

## Patient Satisfaction with Outpatient Physiotherapy Services: A Cross-Sectional Study in Erbil, Iraq

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### ABSTRACT

**Background and Objectives:** Patient satisfaction is increasingly recognized as a key indicator of healthcare quality. Physiotherapy services, in particular, play a vital role in rehabilitation and patient-centered care. This study addresses a regional gap by systematically evaluating patient satisfaction with outpatient physiotherapy services in Erbil, Iraq. This study aimed to assess patient satisfaction with outpatient physiotherapy services, identify key factors influencing satisfaction, and provide evidence-based recommendations for improving service delivery.

**Methods:** A cross-sectional study was conducted from June to October 2024 involving 303 patients from governmental and private physiotherapy centers in Erbil. Data were collected via structured interviews using a validated 13-item satisfaction questionnaire covering administrative processes, comfort, therapist communication, and overall experience. Demographic data were also recorded. Statistical analysis included descriptive statistics and chi-square tests, with significance set at  $P\text{-value} \leq 0.05$ .

**Results:** The majority of participants were female (72%). Satisfaction was highest for administrative processes and staff courtesy (48.5% rated 'very good'), facility comfort and relaxation (38% rated 'very good'), and overall recommendation of services (42.2% 'very good'). Overall, 38.3% rated services as 'good' while only 1.7% rated them as 'poor'. All domains showed statistically significant associations with overall satisfaction ( $p < 0.001$ ).

**Conclusions:** Patients reported generally high levels of satisfaction with outpatient physiotherapy services in Erbil. Improvements are needed in treatment explanations and patient education. These findings highlight the importance of patient-centered approaches to strengthening healthcare quality.

**Keywords:** Patient satisfaction; Physiotherapy; Outpatient services; Erbil; Iraq

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## INTRODUCTION

Patient satisfaction is regarded as a vital aspect of estimating the efficacy and quality of healthcare services as the healthcare industry continues to grow. It encompasses a number of elements, including the effectiveness of the treatment, the level of interpersonal communication, the accessibility of services, and the overall healthcare experience [1]. Understanding the intricate interplay among these variables is imperative, not only for improving current services but also for the continuous progression of the healthcare system. Physiotherapy, which aims to regain function and promote health, is an excellent area for studying such connections. This cross-sectional study, situated in the centre of Erbil's healthcare system, holds significant ramifications for improving physical therapy treatment provided to outpatients. By clarifying those aspects that contribute to patient satisfaction, the desired outcome of the study is to provide empirically grounded knowledge that can guide methods for service improvement. Based on the actual state of healthcare in Erbil, the expected suggestions have the potential to go beyond local borders and act as templates for promoting patient-centred care worldwide [2,3]. Patient satisfaction is an intricate concept that has gained increasing attention in research on healthcare. It's a beneficial tool for assessing the quality of healthcare, taking into account factors such as communication, treatment outcomes, accessibility, and the overall patient experience [4]. Research continues to emphasize the importance of comprehending and enhancing patient satisfaction in order to support patient-centred care and better treatment outcomes [5]. Patient satisfaction is regarded as a significant aspect in the physiotherapy area. Physiotherapy services are designed to manage musculoskeletal and

neurological disorders through a collaboration between healthcare professionals and patients [6]. Many research studies have emphasized the beneficial correlation that exists between treatment adherence, patient satisfaction, functional outcomes, and overall well-being with physical therapy [7]. It's essential to comprehend regional differences in patient satisfaction in order to create healthcare interventions that are specifically targeted. Although there is abundant information available on patient satisfaction in physiotherapy at a global level, there is a noticeable gap in research concerning the unique dynamics of the Erbil healthcare system. Several studies conducted in low- and middle-income countries (LMICs), such as Ethiopia and Libya [3,8], have utilized cross-sectional designs and standardized questionnaires to assess patient satisfaction with physiotherapy services. While these studies consistently report moderate to high levels of satisfaction, differences exist in determinants such as accessibility, communication quality, and facility resources. Compared to these settings, variations in healthcare infrastructure and workforce capacity may influence patient perceptions, highlighting the importance of context-specific evaluation. Recent systematic reviews further support these findings, demonstrating that patient satisfaction in physiotherapy is strongly influenced by communication quality, accessibility of services, and therapist competence across different healthcare settings and delivery models [9–12]. The objective of this study is to address the gap by carrying out a cross-sectional assessment of patients' satisfaction with the services at the outpatient physiotherapy services in Erbil. Although the amount of research on patient satisfaction in physical therapy is increasing, more context-specific studies that consider local

characteristics and cultural influences are still needed [13]. This study aimed to add to the existing body of knowledge by focusing the light on the variables which influence patient satisfaction within Erbil's distinct healthcare environment. Objective: To assess patients' satisfaction with outpatient physiotherapy services and identify a key factor that affected the satisfaction levels. Provide evidence-based recommendations for service improvement based on the research findings. "Physiotherapy Services" means the services to be provided by the physiotherapists to Patients as set out in this Services Schedule. Physiotherapy can be described as a branch of rehabilitative health medicine that uses specially designed therapeutic exercise, manual mobilization and manipulation, and mechanical and electrical stimulation devices for the purpose of treating various physical issues such as dysfunction, bodily malfunction, physical impairment, disability, pain and trauma arising both from physical and mental conditions through assessment, education and guidance of the patients in Musculoskeletal System, Paediatrics, Neurology, Orthopaedics, Cardio-Respiratory and Women Health [14]. Patient satisfaction is a significant aspect of efficiency and quality in healthcare services, especially in the field of physical therapy where patient collaboration and compliance with therapeutic plans are crucial for the best possible outcomes. However, there is a lack of study on patients' satisfaction with physiotherapy services in countries with low and middle range of incomes, such as Iraq. Consequently, this literature review aims to determine the elements by searching the relevant studies which interact with patients' satisfaction and the services of physical therapy in outpatient setting in Erbil, the capital of the Kurdistan Region of Iraq. The providing of quality care by the health

professionals' staff is one of the fundamental aspects that impact the patient satisfaction with physiotherapy services. Research has demonstrated that patients' awareness of the capability, compassion, and interpersonal skills of physiotherapists considerably influence their satisfaction levels [15]. In addition, circumstances such as waiting periods, accessibility of services, and the physical environment of the place, plays a vital role as well in forming patient satisfaction [4]. Moreover, cultural and socio-economic factors also influence the patient's expectancy of physiotherapy and experiences [16]. In order to tailor the services to the contextual needs of the community, it is essential to comprehend this aspect; as an example, language barriers, religious beliefs, and traditional remedies carry a great potential of interfering with patients' satisfaction in physiotherapy services [17]. Furthermore, tele-rehabilitation services and wearable equipment, resemble advancement in technology and innovations in physiotherapy servicing; these can encompass the patient's satisfaction. Utilizing a customized treatment plan by providing more convenient and effective care options, patient engagement and satisfaction will be at the top of anticipated outcomes. [18]. In conclusion, evaluating patients' satisfaction with the outpatient physiotherapy services of Erbil necessitates a thorough comprehension of the multidimensional constructs and the key factors known to affect the patients' perceptions. By taking these factors into consideration care providers are able to optimize delivery of services and maximize the patient outcomes in the region. Therefore, to the best of our knowledge, no prior studies have assessed patient satisfaction with outpatient physiotherapy services in Erbil, Iraq. This study aims to fill this gap by providing context-specific evidence on patient experiences and satisfaction within

## METHOD

The aim of this cross-sectional study was to assess patient satisfaction with outpatient physiotherapy services in Erbil, it was conducted from June 2024 to October 2024. A post hoc power analysis was conducted using G\*Power to evaluate the adequacy of the achieved sample size ( $n = 303$ ). Assuming a significance level ( $\alpha = 0.05$ ), test type (chi-square test), and effect size (Cohen's  $w = 0.3$ , medium effect) the statistical power was estimated to be greater than 80%, indicating that the study sample was sufficient to detect meaningful associations between variables. So, a total of 303 patients were approached, all of whom agreed to participate, yielding a response rate of 100%, and data were collected through adapted questionnaires administered via structured interviews. A convenience sampling technique was employed, whereby patients attending selected physiotherapy facilities during the study period were invited to participate. Physiotherapy services were evaluated across various healthcare facilities, including Erbil Teaching Hospital, Rizgary Hospital, Balsam Hospital, Erbil International Hospital, Shahidan Health Centre, Kurdistan Rehabilitation Centre, Shifa Centre, Sky Centre, Stella Centre, Novela Centre, Rozh Centre, Rozh Hana Centre, and MG Center. The Monnin and Perneger patient satisfaction scale was selected for this study due to its strong psychometric properties, prior validation in physiotherapy settings, and widespread use in international research. Its structured multidimensional design allows comprehensive assessment of key domains such as administrative processes, therapist interaction, and overall patient experience, making it particularly suitable for evaluating outpatient physiotherapy services in this context. Ethical principles were paramount throughout the study, with informed consent

obtained from participants, clear explanations provided, and confidentiality maintained. Respect for autonomy and participant comfort were prioritized during questionnaire administration, ensuring a comprehensive and ethical approach to evaluating patients' satisfaction with outpatient physiotherapy services in Erbil. The data were collected using a structured questionnaire. The questionnaire consists of two sections. The first section includes questions regarding sociodemographic information (gender, age, occupation, and marital status) and the second section is based on a parameter consisting of 13 survey items, each with five response options (1. poor, 2. fair, 3. good, 4. very good, and 5. excellent) that are designed to measure patients' satisfaction with physiotherapy services. This parameter was validated and developed by Monnin and Perneger [19] and confirmed by the American Physiotherapy Association [8], making it an appropriate and reliable measurement for assessing patients' satisfaction with outpatient services. Inclusion and exclusion criteria: participants included in this study were adult clients receiving physiotherapy services in Erbil City. Eligible participants were individuals aged 18 years and above, and both males and females were included. Patients were recruited regardless of their reason for seeking physiotherapy, ensuring a broad representation of clinical conditions. To be included, participants must have completed at least one physiotherapy session, which was confirmed through patient self-report during the structured interview, as this was necessary to enable them to provide informed feedback on the services received. Additionally, all participants were enrolled only after providing informed consent, ensuring adherence to ethical standards.

Patients were excluded if they had not initiated physiotherapy treatment, as they could not adequately assess the services. Furthermore, individuals with conditions that could limit their ability to provide reliable feedback—such as cognitive impairments—were excluded to ensure data accuracy and validity. Patients with language barriers were also excluded because effective communication was required to understand and respond to the study questionnaire appropriately. The paediatric population was excluded from the study, as direct self-reporting of satisfaction and experience by children is not feasible or reliable in this context. Statistical analysis utilizing SPSS and Excel was employed to analyse the collected data. The findings are displayed as frequency and percentage for all the participants' answered questions variables were compared by using non-parametric tests: In the chi-square test, the p values  $\leq 0.05$  were considered significant differences. Where applicable, additional statistical measures such as confidence intervals were considered to improve the precision of the reported estimates.

## RESULT

The total number of samples in this research was 303 as shown in Table 1 The percentage demographics were as follows: 72% female, 28% male. The highest percentages of participants were between the ages of 50-59 at 24.1%, and the lowest between the ages of 30-39 at 13.2%. Marital status has the highest rate of participants who are married at 77.6 %, and the lowest who are divorced at 1.0% and you can see there is not much difference in proportions of (widowed 1.7%) and (divorced 1.0%). The occupation section shows most of participants unemployed in (58.4%), and fewer are retired in (5.9 %) and we can see a similar percentage of participants are work in the public sector and other are students in (12.5%). Also, the table show that most samples are taken from government hospitals in (68.8 %), and fewer are taken from private hospitals in (2.6%).

**Table 1:** Participants Demographic Characteristics Total (No. = 303) a

Variables	No. (%)				
Gender	Male	Female			
	85(28)	218(72)			
Age by year	(18-29)	(30-39)	(40-49)	(50-59)	Above 60
	66(21.8)	40(13.2)	68(22.4)	73(24.1)	56(18.5)
Marital status	Divorced	Single	Married	Widowed	
	3(1)	60(19.8%)	235(77.6)	5(1.7)	
Occupation	Private sector	Public sector	Retired	Students	Unemployed
	32(10.6)	38(12.5)	18(5.9)	38(12.5)	177(58.4)
Physiotherapy places	Governmental hospital	Private hospital	Governmental health centre	Private centre	
	208(68.6)	8(2.6)	10(3.3)	77(25.4)	

a Data are presented as frequency and percentage

Table 2 found that the satisfaction's mean ranged for individual items from 3.841 to 2.8251 for item 13 (Do you recommend this facility to people close to you?) and item 4 (During your treatment explanations about to you what will be done where given to you), respectively, and 3.491 for global term item 6 (Physiotherapy overall services).

Also, the table shows the relationship of different terms of the questionnaire with the global term (Physiotherapy overall services) among participants. For all components (Transactions and Registration, Comfortability and Relaxation, Instruction and Quality of Information, and General opinion and Recommendation), the result were significantly associated ( $p < 0.001$ ).

**Table 2:** Mean and SD of the questionnaire terms (sections) and items (questions) among participants (N = 303) a

Terms and Items	Mean	SD
<b>Term-1 Transactions and Registration</b>		
Item 1 administrative procedures admission it is ease?	3.475	0.948
Item 2 secretary helpfulness and courtesy	3.706	0.851
Item 7 dose the time and scheduling to get first appointment it is simple?	3.181	1.050
<b>P-value &lt; 0.001</b>		
<b>Term-2 Comfortable and Relaxation</b>		
Item 10 help in your way around and hospital buildings through indications	3.353	1.040
Item 11 where physical therapy was provided the room is comfort	3.270	1.103
Item 12 the atmosphere in physical therapy rooms Calm and relaxing	3.316	1.054
<b>P-value &lt; 0.001</b>		
<b>Term-3 Instruction and Quality of information</b>		
Item 3 physical therapist ability to reassure and put you at ease	3.498	1.006
Item 4 during your treatment explanations about to you what will be done	2.8251	1.366
Item 5 at the end of treatment quality of information received regarding future	3.280	1.249
<b>P-value &lt; 0.001</b>		
<b>Term-4 General opinion and Recommendation</b>		
Item 8 during the treatment feeling of security at all times	3.584	0.955
Item 9 the access to the physical therapy facilities is Ease	3.181	1.123
Item 13 Do you recommend this facility to people close to you?	3.841	0.990
<b>P-value &lt; 0.001</b>		
<b>Global term- Physiotherapy overall services</b>		
Item 6 Your physical therapy overall	3.491	0.923
<b>P-value &lt; 0.001</b>		

a Data are given as means with standard deviations, Chi-square; Non-parametric test was used. Significant p-values (bold).

Fig. 1 A shows that a higher percentage of participants in questions 1, 2, and 7 are answered as good and very good. The highest very good percentage answer 48.5% was in question number 2, while the highest good percentage answer 40.3% was in question number 1. Vice versa is the lower percentage of participants in these questions answered by poor choice, specifically question number 2, which got the lowest one. The result was 1.3%. The result was highly statically significant P-value < 0.001 .

In Fig. 1 B, questions 10, 11, and 12, the majority of participants rated their experiences positively, with "good" and "very good" being the most common choices. Question 12 had "good" ratings at 39.6% which had the highest percentage, while question 10 had "very good" which was the highest percentage of ratings at 38%. Conversely, only 5.9% of participants chose the "poor" option for question 12. The result was highly statically significant P-value < 0.001

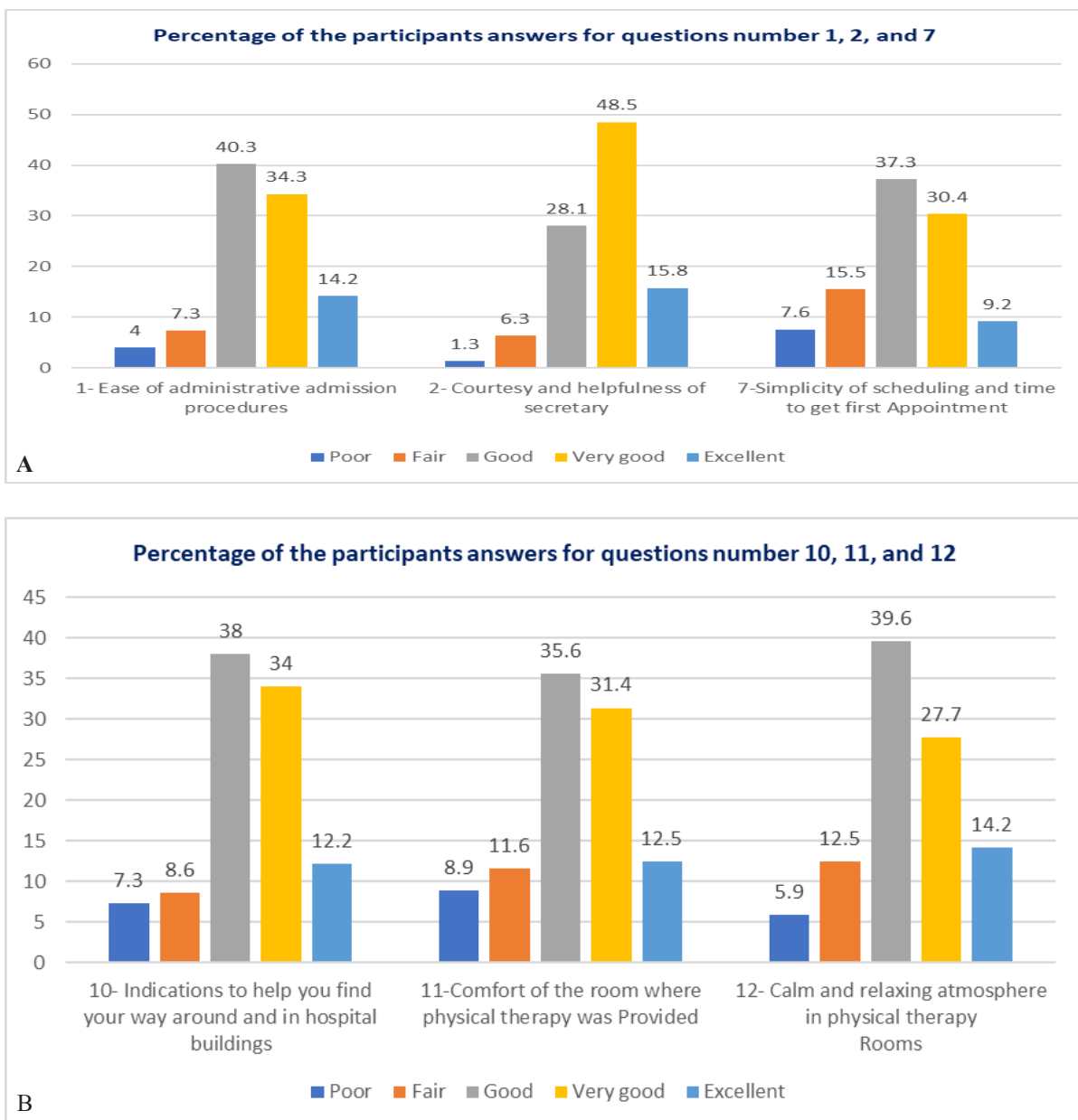


Fig. 1: Participants answers about A (transactions and registration), B (comfortability and relaxation) service

Fig. 2 found that questions 3, 4, and 5 received the highest percentage "very good" responses from participants. Specifically, question 3 had the highest proportion ratings at 41.9%, while question 5 received 30%. Interestingly, both questions 3 and 4 had a similar percentage of participants choosing the "good" option, with 28.7%. On the other hand, the lowest percentage of participants, 4.3%, selected the "poor" option for the question. The result was highly statically significant P-value < 0.001. In Fig.

2 B, questions 8, 9, and 13 garnered the highest proportion of participants selecting either "very good" or "good" responses. The peak hab "very good" rating, at 42.2%, was in question 13, while question 8 received the highest percentage of "good" ratings, reaching 38.3%. Conversely, the lowest percentage of participants, 2.3%, chose a response for question 8. The result was highly statically significant P-value < 0.001.



Fig. 2: Participants answers about A (instruction and quality of information provided), B (general opinion and recommendation) services.

Fig. 3 shows the higher percentage of participants 38.3 % answered by good choice, while the lower percentage of participants 1.7 % answered by poor choice.

The statistical result was highly significant P-value < 0.001.

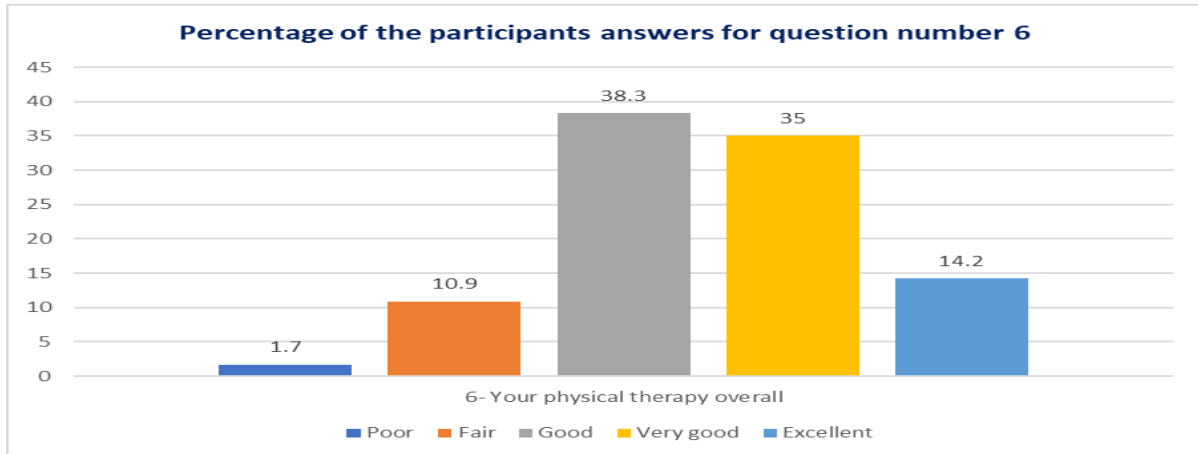


Fig. 3: Physiotherapy overall services

## DISCUSSION

This cross-sectional study aimed to evaluate patient satisfaction with physiotherapy outpatient services in Erbil, Iraq. To the best of our knowledge, this was the first attempt to quantitatively assess patients' satisfaction with physiotherapy services in Erbil city. Patient satisfaction is an important expectation of health service quality assessment, as it represents the extent to which healthcare services meet the needs and expectations of the patient. The exiting literature is enhanced by this research, providing valuable insights into patient satisfaction in contexts where there are few assessments available. Hence, patient satisfaction with physical rehabilitation is rapidly emerging as an outcome variable of critical importance factor *Beattie PF et al.2002* [20].According to the results for transactions and registration (Fig. 1A), Questionnaire Item 1 (ease of administrative admission procedures) showed the highest level of patient satisfaction. This item was rated as "good" by 40.3% of participants, indicating that the majority of

patients were satisfied with the administrative procedures and the behaviour of the staff involved. In addition, comfortability and relaxation (Fig.1 B), encompassing the questionnaire items (10,11,12), the result ranges between (35.6-39.6%). These results suggest that the patients were generally satisfied with the physical environment of the healthcare facility and the therapy rooms also as shown in table 2 (Term-2 Comfortability and Relaxation) the result was statistically significant P-value < 0.001. A patient is satisfied if their needs are fulfilled and they have been provided with adequate information about their condition and treatment. Patient satisfaction represents one aspect of treatment success *Beattie P et al.2005* [21]. Professionals who are warm and friendly generate higher levels of patients' satisfaction *Medeiros FCD et al. 2016* [22]. Our findings support these evidences as patients felt comfortable with their therapists. (Fig.2 A) in terms of instruction and quality of information provided by the physical therapist

to put patients at ease and reassure them, the patients evaluated their physical therapist and the ability as very good which was the same result in Table 2 term 3 (Instruction and Quality of information). The correlation was statistically significant  $P$ -value  $< 0.001$ . Provider and patient interaction have an impact on perception of care quality, along with the positive attitude of the physical therapist, in addition to their technical ability Devreux ICN et al.2012 [23]. The results of this study indicate high percentages of satisfaction among patients with several aspects of physiotherapy services, similar to the study that was in Libya Ampiah PK et al.2019 [8]. The high levels of satisfaction reported in this study are consistent with findings from other well- developed countries such as the United State Hush JM et al.2011 [24]. Our results are nearly identical to those reported in hospitals in Saudi Arabia, which have recently adopted various strategies to improve healthcare outcomes and meet accreditation standards, as described by Aljuaid M et al. (2016) [25]. Despite differences in geographic location and healthcare delivery systems, the factors influencing patient satisfaction appear to be consistent across settings. This suggests that strategies to enhance patient satisfaction are globally applicable. Three key strategies that can enhance patient satisfaction include improving communication between therapists and patients, ensuring that patients' concerns are adequately addressed, and enhancing the accessibility of services. Among these, effective communication is particularly important, as it helps build trust, improves patients' understanding of their treatment plans, and encourages active participation in care, all of which contribute significantly to higher levels of patient satisfaction. These findings are consistent with recent systematic reviews, which report that effective

communication, accessibility, and therapist competence are the most significant determinants of patient satisfaction in physiotherapy services across both traditional and tele-rehabilitation settings [9–12]. On the other hand, it is crucial to consider that although high levels of satisfaction may indicate the sign of quality care, they do not provide a comprehensive evaluation of healthcare delivery. As shown in table 2, the relatively low score observed for treatment explanations (Item 4) may be attributed to several contextual factors within the Iraqi healthcare system, including high patient load, limited consultation time, and potential gaps in communication training among physiotherapists. Additionally, variations in patient health literacy may affect understanding of treatment plans, further influencing satisfaction levels in this domain. All in all, this study serves a valuable comprehension into patient satisfaction of outpatient physiotherapy services in Erbil. The findings highlight the importance of a patient-centered approach to physiotherapy service and underscore the need for ongoing studies to enhance the quality of healthcare services provided to patients. Although this study was conducted in Erbil, the findings may be cautiously generalizable to other cities in Iraq and similar LMIC settings with comparable healthcare structures. However, variations in resource availability, staffing, and service organization must be considered when interpreting and generalizing these finding to other contexts.

## CONCLUSION

Patients in Erbil reported generally high levels of satisfaction with outpatient physiotherapy services, particularly in areas of administration, comfort, and overall recommendation of care. The study underscores the importance of patient-centred strategies to enhance physiotherapy

services, with particular attention to communication and information sharing. Future research should explore subgroup differences and long-term effects of patient satisfaction on treatment adherence and clinical outcomes. From a policy perspective, the findings highlight the need to strengthen patient-centred care through improved communication training for physiotherapists, enhanced patient education strategies, and better organization of service accessibility. Addressing these areas can contribute to improving overall patient satisfaction and healthcare quality in the region.

## LEMETATION

This study has several limitations. First, the cross-sectional design limits the ability to establish causal relationships between variables. Second, the use of self-reported data may introduce social desirability bias, potentially leading to overestimation of satisfaction levels. Third, although Likert scale responses were analysed using mean scores, treating ordinal data as interval data has inherent limitations. Finally, the absence of qualitative data restricts deeper exploration of patient experiences and perceptions.

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