A PSYCHOMETRIC ANALYSIS OF PATIENT SATISFACTION WITH PHYSICAL THERAPY CARE

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ARTICLE INFO

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ABSTRACT

The study was conducted on 30 patients ranging in age from 18 to 75 years, who are undergoing physical therapy. The psychological evaluation of patient's satisfaction was done using a modified MRPS (MedRisk instrument for measuring satisfaction into physicai tharapy care). The relationship between various components of the MRPS was established with overall satisfaction and would return in future for further care using Pearson product moment co-relation coefficient. Overall satisfaction of the patient is more correlated with the office receptionist is courteous (r = 0.432) and my therapist answers all my questions (r = 0.660). Whereas return to the office in future for care is found to be more correlated to the receptionist's courteousness (r =0.229) and therapist advices on ways to avoid future problem (r = 0.868)

INTRODUCTION

Patient saiisfaction is one of the most important sources which determine the quality of care provided to the patient and patient's understanding of explanation by the health care provider is a major predictor of adherence to return visit.[1]

Physical therapy has several characteristics that may influence patient satisfaction:
- The interaction often takes longer than a routine medical visit, it involves more physical contact,
- Therapy usually requires patient's active participation,
- Therapy may cause pain that may be perceived as physically threatening.[2]

A variety of tools used suggests that survey instruments should be matched to the health care service being evaluated. Therefore a satisfaction questionnaire was used for visit to physician may not be optical for physical therapy. [1, 2]

Numerous methods have been proposed for the measurement of patient satisfaction with care varying from the use of a single global question such as "overall, to what degree are you satisfied with the care being given to you?" to lengthy questionnaire. While global measures have do not provide the specific reason for a patient degree of satisfaction with physiotherapeutic care. [1, 2]

A useful property of psychometric analysis of patient satisfaction is to measure the ability of discriminate between different factors affecting satisfaction, namely behavior of a receptionist, waiting area, concern shown by physical therapist and the advice to avoid future problem.

MedRisk instrument for measuring satisfaction into physical thetapy care (MRPS) is relatively short length and reliable for clinical practice and research related to patient satisfaction with care. It discriminates between those factors relating to patient-therapist interaction, such as communication and respect (internal factor), and those factcrs not specifically related to the patient-therapist interaction such as the registration process or the courtesy of the receptionist (external factor). [1, 2, 3, 4]

The preject was based upon a psychometric evaluation for measuring the patient satisfaction with physical therapy care with the help of MRPS. In addition, present study was an endeavor to assess the correlation of its individual variables with global measures of satisfaction and return to the office in future for care.

EXPEIMENT WORK

SUBJECTS:

Data were obtained from consenting subjects, who visited the OPD of SPB Physiotherapy College, Surat and were over 18 years of age, only those patients who received physical therapy treatment for at least 7 days were asked to participate and the patient with cognitive disability to respond to the survey were excluded. The rights of the patients were protected.

INCLUSION CRITERIAS:

1, Age: 18 years or older.
2. Must receive OPD of SPB Physiotherapy College for at least 7 days
3. Patient without cognitive disability.

EXCLUSION CRITERIAS:

1. Age: below 18 years
2. Who received OPD of SPB Physiotherapy College for less then 7 days or did not receive

3. Patient with cognitive disability

INSTRUMENT USED

The instrument used to measure the patient satisfaction with care was modified MRPS (instrument for Measuring Satisfaction into Physical Therapy Care) - (Annexure-1)

PROCEDURE:

The questions were translated into the Gujarati language as most of the patient were from rural area and can't read and understand English questions. After that all the patient recruited were explained the individual questions and were asked to rate them on 5-point likert's scale. (Annexure-1)

DATA ANALYSIS

Descriptive statistics, Mean ± SD, Pearson product moment co-relation coefficient were generated by using SPSS 15.0 version

RESULTS

Total 50 patients were surveyed for the study. The demographic data is given in table-1. The mean age was 47.8 and SD ±14.56 with the range of 18 years to 75 years 43.33% of the patients were female with the mean age of 43.41 and SD ±13.42 and 56.67% of the patients were male with the mean age of 53.54 and SD ± 19.7

Table-1: Demographic Data

Sr. No.	Gender	N=50	%	Age (Mean ± SD)
1	Male	17	56.67	43.41 ± 13.42
2	Female	13	43.33	53.54 ± 19.7

MEAN OF VARIABLE RESPONSES:

The mean score for variable from 1 to12 were calculated along with their standard deviation. Table-2 presents the mean values for external factors. The mean value of variable 1 (The office receptionist is courteous) was 4.7 with SD ± 0.2828, for variable 2 (the registration process is appropriate) was 4.73 with SD ± 0.6 and for the variable 3 (The waiting area is comfortable) showed mean value of 4.57 with SD ± 0.469.

Table-2: Descriptive statistics of 'External Factors (mean ± SD) for the entire sample (n= 50). Each variable rated on a 5 point scale (1. strongly disagree; 2. disagree; 3. uncertain; 4. agree; 5. strongly agree).

S.No.	Variable	Mean ± SD
1	The office receptionist is courteous	4.7 ± 0.2828
2	The registration process is appropriate	4.73 ± 0.6
3	The waiting area is comfortable	4.57 ± 0.469

Table-3 shows the mean values for Internal Factors and Global Measures. Negative form of question 4 has been reversed to positive for the convenience of the patients. The value for variable 4 (My therapist spends enough time with me) is 4.83 with SD ± 0.4123 and that of variable 5 (My therapist thoroughly explains treatment I receive) is found to be 4.9 with SD ± 0.3. The mean value calculated for variable 6 (My therapist treats me respectfully.) was 4.73 with SD ± 0.7939 but that for variable 7 (My therapist does not listen to my concern.) was 1.2 with SD ± 0.4 as the question is negative and the likert's scale is graded as 1 for "strongly disagree to this question. The mean of variable 8 (My therapist answers all my questions.) is 4.77 with SD ± 0.3873 and that of variable 9 (My therapist advices me on ways to avoid future problems) is 4.6 with SD ± 0.7141. The mean value of variable 10 (My therapist gives me detailed instructions regarding my home program.) is 4.7 with SD ± 0.64.

Table-3: Descriptive statistics of 'Internal Factors' and Global Measures' (mean ± SD) for the entire sample (n = 30).

Sr. No.	Variable	Mean ± SD
4	My therapist spends enough time with me	4.83 ± 0.4123
5	My therapist thoroughly explains the treatment I receive	4.9 ± 0.3
6	My therapist treats me respectfully	4.73 ± 0.7937
7	My therapist does not listen to my concern	1.2 1± 0.4
8	My therapist answers all my questions	4.77 ± 0.3873
9	My therapist advices me on ways to avoid future problems	4.6 ± 0.7141
10	My therapist gives me detailed instructions regarding my home program	4.7 ± 0.64
11	Overall, I am completely satisfied with the treatment I receive	4.9 ± 0.3
12	I would return to this office for future service of care	4.77 ± 0.3873

The mean of two global measures was also calculated which was found to be 4.9 with SD ± 0.3 for "overall satisfaction" and 4.77 with SD ± 0.3873 for returning to the same setup in future".

CORRELATION OF GLOBAL AND VARIABLE RESPONSE:

The correlation established of the global measures ("Overall, I am completely satisfied with the service I received from my therapist" and "I would return to this office for future service or care") with each of the external and internal factors are listed in Table-4 and Table-5.

The global measure of "returning to this office for future service or care" established a positive correlation with receptionist courteousness (r = 0.229), registration process appropriateness (r = 0.163) and waiting area comfortability (r = 0.079) (Table-4)

Table-4: Pearson's correlation coefficient of the external factors to each of two global measures

Sr.No	External Factors	Overall satisfaction		Would return		N
		R	Sig.	R	Sig.	
1	The office receptionist is courteous.	0.432	0.297	0.229	0.345	50
2	The registration process is appropriate	0.222	0.488	0.166	0.514	50
3	The waiting area is comfortable.	0.166	0.400	0.079	0.437	50

Table-5 lists the correlation of individual internal factor with the two global measures of satisfaction. The overall satisfaction was found to have a positive correlation with therapist spends enough time (r = 0.404), thorough explains the treatment (r = 0.630), therapist treats respectfully (r 0.168), therapist answers all my questions (r = 0.660), advices me on ways to avoid future problems (r = 0.268) and instruction regarding home program (r = 0.191). It has established a negative correlation with the variable 7 therapist does not listen to my concern (r = 0.111).

Table-5: Pearson's correlation coefficient of the internal factors to each of global measures.

Sr.No	Internal Factors	Overall satisfaction		Would return		N
		R	Sig.	R	Sig.	
4	My therapist spends enough time with me	0.404	0.365	0.591	0.405	50
5	My therapist thoroughly explains the treatment I receive	0.630	0.305	0.660	0.352	50
6	My therapist treats me respectfully	0.168	0.607	0.231	0.632	50

7	My therapist does not listen to my concern	-0.111	0.395	-0.559	0.400	50
8	My therapist answers all my questions	0.660	0.352	0.562	0.394	50
9	My therapist advices me ways to avoid future problem	0.268	0.557	0.868	0.460	50
10	My therapist gives me detailed instructions regarding my home program.	0.191	0.508	0.390	0.406	50

The 2nd global measure "return to the office for future service" established a positive correlation with therapist spends enough time with patient (r = 0.591), thoroughly explains the procedure (r = 0.660), therapist treats me respectfully (r = 0.231), therapist answers to all my questions (r = 0.0.526), advices me on way to avoid future problem (r = 0.868), gave detailed instructions regarding home program (r = 0.390), but it established a negative correlation with the variable 7 therapist does not listen to my concern (r = -0.559). The global measure of "overall satisfaction. when correlated with external factor shows positive correlation with receptionist courteousness (r = 0.432), registration process appropriateness (r = 0.222), and waiting area comfortability (r = 0.166).

PERCENTAGE OF GLOBAL MEASURE RESPONSES

Table-6 describes the percentage of the two global measures of MRPS. This 13.33% of patient agreed to be overall satisfied of which 66.67% were males and 33.33% were females whereas 86.67% of patient strongly agreed for overall satisfaction of which 59.26% were males and 40.74% were females. Thus almost all patients were satisfied to physical therapeutic care to a lesser or greater extent.

For the 2nd global measure 23.33% patients agreed for returning back to the same setup for future care which included 28.57 males and 71.43% females, and 76.67% of patients strongly agreed for return of which 65.22% were males and 34.78% were females.

Table-6: PERCENTAGE OF GLOBAL MEASURE RE SPONSES

Sr.No	Variable	Strongly Disagree	Disagree	Uncertain	Agree		Strongly agree	
1	11	0	0	0	13.33%		86.67%	
					M	F	M	F
					66.67%	33.33%	59.26%	40.74%
2	12	0	0	0	23.33%		76.67%	
					M	F	M	F
					28.57%	71.43%	65.22%	34.78%

DISCUSSION

The finding from this study suggests that for people undergoing outpatient physical therapy treatment were almost completely satisfied with physical therapeutic care, as measured by internal and external subscale of the MRPS. The MRPS instrument, described originally by Paul Baettie et al (2005)[6], intentionally negatively worded the instrument for variables 4 & 7 so as to reduce the likelihood of a subject scoring all variables equally without carefully reading each question, but, finally recorded them as positive variables for statistical analysis.

On the contrary in our study the subjects were mostly of rural population and procedure followed was explaining these questions to the subject and asking them to grade the question on likert's scale from 1 (strongly disagree) to 5 (strongly agree), rather than self reporting. To overcome the practical difficulty of explaining the negativity of question 4 was converted to positive and rating was evaluated as 1 (strongly disagree) to 5 (strongly agree) which was same for other question. Whereas 7th variable was well understood negatively by the patients, so was kept negative and the rating remained same as for this particular question, i.e. 1-being strongly disagree and 5- being strongly agree.

MEAN OF VARIABLE RESPONSES:

The mean ± SD obtained for variable of external factor ranged from 4.57 ± 0.469 to 4.73 ± 0.6, which indicates that in our study the patients were either agreed or strongly agreed towards these but no one was disagreed or uncertain to it. From these variables, registration process appropriateness showed the highest mean, thus depicting that most of the patients strongly agreed to it.

Whereas for variable 3 patients were agreed or strongly agreed.

Mean ± SD of the internal factor ranged from 1.2 ± 0.4 to 4.9 ± 0.3 which are for variable 7 & 5 respectively. Thus most of the patients are strongly agreeing to the thorough explanation of the treatment which is variable 5. The 7th variable is negatively worded, stating "my therapist does not listens to my concern" as explained earlier, thus the low score of mean i.e. 1.2 stands for the good response of the patient.

The next lowest mean ± SD within the internal factor is of 9 which is 4.6 ± 0.7141. stating that the patients were either agreed or strongly agreed to that the "therapist advices on ways to avoid future problems" but not disagreed or uncertain to it.

The two global measures 11 and 12 show a high mean value of which "overall satisfaction" is more strongly agreed than "would return in future".

The result of mean and SD of our study is nearing towards those of Ekta Sarkari and Narinder Kaur Multani (2006)[2] but highest and lowest values are not for same variables. This may be due to the large differences in the whole setup design the environment, interest of the patient, their IQ level, variety of culture and many other factors. Also we see a large variation in the mean of variable 7 from that depicted by Ekta Sarkari & Narinder Kaur Multani[2] which is due to the negativity of the question.

CORRELATION OF GLOBAL AND VARIABLE RESPONSE:

This correlation analysis of a multi variable satisfaction measure can provide useful information by

assessing the relationship of specific variable to overall patient satisfaction.

A positive correlation established with the external factor with overall satisfaction states that these factors are essential part of physical therapy care. Of these, "receptionist courteousness" is most closely correlated (r = 0.432) than the registration process appropriateness (r = 0.222). This may be because of the differences in the preferences between the populations studied.

The 2nd global measure (returning in future for care and service) is also very closely correlated with receptionist courteousness than the registration process appropriateness. But the waiting area comfortability is somehow lowly correlated with both the global measures, thus we can conclude that appropriateness of waiting area comfortability in our setup was not so appealing that could drag the patient back to this setup again for future care.

Now coming to the internal factors, when overall satisfaction was correlated to it, "therapist answer all my questions" is highly correlated than the "therapist thoroughly explains the treatment" followed by "therapist spends enough time with me", " therapist advices on ways to avoid future problems" also correlated but not highly correlated. Similarly "therapist gives detailed instructions regarding home program and "therapist treats me respectfully" are not showing very close relationsnips with overall satisfaction. The negative correlation of variable 7 "therapist does not listen to my concern" with global satisfaction means that the patient were well satisfied that the therapist is deeply concerned with the problems of patients.

These findings support the concept that the patient perception of the quality of professional interaction with the therapist, especially answering of patient's questions, is a critical component of patient satisfaction with physical therapy care. Whereas, in case of external factors receptionist courteousness is standing critical for patients satisfaction.

When the correlation of "would return for future care" was established, the closest correlation was found with " therapist acivices me on ways to avoid future problem" foilowed by 'therapist thoroughly explains the treatment I receive" and then "therapist spends enough time with me", and lastly "therapist answers all my questions". Thus we can establish that therapist needs to emphasize more on providing advices to avoid future problem and need to explains the treatment thoroughly for pulling back the patient into our setup for future problems whereas spending enough time and answering the questions are though essential but not so critical. Whereas "therapist treats respectfully" and "therapist gives detailed instruction are not closely correlated. Again the negative correlation of variable 7 "therapist does not listen to my concern" is enabling the return of the patient in the future.

The preferences given by the patients to the variables for overall satisfaction are different from that given for return. This is mainly due to lack of ability to understand the essentiality of each question by the patients, or probably their choice of establishing prerequisite for overall satisfaction and return are different. The sample was from rural population so the efficiency of explaining the variables to the subject can be highly questioned.

These preferences are also different from that concluded by Ekta Sarkari and Nainder Kaur Multani who found "my therapist aclvices me to be ways to avoid future problem" as the most critical component and "therapist gives me detail instruction regarding my home program" as the least essential for both global measures. This again is due to variety in culture and health care system and extremes in the environment.

These variations are likely to occur and are supported by the same author when they too found variation in the level of preference of co-relation with the change in subjects.

CONCLUSION

86.67% of patients are completely satisfied with the physical therapy care and 13.33% are only satisfied. 76.67% of patients are strongly agreed on return and 23.33% agreed about return for future care. Males are likely to report complete satisfaction and return than females. For developing professional interaction between the therapist and patient relationship, therapist's answer of all the questions and therapist's advice on ways to avoid future problem are critically essential, whereas in the external factors receptionist courteousness is the essential factors.

CLINICAL IMPLICATION

The MRPS can also be used as a tool for analyzing the drawback in our health care system towards patient's satisfaction and thereby the efforts can be carried out to improve on them for gaining high level of patient satisfaction. Thus instrument is very useful in inferring the requirement of the patient and their preferences which will in turn lead to their satisfaction or return for future care.

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Annexure-1
 # Modified MRPS Questionnaire

Sr. No	Variable
1	The office receptionist is courteous
2	The registration process is appropriate.
3	The waiting area is comfortable.
4	My therapist spends enough time with me.
5	My therapist thoroughly explains the treatment I Receive.
6	My therapist treats me respectfully
7	My therapist does not listen to my concern
8	My therapist answers all my questions.
9	My therapist advices me on ways to avoid future problem.
10	My therapist gives me detailed instructions regarding my home program.
11	Overall, I am completely satisfied with the treatment I received.
12	I would return to this office for future service or care

Variable 1 to 3 represents the external factors.
Variable 4 to 10 represents the internal factors.
Variable 11 and 12 are global measures of satisfaction.
LIKERT'S SCALE: 5 point likert's scale was used to evaluate each variable
1. Strongly Disagree 2. Disagree 3. Uncertain 4. Agree 5. Strongly Agree