

# Dimensions of satisfaction of older adult brazilian outpatients with physical therapy

## Dimensões da satisfação do paciente idoso brasileiro com a fisioterapia ambulatorial

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### Abstract

**Objectives:** To investigate the main dimensions with respect to the satisfaction of geriatric patients undergoing outpatient physical therapy and assess the internal consistency of the measures obtained in the assessment instrument. **Methods:** An assessment instrument measuring patient satisfaction with physical therapy was used. The instrument contains a 23-item patient satisfaction scale and was developed and validated for the Brazilian population by Mendonça and Guerra (2007)\*. The data were collected in the waiting room of 29 private physical therapy clinics in Natal, the capital of the state of Rio Grande do Norte, Brazil. The non-probability sample consisted of 221 cognitively healthy patients aged 60 years and older, who possessed health insurance and who had undergone between 5 and 60 physical therapy sessions at the participating clinics. **Results:** Four factors with an autovalue greater than 1 were retained in the factorial analysis: patient-therapist interaction; access and assistance by the receptionist and support personnel; physical environment and overall satisfaction; and convenience. The items related to patient-therapist interaction showed the highest reliability and highest complete satisfaction scores, especially the respect and courtesy of the physical therapist (85.5%). The reliability of the measures obtained with the instrument, using Cronbach's alpha coefficient and directed toward the geriatric population, was  $\alpha=0.943$ . **Conclusions:** Physical therapists must give support to these patients, not only through their technical skills, but also by emphasizing an attentive and favorable interpersonal relationship, which were the most reported aspects of older adult patient satisfaction with health care.

**Keywords:** patient satisfaction; physical therapy; quality of health care; age.

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### Resumo

**Objetivos:** Investigar as principais dimensões relacionadas com a satisfação do paciente geriátrico com o tratamento fisioterapêutico ambulatorial e avaliar a consistência interna das medidas obtidas no instrumento de avaliação. **Métodos:** Foi utilizado o instrumento de avaliação da satisfação do paciente com a fisioterapia, desenvolvido e validado para a população brasileira por Mendonça e Guerra (2007)\*, com escala de avaliação da satisfação de 23 itens. Os dados foram coletados na sala de espera de 29 clínicas de Fisioterapia da rede privada de Natal, capital do RN/Brasil. A amostra do estudo foi selecionada de forma não-probabilística e constou de 221 pacientes com idade igual ou superior a 60 anos, com realização de 5 a 60 sessões de fisioterapia naqueles estabelecimentos, sendo usuários de plano de saúde e com condições cognitivas preservadas. **Resultados:** Quatro fatores com autovalor maior que 1 foram retidos na análise fatorial: interação paciente-terapeuta; acesso e atendimento de recepcionista e pessoal de apoio; ambiente físico e satisfação global e conveniência. Os itens relacionados com a interação paciente-terapeuta apresentaram as mais altas confiabilidades, assim como mais elevados escores de satisfação completa, especialmente o respeito e a gentileza do fisioterapeuta (85,5%). A confiabilidade calculada para as medidas obtidas com o instrumento, por meio do Coeficiente Alfa de Cronbach e direcionado a população geriátrica, estabeleceu  $\alpha=0,943$ . **Conclusões:** O fisioterapeuta deve dar suporte a esses pacientes não apenas com sua qualidade técnica, mas também enfatizando o apoio afetivo e um favorável relacionamento interpessoal, os quais foram aspectos mais representativos da satisfação do paciente idoso com o cuidado de sua saúde.

**Palavras-chave:** satisfação do paciente; fisioterapia; qualidade dos cuidados de saúde; idoso.

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## Introduction ◻◻◻

The redefining of patients as health service consumers has led to the adoption of strategies to improve health care based on an assessment of patient satisfaction<sup>1</sup>. Observing and knowing the behavior and opinion of patients is fundamental to understanding and improving both the care provided and the clinical environment<sup>2,3</sup>. Patient satisfaction surveys conducted as part of care follow-up are particularly important in providing therapists with feedback from patients about their physical therapy experiences<sup>4</sup>. Patient satisfaction is related to one of the elements of health status, and it is a measure of care quality, technical and interpersonal competence, immediate and positive non-verbal procedures, social conversation, courtesy, consideration, clear communication and information, respect, frequency of contact, prolonged consultation, availability of the care and waiting time<sup>5,6</sup>. A number of studies have focused on patient satisfaction as an indicator of health care quality, as a measure of the perception of the health services provided and as a result and continuity variable<sup>7,8</sup>.

The methodological procedures reported in the literature for approaching patient satisfaction defend the use of rigorously validated and standardized instruments, which have been steadily refined since the 1990s in the area of physical therapy, producing valid and reliable measures<sup>6,9-11</sup>. The results of one of the studies showed a possible influence of sociodemographic and psychosocial factors as well as interpersonal relations on patient satisfaction with physical therapy treatment<sup>12</sup>. Of all the sociodemographic variables, the individual's age appears to have the highest correlation with satisfaction<sup>13,14</sup>. However, little attention has been paid to the satisfaction of patient subgroups, including older adults, and it is wrong to assume that all patients have the same needs and expectations.

The repercussions of aging along with its associated infirmities on public health care systems are significant. Older adults are the largest consumers of these services worldwide<sup>15</sup>, and the effectiveness of geriatric care is often called into question<sup>16</sup>. In Brazil, the rapid growth of the older adult population has had a great impact on its health care system, resulting in higher costs and greater use of the services. The inefficiency of traditional geriatric care models makes a change in the health care paradigm of this population indispensable. Improvements can be achieved by developing new health care models that identify, assess and treat older adults with different morbid and functional profiles.

Older adult patient satisfaction with the communication used at the first medical visit was analyzed<sup>17</sup>, and it was concluded that older adult patients prefer consultations where

the doctors provide support and show empathy, and where they give patients the opportunity to voice their concerns. A study carried out by Juanola et al.<sup>15</sup> investigated the degree of satisfaction of an older adult population with primary health services and found that women in the 60-69-year age group used these services more, mainly for medical consultations, outpatient care and diagnostic tools, but not for rehabilitation services. The level of overall geriatric satisfaction with these services was between 57.14% and 100%.

There is a lack of scientific evidence about satisfaction in the rehabilitation area, an important fact, given the large older adult population that is increasingly in need of this care. The small production is restricted to the quantitative assessment of general services, and it is scarce with respect to resolution and patient satisfaction<sup>8</sup>. Therefore, the purpose of this study was: (1) to identify the levels of older adult patient satisfaction with physical therapy care using indicators of satisfaction, (2) to identify the emerging aspects that best correlate perceived satisfaction with the physical therapy care received, and (3) to assess the internal consistency of the assessment instrument (satisfaction assessment) when applied to an older adult population.

## Methods ◻◻◻

This study was approved by the Research Ethics Committee of Universidade Federal do Rio Grande do Norte (protocol 067/06). Prior written consent was obtained from all respondents. The confidentiality and anonymity of the responses was also guaranteed.

## Subjects

The sample consisted of 242 older adult patients who received outpatient physical therapy treatment at 29 private clinics in Natal, Brazil. The inclusion criteria were the following: aged 60 years or older; having undergone between 5 and 60 physical therapy sessions at the clinic where the data were collected; and good cognitive function, assessed by Folstein's Mini-Mental State Examination - MMSE (cut-off points: illiterate - 13; low educational level [1 to 4 years] - 13; medium educational level [4 to 8 years] - 18; high educational level [more than 8 years] - 26)<sup>18</sup>. The selected subjects had scores equal to or greater than those previously described; this allowed them to understand and complete the questionnaire. A total of 221 volunteer patients who met the inclusion criteria were selected to take part in the study. The 21 patients excluded did not attain the MMSE cutoff for preserved cognitive function.

## Instrument

We used a self-completion instrument, developed for the Brazilian population, that assessed patient satisfaction with physical therapy. Psychometric properties were tested and demonstrated through reliability (Cronbach's alpha coefficient=0.94) and content analysis, as well as simultaneous and construct validity<sup>6</sup>. The first part of the instrument is composed of descriptive questions about sociodemographic characteristics and the seeking of care. The satisfaction scale is composed of 23 items about aspects of the different patient satisfaction levels. These were scored using a 5-point interval scale that ranged from "very bad" to "excellent" on the first 21 items. The last two items ask about the patients' intentions with respect to returning to the facility, on a scale ranging from "never" to "certainly". There was also a section for patient comments.

## Pilot study

The methodology proposed for data collection was pre-tested in 40 patients from 4 randomly selected clinics. Analysis showed that the measures obtained with the instrument were highly reliable (Cronbach's alpha coefficient=0.957). They were also compliant with the norms established for data collection.

## Data collection

The data were collected between February and April 2007 in the waiting rooms of the participating clinics. The older adult patients who came to the clinic for treatment during the aforementioned period met the inclusion criteria. They agreed to take part in the study by signing a consent form.

## Data analysis

The data were analyzed using SPSS 15.0 software. Descriptive and analytical statistics, reliability estimates and the degree of internal consistency of the measures were calculated using Cronbach's alpha coefficient. Descriptive statistics were measured using absolute and relative frequency distribution for the categorical variables and means with standard deviation (SD) for the continuous variables. The data underwent factorial analysis to identify the factorial structure of the indicators of satisfaction level. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was performed before factorial analysis to determine whether the data fit the factorial model<sup>6</sup>, while Bartlett's test of sphericity (BTS) tested the multivariate normality of the set of distributions<sup>19</sup>. The principal component analysis extraction method and oblique rotation were used because they are indicated for extracting theoretical concepts<sup>6</sup>.

## Results

Table 1 shows the sociodemographic characteristics related to the care received by the 221 participants. The most prevalent physical therapy specialties were rheumatology, orthopedics/traumatology and neurology (48.0%, 37.1% and 5.9%, respectively). Most of the patients reported being aware of their clinical diagnosis (77.4%).

**Table 1.** Sociodemographic characteristics and those related to the health care of 221 older adult patients.

Variables	
Age, mean in years ± S.D.	70.9±7.574
Sex, N (%)	
Male	52 (23.5)
Female	169 (76.5)
Marital state, N (%)	
Married	110 (49.8)
Others	111 (50.2)
Resides with, N (%)	
Family	149 (67.4)
Spouse	55 (24.9)
Alone	9 (4.1)
Others	8 (3.6)
Educational level, N (%)	
Illiterate	7 (3.2)
Primary (incomplete)	59 (26.7)
Primary	37 (16.7)
Secondary (incomplete)	20 (9.0)
Secondary	56 (25.3)
Tertiary	42 (19.0)
Family income, N (%)	
1 to 3 times the minimum wage*	60 (27.1)
4 to 6 times the minimum wage*	59 (26.7)
7 to 10 times the minimum wage*	58 (26.2)
More than 10 times the minimum wage	44 (19.9)
Clinic recommended by, N (%)	
Doctor	94 (42.5)
Friend	44 (19.9)
Telephone directory	2 (0.9)
Health insurance directory	25 (11.3)
Previous patient	22 (10.0)
Others	34 (15.4)
First experience with the physical therapist, N (%)	
Yes	56 (25.3)
No	165 (74.7)
First experience with the clinic, N (%)	
Yes	132 (59.7)
No	89 (40.3)
Number of sessions, mean ± S.D.	18±15.110
Physical therapists per patient, N (%)	
1	134 (60.5)
2 or more	87 (39.5)
Sex of the physical therapist, N (%)	
Male	18 (8.1)
Female	176 (79.5)
Male/Female	27 (12.2)

\* Minimum wage ≈ US\$ 200.00.

The aspects that generate patient satisfaction presented in Table 2 show that the items related to the therapist-patient relationship were the most relevant, given the high complete satisfaction scores, especially with respect to the courtesy of the physical therapist. The complete satisfaction (“excellent” and “very good” scores) of 76.9% reported in item 21 shows that, in general, the population studied was satisfied with the physical therapy care received. The reliability of the means obtained with the study instrument, using Cronbach’s alpha coefficient and intended for the geriatric population, found an  $\alpha$  of 0.943.

The study of sampling adequacy (KMO=0.924) indicated the applicability of the factorial model because the representative value shows that the set of data is strongly recommended for factorial analysis. BTS demonstrated a significant value (0.0001), suggesting that the data have near-normal multi-variety and are also acceptable for factorial analysis<sup>19</sup>. Table 3 shows the retained items in each extracted component after oblique rotation. To determine the most important factor for the quality of physical therapy care provided, given the dimensions obtained between the different patient satisfaction indicators, we used principal component analysis with four retained factors having autovalue greater than one as the extraction method (Table 4).

## Discussion

The results obtained in the study indicate that the instrument used is reliable for measuring the quality of the out-patient care provided to older adult patients. The reliability calculated by Cronbach’s alpha coefficient ( $\alpha=0.943$ ) exceeded the values proposed as a criterion for exploratory studies<sup>20</sup>. It is suggested that an alpha value of 0.7 is acceptable<sup>19</sup>. The correlation of subscale 1 items, which encompass aspects related to physical therapist-patient interaction (Table 4, items of component 1), represented the highest level of satisfaction with care received by the older adult patients. This result corroborates findings from other studies, which show this domain as the main component associated to patient satisfaction with physical therapy<sup>6,9,10</sup>.

The questions related to convenience, such as availability of parking and location of the clinic, had the lowest internal consistencies and lowest autovalue on subscale 4 (convenience). This finding is contradictory, given that researchers from the USA<sup>21</sup> reported that patient satisfaction is strongly influenced by factors such as location and cost, whereas researchers from the UK<sup>21</sup> found that accessibility, waiting time and attitude of the staff are critical components to patient satisfaction. These findings are from different health care systems, which could

**Table 2.** Descriptive statistics of the items related to aspects that generate satisfaction in older adult patients.

Instrument items	Complete satisfaction		Incomplete satisfaction		Total
	N	%	N	%	%
1) Clear explanations given by the physical therapist about your treatment at the first consultation	133	60.2	88	39.8	100
2) A sense of security transmitted by the physical therapist during treatment	147	66.5	74	33.5	100
3) Doubt resolution by the physical therapist	143	64.7	78	35.3	100
4) Courtesy displayed by the physical therapist	189	85.5	32	14.5	100
5) The respect with which you are treated by the physical therapist	186	84.2	35	15.8	100
6) Privacy respected during your physical therapy session	164	74.2	57	25.8	100
7) Opportunity given by the physical therapist to express yourself during the assessment of your problem	150	67.9	71	32.1	100
8) Thorough assessment of your problem	132	59.7	89	40.3	100
9) Courtesy of the other team members	154	69.7	67	30.3	100
10) Courtesy and availability of the receptionist	164	74.2	57	25.8	100
11) Ease in scheduling your first consultation after referral	151	68.3	70	31.7	100
12) Ease in scheduling sessions after the first consultation	160	72.4	61	27.6	100
13) Availability of convenient times to undergo your treatment	155	70.1	66	29.9	100
14) Time spent in the waiting room beyond the scheduled hour	138	62.4	83	37.6	100
15) Convenience of the clinic’s location	127	57.5	94	42.5	100
16) Availability of parking	88	39.9	133	60.1	100
17) Comfort in the waiting room	112	50.6	109	49.4	100
18) Comfort of the environment where the physical therapy was performed	122	55.2	99	44.8	100
19) General hygiene conditions of the clinic	139	62.9	82	37.1	100
20) Ease of movement within the facilities of the clinic	131	59.3	90	40.7	100
21) General satisfaction with your experience with the physical therapist	170	76.9	51	23.1	100
22) You would return to this clinic if future treatment were necessary	211	95.4	10	4.6	100
23) You would recommend this clinic to family members and friends	216	97.7	5	2.3	100

**Table 3.** Rotation components matrix of the instrument measuring patient satisfaction with physical therapy applied to older adult patients.

Item	Component			
	1	2	3	4
Doubt resolution by the physical therapist	0.765			
A sense of security transmitted by the physical therapist during treatment	0.750			
Courtesy displayed by the physical therapist	0.730			
The respect with which you were treated by the physical therapist	0.723			
Clear explanations about your treatment given by the physical therapist at the first session	0.705			
Opportunity given by the physical therapist to express yourself during the assessment of your problem	0.673			
Thorough assessment of your problem	0.568			
Ease in scheduling sessions after the first consultation		0.799		
Ease in scheduling your first consultation after referral		0.783		
Availability of convenient times to undergo your treatment		0.731		
Privacy respected during your physical therapy session		0.597		
Courtesy and availability of the receptionist		0.571		
Comfort of the environment where the physical therapy was performed		0.533		
Time spent in the waiting room beyond the scheduled hour		0.507		
Courtesy of the other team members		0.506		
You would return to this clinic if future treatment were necessary			0.829	
You would recommend this clinic to family members and friends			0.813	
General hygiene conditions of the clinic			0.540	
Ease of movement within the facilities of the clinic			0.480	
General satisfaction with your experience with the physical therapist			0.468	
Convenience of the clinic's location				0.792
Availability of parking				0.780
Comfort in the waiting room				0.521

**Table 4.** Total variance explained and the reliability coefficient for each component removed from the instrument measuring patient satisfaction with physical therapy applied to older adult patients.

Component*	Eigenvalue	Percentage of total variance explained	Accumulated percentage of total variance explained	Alpha ( $\alpha$ )
1	10.491	45.614	45.614	0.901
2	1.626	7.072	52.686	0.888
3	1.299	5.650	58.336	0.835
4	1.165	5.067	63.402	0.711

\*Component 1: Patient-therapist interaction (7 items); Component 2: Access and courtesy of the receptionist and of the support personnel (8 items); Component 3: Physical environment and overall satisfaction (5 items); Component 4: Convenience (3 items).

explain this apparent 'contradiction'. However, these items were explained in most studies that do not have the same retention power in measuring the satisfaction construct, if compared to the remaining items and/or domains, mainly the therapist-patient relationship<sup>6,9,10,22,23</sup>. It is further corroborated when we report on an older adult population whose expectations about care are based on their relationship with the physical therapist and the courtesy shown at treatment sessions. The factorial structure resulting from the analysis of this study was similar to that performed in an earlier investigation in the same sociocultural context, albeit in a general population; that is, not stratified by age<sup>6</sup>. The factorial structure obtained in our study might better explain the satisfaction level of older adult patients, if we consider the four subscales formed here, all of which had an autovalue greater than one and  $\alpha > 0.7$ .

The dimension most widely reported, and most strongly associated with the assessment of patient satisfaction with

respect to the quality of the service provided, is reflected in the attentive communication of those who care for the patients. These assumptions contribute to patient satisfaction with treatment and improved prognosis, since the latter, along with the evolution of physical therapy treatment, depends directly on the interpersonal relationship between the patient and the physical therapist. Thus, we face the dilemma that exists between classical therapies, state-of-the-art equipment and a more attentive care<sup>24</sup>. Fitzpatrick<sup>25</sup> proposed "the importance of emotional needs" satisfaction model, emphasizing emotional experience as an important health problem, caused in part by uncertainty and anxiety, but also by the inability of patients to judge the technical competence of professionals. Consequently, patients base their satisfaction on the attentive behavior and communication skills of the professional.

With the perspective of a more humanistic therapy, we can reflect on a wider meaning of care; that is, an exchange

between the therapist and the patient that associates emotion to the professional's technique. The ability of individuals to deal with relationships more effectively, and to satisfy their needs and those of others, is called interpersonal competence<sup>24</sup>. An earlier study indicated that patients use the quality of interpersonal skills as a reference for assessing the performance of a professional<sup>6</sup>.

Friedman<sup>26</sup> reported that the emotions involved in the disease process make the patients more sensitive, and that they observe carefully, not only the verbal communication skills of professionals, but also non-verbal communication. Tone of voice, facial expression, smiles, touch and physical distance are the main signs of non-verbal communication that transmit the idea of the existence of an interpersonal interaction between the parties involved in the process<sup>27</sup>. Buller and Buller<sup>28</sup> found that professionals who behave in a dominating way and who control the style of communication produce less satisfaction in their patients. Other studies also support these findings by showing that satisfaction with treatment is more strongly related to the perceptions of attentive behavior exhibited by the caregiver than to factors related to technical skills and administrative aspects<sup>28</sup>.

Although the degree of older adult patient satisfaction showed high overall satisfaction scores (very good, excellent), it may have been underestimated, given that the score "good" was included in the dichotomization of the scale as "not completely satisfied"<sup>8,12,13</sup>. Thus, several items of this new re-categorization did not show negative perceptions (bad, very bad); questions 2,3,4,5,7,9,18 and 23 include only "good" in

the not completely satisfied category, while questions 2 to 7 are related to the therapist-patient interaction. Therefore, to achieve patient satisfaction in areas other than the quality of the professional and of the educational and operational infrastructure of the clinic, institutions must implement a policy, aimed at the social transformation of the professional, that encourages medical ethics, considers the real commitment of the professional in the health area and seeks to establish responsibility for the social well-being of the patient<sup>29,30</sup>. It must also be pointed out that the classical models of promotion, prevention, care and rehabilitation cannot be mechanically applied to groups of older adult individuals without important and significant adaptations. This requires the inclusion of physical therapists specialized in geriatrics to better meet the needs of these patients.

The present study shows the multidimensionality of the patient satisfaction construct, with an emphasis on interpersonal interaction, which is lacking in the current literature, especially communication aspects such as the respect and courtesy displayed by the physical therapist. Older adult individuals with loss of functional capacity have permanent health care needs. They are the group that most uses health services given the high prevalence of chronic diseases, especially those related to the rehabilitation process. Physical therapists, as part of this process, must provide support to these patients, not only through their technical skills, but also by emphasizing an attentive and positive interpersonal relationship, which are the most mentioned aspects of older patient satisfaction with health care.

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