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Assessing quality of health care in the context of patient satisfaction from patients' perspective among a physical therapy and rehabilitation unit

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Abstract

Health service policies are evolving into qualified health care providing best possible outcomes as well as focused on patient satisfaction. Hence the qualification valued health care includes patient satisfaction measurements, it is suggested to get feedbacks during the assessment of outcomes from the patient's perspective. Aging of the world population accelerates demand on rehabilitation medicine which means recovering impairments so is directly related with quality of life. This study measures the patient satisfaction among 286 patients referring to outpatient clinics and receiving therapy within Physical Medicine and Rehabilitation Unit of City Hospital in Balikesir, Turkey. Results showed 63.4 ± 2.6 years mean of age and female majority (63.6%). Region of therapy included 9.8% for total body, plegic syndromes, 19.6% for neck, 25.2% for shoulder, 21.6% for knee and 23.8% for lumbar regions. Patients are grouped in two according to 'yes' or 'no' answer of the question 'Do you agree with you have benefit from applied treatment, does the treatment met your expectations?'. 274 patients (95.8%) were agree with therapy met their expectations. Article discusses one of the valid patient satisfaction questionnaire as evidence based outcome measures. In divisions the means of query scores were 3.9 for technical quality, 4.2 for communication with therapist, 3.6 for physical comfort, 3.9 for communication with secretary, 4.1 for communication with doctor, 3.5 for accessibility and 3.5 for cleanliness. Comparison of means among groups did not seem statistically significant as result of Mann–Whitney U test, $p > 0.05$. In conclusion in the context of qualified health service providing, it is essential to get feedback from health care receivers to measure satisfaction and this needs improvement of generally valid questionnairres. Improved communication and greater provider sensitivity towards patients can enhance patient satisfaction resulting as meeting the expectation.

Keywords Global health care, Patient satisfaction, Rehabilitation unit

Introduction

Health management consists of planning, organisation, leading and supervision of things to do in line with needs and demands aiming various health care provision and better living environment to both individuals and society. Having direct relationships with human being lives and it is hard to manage, supervise and correct a mistake even impossible sometimes. Adaptation of new technologies to health care, rising care costs, backing up private

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clinics, qualification of services are topics of agenda. Being rewarded for quality and efficiency is gradually increasing than being rewarded for volume [1–3]. Studying among quality of health care requires taking into consideration of heterogenicity, patients with similar diseases may need different health care utilities, may have different expectations and results of similar applications may also differ from each other [1]. In health care units both providers and recipients are human beings lying behind of fragility, emotional instability and stress in process. Therefore qualification valued health care includes patient satisfaction measurements, clinicians should take feedbacks from the recipients methodically.

Rehabilitation Medicine dealing with acquired or congenital impairments has its own properties, directly related with quality of life. Qualified health care that means providing the best possible outcomes, safety and service should be the first priority of every rehabilitation professional [4, 5].

Patient satisfaction is an important patient-centered health outcome. To help determining what constitutes quality and how health professionals should measure it this article discusses one of the patient satisfaction questionnaires as evidence based outcome measures [5, 6]. This study provides a data in terms of patient satisfaction correlating with expectations and utilities in a Physical Medicine and Rehabilitation Unit of City Hospital in Balıkesir, Turkey.

Materials and methods

The survey of 'Patient Satisfaction Questionnaire in Physical Therapy Unit' was performed during year 2023, in Department of Physical Medicine and Rehabilitation of belonging City Hospital. 286 patients' data has collected by voluntarily completed survey after receiving ethics committee approval from Ethics Committee for Clinical Trials of the Provincial Health Directorate Ataturk City Hospital. Informed concent was also taken from each participant and Helsinki Declaration rules were followed.

Researcher performed the questionnaires with the 286 patients who have finalized the application of therapy comprising various ailing regions of body during year 2023. State of affairs courses first meeting and examination by doctors then if indicated, necessary and accepted, having rights for physical therapy implementation. The adventure goes ahead by secretary meeting for lining up session with therapist. The patient is called up by secretary in due course and 15 days of sessions begin. Afterall patient reaches his/her clinician in the case of continuation of complements. There were extinction criterias sorted as having communication problems, denying to answer the questions, quiting sessions before the scheduled time and being out of the time line of study.

Besides the patient satisfaction questionnaire; some other informations were recorded as demographical properties; age, gender, education level, occupation, having insurance, place of residence, marrital status and clinical properties; treatment region, duration, previous history of physical therapy and comorbid diseases.

The used patient satisfaction query was defined reliable and valid for outpatient physical therapy clinics by Tuzun and friends at 2009 [7]. The survey has 24 questions totally, examines 7 divisions. Questionnaire was a Likert scale in which participants are requested to respond to each statement in terms of their own degree of disagreement or agreement between 1 and 5 respectively [8]. First group formed by 5 questions indicates 'technical quality', continuing as 4 questions each forming the 'communication with therapist' and 'communication with doctor' group, 3 questions for each part named as 'physical comfort', 'communication with secretary', 'accessibility' and 2 questions for 'cleanliness' finally [7]. It is placed in Table 1.

In addition to questionnaire there was pleasure question asked; 'Do you agree with you have benefit from applied treatment, does the treatment met your expectations?' needed to be answered as 'yes' or 'no'.

Analysis was performed with the statistical package for the social sciences (SPSS) 22.0 for Windows. Descriptive statistical analyses as median, mean and ratios of demographical data were used. Mean scores of each subgroups of the patient satisfaction questionnaire are calculated. Satisfaction query Likert questionnaire scores have Cronbach alpha reliability analyses. Two groups performed within overall patiens in the contex of 'yes' or 'no' answer of pleasure question. Relationships between satisfaction and the demographical data groups were analysed by Mann–Whitney U test with the significant p value less than 0.05.

Results

Descriptive and demographical properties of the participants are given in Table 2. The mean age of them was 63.4 ± 2.6 years. The vast majority of the patients consist of female gender (63.6%), not working (92.7%), primary school level educated (94.4%), married (66.1%), rural settled (94.8%), with social insurance (97.9%), presence of comorbid diseases (67.8%). 70.9% of them had previous experience of physical therapy. Applied region of therapy had close distribution ratios of 25.2%, 21.6%, 23.8% with respectively, shoulder, knee and lumbar vertebral regions while plegic syndromes and servical diseases had proportions of 9.8% and 19.6% in order. 78.3% of them had no rest during physical therapy sessions despite recommendation by doctors and therapists as they did not do exercise at the rate of 70.2%. Outcome of meeting the

Table 1 Patient satisfaction questionnaire for physical medicine and rehabilitation outpatient clinics [7]

Questions	Answers*
Technical quality	
1. My therapist allways kept the appointment time	
2. My therapist sufficiently explained the methods I should use at home	
3. My therapist gave information about therapeutic and adverse effects of devices used in my treatment	
4. I got service from same therapist throughout the entire treatment	
5. My therapist took care of my privacy	
Communication with therapist	
1. My therapist was concerned in my treatment	
2. My therapist explained the justifications of actions to be taken in the beginning	
3. My therapist answered my questions in a compherensible manner	
4. I didn't wait for initiation of the therapy	
Physical comfort	
1. Restrooms of the clinic was adequate in number and located properly	
2. Restrooms were designed for pstients properly	
3. Examination and therapy rooms were ventilated and enlightened appropriately and at optimal room teperature	
Communication with secretary	
1. Secretary at clinic was always paid attention to my issues	
2. Secretary at clinic gave explanatory information about actions to be taken	
3. Secretary procedure was completed quickly	
Communication with doctor	
1. My doctor was allways in concern of my treatment	
2. My doctor was all ears and allowed me to ask questions about my disease	
3. Informations given my doctor were clear enough	
4. My doctor gave information about things waiting for me	
Accessibility	
1. I can easily reach the clinic	
2. Clinic has enough parking and waiting areas	
3. Usher signs in the clinic are adequately placed	
Cleanliness	
1. Examination and therapy rooms were allways clean	
2. Strechers, sheets and pillows were allways clean in therapy rooms	

Answers will be among Likert Scale; 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, 5-strongly agree

expectation question, also the main goal of this research, was favorable with 95.8% of patients.

The analyses of satisfaction questionnaire which has the answers in Likert scale deduced Cronbach alpha coefficient as 0.78. Figure 1 projects the average scores and percentages of answers in divisions from the questionairre. Table 3 continues with relation analyses between pleased and unpleased groups. However any statistically significant difference found in patient satisfaction amongst subgroups of query ($p > 0.05$), total pleased ratio was 95.8%. The only nuance was the lower scores of cleanliness and accessibility questioning than the others with averages of 3.6 for each.

Discussion

Recently by the improvement process of health care delivery system the rising star is patient's opinion. Patient satisfaction is the state of pleasure or happiness that the patients experience while using a health service. Thus, patient care is the basic function of every health service provider, it is one of the standards to measure the efficiency and effectiveness, where the efficiency of a hospital is associated with the provision of service delivery and quality care. It can be said patient satisfaction is the actual evidence of the effectiveness of the healthcare services providing administration [9]. Also the authors conclude that patient satisfaction is a multidimensional concept that relates to the nature of medical services, health status, and the economics of medical consumption. A review consumed of 24 years of published literature yields eight major dimensions for patient satisfaction, ie, art of care, technical quality of care, accessibility/convenience, finances, physical environment, availability, continuity, and outcome efficiency [10]. Based on these, in this study satisfaction is questionned from patients' perspectives in domains as technical quality, cleanliness, accessibility, physical comfort and communication with staff including doctor, therapist and secretary. Mean of the query scores was 3.81, representing high ratio of satisfaction. Medical outcomes and financial status is not considered in this project.

Contemporary thinking as expressed by authors defines consumerism as an empirical process arising from a "confirmation/disconfirmation paradigm with consumer

Table 2 Demographical and Descriptive Properties of the Patients ($n=286$) with Relationship Evaluation in 2 groups according to Satisfaction Status

	Overall	Presence of Satisfaction (Meeting Expectation)		*p*
		Yes	No	
		n (%)	n (%)	
Total patients (286)		274(95.8)	12(4.2)	
Mean of Age (years) x ± SD	63.4 ± 2.6	65.8 ± 1.6	69.6 ± 4.8	> 0.05
Gender				
Female	182(63.6%)	174(63.5)	8(66.7)	> 0.05
Male	104(36.4%)	100(36.5)	4(33.3)	
Occupation				
Yes	21(7.3%)	18(6.6)	3(25)	> 0.05
No	265(92.7%)	256(93.4)	9(75)	
Education level				
Primary school	270(94.4%)	260(94.9)	10(83.4)	> 0.05
Others	16(5.6%)	14(5.1)	2(16.6)	
Marrital Status				
Single	25(8.7%)	22(8.1)	3(25)	> 0.05
Married	189(66.1%)	184(67.2)	5(41.7)	
Divorced/widow	72(25.2%)	68(24.7)	4(33.3)	
Place of residence				
Rural	271(94.8%)	262(95.6)	9(75)	> 0.05
Urban	15(5.2%)	12(4.4)	3(25)	
Social Insurance				
Yes	280(97.9%)	269(98.1)	11(91.7)	> 0.05
No	6(2.1%)	5(1.9)	1(8.3)	
Presence of Comorbid Diseases				
Yes	194(67.8%)	184(67.1)	10(83.4)	> 0.05
No	92(32.2%)	90(32.9)	2(16.6)	
Previous History of Physical Therapy				
Yes	203(70.9%)	200(72.9)	3(25)	> 0.05
No	83(29.1%)	74(27.1)	9(75)	
Region of Therapy				
Total body (plegic syndromes)	28(9.8%)	27(9.8)	1(8.3)	> 0.05
Neck	56(19.6%)	54(19.7)	2(16.6)	
Shoulder	72(25.2%)	71(25.9)	1(8.3)	
Knee	62(21.6%)	58(21.2)	4(33.4)	
Lumbar	68(23.8%)	64(23.4)	4(33.4)	
Having Rest During PT Sessions				
Yes	62(21.7%)	60(21.9)	2(16.6)	> 0.05
No	224(78.3%)	214(78.1)	10(83.4)	
Doing Exercise During PT Sessions				
Yes	85(29.7%)	84(30.7)	1(8.3)	> 0.05
No	201(70.2%)	190(69.3)	11(91.7)	

satisfaction resulting from a process of comparison" [11]. Therefore when we asked if their expectations have met or not, if there isn't any other competitor physical therapy clinic they could reach, comparison will conclude to confirmation, so the results are shining for us, 95.8% was satisfied.

Adams and friends performed the analysis of data from 19,228 survey responses between 2018 to 2022 to discuss impact of age and gender on satisfaction levels. Findings revealed that age is a linear correlated significant determinant of satisfaction however gender-related disparities were not. In another study patient satisfaction seemed to become stronger with increasing age and in female population [6, 12, 13]. In this study from the evaluated criteria mean of age was higher in dissatisfied group as 69.6 years but not significant. Female gender dominancy was found but did not differ between groups already.

An investigation on different treatment modalities applied for chronic low back pain patient satisfaction showed no significant difference between groups in terms of age, gender, having any chronic disease, working status, educational status even assesments were based on 5 questions not a query. Satisfaction was directly related to applied therapy [14].

There are results defending that satisfaction degrees depend on gender, age, educational status, occupation, time spent in clinic, history of physical therapy, outcome of treatment and area of applied clinic [6, 15].

In this paper overall and satisfied group participants were mostly non-occupied but have insurance, living at rural area. It is eliminating superposition of work hours and therapy sessions. With insurance, getting service from government hospital providing fee free service is reflecting properties of our patient population. Location and fee payment condition may have role on results. There is evidence that people who received treatment through fee-for-service are more satisfied than pre-paid group [16]. An article comparing government hospital and private clinic for physical therapy revealed more pleased patients in government hospital with impact of accessibility, inpatient services, communication and treatment outcomes. On contrary to vision of higher quality of service is given at university hospitals, we have high satisfaction scores as a government hospital [15, 17].

Having previous experience of physical therapy, with high ratios in pleasured group but 75% of unpleasured patients had first experience, the factor had no distinction on pleasure but there wasn't any comparison in the query. Similarly region of therapy analysis shows no difference. As stated positive impact of having rest especially in hard blue-collar workers and doing suitable exercises during sessions in similar articles, they had nonsignificant effect on the result here [18]. By the way it is hard to comment

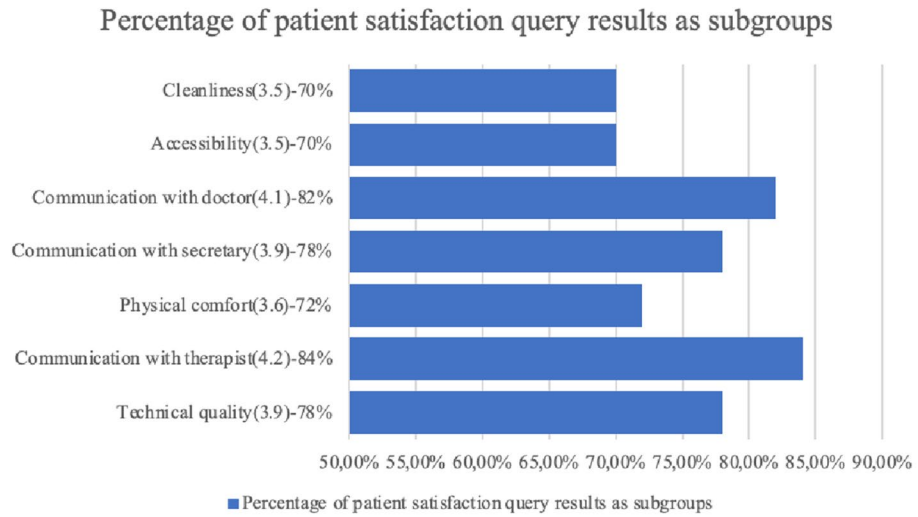

Fig. 1 Questionnairre scores

Table 3 Patient Satisfaction Query Score Analysis Between Groups (Mann–Whitney U test)

Questions forming subgroups	Pleasure question answer 'yes' n:274(95.8%)	Pleasure question answer 'no' n:12(4.2%)	p
Technical quality Adhering the appointment times Explaining the methods used to be at home Explaining the aims of therapy devices Getting service from same therapist throughout the entire treatment Significance to privacy	4.0	3.5	> 0.05
Communication with therapist Attention of the therapist Expalanatory information by therapist Answering the questions of patient in a comprehensible manner Standby time for therapy	4.3	3.8	> 0.05
Physical comfort Design of clinic restrooms Number and locations of restrooms Comfort of examination and therapy rooms (temperature, brightness, ventilation)	3.7	3.5	> 0.05
Communication with secretary Attention of the secretary Explanatory information by secretary Speediness of the secretary procedure	4.0	3.6	> 0.05
Communication with doctor Attention of the doctor Answering the patient's questions by the doctor Explanatory information of doctor about the diagnose Explanatory information of the doctor about things waiting for the patient	4.4	3.8	> 0.05
Accessibility Easy access to the hospital Adequacy of parking and waiting areas Adequecy of usher signs	3.6	3.1	> 0.05
Cleanliness Cleanliness of examination and therapy rooms Cleanliness of stretchers, sheets and pillows	3.6	3.1	> 0.05

on their effects without information of duration, severity and functional limitations of diagnosed diseases.

Regardless from the result comparison between previous experiences, also experiences in other public or private clinics may be broader assessment [15, 17].

Patient centered health care utilities and satisfaction degrees already differ among variation of providers; such as having life threathening disorders and therapies at the correlated rates or expectations like increment of quality of life after remaining sequelas. Physical Therapy and Rehabilitation Medicine deals with musculoskeletal disorders and remaining decreased abilities after many sort of diseases [19]. Therapy sessions ensure replacement of disabilities caused from diseases or traumas, acquired or congenital, in the wide range of results and progressions according to degrees of affection, duration and access to services. Therapies provide the quality of life incrementation when applied properly, on time and duration along with demand and contribution of the patient by catching same frequency in touch physically also emotionally. We have high scores in technical quality and communication domains indicating the idea. Overall satisfaction with physical therapy was positively correlated with all components as communication and respect, convenience, quality time, and personal care in similar articles [15, 20].

The instrument which could be used to improve patient satisfaction with health services dealing in certain dimensions of quality is health management information system (HMIS). Detection of expected standards in service delivery system can be helpfull in quality checking. Using questionnaires and surveys in clinical practice may assist the objective of the HMIS what is to record information on health events and check the quality of services at different levels of health care [21]. The positive aspect of our article is the usage of a query that already had validity and reliability in Turkish population besides only degrees of pain evaluated studies [7, 14]. Despite we have non significant results of neither correlation between demographical status and satisfaction nor the factor analyses of Likert scale, the high ratio of gladness was an entity of success. Questioning of the applied physiotherapy devices and techniques might be illuminating the determinants of satisfaction. As characteristic features of rehabilitation medicine, the wide range of rehabilitation techniques and devices all have effect on the results [14, 22].

In line with our results it is possible to comment our clinic is one of the centers that patients are pleased to get service. One of the conditions we inspected the efficacy on satisfaction and the owner of high impact factor was communication with doctors and therapists. On the way of improving the quality of health services giving importance to patient's views is an important assessment value. Improved communication and greater provider sensitivity towards patients can enhance patient satisfaction resulting as meeting the expectation of HMIS also enhances community awareness about the quality of services [23]. It is handled in articles as the effectiveness of medical treatment depends on the quality of the patient-clinician relationship in which the patient and clinician build a shared understanding of illness and treatment. Given that psychotic patients have problematic long term outcomes of treatment who often have poor relationships with psychiatrists and health care services more widely [24].

Hygiene factors are viewed as tangible environmental constructs associated with consumption such as price, quality, and availability of service personnel. Alternatively, motivators relate to the interaction of the consumer with the service, and would include perceptions of utility, value, and appreciation. Extrinsic hygiene factors are assumed as when present, did not increase satisfaction but their absence increases dissatisfaction. Herein hygiene domain's average was low in overall and in dissatisfied group although not statistically significant [10]. In this study hygene factors are needed to be mentioned having unpleasant scores, non significantly, taking up space in patient satisfaction as much as treatment facilities. Although high scores of communication status get the whip hand of low scored hygiene and accessibility as if despite the developing artificial intelligence human values still exist.

By the evolution of health care systems, occuring developments in hospitals equipped with the latest facilities, easier availability of information and higher expectations of patient care, increasing awareness among patients and also the increasing litigations for unsatisfying results are the recent topics. Traditional concepts are evolved and advanced into innovative systems, research and development studies, just as much increased quality of services in terms of communication, accessibility, technical quality and hygene factors [25, 26]. Low scores in accessibility detects need of progress in availability standarts of our hospital.

Limitations

It may create positive bias on the result as a missing feature of study the interviewer to be among clinic doctors, in one of the advanced hospitals in the city and known by the population.

Disregarding evaluation of therapeutic results as an indicator of satisfaction and just the opposite impact of satisfaction degrees on outcomes could be a limitation as well, but considered as further work.

Conclusions

In the patient-centered health care services, patient satisfaction as an important indicator for measuring the quality of provided health care. Patient satisfaction is a representative but a very effective determiner naming the success of doctors and hospitals. Consequence of high variety of health care specialities, branches have their specific outcome measurements theorotically but no longer they all should care about patients' opinions, carry out satisfaction questionnaires, have feedbacks from health care utilizers, including factors as communication, accessibility, technical quality and hygene conditions.

Consequently, it is important for healthcare organizations to consider patients' perspective and to implement specific strategies targeting the unique needs and expectations of them.

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Informed concent
Informed concent was also from each participant and Helsinki Declaration rules were followed.

Authors' contributions
T.A. and other Medical Doctors in the physical medicine and rehabilitation unit of the hospital have role in examination, diagnosis and treatment decision of the patients, they are being thanked in acknowledgement part. T.A. and physiotherapists in the physical medicine and rehabilitation unit of the hospital had role in treatment and applying the questionnaire to the patients. T.A. wrote the manuscript, confirmed tables and also done the statistical analysis.

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Data availability
The datasets generated during and/or analyzed during the current study is mentioned in tables and stored as paper formats, could be transferred if recquested.

Declarations

Ethics approval and consent to participate
Author received ethics committee approval from Ethics Committee for Clinical Trials of Balikesir Provincial Health Directorate Atatürk City Hospital at 17/08/2023 with the document number of E-30041352–799-222545238 and decision number of 2023/5/44.

Competing interests
The authors declare no competing interests.

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