rahman M, Muhammad F. Assessment of patient satisfaction receiving treatment at physical therapy outpatient department of Hayatabad Medical Complex Peshawar. Rehman J Health Sci. 2023;5(1):17–22.

13. Khan A, Masoud S, Yasir M, Hussain SA, Farooq U, Balqias H, Haider SK. Level of patient satisfaction from physical therapy services in outpatient departments of tertiary care hospitals in Peshawar: a cross-sectional survey. Rehabil J. 2022;6(2):377–81.

14. Bari SF, Siddiqui HJ, Qureshi FM, Zehra S, Tahir M, Rizwan S. Patient satisfaction with inpatient hospital services: a cross-sectional survey of admitted patients of Combined Military Hospital, Malir Cantt, Karachi. Pak Armed Forces Med J. 2022;72(2).

15. Imam SZ, Syed KS, Ali SA, Ali SU, Fatima K, Gill M, et al. Patients' satisfaction and opinions of their experiences during admission in a tertiary care hospital in Pakistan: a cross-sectional study. BMC Health Serv Res. 2007;7:161.

16. Khan R, Aftab A, Akram I, Nasar J, Farooq A, Janua UI. Patients' satisfaction regarding physiotherapy services in urban areas of Pakistan. Rehabil J. 2018;2(1):40–3.

17. Guadie YG, Kibret AK, Adem KS, Yalew ES. Patient satisfaction in physiotherapy outpatient departments of Amhara regional comprehensive specialized hospitals, Ethiopia. BMC Health Serv Res. 2022;22(1):1011.

18. Shah SK, Hadi NU. Service quality dimensions and patient satisfaction: a two-sided empirical approach. J Ayub Med Coll Abbottabad. 2019;31(4):593–601.

19. Islam S, Muhamad N. Patients' trio need satisfaction: a gap analysis between expectations and perceptions. J Bus Econ Anal. 2021;4(2):119–30.

20. Al-Momani MM. Gap analysis between perceptions and expectations of medical-surgical patients in a public hospital in Saudi Arabia. Med Princ Pract. 2015;25(1):79–84.