Ferrans and Powers Quality of Life Index

ÍNDICE DE QUALIDADE DE VIDA DE FERRANS E POWERS
INDICE DE CALIDAD DE VIDA DE FERRANS Y POWERS

Miako Kimura¹, José Vitor da Silva²

ABSTRACT

This article aims to describe the processes of conceptual and methodological development used for the creation of the Ferrans and Powers Quality of Life Index (QLI), and to make available the current generic version adapted to the Portuguese language, expecting to enlarge its application in different contexts and samples of the Brazilian population. QLI is an instrument designed to evaluate quality of life based on the levels of satisfaction and importance in four dimensions: Health/functioning, Psychological/spiritual, Socioeconomic and Family. Previous studies have showed that the QLI Brazilian Portuguese version may be used as a valid and reliable measure of quality of life.

KEY WORDS

Quality of life.
Questionnaires.
Validation studies.

RESUMO

Este artigo tem como objetivos descrever os processos de desenvolvimento conceitual e metodológico utilizados na criação do instrumento Ferrans and Powers Quality of Life Index (QLI) e disponibilizar a versão genérica atual adaptada para o português, visando ampliar a disseminação do seu uso em diferentes contextos e amostras da população brasileira. O QLI avalia a qualidade de vida de acordo com os níveis de satisfação e de importância atribuídos a quatro dimensões: Saúde/funcionamento, Psicológico/espiritual, Socioeconômico e Família. Aplicações prévias da versão em português (Índice de Qualidade de Vida de Ferrans e Powers) têm demonstrado que o instrumento pode ser utilizado em nosso meio como uma medida válida e confiável de qualidade de vida.

DESCRITORES

Qualidade de vida. Questionários. Estudos de validação.

RESUMEN

Este articulo tiene los objetivos de describir los procesos de desarrollo conceptual y metodológico que aportaran la creación del Ferrans and Powers Quality of Life Index (QLI), así como tornar disponible la actual versión genérica adaptada al portugués, intentando ampliar las oportunidades de su aplicación en diferentes contextos y muestras de la población brasileña. El QLI es uno instrumento que evalúa los niveles de satisfacción y importancia en relación a cuatro dimensiones: Salud/ funcionamiento, Psicológico/ espiritual, Socioeconómico e Familia. Estudios anteriores han demostrado que la versión en portugués del Índice de Calidad de Vida de Ferrans y Powers puede ser utilizada como una medida válida e fiable de calidad de vida.

DESCRIPTORES

Calidad de vida. Cuestionario. Estudios de validación.

¹ Nurse. Associate Professor of the Department of Medical-Surgical Nursing, Nursing School of the University of São Paulo, São Paulo, SP, Brazil. mikimura@usp.br ² Nurse. PhD in Nursing. Professor of School of Nursing Wenceslau Braz. Itajubá, Minas Gerais, Brazil. jvitorsilva@oi.com.br





INTRODUCTION

Over the last decade there has been an increasing interest in the concept Quality of life both in scientific literature and among the general public. Despite its frequent use, until today there is no consensus about its definition. In specific literature, it is seen as a complex concept, with a variety of meanings, a range of theoretical approaches, and numerous methods to measure the concept.

In the nursing environment, specifically, it stands out the importance of the studies performed by Dr. Carol Estwing Ferrans, a researcher of the Medical-Surgical Nursing Department at the College of Nursing at University of Illinois, Chicago. For over two decades Dr. Ferrans has been conducting studies on quality of life. Using different methodological approaches, Dr. Ferrans developed a conceptual model of quality of life that provided the basis for the development of an instrument to measure the concept - the Ferrans and Powers Quality of Life Index (QLI).

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Published for the first time in 1985⁽¹⁾, the QLI is available today in several languages, including Arabic, Chinese, Danish, French, Italian, Lithuanian, Norwegian, Polish, Russian, Spanish, and Portuguese. In addition to the generic version, which can be applied to any population, there are also specific versions for patients with cancer, pulmonary disorders, chronic fatigue syndrome, arthritis, diabetes, epilepsy, multiple sclerosis, spinal injuries, stroke, and for patients in homecare, in dialysis and submitted to renal and hepatic transplants⁽²⁾. The instrument is based on a conceptual model developed according to rigorous methodological procedures, with psy-

chometric properties attested in several international studies $^{(3)}$. Such characteristics justify the interest in disseminating this instrument of subjective assessment of quality of life, in order to enlarge the possibilities to investigate the issue in our environment.

The original generic version of the QLI was translated into the Brazilian Portuguese language and submitted to the process of cultural adaptation and validation⁽⁴⁾ and was named as Índice de Qualidade de Vida (IQV) de Ferrans e Powers.

The objectives of this study are to report the development of the conceptual model and the methods used to develop the Quality of Life Index, and make available the current generic version adapted to the Portuguese, aiming to spread its use in Brazilian nursing research and practice.

DEVELOPMENT OF THE ORIGINAL VERSION OF THE FERRANS AND POWERS QUALITY OF LIFE INDEX (QLI)

The first step in developing this instrument was to select an ideological approach consistent with the purpose of measuring the concept of quality of life. At this moment, it was sought to answer a central question of research in this area: who should evaluate the quality of life of a person? The decision was to use an individualistic approach, that is, an ideological view in which the subjects, themselves, could outline what quality of life is for them. According to this posture, the subject is asked about the evaluation that he or she makes of his or her own quality of life in terms of specific domains. For the authors, the essence of quality of life is based on the life experience that each individual has and, therefore, that individual is the only one in the position of judging it, according to his or her own values and preferences^(1,5-6). Previous studies, both quantitative and qualitative, support the assumption that quality

of life is a subjective concept and, as such, its evaluation depends on the individual perspective of each subject⁽⁷⁻¹⁰⁾.

In order to develop the conceptual model of quality of life, the chosen methods were critical literature analysis and field research with qualitative and quantitative approaches ^(1,6).

By means of a broad literature review, six major nucleuses intrinsic to the quality of life concept were identified: the ability of living a normal life, ability of living a socially useful life (social utility), natural capacity (physical and mental capabilities), achievement of personal goals, happiness/affect and satisfaction with life⁽⁶⁾. Among them, the authors consid-

ered that conceptualizing quality of life in terms of satisfaction with life was most congruent with the individualistic approach, since the other aspects (normal life, social utility, natural capacity and achievement of goals) do not necessarily require a personal evaluation and can, therefore, be evaluated by someone else.

The subjective perception of the level of happiness and satisfaction towards the different aspects of life is considered the main determinant in making a positive or negative judgment of the subjectively perceived quality of life⁽⁷⁾. Although *happiness* and *satisfaction with life* are related concepts, they are not identical. Happiness, an affective experience, suggests a transitory feeling of joy or euphoria, whereas satisfaction, a cognitive experience, implies a more lasting, long-term judgment about one's life conditions, hence it tends to be more stable than happiness⁽⁷⁾. In this way, satisfaction with life was chosen as the central nucleus of the quality of life construct, in the conceptual model by Ferrans and Powers. Furthermore, the importance that individuals assign to different aspects of life was ex-



plicitly taken into consideration in the definition of quality of life proposed by the authors: *a person's sense of well-being that stems from satisfaction or dissatisfaction with the areas of life that are important to him/her*^(1,6).

The next step in developing the conceptual model consisted in determining the domain of content. First, openended questions were made to 40 hemodialysis patients aiming at identifying what were, from the individuals' perspective, the components of a satisfying life. The responses were analyzed using qualitative methodology (grounded theory). The results were compared to those of other studies in which the same questions were made to different patient groups and to the general population of 13 countries⁽⁶⁾.

Next, based on a literature review, a list was created of the elements used in the selected studies to evaluate quality of life. The data obtained with the qualitative analysis of the literature review were synthesized in a list of elements that were the basis for item development of the Ferrans and Powers QLI. The items were divided into two corresponding groups: one to assess the degree of satisfaction and the other to assess its importance to the individual^(1,6).

The next step of the process had the purpose to group the elements obtained in the previous step into quality of life domains. Exploratory factor analysis was the quantitative technique used to determine the nature and number of domains. The QLI was applied to 349 American patients in dialysis, and the analysis of their responses revealed four interrelated domains: Health and functioning, Psychologi-

cal/spiritual, Social and economic, and Family. The dimensional structure found with the factor analysis was compared to that of other studies, providing support for the construct validity⁽⁵⁾.

STRUCTURAL CHARACTERISTICS, DETERMINATION OF SCORES AND PSYCHOMETRIC PROPERTIES

The current generic version of the Ferrans and Powers Quality of Life Index consists of 33 items in each part, which the subjects attribute scores in a satisfaction and importance scale with values ranging from 1 to 6. In the first part, the scale ranges from very unsatisfied (1) to very satisfied(6). In the second part, the scale ranges from without any importance (1) to very important(6).

The 33 items are distributed into the four dimensions (subscales): Health/functioning (13 items), Social and economic (8 items), Psychological/spiritual (7 items) and Family (5 items).

Table 1 lists the aspects evaluated in the QLI items, grouped under the domain to which they belong. Each item of the first part of the instrument (Satisfaction) corresponds to the same in the second (Importance).

It should be noted that items 21 (job) and 22 (not having a job) of the Social and economic domain are mutually excluding, that is, only one of them is to be considered when calculating the scores.

Table 1 - Items and domains of the Ferrans and Powers Quality of Life Index - generic version III

HEALTH AND FUNCTIONING (13 items)	SOCIAL AND ECONOMICAL (8 items*)	PSYCHOLOGICAL/ SPIRITUAL (7 items)	FAMILY (5 items)		
1. health 2. health care 3. pain 4. energy (fatigue) 5. ability to take care of yourself without help 6. control over life 7. chances for living as long as you would like 11. sex life 16. ability to take care of family responsabilities 17. usefulness to others 18. worries 25. things for fun 26. chances for a happy future	13. friends 15. emotional support from people other than your family 19. neighborhood 20. home 21/22. job/not having a job 23. education 24. financial needs * items 21 and 22 are mutually excluding	 27. peace of mind 28. faith in God 29. achievement of personal goals 30. happiness in general 31. life satisfaction in general 32. personal appearance 33. self 	8. family health 9. children 10. family happiness 12. spouse, lover, or partner 14. emotional support from family		

To determine the scores, each satisfaction item is weighted by its corresponding importance item. Hence, the values are combined, i.e., highest scores represent high satisfaction and high importance, and the lowest scores represent low satisfaction and high importance. This scor-

ing scheme is based on the belief that people highly satisfied with areas of life they consider important have a better quality of life than those who are unsatisfied with areas they consider important^(1,5).



The scoring procedure requires certain steps. First, the satisfaction scores must be recoded with the purpose of centering the scale on zero. This is done by subtracting 3.5 from satisfaction responses, which results in the following scores: -2.5, -1.5, -0.5, +0.5, +1.5, and +2.5 for scores that originally were 1, 2, 3, 4, 5, and 6, respectively. Second, the recoded satisfaction scores are weighted by their corresponding importance items, multiplying each item's recoded value by the raw importance score (1, 2, 3, 4, 5, 6). Next, the total score is calculated by adding the weighted values of every response and then dividing by the total number of answered items. Up to this stage, the possible variation is from -15 to +15. To avoid that final score have a negative number, we add 15 to the obtained values, resulting in the total score of the instrument, which can vary from 0 to 30. Highest values represent better quality of life⁽⁵⁻⁶⁾.

The steps to obtain the scores of each domain are exactly the same as the described above, considering the total items of the domain being evaluated. The total score of each domain also varies from 0 to 30.

In summary, QLI scores (total and by domain) are determined using the equation below and the previously mentioned instructions:

QLI = [(SAT rec x IMP) for each item \div number of answered items] + 15,

where: SAT rec = recoded value for each satisfaction item (-2,5 to +2,5)

IMP = raw value for each importance item (1 to 6).

The instructions to how to obtain the QLI scores and the computerized syntax are available on the Internet⁽²⁾.

The instrument does not have inverted items nor cut points.

As for the application of the instrument, it can be either self-administered or by interview^(1,5), depending on the situation and type o population. To facilitate the administration, the respondent is instructed to first evaluate if he or she is satisfied or unsatisfied with the addressed item, and then state for each case (satisfaction or dissatisfaction) the degree that better corresponds to his or her condition: very, moderately, or little. The items related to importance are answered in the same way.

In the first study for the psychometric evaluation of $QLI^{(5)}$ reliability was analysed by means of the internal consistency of the items, using Cronbach's Alpha coefficient. The values obtained were 0.93 for all the items and for the subscales, as follows: Health/functioning = 0.87; Social and economic = 0.82; Psychological/spiritual = 0.90; and Family = 0.77. The convergent validity was assessed by the

correlation between the score of a question on overall satisfaction with life and the total score. The correlation coefficient for the instrument as a whole was 0.77, and for the subscales the values were 0.63, 0.55, 0.88, and 0.44, respectively⁽⁵⁾. After this study, the QLI has been used by researchers from several countries, stating its validity and reliability in over one-hundred studies⁽³⁾.

In Brazil, results of studies developed with the generic version of the Índice de Qualidade de Vida de Ferrans e Powers^(4,11-20) have also shown satisfactory psychometric properties in different situations. Based on this generic version, Brazilian researchers have reported the development of specific versions for measuring the quality of life of individuals with wounds⁽²¹⁾ and pregnant women⁽²²⁾.

The generic version III, translated into Portuguese with the authorization of Carol Estwing Ferrans is presented in the Appendix.

FINAL CONSIDERATIONS

The Ferrans and Powers Quality of Life Index was developed using a solid conceptual and methodological basis, which explains its broad recognition as an instrument for evaluation of the quality of life, in many countries. One feature that differentiates this instrument from the other refers to its peculiar structure: in addition to evaluating the level of satisfaction regarding its several items, it also includes an evaluation of the degree of importance assigned to them, taking into account that people may value differently the many aspects of life.

The instrument includes representative dimensions of the construct it intends to measure, with items formulated in a simple and comprehensible way which avoid making the respondents tired or unmotivated, especially in cases of individuals who are frail, of old age or with low educational level.

The results from the psychometric analyses of the instrument in Portuguese - Índice de Qualidade de Vida (IQV) de Ferrans e Powers - permit to recommend it as a valid and reliable instrument to measure quality of life in our environment.

There is, however, a need for further analyses to continue testing the performance of the IQV in longitudinal studies and in different Brazilian socio-cultural contexts. There is also a need to obtain reference values for the Brazilian population to be used as a basis for comparison with the results of other studies. Finally, we highlight the importance of introducing the assessment of quality of life among outcome indicators of health programs and interventions, thus incorporating the perspective of the subjects involved.



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APPENDIX

Índice de Qualidade de Vida de Ferrans e Powers[©] Versão Genérica III

Parte 1: Para cada uma das perguntas a seguir, por favor, escolha a resposta que melhor descreve o quanto satisfeito você está com este aspecto de sua vida. Por favor, responda marcando um círculo ao redor do número escolhido. Não há respostas certas ou erradas.

aspecto de sua vida. Por favor, responda marcando um círculo ao redor do número escolhido. Não há respostas certas ou erradas.							
Quanto você está satisfeito com	Muito Insatisfeito	Moderadamente Insatisfeito	Pouco Insatisfeito	Pouco satisfeito	Moderadamente Ssatisfeito	Muito Ssatisfeito	
1. Sua saúde?	1	2	3	4	5	6	
2. O cuidado que você tem com a sua saúde?	1	2	3	4	5	6	
	1	2	3	4	5	6	
3. A intensidade de dor que você sente?		2	3	4	5	6	
4. A energia que você tem para as atividades diárias?		2	3	4	5	6	
5. Sua capacidade para cuidar de si mesmo(a) sem ajuda de outra pessoa?		2	3	4	5	6	
6. O controle que você tem sobre sua vida?		2	3	4	5	6	
7. Sua possibilidade de viver tanto quanto você gostaria? 8. A saúde da sua família?	1 1	2	3	4	5	6	
9. Seus filhos?	1	2	3	4	5	6	
10. A felicidade da sua família?	1 1	2		4	5	6	
11. Sua vida sexual?	1 1	2	3	4	5	6	
	1	2	3	4	5	6	
12. Seu (sua) esposo(a), namorado(a) ou companheiro(a)?13. Seus amigos?	1	2	3	4	5	6	
14. O apoio emocional que você recebe da sua família?	1 1	2	3	4	5	6	
15. O apoio emocional que você recebe de outras pessoas	1		3	4	3	0	
que não são da sua família?	1	2	2	4	5	6	
16. Sua capacidade para cuidar das responsabilidades da família?	1	2	3	4	5	6	
17. O quanto você é útil para os outros?	1	2	3	4	5	6	
18. A quantidade de preocupações em sua vida?		2		· ·			
19. Sua vizinhança?	1 1	2 2	3	4	5 5	6 6	
20. Sua casa, seu apartamento ou com o lugar onde você mora?		2	3	4	5		
21. Seu trabalho (se tiver algum trabalho, com ou sem remuneração)?	1	2	3	4	5	6 6	
22. O fato de não ter um trabalho (se desempregado, aposentado ou incapacitado)?		2	3	4	5	6	
22. O fato de não de um trabalho (se desempregado, aposentado ou meapacitado): 23. Seu nível de escolaridade?	1	2	3	4	5	6	
24. A maneira como você administra o seu dinheiro?	1	2	3	4	5	6	
25. As suas atividades de lazer, de diversão?	1	2	3	4	5	6	
26. Suas possibilidades de ter um futuro feliz?	1	2	3	4	5	6	
27. Sua paz de espírito, sua tranquilidade?		2	3	4	5	6	
28. Sua fé em Deus?		2	3	4	5	6	
29. A realização de seus objetivos pessoais?		2	3	4	5	6	
30. Sua felicidade de modo geral?		2	3	4	5	6	
31. Sua vida de modo geral?		2	3	4	5	6	
32. Sua aparencia pessoal?	1 1	2	3	4	5	6	
33. Você mesmo (a) de modo geral?	1	2	3	4	5	6	



Parte 2: Para cada uma das perguntas a seguir, por favor, escolha a resposta que melhor descreve o quanto importante é para você este aspecto de sua vida. Por favor, responda marcando um círculo ao redor do número escolhido. Não há respostas certas ou erradas. importância Moderadamente Importante Um pouco sem importância Sem nenhuma importância pouco importante Moderadamente sem Muito Importante Cm Quanto é importante para você: 1. Sua saúde? 2. O cuidado que você tem com a sua saúde? 3. Não ter dor? 4. Ter energia suficiente para as atividades diárias? 5. Cuidar de si mesmo(a) sem ajuda de outra pessoa? 6. Ter controle sobre sua vida? 7. Viver tanto quanto você gostaria? 8. A saúde da sua família? 9. Seus filhos? 10. A felicidade da sua família? 11. Sua vida sexual? 12. Seu (sua) esposo(a), namorado(a) ou companheiro(a)? 13. Seus amigos? 14. O apoio emocional que você recebe da sua família? 15. O apoio emocional que você recebe de outras pessoas que não são da sua família? 16. Cuidar das responsabilidades da família? 17. Ser útil às outras pessoas? 18. Não ter preocupações? 19. Sua vizinhança? 20. Sua casa, seu apartamento ou o lugar onde você mora? 21. Seu trabalho (se tiver algum trabalho, com ou sem remuneração)? 22. Ter um trabalho (se desempregado, aposentado ou incapacitado)? 23. Seu nível de escolaridade? 24. Ser capaz de administrar o seu dinheiro? 25. Ter atividades de lazer, de diversão? 26. Ter um futuro feliz? 27. Sua paz de espírito, sua tranquilidade? 28. Sua fé em Deus? 29. Realizar seus objetivos pessoais? 30. Sua felicidade de modo geral? 31. Estar satisfeito (a) com a vida? 32. Sua aparencia pessoal? 33. Ser você mesmo (a)?

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