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The Development of an Instrument for the Assessment of Doctor-Patient Relationship (Dopraq-16)

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Abstract

The objective was to assess the quality of the doctor-patient relationship, following a clinical consultation, through the development of a questionnaire that asks identical questions to doctors and patients. Therefore, a systematic search of the world literature in eight languages to include all available questionnaires measuring aspects of the doctor-patient relationship led to two separate comprehensive sets of questions, which were administered separately to doctor and patient pairs following clinical consultations. Principal component and factor analyses were performed to identify common factors in the doctor-patient relationship. On the basis of results and review of common questions in doctor and patient questionnaires, a questionnaire was constructed, with identical questions for doctors and patients. Concurrent validity was assessed through a 1-10 analogue scale and correlation between doctor and patient responses was studied. As an outcome, sets of 122 and 137 questions for doctors and patients respectively have been identified and administered to 461 doctor-patient pairs following clinical consultation. Principal component analyses revealed 24 factors for doctors and 31 factors for patients, accounting for 73.3 and 70.8% of variance respectively. A series of factor analyses showed that factors vary for patients, doctors and medical specialties. A final analysis including only common questions for doctors and patients led to a two-factor solution, resulting to a 16-item questionnaire. Together these findings suggest that the Doctor-Patient Relationship Assessment Questionnaire (DoPRAQ-16) has good psychometric properties, while common questions provide a common language, for measuring the doctor-patient relationship.

Introduction

The doctor-patient relationship has been increasingly recognized as an important variable in medical practice [1,2]. Throughout the history of medicine, patients and doctors have scrutinized and debated their relationship, which is undoubtedly one of the most difficult among interpersonal relations, for a variety of reasons [1,2]. It involves interaction between individuals in non-equal positions, and sometimes it is non – voluntary and emotionally laden, where at the same time it concerns issues of vital importance and therefore requires close cooperation.

The quality of their relation determines not only the patient's and doctor's satisfaction but also the patient's compliance/adherence, ability of coping, relapse rate, quality of life and, to some extent, his state of health.

Various theoretical approaches to the relationship have been proposed, such as the internal working model [3], the organistic-systemic model [4], the functional model of the professional dominance [5], the normative model [6], the conflict model [7], the psychodynamic model [8] and others based on the way the exchange of communication happens in the clinical practice [9-11]. However, the topic was only recently investigated with an empirical approach. This was only done in studies of single patient-physician encounters and in surveys of patients' perceptions of medical care [12-19].

The doctor-patient relationship is complex [20]. If we compare doctors' and patients' points of view for the therapeutic relationship, significant differences emerge. For example, from the doctor's point of view, the focus is on the patient's behavioural characteristics [21],

attitudes [22,23] and their emotional state [24]. Also important appear to be the patient's communication style [25], especially the way s/he seems to respond to the communication of information [24]. Finally, historically according to doctors, the clinician should control the amount of given information [26] and a good therapeutic relationship requires the patient's compliance [27,28].

On the other hand, from the point of view of the patient, the doctor's communication style, demeanor, courtesy, availability, emphasis on the patient's uniqueness, performance of physical examination [29] and humanness [30] appeared to be important. Patients also place emphasis on the arts [31,32], clinical competence [33] and continuity of care [34], the emotional depth of the relationship [35], the development of the working alliance [36], and the satisfaction they receive [18,35-38]. Martin [39] and Armstrong [40] emphasized that patients want to see themselves as active participants and that the doctor should communicate information which is sensitive to the patient's priorities.

In the light of the above, it appears important to work towards the development of a common language for doctors and patients to understand, discuss and evaluate the doctor-patient relationship. Ways of being human, of course, are expressed in so many ways: non-communication is monolog – emptiness, shallowness, hollowness,

simply existing side by side, but with no recognition of the other. On the other hand, dialogue is not just words; it is the expression of life-felt thoughts and feelings in every moment of our daily routine. All kind of forms of communication are expected in a therapeutic relationship such as asking questions, demanding answers, love, emotions of anxiety and relief or disappointment, reason, criticism, thought, hate, even mindless behavior.

Along with the mentioned theories in the area, our approach stands as a rare advocate for the human sight. It seems that even when professionals face disease, they confront their inner world as human beings. Relationship is a mutual empowerment. Empowerment is, first and foremost, the expert's sharing of scientific knowledge and information related to their medical condition with respect to their wholeness and equality. And the opposite seems to be true. Experts need to be aware of the power and empowering dimension of their smile – a warm loving statement filled with multiple messages that the other is totally valued, honored, and respected as a human being. This valuing is unconditional and continuous. It is joyful, playful, and empathic. All human beings need an enveloping sense of connectedness throughout life. This deep-seated feeling results in a sincere longing to be in contact and communicate with others around us; this desire transcends all forms of communication, dialogue and relationship. Whether we have the appropriate education and relevant experience or not to manage the situation, whether we see ourselves engaged in a theory or their specialty context, whether we are bold enough to offer a vision of being human in any human situation, we are situated to see our potential value to that exchange by offering the meaning of therapeutic relationship. To summon the previous information, therapeutic relationship is like a dance helps to bring about the possibility of mutual contact and transformation. And that is why therapeutic relationship, role and theory-free is more critical now than it ever has been.

The aim of the present study was to develop a psychometrically robust questionnaire for doctors and patients to reflect and measure the doctor-patient relationship, following clinical consultations. The authors feel that an assessment of the therapeutic relationship, if it is to have some clinical as well as research utility, must be independent of technical characteristics and the theoretical orientation of the doctor. It must be based on a clear understanding of the relationship's emotional constituents and function within the clinical framework. Assuming that good therapeutic relationship is a desirable element in the 'care' function of medicine, doctors' and patients' awareness of their emotional state may be useful for both parts [41].

Design and Methods

A systematic search for questionnaires on the world literature in order to identify every available questionnaire on the doctor-patient relationship included in other relevant studies was undertaken. Eighty-one questionnaires available in the literature and relevant questions to the therapeutic relationship were identified (list in Table 7). The questionnaires found were initially written in eight languages (English, French, Italian, Spanish, German, Norwegian, Dutch and Swedish). In reviewing them, the following areas were identified as being of relevance: physician-patient interaction [42] and communication [43-45], doctor's interpersonal skills [46], professional dominance [47], information exchange [48], doctor-patient working alliance [36], therapeutic alliance [49], helping alliance [1,49-53], empathy [16,17,54,55], difficulties in doctor-patient communication [22,56] and satisfaction from the regimen and the consultation [12,30,31,35,38,57,58].

During the initial phase of our research, all the relevant items were included in two scales, one for patients and one for doctors.

Measures

The Greek translation of all questions included in the questionnaires for doctors and patients found in the literature and back translation as well to the initial language, were made by two psychologists separately and a psychiatrist familiar with the subject of this research work. To achieve accurate translation, a consensus was reached in order to reduce conceptual and linguistic bias. This preliminary work led to the preparation of a list of questions or statements resulted to two questionnaires, one for doctors and one for patients. The initial pool of items referred to the therapeutic relationship characteristics role and specialty-free, was shortened to 122 and 137 items - for doctors and patients - after excluding the identical ones. The sequence of the questions was allocated randomly.

A pilot study was performed to evaluate the clarity of the translated questions in a sample of 15 doctors and 70 patients respectively. The comments of the pilot study's subjects informed the revision of the initial lists of questions for doctors and patients. The pattern of response to statements was studied to discover whether a range of opinions was being disclosed. Wording was repeatedly reviewed for ambiguity and other shortcomings. Checking the difficulty experienced by patients in answering statements, assisted this process. If one of these methods showed a problem, the findings from the other selection methods were reviewed and statements were discarded or rewritten.

Questionnaires were not marked in any way that might permit identification of patients, and the method of collecting completed forms was chosen so that patients could feel certain that their comments would be anonymous. A five-point scale (strongly agree – agree – uncertain – disagree – strongly disagree) was used to respond to each statement. Questionnaires were given to doctors and patients after their meetings.

Procedures – Setting - Participants

The sample was collected at the University Hospital of Ioannina in Greece, over a seventeen month period. Doctors and patients from four different medical specialties participated in the research: Psychiatry (N=126 consultations), Oncology (N=103 consultations), Cardiology (N=120 consultations), Orthopedics (N=112 consultations).

The two separate forms of questionnaire consisting of 122 questions for doctors and 137 questions for patients were administered to a sample of 72 doctors and 461 patients following 461 consultations. Additionally, demographic and clinical characteristics were collected for doctors (Table 1) and patients (Table 2).

Results

First analysis of the questionnaires which included all items

For the extraction of factors a series of Principal Component Analyses were performed. The choice of factors extracted was based on Kaiser's criterion, the scree plot, and amount of variance accounted by each factor. Factor scores were obtained using the Anderson-Rubin method.

Principal component analyses revealed 24 factors for doctors and 31 factors for patients, accounting for 73.3% and 70.8% of the variance respectively (Table 3). Factor scores were obtained using the Anderson-Rubin method and subsequently analyzed using the mixed two-way

DEMOGRAPHIC CHARACTERISTICS			PSYCHIATRIC DEPARTMENT N=17 (23.6%) N Questionnaires=126		CARDIOLOGY DEPARTMENT N=25 (34.7%) N Questionnaires=120		ONCOLOGY DEPARTMENT N=11 (15.2%) N Questionnaires=103		ORTHOPEDICS DEPARTMENT N=19 (26.3%) N Questionnaires=112		TOTAL N=72 N Quest.=461	
Gender	Men		10	58.8%	16	22.2%	9	12.5%	17	23.6%	52 (72.2%)	
	Women		7	41.1%	9	12.5%	2	2.7%	2	2.7%	20 (27.7%)	
Questionnaire / Age	Mean	Men	40	x =38	34	x =34	39	x =39	36	x =35	37	x =37
		Women	32		34		32		29		32	
	SD	Men	6	SD=7	6	SD=6	6	SD=6	5	SD=6	6	SD=6
		Women	6		7		0		1		6	
Questionnaire / Specialty	Psychiatric		77	61.1%	-	-	-	-	-	-	77 (16.7%)	
	Oncological		-	-	-	-	95	92.2%	-	-	95 (20.6%)	
	Cardiological		-	-	89	74.2%	-	-	-	-	89 (19.3%)	
	Orthopedic		-	-	-	-	-	-	102	91.1%	102 (22.1%)	
	General Medicine		49	38.9%	31	25.8%	3	2.9%	10	8.9%	93 (20.2%)	
	Internal Medicine		-	-	-	-	5	4.9%	-	-	5 (1.1%)	
Years from graduation	Mean		13	-	9	-	12	-	10	-	11	
	SD		6		6		4		5		6	
Years from being specialist	Mean		6	-	4	-	5	-	3	-	5	
	SD		5		4		3		4		4	
Professional status	Under specialty		5	29.5%	8	32.0%	4	36.3%	7	36.8	24 (33.3%)	
	Specialized		12	70.5%	17	68.0%	7	63.6	12	63.1	48 (66.6%)	

Table 1: Demographic characteristics of the Doctors included in the research.

DEMOGRAPHIC CHARACTERISTICS		PSYCHIATRIC DEPARTMENT N=126	27.3%	CARDIOLOGY DEPARTMENT N=120	26.0%	ONCOLOGY DEPARTMENT N=103	22.3%	ORTHOPEDICS DEPARTMENT N=112	24.2%	TOTAL N=461 (100%)	
Gender	Men	66	52.4 %	77	64.2 %	44	42.7 %	64	57.1 %	N=251 (54.4 %)	
	Women	60	47.6 %	43	35.8 %	59	57.3%	48	42.9 %	N=210 (45.6 %)	
Age	Men	x =43 (SD=14)		x =60 (SD=10)		x =59 (SD=13)		x =49 (SD=17)		x =52 (SD=15)	
	Women	x =44 (SD=16)		x =65 (SD=8)		x =53 (SD=13)		x =59 (SD=16)		x =54 (SD=16)	
Education	<6 years	14	11.1 %	32	26.7 %	15	14.6 %	12	10.7 %	N=73 (15.8 %)	
	Primary school graduate	48	38.1 %	51	42.5 %	40	38.8 %	58	51.8 %	N=197 (42.7 %)	
	High School graduate	15	11.9 %	10	8.3 %	6	5.8 %	9	8.0 %	N=40 (8.7 %)	
	Lyceum Graduate	17	13.5 %	10	8.3 %	18	17.5 %	14	12.5 %	N=59 (12.8 %)	
	Undergraduate	5	4.0 %	1	.8 %	1	1.0 %	6	5.4 %	N=13 (2.8 %)	
	University graduate	9	7.1 %	10	8.3 %	17	16.5 %	7	6.3 %	N=43 (9.3 %)	
	Technical school Graduate	18	14.3 %	6	5.0 %	6	5.8 %	6	5.4 %	N=36 (7.8 %)	
Duration of the disease (months)	x (SD)	x =85.29 (SD=96.37)		x =26.72 (SD=44.54)		x =31.94 (SD=51.19)		x =34.34 (SD=64.02)		x =45.75 (SD=72.14)	
Duration of the medical observations (in months)	x (SD)	x =17.95 (SD=31.91)		x =4.96 (SD=12.31)		x =16.56 (SD=29.24)		x =21.25 (SD=59.72)		x =15.06 (SD=37.48)	

Table 2: Demographic characteristics of the Patients included in the research.

nested (hierarchical) design approach, with clinics regarded as a fixed factor and doctors-patients as a random factor nested within clinics. The Kaizer-Meyer-Olkin measure for the data was 0.959 suggesting that the data set was appropriate for factor analysis; also the Bartlett's test result was highly significant (p<0.01) indicating the correlation matrix differs from the identity matrix.

Factor analysis revealed similar but not identical factors between doctors and patients. For example, responses of both groups suggested the presence of factors best labeled as comprehension, alliance, mutual trust, honesty, hope, patience, empathy, humanness, help, availability, respect, agreement, satisfaction, discomfort, compliance, setting of goals, misunderstanding, lack of communication, mistrust and lack of alliance, fear, lack of sharing, dishonesty, professional dominance, dissatisfaction and drop out of therapy.

Discussion of the first factor analysis

First of all, a large number of factors were extracted from the initial analysis, 24 for doctors and 31 for patients. There was marked lack of correspondence in the way doctors and patients view their relationship. Positive and negative characteristics were revealed from both sides, which were not exactly identical in each factor. As a matter of fact, these data led to the creation of four different questionnaires for each medical specialty, including two different versions for doctors and patients. From the 7th factor onwards, the questions that were accounting for each factor were few, something that did not permit the robust statistical definition of the factor.

Since a specific aim of this project has been to identify a useful common language between patients and doctors to assess their

relationship, we abandoned the effort to create separate questionnaires for doctors and patients and for each specialty and concentrated on the analysis of common questions for doctors and patients only.

Second factor analysis

There were 26 common questions included in the two questionnaires, suggested the presence of factors best labeled on the first analyses, which confirmed a clear definition in the definition of the factors. This attempt focuses mostly on doctor-patient relationship as it develops between humans, irrelevant from roles or special characteristics of medical specialties. The analysis took place in the same sample of 72 doctors and 461 patients in 461 consultations.

Results of the second analysis

Based on Kaiser's criterion (0.959) and scree plot results, four common factors of the relationship were extracted, accounting for 49 and 54% of variance respectively. Although the percentage of variance that the four factors accounted for was high, the number of items included in the last two factors was small and factor loadings for the two last factors accounted for only 5% of the variance. More specifically, using Generalized Least Squares with varimax rotation, the first factor accounted for 40.98% of the total variance; the second factor accounted for 6.53%, while the third and the fourth factor covered the 5.41% and 3.83% (Table 4).

Discussion of second analysis

The first two factors were strong as seen by the amount of variance they account for. Furthermore they refer to both positive and negative aspects of the doctor-patient relationship. In contrast, the other two factors accounted for only 9.24 of the variance and it was difficult to see what they referred too.

Third analysis and refinement of the questionnaire

A third factor analysis was performed with the questions accounting for the first two factors (16 items). The rotated solutions reached by the three extraction methods were identical. As expected, the Principal Component solution accounted for more sample variability (48.77%). The Generalized Least Squares, the Maximum Likelihood and Principal Axis Factoring solutions accounted for 45.24%, 44.31% and 44.55% of the total variance respectively. However, the Generalized Least Squares and Maximum Likelihood methods were superior to the Principal Components and Principal Axis Factoring solutions in reproducing the correlations; the Generalized Least Squares solution was slightly better than the Maximum Likelihood one and therefore the estimated factor loadings using the former method were preferred.

Results of the third analysis

Both Kaizer's criterion and the scree plot suggested that two factors should be extracted from the 26 questions. More specifically two factors of the relationship (with a total of 16 items) accounting for 45.24% of variance were extracted in the sample of 461 meetings of 72 doctors with 461 patients, by combining information from Kaizer's criterion, the scree plot, the amount of total variance explained and the fit of each method and model as judged by the residual correlations.

Therefore a two-factor solution was chosen, consisting of the positive and negative characteristics of doctor-patient relationship, resulting in a 16-item questionnaire. The first factor includes 8 questions indicating the positive characteristics of doctor-patient relationship, whereas the second factor includes 8 more questions representing quite

FACTORS	DOCTORS			PATIENTS		
	Factor loadings	%	no of questions	Factor loadings	%	no of questions
1st	43.482	35.641%	58	43,231	31.556%	68
2nd	6.541	5.362%	14	7,548	5.509%	9
3rd	3.928	3.220%	5	3,863	2.819%	4
4th	3.075	2.520%	4	3,050	2.226%	2
5th	2.843	2.330%	3	2,517	1.837%	5
6th	2.547	2.088%	3	2,266	1.654%	4
7th	2.397	1.964%	4	2,105	1.537%	3
8th	2.161	1.771%	3	2,035	1.485%	2
9th	1.886	1.564%	2	1,951	1.424%	1
10th	1.762	1.444%	2	1,840	1.343%	2
11th	1.710	1.402%	2	1,772	1.293%	1
12th	1.634	1.339%	2	1,726	1.260%	3
13th	1.578	1.293%	2	1,692	1.235%	1
14th	1.534	1.257%	4	1,602	1.169%	1
15th	1.492	1.223%	1	1,491	1.088%	1
16th	1.455	1.193%	1	1,449	1.058%	1
17th	1.336	1.095%	1	1,419	1.036%	2
18th	1.287	1.055%	1	1,378	1.006%	1
19th	1.253	1.027%	2	1,332	.973%	1
20th	1.146	.940%	1	1,285	.938%	1
21st	1.134	.929%	1	1,237	.903%	1
22nd	1.097	.899%	1	1,223	.892%	1
23rd	1.062	.870%	2	1,197	.874%	2
24th	1.036	.849%	1	1,172	.856%	1
25th				1,148	.838%	1
26th				1,110	.810%	1
27th				1,107	.808%	1
28th				1,059	.773%	1
29th				1,057	.771%	2
30th				1,012	.739%	1
31st				1,007	.735%	1

Table 3: Estimated factors and factor loadings in the two questionnaires, using Generalized Least Squares with varimax rotation (73.3% for doctors and 70.8% for patients).

	QUESTIONS	FACTORS			
		1 (40.98%)	2 (6.53%)	3 (5.41%)	4 (3.83%)
1.	This was a very satisfying visit for me.	.701**	-.313	-.235	---
2.	The goals of these sessions are very important.	.694	---	-.207	---
3.	I believe he likes me.	.680	-.333	---	-.251
4.	He/she understands what I am trying to do.	.671	-.209	---	-.345
5.	We trust one another.	.658	-.483	-.225	---
6.	He suites me.	.652	-.451	---	---
7.	Our relationship is very important.	.633	---	---	---
8.	He/she perceives accurately what my goals are.	.607	-.306	-.290	-.292
9.	I have sympathy for him/her.	.601	-.550	---	---
10.	We understand each other.	.578	-.425	-.351	---
11.	We agree upon the procedure we follow for the best outcome.	.562	-.403	-.276	---
12.	I am clear as to what he/she wants me to do in these sessions.	.517	-.214	-.446	---
13.	I secretly hope not to see him again.	-.297	.740	---	---
14.	My patience is exhausted with him.	-.239	.724	---	---
15.	The things that he/she is asking me to do, don't make sense.	-.298	.709	.260	---
16.	He criticizes me.	---	.698	---	---
17.	I felt angry sometimes during the interview.	---	.685	.208	---
18.	I feel uncomfortable with him/her.	-.273	.590	.234	---
19.	I feel that he/she is not totally honest about his/her feelings toward me.	---	.523	.473	---
20.	We don't agree upon the nature of his problems.	-.346	.480	.362	.212
21.	I believe the time we are spending together is not spent efficiently.	---	.201	.753	---
22.	The things he/she is asking me to do don't make sense.	-.363	.315	.568	---
23.	I am worried about the outcome of these sessions.	---	---	---	.746
24.	I don't know what to expect as a result.	---	---	---	.736

** Factor loadings

Table 4: Estimated factors and factor loadings in the questionnaire with common questions, using Generalized Least Squares with varimax rotation (56.75%)

	QUESTIONS	Factors (45.24%)	
		1 (24.84%)	2 (20.40%)
1.	We trust one another.	.742**	-.440
2.	This was a very satisfying visit for me.	.711	-.321
3.	I have sympathy for him/her.	.697	-.300
4.	We understand each other.	.649	-.413
5.	He/she perceives accurately what my goals are.	.625	-.352
6.	The goals of these sessions are very important.	.617	---
7.	We agree upon the procedure we follow for the best outcome.	.584	-.464
8.	Our relationship is very important.	.577	---
9.	The things that he/she is asking me to do, don't make sense.	-.395	.705
10.	He/she doesn't show patience with me.	-.346	.664
11.	I secretly hope not to see him again.	-.384	.646
12.	I felt angry sometimes during the interview.	-.297	.613
13.	I feel uncomfortable with him/her.	-.352	.589
14.	I feel that he/she is not totally honest about his/her feelings toward me.	-.334	.589
15.	We don't agree upon the nature of his problems.	-.409	.576
16.	He criticizes me.	-.272	.526

** Factor loadings

Table 5: Estimated factor loadings using Generalized Least Squares with varimax rotation (45.24%)

the opposite (Table 5). According to the results, the 1st factor explains the 24.84% of the total variance and the 2nd factor explains 20.40%. This approach excludes the characteristic of the relationship due to patient or doctor roles and the characteristics of the relationship due to medical specialties. The two factors identified cannot fit to any theoretical notions about the relationship and we feel that is well balanced between negative and positive aspects of the relationship.

Validity and internal consistency

The external validity of the 16-item questionnaire was measured through the collection of the further samples, completed by 80 doctors and 80 patients. Respondents were asked to rate the overall quality of the doctor-patient relationship on a 1-10 point rating scale, where 1 is extremely poor and 10 is perfect. Pearson product moment correlation coefficient and Spearman rank order correlation coefficient was found to be satisfactory (reverse coding) (Table 6). Correlations varied from 0.774 to 0.442 (p<0.001). Internal consistency was also established through measurement of Cronbach's alpha in the new sample. Cronbach's alpha varied between 0.93 and 0.94.

Discussion

Interpersonal relationships are fundamental to a meaningful human existence. Developing meaningful interpersonal relationships between patients and doctors is important to optimal clinical outcomes. In his 1927 landmark article, Dr Francis Peabody eloquently described how mutual understanding within the doctor–patient relationship is essential to the successful practice of medicine, by summarizing his discussion in the following statement: 'The secret of the care of the patient is caring for the patient' [32]. Doctors' understanding of their patients' experiences and feelings were elegantly reiterated by Sir William Osler in his statement: 'It is as important to know what kind of a person has the disease, as it is to know what kind of disease has the person' [59]. These words of advice are as true today as they were many decades ago. Defined as a personal quality in the uncritical understanding of a patient's inner experiences and feelings, human feelings and specific behaviour characteristics are the essence of a meaningful doctor-patient relationship [55].

To a large extent, the quality of the patient–doctor relationship depends on doctors' and patients' interpersonal skills and characteristics as human beings, not on the seriousness of the patient's problem, nor on

the duration of their relationship or meeting. Therefore, behaviours as trust, honesty, discomfort, patience and empathy are such skills among the factors that are often taken into consideration in the assessment of the therapeutic meeting – inside the questionnaire we meet the previous characteristics in questions 1, 3, 8, 6 and 12. Empirical data are available in support of this proposition [33]. Understanding of the patients' and doctors' perspective, and agreement in the therapeutic choices, as well as the goals they set, are also important factors in the doctor–patient relationship [43]. Failure to understand each other's perspective may lead to communication problems that in turn contribute not only to patient dissatisfaction, but also his willingness of the patient to drop out therapy and abandon his doctor [60].

It is therefore intuitive that clinical outcomes are associated with the quality of their interpersonal relationship, and all the above mentioned behaviours could be proved to be a vehicle for improving doctor–patient interpersonal relationships. Thus, the quality of their therapeutic relationship is an outcome of both sides' interpersonal skills. To this point, research suggests that patient dissatisfaction due to doctors' lack of understanding can lead to malpractice claims, regardless of the quality of medical care rendered by doctors [61]. The previous characteristics are met in questions 2, 5, 7 and 16. Malpractice attorneys have indicated that more than 80% of malpractice suits are due to problems arising from interpersonal communication with doctors [62].

Assuming that the therapeutic relationship is a desirable element and not very relevant to roles (doctor or patient), medical specialty, diseases, or timing (1st or follow-up meetings), this research followed the empirical method and focused on the development of an instrument, meeting all the appropriate psychometric standards, in order to investigate the characteristics - behaviours it concentrated on the humans as persons participating in the therapeutic relationship. The

QUESTIONS	Pearson Correlation	Sig. (2-tailed)	Spearman's rho	Sig. (2-tailed)
We trust one another.	.774*	.000	.783	.000
This was a very satisfying visit for me.	.662	.000	.680	.000
I feel that he/she is not totally honest about his/her feelings toward me.	.625	.000	.636	.000
We don't agree upon the nature of his problems.	.564	.000	.557	.000
The goals of these sessions are very important.	.559	.000	.504	.000
Our relationship is very important.	.642	.000	.563	.000
The things that he/she is asking me to do, don't make sense.	.571	.000	.481	.000
I feel uncomfortable with him/her.	.425	.000	.420	.000
I felt angry sometimes during the interview.	.446	.000	.444	.000
We understand each other.	.628	.000	.636	.000
I have sympathy for him/her.	.581	.000	.593	.000
He/she doesn't show patience with me.	.442	.000	.426	.000
I secretly hope not to see him again.	.502	.000	.415	.000
He/she perceives accurately what my goals are.	.583	.000	.558	.000
He criticizes me.	.461	.000	.460	.000
We agree upon the procedure we follow for the best outcome.	.653	.000	.647	.000

* All correlations were statistically significant at the 1% level.

Table 6: Pearson product moment correlation coefficient and Spearman rank order correlation coefficient of the doctors' and patients' answers in the common questions and the analogue scale (1-10) in the total of sample (N=160 meetings)

Andrusyna et al. [64]	**Cognitive-Behavioral Therapy (Cbt Alliance) Wai-O-S** *(Working Alliance Inventory, Shortened Observer-Rated Version)*
Arborelius and Timpka [56]	**Difficulties in Doctor -Patient Communication**
Awad et al. [65]	**Drug Attitude Inventory (Dai) - 30**
Baker [35]	**Questionnaire to Assess Patients' Satisfaction with Consultations**
Barak and Lagrosse [66] Lagrosse [67]	**Counselor Rating Form (Crf)**
Barrett-Lennard [68] Barrett-Lenard [69]	**Barrett-Lennard Relationship Inventory**
Beckman and Frankel [70]	**A Coding Method**
Bender et al. [71]	**Compliance Self-Rating Scale (Coss)**
Bergner and Bobbitt [72]	**The Sickness Impact Profile**
Bertakis and Callahan [73]	**Davis Observation Code (Doc): 20-Item**
Callahan and Bertakis [74]	***Physician – Patient Interaction Code***
Bochmann and Petermann [75]	**Compliance - Vertrauen**
Brody et al. [31]	**Ware Satisfaction Scale**
Carlberg [57]	**Patient Satisfaction**
Caron and Roth [76]	**Questions For Doctors**
Chaitchik et al. [24]	**The Patient Attitudes Questionnaire 1** *(Administered Before The Meeting)* **The Patient Attitudes Questionnaire 2** *(Administered After The Meeting)*
Chaitchik et al. [24]	**A Questionnaire For The Physicians**
Steven A Cole [77]	**Station #1 Examiner Rating Form - 1st Patient Encounter** **Patient Satisfaction Rating Scale - 1st Patient Encounter**
Consoli and Safar [78]	**Analyse De La Stratégie Thérapetique**
Cooley and Lajoy [79]	***Understanding - Critical - Independence - Encouraging - Directive (Authoritarian)***
Dazord et al. [50]	**The Helping Alliance Questionnaire**
De Monchy et al. [62]	**The Doctor-Patient Scale (Dp Scale)**
Dormaar et al. [80]	***Icp - The Measures Themselves are from the Interpersonal Perceived Consensus List***
Durántez and Tirado [81]	**Clinical Interview**
Ende et al. [82,83]	**Decision Making Preference Scale** **Information-Seeking Preference Scale**
Fernández et al. [12]	**Factors of Dissatisfaction with Health Care**
Finlay et al. [84]	**1. Actor-Patient Score**
Finlay et al. [84]	**2. Examiner Score Sheet**
Fitzpatrick [38]	**Summed Scale of Satisfaction among Chronically Ill Patients** ***Baker's Scale (1990) To Measure Satisfaction with Consultations***
Foreman and Marmar [85]	**Coding Therapist Actions with Improved or Unimproved Therapeutic Alliances**
Frank and Gunderson [86]	**The Psychotherapy Status Report**
Franklin and Mclemore [87]	**Student Health Services (Shs) Scale**
Freeman and Richards [88]	**Questions for Patient**
Ganther et al. [13]	**Medical Care Preference Scale**
Girard et al. [89]	**The Internship**
Goerg et al. [90,91]	***What Specific Psychiatric Information and Skills Should*** ***A Non-Psychiatric Doctor Have*** **(Questions for Doctors and Students)**
Greco et al. [46]	**Doctor's Interpersonal Skills Questionnaire (Disq)**
Grol et al. [92]	**Work Satisfaction**
Gudas et al. [93]	**Medical Compliance Incomplete Stories Test (Mcist)**
Gulbrandsen et al. [94]	**Questions for Patients and Doctors**
Günther and Meise [95]	**Compliance Index for Doctors**
Hahn et al. [22]	**The Difficult Doctor -Patient Relationship Questionnaire** **Ten-Item Version (Ddprq-10)**
Hall and Dornan [14]	**Satisfaction with Medical Care**
Hayes and Gelso [54]	**16-Item Empathy Subscale** *(Of The Barrett-Lennard Relationship Inventory – Blri)*
Henry et al. [96] Moras and Strupp [97]	**Vanderbilt Therapeutic Strategies Scale**
Heszen-Klemens and Kapińska [98]	**Recording and Analysis of Doctor-Patient Interaction**
Hjortdahl and Borchgrevink [99]	**Questionnaire Related to Continuity and Use of Resources**
Hjortdahl and Lærum [34]	**Continuity of Care - Consultation**
Hodges et al. [100]	**OSCE Format (Observed Structured Clinical Exam)**
Hogan [101]	**Development of an Empathy Scale**
Holloway and Rogers [102]	***Level of Congruence - Likehood of Compliance - Commitment to Compliance - Satisfaction with Match***
Holloway et al. [103]	***3 Questions***
Horvath and Greenberg [36]	**Item Stems of the Working Alliance Inventory** ***(Case Manager And Client Forms)***
Hulka and Zyzanski [104] Roberts and Tugwell [105]	**Hulka Questionnaire**
Kaplan et al. [42]	**Physician-Patient Interaction Indicators - Measures**
Krupnick et al. [49]	**Vanderbilt Therapeutic Alliance Scales (Vtas)**
Kurth et al. [106]	**The Relationship Patterns Questionnaire (Rpq)**
Kurtz and Silverman [107]	**Calgary-Cambridge Referenced Observation Guides**
Lærum et al. [108]	***Doctor Evaluation Form*** ***Patient Evaluation Form***
Langewitz et al. [109]	**Patientenzufriedenheits-Fragebogen (Pzf)**
Levinson et al. [21]	**Physician Frustration**

Lin et al. [110]	**Questionnaire on Patient Education**
Linden et al. [15]	**Krankheitskonzeptskala (Kk-Skala)**
Luborsky [111]	**Health-Sickness Rating Scale**
Luborsky [51]	**The Helping Relationship Questionnaire**
Luborsky et al. [52]	**Manual for Counting Signs of Helping Alliances in Psychotherapy Sessions (Hacs)**
Luborsky et al. [52]	**Manual for Counting Signs of Therapist Behaviors Which Facilitate or Inhibit The Development of Helping Alliances in Psychotherapy Sessions (Tfbcs)**
Ludwig et al. [112]	**'Krankheits Konzept-Skala' - 'Kk-Skala'** **Disease Concept Scale**
Malterud [113]	***3 Questions***
Marteau et al. [114]	**Career Intentions and Attitudes to Communication Skills of Students Intending to Specialize in Surgery, Hospital Medicine and General Practice**
Marmar et al. [115]	**California Therapeutic Alliance Rating System (Caltars)**
Marziali [16]	**Therapeutic Alliance Scale (Tas)**
Marziali et al. [17]	***The Items Used Were Selected from the Scales of Luborsky***
Mason et al. [48]	**The Doctor – Patient Interview Evaluation**
Matthews and Feinstein [29]	**A New Instrument for Patient's Ratings Of Physician Performance in the Hospital Setting**
Mcgaghie and Whitenack [116]	**Patient Description Questionnaire (Pdq)** *(Physicians' Perceptions Of Problem Patients)*
Melville [23]	**Job Satisfaction**
Meredith and Albert [117] Meredith and Siu [118] Stewart et al. [119]	**Mos 20-Item (Short-Form)**
Mira et al. [120]	**Cuestionario Font Roja-Ap**
Morisky et al. [121]	**Compliance Index**
Morgan et al. [53]	**Penn Helping Alliance** *Manual For Ratings Helping Alliances In Psychotherapy Sessions*
Morgan et al. [53]	**Penn Helping Alliance Questionnaire** *Manual For Rating Therapists' Behaviors That Facilitate Or Inhibit Development Of Helping Alliances*
Muran et al. [122] Wiggins [123] Wiggins et al. [124]	**The Interpersonal Adjective Scale (Ias-16)**
Nnodim and Osuji [125]	**Attitudes to Social Issues in Medicine: Subscale Definitions**
Orlinsky and Howard [126]	**Therapy Session Report (Tsr) Questionnaire**
Participants in the bayer-fetzer conference on physician-patient communication in medical education [127]	**The Essential Elements of Communication in Medical Encounters**
Peay and Peay [128]	**Symptom Evaluation By General Practitioners, Patients and Potential Patients**
Petrusa et al. [44]	**Measuring The Doctor -Patient Relationship and Communication in a Clinical Performance Examination**
Phillips [47]	**Professional Dominance / Doctor-Patient Relationship**
Priebe and Gruyters [1]	**Helping Alliance**
Reuben et al. [25]	***3 Questions***
Roberts and Tugwell [129]	**Ware Questionnaire**
Roland et al. [18]	**Improving Care**
Rost et al. [20]	**Roter Interaction Analysis System (Rias)**
Roter et al. [130]	**Improving Physicians' Interviewing Skills**
Salomon et al. [19]	**Scale for Measuring Inpatient's Opinion on Quality of Hospital Care**
Saltzman et al. [131]	**Therapeutic Relationship: Client Dimensions / Therapist Dimensions**
Samstag et al. [132]	**Brief Psychotherapy Research Project Patient and Therapist Post-Session Questionnaire (Psq)**
Saunders et al. [133]	**Therapeutic Bond Scale (Tbs)**
Schmeling-Kludas [134]	**Skala Behandlungszufriedenheit - Skala Patient Kooperativ - Skala Patient Bedürftid/Belastet**
Schnabl et al. [135]	**Interpersonal Skills/Degree of Empathy**
Schnabl et al. [136]	**Interpersonal Skills (Ips) Rating Scale**
Smith and Zimny [137]	**Emotion For 33 Statements of Patient Circumstances or Behaviors**
Sparr et al. [138]	***Patient's Care - Interpersonal Relationships - Education - Overwork – Personal Factors***
Suchman et al. [58]	**Physician Satisfaction Questionnaire**
Todd [139]	**Recording and Analysis of Doctor-Patient Interaction**
Tomasz et al. [2]	***All Items on Wai-O-S as Organized by the Three Subfactors of the General Therapeutic Alliance Factor:*** ***Goal/ Task/ Bond*1** **Two Factors of CBT (Cognitive-Behavioral Therapy) Alliance As Measured by the Wai-O-S / Agreement-Confidence**
Van Thiel et al. [140]	**Maastricht History – Taking and Advice Checklist (Maas)**
Viinamaki et al. [141]	**Illustrative Items**
Waitzkin [45]	**Doctor - Patient Communication**
Waldvogel et al. [142]	**Core Conflictual Relationship Theme (CCRT)**
Wallston et al. [143]	**Health Locus of Control Scale Items**
Ware and Snyder [30]	**The Patient Satisfaction Scale**
Ware et al. [144,145]	**Ware Satisfaction Scale**
Winefield et al. [146]	**Kagan's Interpersonal Process Recall Model – (Doctor) Quality of Care (Patient)** **Patient's Satisfaction with the Consultation**
Wright et al. [147]	**Selected Characteristics of Attending Physicians with Identification As an Excellent Role Model**
Ziv et al. [148]	**Peer Assessment Questionnaire** **Feedback Questionnaire**

Table 7: Literature and relevant questions to the therapeutic relationship.

findings of this study generally suggest that in the presence of a common language between doctors and patients, doctor-patient relationship can be measured independently of the technical characteristics of the relationship due to roles and medical specialty. Until now, the numerous instruments concerning the therapeutic relationship are based largely on different frameworks and theories and their use has been limited to the investigation of the relationship as coloured by roles and specialty. This of course could be done but it would require separate questionnaires for doctors and patients and also different for medical specialties.

In the light of the above, we have developed a questionnaire to assess the therapeutic relationship in its basic components. The Doctor-Patient Relationship Assessment Questionnaire (DoPRAQ-16) asks 16 identical questions to doctors and patients, about the quality of their relationship following consultation (Appendix A).

The Doctor-Patient Relationship Assessment Questionnaire (DoPRAQ-16) also has some limitations. This has been the first study, so it requires further use in various situations. It has not been tested in primary care, in other languages and cultures. Its use in English language we think it will be ease, since most items were initially written in English. A variety of theoretical perspectives have been used to approach this complex relationship and the practicing clinician should use this questionnaire to study and understand the doctor-patient relationship further, rather than test the theories underlying in the relationship.

Such efforts represent indeed the capacity of the doctor and patient to 'stand in the other's shoes', and view the world from the other's perspective. It is about finding a common way to enter into each other world and expand each sight world through this process. How do we know that anyone wants from the other person to enter into his/her space-world? We do not now that for sure, but assume that everyone hungers and longs for a feeling of connectedness. Everyone is so different, yet all need to feel safe and love. This is a common ground shared by all human beings. The core after all meaningful communication is mutual respect and trust. If these virtues are missing in any relationship, there is little to talk about.

It is now widely accepted that therapeutic relationship is central to quality of health care. Given the importance of doctor-patient relationship, it is essential to provide meaningful results that can be implemented by doctors and patients.

Conclusions

The questionnaire has robust psychometric properties and is suitable for use in a variety of clinical settings. It is focused on the emotional, human and communication aspects of the doctor-patient relationship. Research confirms that this is important both for patients [15-17,63] and doctors [24,35,51,58] and significant in terms of quality of care and clinical outcomes [12-14,18,19,60-62]

The strengths of the questionnaire are as follows:

i.   It is empirically based and not theory dependent.
ii. It includes common questions for doctors and patients.
iii. It is able to identify both positive and negative aspects of the therapeutic relationship.
iv. It may be used in different clinical settings in respective of specialty.
v.   It is valid and reliable; however its validity should be tested in further studies.
vi. It is a self-report measure, easily understandable and particular brief (5-10 minutes).

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