

Self-Awareness of Performing Patient-Centered Medicine in General Practice / Family Medicine: Development of a Measurement Scale



Auto Perceção do Desempenho da Medicina Centrada na Pessoa em Medicina Geral e Familiar: Criação de Um Instrumento de Medição

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ABSTRACT

Introduction: Patient Centred Medicine is a method and a model of practicing allowing gains for both the doctor and the patient. Its practice must be evaluated for purposes of continuous professional development and continuous medical education. The aim of this study was to create an instrument focused in measuring the practice based on person centered medicine in general and family medicine, as well as in determining its reliability and validity.

Material and Methods: A first version of a questionnaire according to the four dimensions of the patient-centred clinical method was revised in a focus group providing the content validity. The final questionnaire includes 22 items, using a Likert scale with four response options. Factorial analysis made it possible to confirm the dimensions defined by Moira Stewart, and internal consistency, test-retest reproducibility and item-total correlations were determined. The online implementation of the questionnaire to a sample of 905 family doctors guaranteed the construct and criterion validities.

Results: The measurement instrument includes four dimensions: (i) exploring health, disease and the illness experience; (ii) investing in the doctor-patient relationship; (iii) seeking understanding; and (iv) understanding the whole person. The internal consistency was demonstrated with a global Cronbach's alpha of 0.892, varying between 0.783 and 0.844 for all dimensions. The test-retest reproducibility obtained an intraclass correlation value between 0.678 and 1.000. The item-total correlations varied between 0.457 and 0.870. Women doctors are more aware than their colleagues about seeking understanding with the person, and young doctors are more susceptible to approach the disease through history and to seek understanding with the patient. Specialist physicians have shown to be more careful with the history and with viewing the patient as a whole and the professionals who work in a Family Health Unit are those who seek a better understanding with the person. Finally, specific training about person centered medicine and about consultation in person centered medicine demonstrated a positive impact in all dimensions of the person-centred medicine and this is acknowledged by professionals.

Discussion: The assessment of self-perception of person-centred medicine is now possible.

Conclusion: The questionnaire presents good reliability and validity, thus allowing doctors to assess their main weaknesses, as well as enabling the development of specific training.

Keywords: Clinical Method Focused on the Person; Doctor-Patient Relationship; General and Family Medicine; Person-Centered Medicine; Primary health care; Questionnaire; Reliability

RESUMO

Introdução: A Medicina Centrada na Pessoa é um método e modelo de prática permitindo ganhos para o médico e o paciente, devendo a sua prática ser avaliada para fins de desenvolvimento profissional contínuo e educação médica continuada. O objectivo deste estudo foi construir, determinar a fiabilidade e a validade de um instrumento capaz de aferir a auto percepção genérica da prática médica segundo a medicina centrada na pessoa no ambiente de medicina geral e familiar.

Material e Métodos: Uma primeira versão de um questionário segundo as quatro dimensões do método clínico centrado na pessoa foi revista por um grupo focal garantindo a validade de conteúdo. O questionário final engloba 22 itens, utilizando para resposta uma escala de Likert com quatro opções. A análise fatorial permitiu confirmar as dimensões definidas por Moira Stewart, tendo também sido determinada a consistência interna, a reprodutibilidade por teste-reteste e a correlação item-total. A aplicação online a uma amostra de 905 médicos de medicina geral e familiar permitiu testar as validades de constructo e de critério.

Resultados: O instrumento de medição inclui quatro dimensões: (i) explorar a saúde, a doença e a experiência de doença, (ii) investir na relação médico-doente; (iii) procurar entendimento; e (iv) compreender a pessoa como um todo. A consistência interna foi demonstrada com um alfa de Cronbach global de 0,892, variando entre 0,783 a 0,844 para todas as dimensões. A reprodutibilidade teste-reteste obteve um valor de correlação intraclassa entre 0,678 e 1,000. As correlações item-total variaram entre 0,457 e 0,870. As mulheres médicas estão mais sensibilizadas do que os seus colegas no que respeita à procura de entendimento com o doente e os médicos mais novos são os mais sensíveis à abordagem da doença através da anamnese e à procura de entendimento com o doente. Os especialistas demonstraram ter mais cuidado com a anamnese e com o facto de encarar o doente como um todo, e os profissionais que trabalham numa unidade de Saúde Familiar são os que procuram um melhor entendimento com a pessoa. Por fim, a formação específica sobre medicina centrada na pessoa e sobre consulta em medicina centrada na pessoa demonstraram ter um impacto positivo

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em todas as dimensões da medicina centrada na pessoa e isso é reconhecido pelos próprios profissionais.

Discussão: A avaliação da auto percepção de desempenhar medicina centrada na pessoa é agora possível.

Conclusão: O presente questionário apresenta boa fiabilidade e validade permitindo ao médico verificar quais as principais insuficiências bem como desenvolver formação específica.

Palavras-chave: Cuidados de saúde primários; Fiabilidade; Medicina Centrada na Pessoa; Medicina Geral e Familiar; Método Clínico Centrado na Pessoa; Questionário; Relação Médico-Doente

INTRODUCTION

Patient-centered medicine (PCM)^{1,2} is currently recognised as a relevant methodology in clinical practice.³ In fact, the approach of PCM has been associated with higher satisfaction of patients and medical practitioners. Reduced concern and anxiety is also clear, in addition to greater adherence to therapy, improved mental health and functional status, a reduction in medical negligence claims, costs and use of primary health consultations, reduced number of attendances to emergency and admissions, use of diagnostic tests, speciality referrals and improved efficacy in healthcare.⁴⁻⁹

The concept of PCM was introduced by Balint in 1970 and is based on the recognition of each patient considered as a whole in search for healthcare, with their own unique experiences, values, needs and preferences.^{1,9} The sharing of power between physicians and patients, aimed at obtaining a therapeutic alliance in which patients assume an active role in therapeutic decisions and due responsibilities, revoking the paternalistic biomedical model, focused on diseases as objective entities in which physicians have a position of distancing and supremacy in decision-making.^{3,10}

According to Moira Stewart *et al.*,³ the patient-centered approach is presented as a model and a method also called Patient-Centered Clinical Method (PCCM), based on four dependent and inter-related components: (1) exploring both the disease and the illness experience; (2) understanding the whole person; (3) finding common ground; and (4) enhancing the relationship.

The approach to disease, through anamnesis, physical examination and the patients' perspective on their health and disease, as well as on illness or pain, identifies their ideas, fears, expectations and the functional impact of the clinical status. Subsequently, patients are assumed as a whole, taking into account the integration of these concepts with their personality and their family, work, cultural and social contexts. After this stage, an understanding with the person is developed, identifying the problems, establishing a joint therapeutic plan and determining the roles of both physicians and patients. Finally, the doctor-patient relationship is developed by building a relationship of empowering confidence, empathy, compassion and power sharing that requires an ability to understand aspects of the relationship, such as transference and countertransference and to be self-conscious, knowing that this is a long and ongoing process.

Studies have been carried out to determine whether current clinical practice is based on this method and to identify the perspective of patients seeking medical care,^{11,12} using their level of satisfaction as an indicator of the quality of healthcare services. It is now important to assess physi-

cians' self-perception on their own performance in this area, in order to carry out continuing medical education in PCM and PCCM and, in addition, to ensure that physician's attitudes meet patients' legitimate expectations.

At the same time, the authors of PCCM and PCM have developed theoretical models of evaluation regarding what happens in a medical consultation.¹² However, there is no generic instrument to verify whether these frameworks have been adopted in clinical practice in Portugal, both in primary care and in family medicine (FM).

This study was aimed at the development of an instrument intended for family medicine consultants for measuring their generic self-awareness of adopting the PCCM. The reliability and validity of this new instrument were also assessed.

MATERIAL AND METHODS

The study was developed in three stages: (1) questionnaire for measuring adherence to PCCM; (2) reliability test; and (3) validity test.

The study was approved by the Ethics Committee of the *Administração Regional de Saúde do Centro* as well as by Moira Stewart, the PCCM author.³

Questionnaire

A first list of statements was developed, based on the dimensions proposed by Moira Stewart as well as on bibliographic and documentary research. A focus group was held in September 2016 including invited physicians of both genders and of different ages and with different length of professional experience as family medicine physicians, both with and without training positions. After obtaining consent from all the participants, a recorded video debate was held on the material that had been previously sent to the focus group members including the first version of the list of statements and a discussion was held on the most appropriate format for the list of response options.

Once this focus group was concluded and all suggestions and proposals for change were consensual, a final version was obtained which was subsequently subjected to linguistic assessment.

Reliability

The reproducibility test (temporal stability), internal consistency analysis and determination of item-total correlations were used in order to assess reliability. As regards reproducibility, a test-retest was carried out by applying the questionnaire at two different times, three days apart, to a convenience sample of family medicine consultants of both genders, different age groups and working in

different healthcare units in the Northern and Central Health Regions. This was carried out in an anonymous and confidential way between October and November 2016. In order to pair the questionnaires that were completed by the same respondent, these were previously numbered and a report has been given to the participants.

In order to test the internal consistency and homogeneity between individual items and to determine the values of item-total correlations, the questionnaire obtained in the previous step was applied online to a sample that was also subsequently used for the analysis of the validity of this measuring instrument.

Validity

The three scientifically recognised forms of validity: (1) content validity; (2) construct validity; and (3) criterion validity were used.¹³

Content validity aims to determine the degree to which a measurement instrument includes the most relevant aspects to be measured. In our study, it relied on the collaboration of expert judgements on the content of the measure. In fact, GPs other than those who contributed to the creation of the measurement instrument assessed clarity, comprehension and degree of redundancy of the items and scales. In addition, knowledge of intelligibility was also assessed through a direct question at the time of questionnaire collection.

Construct validity was based on the presence of any logical relationships between the different items included in the measuring instrument. In order to determine the factors underlying the questionnaire and, to some extent, to support the dimensions proposed by Moira Stewart, an exploratory factor analysis was performed, after the application of KMO and Bartlett's test of sphericity.¹⁴ The analysis was based on principal component estimates and underwent varimax rotation for better identification of the factors underlying the data. The Kaiser eigenvalues greater than one criterion were considered for the selection of the number of factors.¹⁴

Furthermore, once the dimensions proposed by the author were confirmed, the means of the responses corresponding to the items of each dimension were determined and the following two hypotheses were formulated:

- H1: Adoption of PCM does not depend on physician's gender and age;
- H2: Adoption of PCM does not depend on physician's specialty or workplace.

The database was obtained in November 2017 from an online application to a group of 6,460 physicians on the initiative of the Regional Section of the Centre of the Portuguese Medical Association and internship coordinators of the Central and Northern Regions. Only completed questionnaires (22 items completed) were considered as valid, and a 308-respondent sample size was calculated, considering a 5% margin of error and 95% confidence interval. Criterion validity regards the extent to which the measurements obtained by the instrument are related to those obtained by a reference method. In our case, as there was

no other measurement instrument specifically designed to assess self-awareness of performing PCM, we chose to analyse the difference between responses obtained from respondents who have attended specific training on PCM (yes/no), specific training in PCM consultation (yes/no) and whether respondents consider themselves as having adopted PCM (yes/no). The following three hypotheses were defined:

- H3: Respondents who have attended specific training in PCM do not show different values from those who did not attend this type of training;
- H4: Respondents who have attended specific training in PCM consultation model do not show different values from those who did not attend this type of training;
- H5: Respondents who consider that they have adopted a PCM approach do not show different values from those who do not.

Data analysis

Cronbach's alpha was used for the determination of internal consistency and values ranging 0.7-0.9 were considered,¹⁵ while intra-class correlation (ICC) coefficient was used as a reproducibility test (a value <0.5 was considered as weak, 0.5-0.75 as moderate, 0.75-0.90 as good and >0.9 as excellent).¹⁶

Gender variable was classified as female/male and respondents were grouped into three age groups [≤ 35 , $35 - 55$, ≥ 65) to test the two first hypotheses. Physicians were also grouped as consultants or registrars and workplaces as UCSP (*Unidade de Cuidados de Saúde Personalizados*) or USF (*Unidade de Saúde Familiar*) healthcare units.

Student's t-test and ANOVA were used in the five hypotheses, depending on the fact that each variable had two or more possible values. A type-I error associated to a 0.05 probability was assumed. The SPSS v.19 software has been used.

RESULTS

Questionnaire

As previously mentioned, the analysis of Moira Stewart's book initially led to the development of a 16-item questionnaire associated with three response options ('no', 'to some extent' and 'yes'), conceptually divided into four chapters, corresponding to the PCM dimensions and proposed by the author. Three other questions of an epidemiological nature were added to the questionnaire, regarding each respondent's gender, age group and workplace type.

After the focus group discussion, six new items were added and a 22-item final version of the questionnaire has been developed. The response options were consensually changed to four anchors ('almost always', 'often', 'a few times' and 'rarely') for a better discrimination of the results. These anchors were assigned the values 1 to 4, respectively and a lower score meaning a closer clinical practice to the PCM approach.

The items were always formulated in the positive, in

order to assess the method's adoption, in compliance with the model described by Moira Stewart *et al.*¹² The final version of the questionnaire is shown in Fig. 1.

Reliability

Reproducibility was tested in a sample of 63 completed surveys through a test-retest, with no exclusions since all items were correctly completed. The sample included 26 (41.7%) male respondents, 16 (25.4%) aged under 35 and 32 (50.8%) aged 35-55; 25 (39.7%) respondents worked in UCSP and 38 (60.3%) in USF healthcare units.

The ICC values (column 3) corresponding to each item are shown in Table 1. All the values have shown very good

reproducibility.

However, in order to assess internal consistency and item-total correlations, an online questionnaire including questions on PCM aimed at a group of 6,460 physicians has been used and 996 completed responses (15.4%) have been obtained. From the questionnaire sent out, 996 responses (15.4%) were obtained and 905 (90.8%) fully completed responses were handled, even though not all socio-demographic and occupational variables were fully completed, with a rate of missing data ranging from 7.0% to 12.6% (except the respondent's age group, with a 31.3% rate).

The characteristics of the final sample are shown in

Nas consultas de Medicina Geral e Familiar agendadas pelo consulente, costume:	Resposta			
	Quase sempre	Muitas vezes	Poucas vezes	Raramente
1. Deixar falar inicialmente a pessoa, sem interrupção, sobre os sinais e sintomas que motivam a sua vinda à consulta	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Pedir à pessoa que fale sobre os seus receios e ideias acerca do que tem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Perguntar sobre as expectativas acerca do que possa resultar da consulta	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Perguntar acerca da influência dos problemas na sua vida diária quer física quer emocionalmente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Inquirir sobre a sua perspetiva de ter uma doença	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Saber da auto percepção de estado geral de saúde	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Analisar a sua comunicação verbal e não-verbal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Realizar exame físico e/ou analítico acerca das queixas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Manter atualizado o conhecimento sobre a pessoa (formação, atividades laborais e extralaborais), religiosidade, pontos de interesse, rendimentos e aspirações.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Manter atualizado o conhecimento sobre a sua família (relações familiares, condições de habitação e rendimentos)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Manter atualizado o conhecimento sobre a ligação da pessoa à sociedade (voluntariado, cultura e política)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Elaborar com a pessoa a lista de problemas na consulta	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Definir em conjunto as prioridades a resolver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Explicar o processo de tratamento que será realizado em conjunto e colaboração	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Certificar-me de que a pessoa percebeu e concorda com os objetivos a atingir	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Inquirir se percebeu o que deve ser feito para evitar piorar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Verificar que a pessoa percebeu a importância de cumprir as indicações para que se obtenham resultados	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Observar os princípios da empatia médica tendo compaixão com a pessoa.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Tentar que a consulta dure o tempo necessário.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Demonstrar confiança nos meus conhecimentos e atitudes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Dar espaço e responder às dúvidas da pessoa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Ter comportamento que permita perceber em simultâneo o corpo e a mente do meu consulente	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 1 – Final version of the questionnaire

Table 2, showing mainly female (65.5%), young respondents (61.1% with 35 years old or less) working in USF (67.0%), without specific training on PCM (65.1%) nor specific training on PCM consultation model (68.5%), but mostly describing as applying a PCM approach (79.9%).

Validity

Content validity was ensured through the discussion on the survey items within the focus group as regards clarity, comprehension and redundancy.

An exploratory factor analysis was applied to a database including 905 online responses to confirm the dimensions proposed by the author, based on the responses to the 22 statements. This analysis allowed ensuring the accuracy of the four dimensions defined by the author and explaining 53.9% of the variance. A 0.091 value was obtained with the KMO test and >0.001 associated significance with the Bartlett's test of sphericity.

The associated eigenvalue, the percentage of variance explained and the items which were actually included in each dimension are shown in Table 3. The summary values

(mean and standard deviation) of each dimension are also shown in the last column of this table.

Once these summary values of the four dimensions were found, it was possible to determine the item-total correlations (column 4 in Table 1), which were all significant ($p > 0.01$). Based on these correlations, the dimensions that can be associated with each item are shown in square brackets. As shown in this table and based on the item-total correlations, dimension 1 (exploring both the disease and the illness experience) ranged 0.655 to 0.726, dimension 2 (enhancing the relationship) 0.457 to 0.755, dimension 3 (finding common ground) 0.766 to 0.870 and dimension 4 (understanding the whole person) 0.830 to 0.870.

The first two hypotheses regarding construct validity were then tested. As shown in Table 4, we found that female respondents were more aware than their male colleagues of the search for finding common ground with the patient. As regards respondents' age, it was also clear that younger respondents were more aware of exploring both the disease and the illness experience and, again, of finding common ground with the patient (H1).

Table 1 – Test-retest reliability

Item	ICC	Item-Total
1 <i>Deixar falar inicialmente a pessoa, sem interrupção, sobre os sinais e sintomas que motivam a sua vinda à consulta</i>	0.746	0.506 [2]
2 <i>Pedir à pessoa que fale sobre os seus receios e ideias acerca do que tem</i>	0.950	0.655 [1]
3 <i>Perguntar sobre as expectativas acerca do que possa resultar da consulta</i>	0.964	0.715 [1]
4 <i>Perguntar acerca da influência dos problemas na sua vida diária quer física quer emocionalmente</i>	0.678	0.671 [1]
5 <i>Inquirir sobre a sua perspetiva de ter uma doença</i>	0.723	0.726 [1]
6 <i>Saber da auto percepção de estado geral de saúde</i>	0.889	0.679 [1]
7 <i>Analisar a sua comunicação verbal e não-verbal</i>	0.813	0.536 [2]
8 <i>Realizar exame físico e/ou analítico acerca das queixas</i>	1.000	0.457 [2]
9 <i>Manter atualizado o conhecimento sobre a pessoa (formação, atividades laborais e extralaborais), religiosidade, pontos de interesse, rendimentos e aspirações.</i>	0.896	0.838 [4]
10 <i>Manter atualizado o conhecimento sobre a sua família (relações familiares, condições de habitação e rendimentos)</i>	0.905	0.870 [4]
11 <i>Manter atualizado o conhecimento sobre a ligação da pessoa à sociedade (voluntariado, cultura e política)</i>	0.917	0.830 [4]
12 <i>Elaborar com a pessoa a lista de problemas na consulta</i>	0.839	0.717 [1]
13 <i>Definir em conjunto as prioridades a resolver</i>	0.920	0.674 [1]
14 <i>Explicar o processo de tratamento que será realizado em conjunto e colaboração</i>	0.727	0.766 [3]
15 <i>Certificar-me de que a pessoa percebeu e concorda com os objetivos a atingir</i>	0.921	0.870 [3]
16 <i>Inquirir se percebeu o que deve ser feito para evitar piorar</i>	0.846	0.849 [3]
17 <i>Verificar que a pessoa percebeu a importância de cumprir as indicações para que se obtenham resultados</i>	0.743	0.816 [3]
18 <i>Observar os princípios da empatia médica tendo compaixão com a pessoa.</i>	0.966	0.630 [2]
19 <i>Tentar que a consulta dure o tempo necessário.</i>	0.970	0.661 [2]
20 <i>Demonstrar confiança nos meus conhecimentos e atitudes</i>	1.000	0.736 [2]
21 <i>Dar espaço e responder às dúvidas da pessoa</i>	0.848	0.746 [2]
22 <i>Ter comportamento que permita perceber em simultâneo o corpo e a mente do meu consulente</i>	0.979	0.755 [2]

Table 2 – Characteristics of the study sample

Variable	Value	n	%
Gender	Male	287	34.5
	Female	545	65.5
Age	≤ 35	380	61.1
	36 - 55	162	26.0
	≥ 56	80	12.9
Doctor's titles	Consultant	622	73.9
	Registrar	220	26.1
Workplace	UCSP	261	33.0
	USF	530	67.0
Training in PCM	Yes	293	34.9
	No	547	65.1
Training in PCM consultation model	Yes	264	31.5
	No	575	68.5
Adoption of a PCM approach	Yes	673	79.9
	No	169	20.1

Table 3 – Characteristics of the dimensions found upon factor analysis

Factor/ Dimension	p-value	Explained variance	Items	Cronbach's alpha	M ± SD of the dimension
1: Exploring both the disease and the illness experience	7.002	31.8%	2, 3, 4, 5, 6, 12, 13	0.819	2.18 ± 0.55
2: Enhancing the relationship	2.133	9.7%	1, 7, 8, 18, 19, 20, 21, 22	0.783	1.51 ± 0.39
3: Finding common ground	1.482	6.7%	14, 15, 16, 17	0.844	1.54 ± 0.52
4: Understanding the whole person	1.242	5.6%	9, 10, 11	0.803	2.13 ± 0.67
		54.4%		0.892	

M ± SD: mean ± standard deviation

In the same way, more care is taken by consultants with anamnesis and with looking at the patient as a whole. On the other hand, the respondent's workplace is also a determinant of better adoption of the PCM approach. In fact, professionals working in USF healthcare units are those who seek a better understanding with patients (H2).

As shown in the same table, specific training in PCM and in PCM consultation model had a positive impact on all dimensions as regards the approach that physicians follow towards adopting a PCM approach (H3, H4), and this is recognized by the respondents themselves (H5).

DISCUSSION

A mixed methodology, including a qualitative methodology (focus group) and quantitative methodology (data analysis) has been used in the study.^{12,15} Family medicine was clearly selected for the study, considering that this method has been always used and included in its definition¹⁶ and the collaborative attitude of all the participants is worth mentioning.

Internal consistency was assessed and, as regards reli-

ability, test-retest and item-total correlation analysis showed stable results over time in a large sample. Validity was carried out in a population-based study and showed significant differences based on the presence of a specific training in PCM or in PCM consultation model, as well as on whether physicians considered having themselves adopted a PCM approach.

It is worth mentioning that most of the participants in our group have described not having attended any specific training in the area, even though 673 (79.9%) participants had the self-awareness of applying a PCM approach.

This is the first instrument for self-assessment of the adoption of PCM. There are other instruments such as the Measure of Patient-centered Communication (MPCC), based on audio-recorded interviews, the nine-item Patient Perception of Patient-Centeredness (PPPC) for the measurement of the first three components of PCM and comprising of a questionnaire addressed to patients¹² and the *Questionário da Medicina Centrada no Doente em Portugal* (MCP-PT)¹¹ which is aimed at patients and covers the six components of PCM, as in a previous version described by

Table 4 – Sensitivity of the PCM to socio-economic and occupational characteristics

Variable	Value	Dimension 1		Dimension 2		Dimension 3		Dimension 4	
		M ± SD	Sig	M ± SD	Sig	M ± SD	Sig	M ± SD	Sig
Gender	Male	2.13 ± 0.58	0.093	1.53 ± 0.42	0.214	1.61 ± 0.58	0.005	2.18 ± 0.71	0.101
	Female	2.20 ± 0.55		1.49 ± 0.36		1.50 ± 0.50		2.10 ± 0.64	
Age	≤ 35	2.07 ± 0.58	0.002	1.49 ± 0.37	0.477	1.52 ± 0.50	0.031	2.06 ± 0.67	0.564
]35 - 55]	2.20 ± 0.50		1.51 ± 0.37		1.64 ± 0.58		2.11 ± 0.62	
	> 55	2.27 ± 0.60		1.54 ± 0.47		1.63 ± 0.62		2.13 ± 0.74	
Workplace	UCSP	2.17 ± 0.59	0.431	1.55 ± 0.41	0.039	1.59 ± 0.54	0.104	2.15 ± 0.72	
	USF	2.20 ± 0.54		1.49 ± 0.37		1.52 ± 0.52		2.13 ± 0.64	
Doctor's titles	Consultant	2.13 ± 0.55	< 0.001	1.50 ± 0.39	0.499	1.56 ± 0.54	0.064	2.08 ± 0.67	0.003
	Registrar	2.31 ± 0.55		1.52 ± 0.38		1.49 ± 0.50		2.24 ± 0.67	
Training in PCM	Yes	2.00 ± 0.56	< 0.001	1.45 ± 0.38	0.001	1.46 ± 0.48	< 0.001	1.96 ± 0.67	< 0.001
	No	2.26 ± 0.53		1.54 ± 0.38		1.59 ± 0.55		2.21 ± 0.65	
Training in PCM consultation	Yes	2.00 ± 0.57	< 0.001	1.45 ± 0.38	0.010	1.45 ± 0.47	< 0.001	1.98 ± 0.68	< 0.001
	No	2.25 ± 0.53		1.53 ± 0.38		1.59 ± 0.55		2.19 ± 0.65	
Adoption of a PCM approach	Yes	2.09 ± 0.53	< 0.001	1.46 ± 0.37	< 0.001	1.49 ± 0.49	< 0.001	2.05 ± 0.66	< 0.001
	No	2.51 ± 0.53		1.68 ± 0.41		1.76 ± 0.61		2.43 ± 0.63	

M: mean; SD: standard deviation; Sig: significance

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The questionnaire is not limited to the consultation, allowing a better assessment of aspects of the doctor-patient relationship that require time to establish and that cannot be measured at each visit. As it is debatable whether the satisfaction of patients is on its own a good indicator of quality of care,¹⁷ this questionnaire addressed to physicians may allow changing the current biomedical paradigm.¹⁸⁻²⁰

This instrument assumes medical self-assessment as a parameter of the adoption of PCM and, when applied together with other tools, it will certainly allow assessing the relationship between a patient-centered approach and health indicators. It is therefore an indicator of the need for continuing professional development.

CONCLUSION

This study reports on the development of an instrument assuming medical self-assessment as a measure of the adoption of PCM; at the same time, the need for continuing professional development has been shown.

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HUMAN AND ANIMAL PROTECTION

The authors declare that the followed procedures were according to regulations established by the Ethics and Clinical Research Committee and according to the Helsinki Declaration of the World Medical Association.

DATA CONFIDENTIALITY

The authors declare that they have followed the protocols of their work centre on the publication of patient data.

CONFLICTS OF INTEREST

The authors declare that there were no conflicts of interest in writing this manuscript.

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REFERENCES

- Sacristán JA. Patient-centered medicine and patient-oriented research: improving health outcomes for individual patients. *BMC Med Inform Decis Mak.* 2013;13:6.
- Draeger RW, Stern PJ. Patient-centered care in medicine and surgery. *Hand Clin.* 2014;30:353–9.
- Stewart M, Brown J, Weston W, McWhinney I, McWilliam C, Freeman T. *Patient-centered medicine: transforming the clinical method.* 3rd ed. London: Radcliffe Publishing Ltd; 2014. p.313-30.
- Pires P. Medicina centrada no paciente: melhor qualidade com menores custos. *Rev Port Med Geral Fam.* 2011;27:482-6.
- Robinson J, Callister L, Berry J, Dearing K. Patient-centered care and adherence: definitions and applications to improve outcomes. *J Am Acad Nurse Pract.* 2008;20:600–7.
- Rathert C, Wyrwich M, Boren S. Patient-centered care and outcomes: a systematic review of the literature. *Med Care Res Rev.* 2013;70:351–79.
- Bertakis K, Azari R. Patient-centered care is associated with decreased health care utilization. *J Am Board Fam Med.* 2011;24:229–39.
- Stewart M, Brown J, Donner A, McWhinney I, Oates J, Weston W, et al. The impact of patient-centered care on outcomes. *J Fam Pract.* 2000;49:796–804.
- Gluyas H. Patient-centered care: improving healthcare outcomes. *Nurs Stand.* 2015;30:50–9.

10. Mendes-Nunes J. Comunicação em contexto clínico. Bayer Health Care. 2010:59-67.
11. Reis A, Santiago L, Botas P. Medicina centrada no paciente e capacitação do consultante em Medicina Geral e Familiar. Revista ADSO. 2015:19-32.
12. Stewart M, Brown J, Weston W, McWhinney I, McWilliam C, Freeman T. Patient-centered medicine: transforming the clinical method. 3rd ed. London: Radcliffe Publishing Ltd; 2014. p. 331-7.
13. Terwee C, Bot S, de Boer M, van der Windt D, Knol D, Dekker J, et al. Quality criteria were proposed for measurement properties of health status questionnaires, J Clin Epidemiol. 2007;60:34-42.
14. Lisboa J, Augusto M, Ferreira P. Estatística aplicada à gestão. Porto: Vida Económica; 2012.
15. Koo T, Li M. A guideline of selecting and reporting intraclass correlation coefficients for reliability research. J Chiropr Med. 2016;15:155-63.
16. Silva D. Helping measure person-centered care: a review of evidence about commonly used approaches and tools used to help measure person-centered care. London: The Health Foundation; 2014.
17. Wonca Europe. The European Definition of General Practice / Family Medicine. [consultado 2018 mar 20]. Disponível em: <http://www.woncaeurope.org/sites/default/files/documents/Definition%20EURACTshortversion.pdf>.
18. Heidenreich P. Time for a thorough evaluation of patient-centered care. Circ Cardiovasc Qual Outcomes. 2013;6:2-4.
19. Bardes C. Defining "Patient-Centered Medicine". N Engl J Med. 2012;366:782-3.
20. Epstein R, Street R Jr. The values and value of patient-centered care. Ann Fam Med. 2011;9:100-3.