Physician Enabling Skills Questionnaire

Validation of a newly developed instrument in primary health care

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Abstract

Objective To evaluate the reliability and validity of the newly developed Physician Enabling Skills Questionnaire (PESQ) by assessing its internal consistency, test-retest reliability, concurrent validity with patient-centred care, and predictive validity with patient activation and patient enablement.

Design Validation study.

Setting Saguenay, Que.

Participants One hundred patients with at least 1 chronic disease who presented in a waiting room of a regional health centre family medicine unit.

Main outcome measures Family physicians' enabling skills, measured with the PESQ at 2 points in time (ie, while in the waiting room at the family medicine unit and 2 weeks later through a mail survey); patient-centred care, assessed with the Patient Perception of Patient-Centredness instrument; patient activation, assessed with the Patient Activation Measure; and patient enablement, assessed with the Patient Enablement Instrument.

Results The internal consistency of the 6 subscales of the PESQ was adequate (Cronbach α=.69 to .92). The test-retest reliability was very good (r=0.90; 95% CI 0.84 to 0.93). Concurrent validity with the Patient Perception of Patient-Centredness instrument was good (r=-0.67; 95% CI -0.78 to -0.53; $P<.001$). The PESQ accounts for 11% of the total variance with the Patient Activation Measure (r^2=0.11; P=.002) and 19% of the variance with the Patient Enablement Instrument (r^2=0.19; $P<.001$).

Conclusion The newly developed PESQ presents good psychometric properties, allowing for its use in practice and research.

EDITOR'S KEY POINTS

• The Physician Enabling Skills Questionnaire (PESQ) is a tool to measure the enabling skills of family physicians, who are in a position to empower their patients, from the perspectives of patients with chronic diseases.

• The PESQ assesses several dimensions of family physicians' enabling skills that are important to patients (eg, providing advocacy for the patient in the health care system, legitimizing the illness experience, offering realistic hope). The PESQ showed adequate internal consistency for each dimension of the questionnaire.

• The PESQ could be used to evaluate physicians' enabling skills either for descriptive purposes or to evaluate interventions to promote enabling skills among providers. It also informs family physicians about useful skills to enable patients with chronic diseases and thereby increase their empowerment.

Le Physician Enabling Skills Questionnaire

Validation d'un outil récemment développé en contexte de soins primaires

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Résumé

Objectif Évaluer la fiabilité et la validité du *Physician Enabling Skills Questionnaire (PESQ)*, un outil récemment créé, en étudiant sa consistance interne, sa fiabilité de test-retest, sa validité concourante avec des soins centrés sur le patient et sa validité prédictive pour l'activation et l'autonomie des patients.

Type d'étude Étude de validation.

Contexte Saguenay, Québec

Participants Cent patients avec au moins une maladie chronique qui ont visité la salle d'attente de l'unité de médecine familiale d'un centre régional de santé.

Principaux paramètres à l'étude La capacité des médecins de famille d'augmenter l'autonomie de leurs patients, mesurée au moyen du PESQ à 2 moments différents (c.-à-d. lors de leur présence dans la salle d'attente de l'unité de médecine familiale et 2 semaines plus tard, par enquête postale); les soins centrés sur le patients, évalués avec l'outil Patient Perception of Patient-Centredness; l'activation des patients, évaluée par la Patient Activation Measure; et l'augmentation de l'autonomie des patients, évaluée à l'aide du Patient Enablement Instrument.

Résultats La consistance interne des 6 sous-échelles du PESQ était adéquate (Cronbach α=,69 à ,92). La fiabilité de test-retest était très bonne (r=0,90; IC à 95% 0,84 à 0,93). La validité concourante évaluée avec l'instrument Patient Perception of Patient-Centredness était bonne (r=-0,67; IC à 95% -0,78 à -0,53; P<,001). Le PESQ explique 11% de la variance totale avec la Patient Activation Measure (r^2=0,11; P=,002) et 19% de la variance avec le Patient Enablement Instrument (r^2=0,19; P<,001).

Conclusion Parce qu'il possède de bonnes propriétés psychométriques, le PESQ récemment développé est un outil qui peut être utilisé pour la pratique comme pour la recherche.

POINTS DE REPÈRE DU RÉDACTEUR

• Le *Physician Enabling Skills Questionnaire (PESQ)* est un outil qui permet d'évaluer la capacité des médecins de famille d'augmenter l'autonomie de leurs patients, en particulier ceux qui souffrent de maladies chroniques.

• Le PESQ évalue plusieurs aspects de la capacité des médecins de famille de renforcer l'autonomie de leurs patients; ces aspects sont importants pour les patients (p. ex. plaider en faveur du patient dans le système de santé, légitimer l'expérience de la maladie, offrir un espoir réaliste). Le PESQ a montré qu'il possède une consistance interne adéquate pour chacun des aspects du questionnaire.

• Le PESQ pourrait servir à préciser la capacité des médecins pour rendre leurs patients plus autonomes, soit à des fins descriptives ou pour évaluer les interventions susceptibles de favoriser cette capacité chez les soignants. Il renseigne aussi les médecins sur les meilleures façons d'augmenter l'autonomie des malades chroniques, les amenant ainsi à mieux gérer leur maladie.

To achieve optimal outcomes in the management of chronic diseases, the chronic care model promotes productive interactions between proactive professionals and activated patients.[1,2] The family physician, frequently in interaction with people affected by chronic diseases,[3,4] is in a privileged position to enable people[5] to increase their individual empowerment,[6-8] which translates into a growing awareness of one's strengths, improved self-esteem, decreased anxiety or sadness, improved decision making, development of new skills, and movement toward taking action.[9,10]

Soliciting and evaluating patient perceptions about how their family physicians help them become more empowered is an essential step toward promoting enabling skills among these health professionals. Patients value the close, trust-based relationship they have with their family physicians.[11] Consultation style, continuity of care, and a tailored or individualized approach might have important effects on patients' self-confidence and on their ability to cope with the strains of illness.[12,13] Patients rely on their family physicians to clarify information and treatment options provided by the hospital.[11] They also express a need to see their struggle acknowledged and their illness experience legitimized.[14,15]

In a qualitative study to identify family physicians' enabling skills from the perspectives of patients with chronic diseases, participants expressed that they needed their family physicians to do the following:

- develop a partnership with them by building a relationship based on trust and by finding common ground;
- promote their interests in the health care system by fostering continuity, accessibility, and safety;
- start from their personal situation by knowing about their feelings, expectations, and context;
- legitimize their illness experience by recognizing their suffering;
- acknowledge their strengths and promote their expertise by encouraging self-care and fostering self-confidence; and
- help maintain hope by supporting them.[16]

We retained these 6 themes as the main dimensions of family physicians' enabling skills.

Although many questionnaires have already assessed some aspects of these dimensions by measuring concepts such as patient-centred care, relational empathy, shared decision making, quality of care,[17,18] or outcome measures of enablement (Patient Enablement Instrument [PEI] developed by Howie et al),[19,20] none has measured all 6 dimensions of family physicians' enabling skills. We developed the self-administered Physician Enabling Skills Questionnaire (PESQ) to measure family physicians' enabling skills from the perspectives of patients with chronic diseases. This is the first study examining the psychometric properties of this new instrument by assessing its internal consistency, test-retest reliability, concurrent validity with patient-centred care, and predictive validity with patient activation and patient enablement.

METHODS

Instrument development

First version. We developed a pool of items based on a thematic analysis of the literature,[21] interviews with 30 patients with chronic diseases,[16] and existing instruments that measured enabling skills in hospital settings[18] and patient-centred care, or that contained subscales or items evaluating patient-centred care.[17] The dimensions most important to patients included a greater number of items than the less important dimensions did.

Second version. The content validity of our pool of items (66 items) was established by 12 Canadian experts in family medicine through a 3-round electronic Delphi process.[22] The experts evaluated wording, coherence, and relevance of the items using a 9-point Likert scale (1=inappropriate, 9=very appropriate). In the end, 38 items were kept as they were submitted, 22 were modified in light of expert comments, 6 were removed, and 1 was added, for a total of 61 items in the second version.

Third version. The face validity of the second version of the questionnaire was then examined by pretesting the instrument with patients affected by chronic diseases. Eight patients participated in cognitive interviews using the think-out-loud technique.[23] They were asked to read and complete the questionnaire out loud and add anything that went through their mind at the moment. Of the 61 items submitted to the pretest, 38 remained unchanged, 18 were modified following patients' suggestions and comments, and 5 were removed because they were confusing or redundant, which left a total of 56 items in this third version. At this point, the PESQ's rating scale and the visual layout were also modified to facilitate completion of the questionnaire by participants.

Fourth and final version. During the validation study of the French version of the PESQ, which is described in the validation study section of this article, 22 items were removed: 11 reverse-score items were too confusing (eg, I feel that my family doctor minimizes my problems), 3 seemed too difficult to understand, and 8 were redundant. There was now a total of 34 items in this fourth and final version.

The PESQ takes approximately 15 minutes to complete and assesses 6 dimensions of physicians' enabling skills:

- developing an ongoing partnership (items 1, 8, 11, 12, 16, 19, 20, 27, 28, 29, and 31);
- providing advocacy for the patient in the health care system (items 18, 23, 24, and 32);
- starting from the patient's personal situation (items 2, 3, 4, 5, 10, 13, 14, and 33);
- legitimizing the illness experience (items 7 and 17);
- acknowledging patients' expertise regarding their own lives (items 6, 21, 22, 25, and 30); and
- offering realistic hope (items 9, 15, 26, and 34).

The instrument uses 2, 5-point Likert scales: the first scale ranges from 1 being very rarely or never to 5 being very often or always; the second scale ranges from 1 being strongly disagree to 5 being strongly agree. The total score is the sum of all questions. The possible score of the scale ranges from 34 to 170.

English-language version of the PESQ. The 34-item English-language version of the PESQ was obtained through a rigorous translation–back-translation method inspired by da Mota Falcão et al[24] and the World Health Organization.[25] The English and French versions of the PESQ are available at **CFPlus.***

Validation study

We aimed to recruit a sample of 100 participants in the first validation study of the instrument.[23] The patients were recruited by a research assistant in the waiting room of the family medicine unit (FMU) of a regional health centre (Centre de santé et de services sociaux de Chicoutimi) in Saguenay, Que. Each adult patient arriving for a consultation received a document containing information about the project (title and aim of the study, name of the researcher, criteria for inclusion, etc) from a clinic staff member and was informed that he or she would be approached by a research assistant in the waiting room.

Participants had to have the following characteristics: be a regular patient of a family physician (other than the corresponding author [C.H.]) for more than 1 year; aged between 25 and 75; have the ability to read and write in French; and be affected by at least 1 of the chronic diseases most frequently seen in primary care (ie, osteoarthritis, arthritis, or other substantial musculoskeletal condition; hypertension; hyperlipidemia; diabetes; heart disease; chronic obstructive pulmonary disease or asthma; and depression or anxiety).[26,27] Pregnant women or patients with an unstable acute condition, an uncontrolled psychiatric disease, or a cognitive

disorder, or those unable to provide informed consent were not included in the study.

After providing written consent, eligible patients were asked to complete the questionnaire a first time while they were in the waiting room of the FMU (this first point in time will be referred to as *T1*). The questionnaire included the PESQ and the short form of the Patient Perception of Patient-Centredness (PPPC) instrument,[28] the Patient Activation Measure (PAM),[29] and the PEI.[19,20,30] The first 3 instruments were completed before consultation, while the PEI was completed immediately after.

The PPPC includes 9 questions and measures patients' perceptions of patient-centred care. Scores for each item range from 1 to 4. The total score is the mean score of the 9 items. Patient-centred care and the enabling skills of a physician are 2 related concepts describing interaction with a family physician. A moderate correlation was therefore expected between these 2 concepts (concurrent validity). The PAM is composed of 13 questions and measures degree of patient activation, that is, their knowledge, skills, and confidence level in managing their chronic condition. Scores range from 0 to 100. The PEI comprises 6 questions and evaluates enablement outcome after a medical visit. Scores range from 0 to 12. Our hypothesis was that the PESQ could account for a percentage of the variance for each of these 2 outcomes (PAM and PEI). Filling out the questionnaire took no more than 30 minutes. Participants completed the PESQ a second time 2 weeks later (this second point in time will be referred to as *T2*) through a mail survey. A 2-week interval was judged appropriate to minimize recall and maturation biases.

We optimized response by using a process based on Dillman's tailored design method.[23] Two weeks after the first mailing, we sent a postcard to all participants to thank them for their participation and to remind those who had yet to respond to complete the T2 questionnaire. One month after the postcard mailing, we sent the T2 questionnaire once again to those who had not returned it. One week after this, we contacted nonrespondents by telephone to remind them once again to return the completed T2 questionnaire. If the participant asked for another T2 questionnaire, we sent another copy by mail. As a last resort, we offered to help participants complete the survey over the telephone.

This study was approved by the ethics review board of the Centre de santé et de services sociaux de Chicoutimi in Quebec.

Analysis

The sample is described using means and SDs for continuous variables such as age and patient-centred care, patient activation, and patient enablement, and

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*The English and French versions of the Physician Enabling Skills Questionnaire are available at **www.cfp.ca**. Go to the full text of the article online and click on **CFPlus** in the menu at the top right-hand side of the page.

proportions for categorical variables (sex, marital status, education, family income).

We calculated the internal consistency for each subscale of the PESQ using the Cronbach α and the test-retest reliability by determining the intraclass correlation coefficient between the 2 administrations of the instrument using the 1-way random model. After checking for normality of the distributions, the Pearson correlation was used to measure the concurrent validity of the PESQ with the PPPC. A linear regression was calculated to estimate the predictive validity of the PESQ for patient activation and patient enablement. We used SPSS, version 16.0, for all analyses.

RESULTS

Between January 9, 2012, and February 15, 2012, the research assistant approached a total of 206 admissible patients in the waiting room of the FMU. Of these, 100 (49%) agreed to participate in the study and completed the questionnaire in the waiting room (T1). Only 12 (12%) of these participants did not return the completed questionnaire at T2.

Table 1 summarizes participant characteristics: mean (SD) age was 59.9 (9.4) years; most participants were female (73%); half of participants had some college or postsecondary school education; almost half had an annual income of $40 000 or more; and 67% were married or lived with a partner.

Table 2 shows mean scores for the PPPC, the PAM, and the PEI measured at T1. The mean (SD) score for the PESQ was 138.1 (18.7) (95% CI 134.2 to 142.0) at T1 and 135.8 (18.0) (95% CI 131.8 to 139.8) at T2. The PESQ showed adequate internal consistency; Cronbach α within each dimension ranged from .69 to .92 (**Table 3**). The intraclass correlation coefficient for the PESQ measures at T1 and T2 was 0.90 (95% CI 0.84 to 0.93). Concurrent validity of the PESQ with the PPPC was good (**Table 2**).

The PESQ accounts for 11% of the total variance with the PAM ($r^2=0.11$; $P=.002$) and 19% of the variance with the PEI ($r^2=0.19$; $P<.001$) (**Table 2**).

DISCUSSION

The PESQ showed adequate internal consistency for each dimension of the questionnaire. Its test-retest reliability was very good. Its concurrent validity with the PPPC was good, as was its predictive validity with both the PAM and the PEI.

To our knowledge, the PESQ is the first comprehensive instrument designed to evaluate all dimensions of family physicians' enabling skills. In a longitudinal evaluation, the PESQ allows for the consideration of the

relational aspects that develop during a given period of time and that are very important to patients.[16] In research, the PESQ could be used to evaluate physicians' enabling skills for descriptive purposes, to establish the relationship with outcomes of interest, or to evaluate interventions to promote enabling skills among providers. In practice, the PESQ could be used in quality audits or to gather feedback from patients that could be useful for their physicians. Considering the rigorous and iterative conceptual process used in finding and refining the questions, the PESQ also provides important clues to inform all family physicians about useful skills to enable patients with chronic diseases and thereby increase patient empowerment.

Research has stressed the importance of a partnership between the patient and the family physician, a trust-based relationship being an important part of this alliance.[14,31-33] Indeed, a positive relationship with the family physician could enable patient empowerment.[16,32] Considering the importance of this relationship, the PESQ is an important tool for the evaluation of

Table 1. Participant characteristics: *Mean (SD) age was 59.9 (9.4) years; N = 100.*

CHARACTERISTICS	%
Sex	
• Female	73
• Male	26
• Missing data or no response	1
Highest education level completed	
• No education or preschool level	1
• Grades 1–7	9
• Grades 8–12	40
• College or postsecondary school	25
• University	24
• Missing data or no response	1
Annual family income, $	
• < 10 000	6
• 10 000–19 999	13
• 20 000–29 000	14
• 30 000–39 000	18
• 40 000–49 000	14
• ≥ 50 000	32
• Missing data or no response	3
Marital status	
• Married or living with partner	67
• Separated or widowed	19
• Widowed	7
• Single	5
• Missing data or no response	2

Table 2. Data on each instrument completed by participants immediately after consultation with the physician

INSTRUMENT	MINIMUM SCORE	MAXIMUM SCORE	MEAN (SD)	COMPARISON WITH THE PESQ	
				r	P
PPPC (n = 92)	1	3	1.46 (0.44)	−0.67	< .001
PAM (n = 98)	34.7	100	65.6 (13.6)	0.33 ($r^2 = 0.11$)	.002
PEI (n = 97)	0	12	6.28 (3.5)	0.44 ($r^2 = 0.19$)	< .001

PAM—Patient Activation Measure, PEI—Patient Enablement Instrument, PESQ—Patient Enabling Skills Questionnaire, PPPC—Patient Perception of Patient-Centredness.

Table 3. Internal consistency of the PESQ dimensions

PESQ DIMENSION	NO. OF ITEMS	CRONBACH α
Developing an ongoing partnership	11	.91
Providing advocacy for the patient in the health care system	4	.81
Starting from the patient's situation	8	.92
Legitimizing the illness experience	2	.69
Acknowledging patient expertise on their own lives	4	.83
Offering realistic hope	4	.86

PESQ—Patient Enabling Skills Questionnaire.

physicians' relational skills and their capacity to find common ground (11 items out of 34). Many studies have also documented the importance of knowing and starting from the patient's personal situation and adapting medical approaches to their expectations, desires, concerns, and lifestyles.[12,34-36] Having a good understanding of a patient's situation allows a physician to maximize the effects of his or her intervention, helping the patient develop empowerment in making choices and taking action.[16] The PESQ also gives importance to this dimension (8 items out of 34).

Other questionnaires

Although many questionnaires have already assessed certain aspects of physicians' enabling skills from the perspectives of people with chronic diseases, none has measured all dimensions. For example, the dimension to provide advocacy for the patient in the health care system is rarely evaluated by questionnaires measuring patient-physician communication. This dimension is well evaluated by the Primary Care Assessment Survey,[37] the General Practice Assessment Survey,[38] and the Adult Primary Care Assessment Tool[39]; however, these instruments aim to measure quality of care and therefore they contain some items that are not related to enabling skills.

The dimensions of offering realistic hope and acknowledging patient expertise on their own lives

are not given sufficient attention by existing measures. We are not aware of any instrument measuring the dimension of legitimizing the illness experience.[17] The various items included in the PESQ are intended to assess all these dimensions.

Limitations

Our study has limitations. One of them is that we used a relatively small sample of patients. However, the statistical power of our results is adequate considering the range of the CIs obtained in our results. Also, there were few persons in situations of poverty in our sample; for this reason, the external validity of our results should also be assessed in this segment of the population. Younger participants might perceive physicians' enabling skills differently than older patients do. Even if this potential difference would imply different total scores between the 2 groups, we do not think this would have an effect on the psychometric properties of the questionnaire.

The factorial structure of the questionnaire remains to be confirmed with a larger sample, as does sensitivity to change over time. Potential associations between family physicians' enabling skills measured with the PESQ and clinical outcomes such as use of health services, patient empowerment, and quality of life could be evaluated in further studies. Considering the rigorous translation–back-translation method used, we are confident that the psychometric properties of the English version are similar to the French version, but these were not evaluated in this study. We focused on the relationship between the family physician and his or her patient. However, as the care of patients with chronic diseases is often provided by a care team involving professionals from various disciplines (nursing, psychology, pharmacy, etc), the PESQ can be adapted to assess the enabling skills of other health professionals. A shorter version could be developed.

Conclusion

This article presents the first validation of the newly developed PESQ, a questionnaire measuring family physicians' enabling skills. This evaluation of the psychometric properties of the PESQ showed adequate internal consistency of the scales. Its test-retest reliability was very good, as was its concurrent validity with the

PPPC; its predictive validity was good with both the PEI and the PAM. The PESQ could be used, in practice or research, to gather feedback from patients or to evaluate physicians' enabling skills either for descriptive purposes or to evaluate interventions to promote enabling skills by providers. The PESQ also provides important clues to inform all family physicians about useful skills to enable patients with chronic diseases and thereby increase patient empowerment.

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Contributors
All authors contributed to the concept and design of the study; data gathering, analysis, and interpretation; and preparing the manuscript for submission.

Competing interests
None declared

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