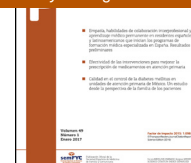Atención Primaria

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ORIGINAL ARTICLE

Reliability and validity of the EASYCare-2010 Standard to assess elderly people in Portuguese Primary Health Care☆

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Maria Piedade Brandão[a,b,*], Laura Martins[c], Ian Philp[d], Margarida Fonseca Cardoso[e,f]

[a] ESSUA – Health School, University of Aveiro, Aveiro, Portugal
[b] CINTESIS – Center for Health Technology and Services Research, University of Porto, Porto, Portugal
[c] University of Aveiro, Aveiro, Portugal
[d] Warwick Business School, Coventry, United Kingdom
[e] ICBAS – Instituto de Ciências Biomédicas de Abel Salazar, University of Porto, Porto, Portugal
[f] CIIMAR – Interdisciplinary Centre of Marine and Environmental Research, University of Porto, Porto, Portugal

Abstract
Introduction: The EASYCare is a multidimensional assessment tool for older people, which corresponds to the concerns and priorities of older people in relation to their needs, health, and quality of life. The EASYCare instrument has been used in many countries worldwide. Lack of reliability evidence has recently been raised by researchers. This study aimed to test the validity and reliability of the EASYCare-2010 instrument in community-dwelling Portuguese older people attended in Primary Health Care centres.
Methods: The sample for this transversal study (N = 244) was collected from Portuguese Primary Health Care Centers. Categorical Principal Component Analysis was used to assess the underlying dimensions of EASYCare-2010. Construct validity was evaluated through correlation with the World Health Organization Quality of Life Assessment Instrument-Short Form.
Results: A two-factor model (labelled ''mobility and activities of daily life'', and ''general well-being and safety'') was found. The EASYCare-2010 instrument showed acceptable levels for internal consistency (≥0.70). The EASYCare-2010 factors were correlated with measures of quality of life. Results showed that in most polytomous items, some of the more extreme categories were not considered at all or only by a residual number of participants.
Conclusion: EASY Care -2010 version is a valid and reliable instrument for holistic assessment of the older people attended in Primary Health Care centres in Portugal.
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Fiabilidad y validez del EASYCare-2010 Standard para evaluar a las personas mayores en Atención Primaria de Salud en Portugal

Resumen

Introducción: El EASYCare es una herramienta de evaluación multidimensional para las personas mayores, que corresponde a las preocupaciones y prioridades de las personas mayores en relación con sus necesidades, salud y calidad de vida. El instrumento EASYCare se ha utilizado en muchos países del mundo. La falta de pruebas de fiabilidad ha sido planteada recientemente por los investigadores. Este estudio tuvo como objetivo probar la validez y fiabilidad del instrumento EASYCare-2010 en personas mayores portuguesas residentes en la comunidad, atendidos en centros de Atención Primaria de la Salud.

Métodos: La muestra para este estudio transversal (N = 244) se recogió en Centros de Atención Primaria de Portugal. Se utilizó el Análisis de Componentes Principales Categórico para evaluar las dimensiones subyacentes de EASYCare-2010. La validez del constructo se evaluó mediante la correlación con el instrumento de evaluación de la calidad de vida de la Organización Mundial de la Salud, instrumento en su forma corta.

Resultados: Se encontró un modelo de dos factores (denominado «movilidad y actividades de la vida diaria» y «bienestar general y seguridad»). El instrumento EASYCare-2010 mostró niveles aceptables de consistencia interna (≥ 0.70). Los factores EASYCare-2010 se correlacionaron con medidas de calidad de vida. Los resultados mostraron que en la mayoría de ítems politómicos en algunas categorías extremas no se consideraron o solo por un número residual de participantes.

Conclusión: La versión EASY Care-2010 es un instrumento válido y fiable para la evaluación holística de las personas mayores atendidas en centros de Atención Primaria de Salud en Portugal.

Introduction

Portugal is ageing at an accelerated pace, where 19.9% of the population are 65 years or older and the estimates indicate that by 2030 it will have the third oldest population within Europe.[1] Many consequences from the ageing population have been occurring over the past few years, namely arising in the prevalence of non-communicable chronic diseases,[2] increased rates of falls,[3] reduced mobility, increased morbidity and prolonged hospitalization.[4] These factors show that priority in Primary Health Care and community services should be given to meet older people's needs to delay or reduce loss of independence and autonomy.[5] In addition, many studies have shown that it is possible to prevent and decrease the growing problems of ageing with valid and sustainable interventions.[6,7] However, there is still evidence of a gap in the development of interventions aimed at meeting the needs of older people.

Since 1999, the EASYCare instrument has been used in many countries worldwide to measure and identify the unmet health care needs of older people.[8–10] The EASY-Care assessment is a multidimensional assessment tool for older people, which corresponds to the concerns and priorities of older people in relation to their needs, health, and quality of life.[11] This tool is a simple and feasible instrument that evaluates physical function, including activities of daily living (ADL) and instrumental activities of daily living (IADL), mental functioning, social functioning and well-being.[11–15]

Changes were made in the form and content of the instrument since 1999. Actually, there are 49 questions included as a check list across seven domains of physical, mental, and social care functioning replacing the previous versions,[11] giving rise to the current version (EASY-Care Standard version 2010) designated in this study as the EASYCare-2010. The EASYCare-2010 version is unlike previous versions and more extensive.

In a recent review of EASYCare about the existing evidence of reliability, validity and acceptability and its appropriateness for assessing the needs of community-dwelling older people, it was concluded that research is needed to establishing concurrent and convergent validity of the EASYCare instrument.[16] The aim of this study was to analyze the validity and reliability of the EASYCare-2010 in community-dwelling Portuguese older people attending Primary Health Care centres.

Methods

This cross-sectional study comprises 244 participants, recruited at Primary Health Care centers from the Portuguese National Health Service at Regional Health Administration of central Portugal. The sample was collected from October 2013 to June 2014. The procedure for selection took account of the fact that there is nothing to indicate that subjects would differ from the study population, with respect to the variables investigated, depending on the time of the day at which they are attended in the PHC,

or even the time of year. The sample size was estimated considering a minimum subject to item ratio of at least five-to-one. Three nurses and one gerontologist interviewers received training in the standardized use of the EASYCare-2010. Each participant was interviewed by one interviewer. Inclusion criteria were 65 years of age or older and without dementia, psychosis or mental retardation as reported by their physician.

The study was approved by the Ethics Committee of the central Regional Health Administration (Coimbra, Portugal) with the local code 006386 on 12th March, 2013. Before the data collection, all participants were informed about the study and signed the informed consent form. Permission for using the EASYCare-2010 instrument has been obtained from the ''EASYCare Foundation Ltd. (http://www.easycarehealth.co.uk/)'' which maintains the EASYCare tool.

Construct validity was evaluated through correlation with the World Health Organization Quality of Life - BREF (WHOQOL-BREF).[17] The WHOQOL-BREF is a 26-item, multi-dimensional, self-administered scale covering four domains: psychological, social relationships, physical health and environmental issues. Items are rated on a 5-point Likert scale where 1 indicates very negative perceptions, and 5 indicates highly positive perceptions. High scores demonstrate good quality of life in each domain. Quality of life was measured with the Portuguese version of the WHOQOL-BREF.[18]

Statistical analysis was performed with SPSS (version 22.0) and two-sided significance tests at the 5% level were used throughout. Categorical variables were described as percentages and quantitative variables as means ± standard deviation (SD).

Prior to performing the factor analysis, a careful inspection of EASYCare-2010 was performed in order to define an adequate strategy for its validation. This inspection included both the identification of the number of categories of each item, polychotomous or dichotomous, and a descriptive analysis.

A categorical principle component analysis (CAPTCA)[19] was performed to determine the underlying dimensions of the EASYCare-2010 items. The number of factors to be extracted was determined by considering the Eigenvalue criterion: factors with eigenvalues greater than 1 should be retained. The internal consistency criterion was: factor extractions/dimensions with a Cronbach's alpha greater than or equal to 0.70 (i.e., suggesting acceptable internal consistency for that particular factor) should be retained. Cronbach's alpha was used to estimate instrument reliability.

The retaining criteria established in advance for the selection of factor items were: (a) factor loading of 0.4 or higher, (b) at least a 0.10 difference compared to the other factors, (c) having at least three items for one factor, and (d) interpretability.

Construct validity was performed based on the analysis of Pearson correlations computed between the EASYCare-2010 and the World Health Organization Quality of Life Assessment Instrument-Short Form (WHOQOL-BREF). For the correlation coefficients, the following interpretations were used: large if greater than 0.50, moderate correlation for values between 0.30 and 0.49, and small from 0.10 to 0.29.[20]

Table 1 Socio-demographic characteristics of the participants ($N = 244$).

	n	%
Age, mean ± SD	76.6 ± 7.6	
Male	113	46.3
Residence: urban	176	72.1
*Marital status**		
Single	14	5.7
Married	137	56.1
Separated/divorced	8	3.3
Widowed	85	34.8
Years of formal education		
None	41	16.8
1–4 years	170	69.7
5–12 years	28	11.5
>12 years	5	2.0
Living arrangements		
Couple	115	47.1
Ext. family	55	22.5
Institution	3	1.2
Alone	54	22.1
Other	17	7.0
Takes care of someone? No	218	89.3
Someone cares for you? No	177	72.5
Finances at the end of the month		
Not enough	53	21.7
Just enough	155	63.5
More than enough	36	14.8

* Missing values: 1 for the marital status.

Results

Table 1 summarizes the socio-demographic characteristics of the 244 participants, 46.3% were males. Almost all participants were married or widowed (91%), 69.6% lived as a couple or with extended family. The majority of the participants had less than 5 years of formal education (86.5%). About 20% of the participants reported that their finances were not enough to cover their expenses until the end of the month.

The descriptive analysis of the items of the EASYCare-2010 instrument gave information about whether all response options were considered by the participants (Table 2). The majority of the questions (27 over 49) of the EASYCare-2010 instrument correspond to dichotomous items, 2 items have 5 response categories, 1 item has 4 categories and the other items have 3 response categories (Table 2). The descriptive analysis revealed that in almost all the 20 items with 3 or 4 categories, the more extreme category had very low frequencies or none (5/20). Although merging of adjoining categories should be avoided, because it can affect the quality of the data,[21] categories with very low frequencies can cause instability of the principal component analysis solution. The bottom threshold of 8 for categories that should be merged with an adjacent category was considered.[19] Adjoining categories in the 3 and 4 response items led to dichotomous items (items Q1.1, Q1.2,

Table 2 Descriptive of the items of the EASYCare-2010 instrument (N = 244).

Code	Item	Categories	n	%
Q1.1	Can you see (with glasses if worn)?	1 - Yes	99	40.6
		2 - With difficulty	144	59.0
		3 - Cannot see at all	1	0.4
Q1.2	Can you hear (with hearing aid if worn)?	1 - Yes	133	54.5
		2 - With difficulty	109	44.7
		3 - Cannot hear at all	2	0.8
Q1.3	Do you have difficulty in making yourself understood because of problems with your speech?	1 - No difficulty	228	93.4
		2 - Difficulty with some people	11	4.5
		3 - Considerable difficulty with everybody	5	2.0
Q1.4	Can you use the telephone?	1 - Without help, including looking up numbers and dialling	223	91.4
		2 - With some help	17	7.0
		3 - Or are you unable to use the telephone?	4	1.6
Q2.1	Can you keep up your personal appearance? (e.g., brush hair, shave, put make-up on, etc.)	1 - Without help	203	83.2
		2 - Or do you need help with keeping up your personal appearance?	41	16.8
Q2.2	Can you dress yourself?	1 - Without help (including buttons, zips, laces, etc.)	199	81.6
		2 - With some help (can do half unaided)	44	18.0
		3 - Or are you unable to dress yourself?	1	0.4
Q2.3	Can you wash your hands and face?	1 - Without help	244	100.0
		2 - Or do you need some help?	0	0.0
Q2.4	Can you use the bath or shower?	1 - Without help	190	77.9
		2 - Or do you need some help with using the bath or shower?	54	22.1
Q2.5	Can you do your housework?	1 - Without help (clean floors, etc.)	159	65.2
		2 - With some help (can do light housework, but need help with heavy work)	55	22.5
		3 - Or are you unable to do any housework?	30	12.3
Q2.6	Can you prepare your own meals?	1 - Without help (plan and cook full meals yourself)	189	77.5
		2 - With some help (can prepare some things but unable to cook full meals yourself)	55	22.5
		3 - Or are you unable to prepare meals?	0	0.0
Q2.7	Can you feed yourself?	1 - Without help	243	99.6
		2 - With some help	1	0.4
		3 - Or are you unable to feed yourself?	0	0.0
Q2.8	Do you have any problems with your mouth or teeth?	1 - No	176	72.1
		2 - Yes	68	27.9
Q2.9	Can you take your own medicine?	1 - Without help (in right doses and at the right time)	216	88.5
		2 - With some help (if someone prepares it for you and/or reminds you to take it)	28	11.5

Table 2 (*Continued*)

Code	Item	Categories	n	%
		3 - Or are you unable to take your medicine?	0	0.0
Q2.10	Have you had any problems with your skin?	1 - No	211	86.5
		2 - Yes	33	13.5
Q2.11	Do you have accidents with your bladder (incontinence of urine)?	1 - No accidents	181	74.2
		2 - Yes occasional accident (less than once a week)	51	20.9
		3 - Or do you have frequent accidents (once a day or more) or need help with urinary catheter?	12	4.9
Q2.12	Do you have accidents with your bowels (incontinence of faeces)?	1 - No accidents	223	91.4
		2 - Yes occasional accident (less than once a week)	18	7.4
		3 - Or do you have frequent accidents or need to be given an enema?	3	1.2
Q2.13	Can you use the toilet (or commode)?	1 - Without help (can reach toilet/commode, undress sufficiently, clean self and leave)	216	88.5
		2 - With some help (can do some things, including wiping self)	27	11.1
		3 - Or are you unable to use the toilet/commode?	1	0.4
Q3.1	Can you move yourself from bed to chair, if they are next to each other?	1 - Without help	230	94.3
		2 - With some help	12	4.9
		3 - Or are you unable to move from bed to chair?	2	0.8
Q3.2	Do you have problems with your feet?	1 - No problems	191	78.3
		2 - Some problems	53	21.7
Q3.3	Can you get around indoors?	1 - Without help (including carrying any walking aid)	231	94.7
		2 - In a wheelchair without help	3	1.2
		3 - With some help	10	4.1
		4 - Or are you confined to a bed?	0	0.0
Q3.4	Can you manage stairs?	1 - Without help (including carrying any walking aid)	212	86.9
		2 - With some help	27	11.1
		3 - Or are you unable to manage stairs?	5	2.0
Q3.5	Have you had any falls in the last twelve months?	1 - None	172	70.5
		2 - One	45	18.4
		3 - Two or more	27	11.1
Q3.6	Can you walk outside?	1 - Without help (including carrying any walking aid)	214	87.7
		2 - With some help	30	12.3
		3 - Or are you unable to walk outside?	0	0.0
Q3.7	Can you go shopping?	1 - Without help (taking care of all shopping needs yourself)	194	79.5
		2 - With some help (need someone to go with you on all shopping trips	43	17.6
		3 - Or are you unable to do any shopping?	7	2.9
Q3.8	Do you have any difficulty in getting to public services?	1 - No difficulty	203	83.2

Table 2 (Continued)

Code	Item	Categories	n	%
		2 - With some help	37	15.2
		3 - Unable to get to public services	4	1.6
Q4.1	Do you feel safe inside your home?	1 - Yes	221	90.6
		2 - No	23	9.4
Q4.2	Do you feel safe outside your home?	1 - Yes	206	84.4
		2 - No	38	15.6
Q4.3	Do you ever feel threatened or harassed by anyone?	1 - Yes	27	11.1
		2 - No	217	88.9
Q4.4	Do you feel discriminated against for any reason?	1 - No	231	94.7
		2 - Yes	13	5.3
Q4.5	Is there anyone who would be able to help you in case of illness or emergency?	1 - Yes	218	89.3
		2 - No	26	10.7
Q5.1	In general, are you happy with your accommodation?	1 - Yes	237	97.1
		2 - No	7	2.9
Q5.2	Are you able to manage your money and financial affairs?	1 - Yes	229	93.9
		2 - No	15	6.1
Q5.3	Would you like advice about financial allowances or benefits?	1 - No	74	30.3
		2 - Yes	170	69.7
Q6.1	Do you take regular exercise?	1 - Yes	79	32.4
		2 - No	165	67.6
Q6.2	Do you get out of breath during normal activities?	1 - No	158	64.8
		2 - Yes	86	35.2
Q6.3	Do you smoke any tobacco? (e.g., cigarettes, cigars, pipe)	1 - No	236	96.7
		2 - Yes	8	3.3
Q6.4	Do you think you drink too much alcohol?	1 - No	239	98.0
		2 - Yes	5	2.0
Q6.5	Has your blood pressure been checked recently?	1 - Yes	227	93.0
		2 - No	17	7.0
Q6.6	Do you have any concerns about your weight?	1 - No concerns	57	23.4
		2 - Weight loss	18	7.4
		3 - Being overweight	169	69.3
Q6.7	Do you think you are up to date with your vaccinations?	1 - Yes	237	97.1
		2 - No	7	2.9
Q7.1	Are you able to pursue leisure interests, hobbies, work and learning activities which are important to you?	1 - Yes	220	90.2
		2 - No	24	9.8
Q7.2	In general, would you say your health is:	1 - Excellent	0	0.0
		2 - Very good	9	3.7
		3 - Good	66	27.0
		4 - Fair	146	59.8
		5 - Poor	23	9.4
Q7.3	Do you feel lonely?	1 - Never	83	34.0
		2 - Rarely	70	28.7
		3 - Sometimes	66	27.0
		4 - Often	15	6.1
		5 - Always	10	4.1

Table 2 (*Continued*)

Code	Item	Categories	n	%
Q7.4	Have you suffered from any recent loss or bereavement?	1 - No	50	20.5
		2 - Yes	194	79.5
Q7.5	Have you had any trouble sleeping in the past month?	1 - No	82	33.6
		2 - Yes	162	66.4
Q7.6	Have you had bodily pain in the past month?	1 - No	60	24.6
		2 - Yes	184	75.4
Q7.7	During the last month, have you often been bothered by feeling down, depressed or hopeless?	1 - No	85	34.8
		2 - Yes	159	65.2
Q7.8	During the last month, have you often been bothered by having little interest or pleasure in doing things?	1 - No	159	65.2
		2 - Yes	85	34.8
Q7.9	Do you have any concerns about memory loss or forgetfulness?	1 - No	137	56.1
		2 - Yes	107	43.9

Q1,3, Q1.4, Q2.2, Q2.5, Q2.11, Q2.12, Q2.13, Q3.1, Q3.3, Q3.4, Q3.5, Q3.7, Q3.8 and Q6.6). The resulting categories are given in Table 2. Items where all, or almost all participants, scored the same category, were not considered in the factor analysis (items Q2.3, Q2.7, Q5.1, Q6.3, Q6.4, and Q6.7). The resulting items were all dichotomous, with the exception of the 2 items with 5 response categories (items Q7.2 and Q7.3).

The factor model for the Portuguese population was identified using the CATPCA approach. A two-factor solution was suggested, by both the eigenvalue and the internal consistency criterion. The first component explained 26.9% of the total variance and the second 14.0%. This means that the two selected components explain 40.9% of the variance.

Items, factor loading and alpha coefficients for the two-factor solution are presented in Table 3. The first factor labelled ''Mobility and Activities of Daily Life'' consists of fifteen items and the second factor, labelled ''General well-being and safety'' consists of eleven items reflecting self-perception of health and self-perceived safety. Individuals with low values perceive the greatest levels of activity and well-being respectively.

Table 4 shows Pearson correlations between the two retained EASYCare-2010 factors and the domains of the quality of life assessment instrument considered (WHOQOL-BREF). All measurements were significantly and negatively correlated with the EASYCare-2010 factors, with only one exception (social relations), meaning that increased perception of levels of activity or wellbeing were related to higher scores of quality of life. The EASYCare-2010 factor labelled ''General well-being and safety'' showed the highest correlations with the environmental domain of quality of life (−0.467). The highest correlation with the EASYCare-2010 factor labelled ''Mobility and Activities of Daily Life'' was the physical domain of quality of life (−0.416).

Discussion

The results of this study contribute to scientific evidence that the EASYCare-2010 is a reliable and valid instrument that can be used in the Portuguese older community-dwelling people attended in Primary Health Care centres.

Given the relevance of EASYCare in identifying the unmet health care needs of older people in many countries worldwide,[15] it was considered important to confirm the operationalization of the instrument and its dimensional structure.

The CAPTCA analysis revealed a two-factor model, reflecting self-perceived activity capacities and well-being. The first factor was labelled ''Mobility and Activities of Daily Life'', and the second factor ''General well-being and safety''. The overall Cronbach's alpha values for the factors were acceptable, indicating satisfactory internal consistency of the scale. The considerably high levels of QOL found in all domains may be explained by the fact that almost all individuals were living in the community. As expected, all factors from the EASYCare-2010 and the quality of life (WHOQOL-BREF) domains were negatively correlated, indicating discriminative validity.

One of the main steps in the analysis of the EASYCare-2010 tool was a careful inspection of the instrument. The conclusion was that in almost all polychotomous items the more extreme response options were not selected at all, or just by a few number of participants. The frequencies of the more extreme categories of several items were very low or even null, questioning the adequacy of those particular categories for Portuguese older people in community settings of primary care. Fewer than five people considered themselves unable to see or hear at all, totally unable to use the telephone, dress themselves, use the toilet/commode or move from the bed to a chair, have frequent accidents or need to be given an enema. No participants felt they needed help

Table 3 Factor loadings in the EASYCare-2010 instrument (N = 244).

Code	Item	Factor		Total
		Mobility and activities of daily life	General well-being and safety	
Q1.4	Can you use the telephone?	0.436		
Q2.1	Can you keep up your personal appearance? (e.g., brush hair, shave, put make-up on, etc.)	0.771		
Q2.2	Can you dress yourself?	0.737		
Q2.4	Can you use the bath or shower?	0.827		
Q2.5	Can you do your housework?	0.718		
Q2.6	Can you prepare your own meals?	0.671		
Q2.8	Do you have any problems with your mouth or teeth?		0.529	
Q2.9	Can you take your own medicine?	0.688		
Q2.11	Do you have accidents with your bladder (incontinence of urine)?	0.526		
Q2.13	Can you use the toilet (or commode)?	0.715		
Q3.1	Can you move yourself from bed to chair, if they are next to each other?			
Q3.2	Do you have problems with your feet?		0.464	
Q3.3	Can you get around indoors?	0.455		
Q3.4	Can you manage stairs?	0.675		
Q3.5	Have you had any falls in the last twelve months?		0.435	
Q3.6	Can you walk outside?	0.639		
Q3.7	Can you go shopping?	0.779		
Q3.8	Do you have any difficulty in getting to public services?	0.755		
Q4.1	Do you feel safe inside your home?		0.504	
Q4.2	Do you feel safe outside your home?		0.650	
Q4.5	Is there anyone who would be able to help you in case of illness or emergency?		0.479	
Q5.2	Are you able to manage your money and financial affairs?	0.511		
Q7.1	Are you able to pursue leisure interests, hobbies, work and learning activities which are important to you?		0.468	
Q7.2	In general, would you say your health is:		0.550	
Q7.3	Do you feel lonely?		0.558	
Q7.5	Have you had any trouble sleeping in the past month?		0.514	
Q7.7	During the last month, have you often been bothered by feeling down, depressed or hopeless?		0.565	
	Cronbach alpha	0.891	0.755	0.942
	Variance	26.9%	14.0%	40.9%

washing their hands and face, 22.5% reported that with some help they could prepare meals but no-one considered themselves to be totally incapable of preparing meals. This same trend was observed for the ability to take their medication.

With the exception of one participant, who reported needing some help to feed himself, no-one reported being totally incapable of feeding themselves. No participants reported being confined to a bed. Although this last option is perhaps

Table 4 Pearson correlations between EASYCare-2010 factors and scores of World Health Organization Quality of Life Assessment Instrument – Short Form (WHOQOL-BREF) (*N* = 244).

	Global domain[a]	Physical domain[a]	Psychological domain[a]	Social relations domain[a]	Environmental domain[a]
Correlations with EASYCare factors[b]					
Mobility and activities of daily life	−0.258[**]	−0.416[**]	−0.383[**]	−0.198[**]	−0.075
General well-being and safety	−0.285[**]	−0.336[**]	−0.204[**]	−0.096	−0.467[**]
Total	−0.335[**]	−0.496[**]	−0.419[**]	−0.213[**]	−0.236[**]
Descriptives					
Mean	57.74	58.99	62.47	59.56	67.05
SD	14.78	13.33	12.17	15.20	9.40

[a] Individuals with low values have low, negative perceptions and high scores demonstrate good quality of life in each domain.
[b] Individuals with low values perceive the greatest levels of activity and wellbeing. Negative correlation coefficients for increased perception of levels of activity or wellbeing related to higher scores of quality of life.
[**] *P* < 0.001.

the most unfeasible for participants recruited from community settings of primary care centres, the others that were considered by none or very few participants, correspond to a level of incapacity that is rarely found in Primary Health Care. These options could be adequate for the elderly in other settings such as in hospital units, nursing homes or at home and unable to travel, but not for the elderly that need some autonomy to be able to attend a Primary Health Care for face-to-face consultation.

Results from this study showed that the EASYCare-2010 items could be presented in a simpler format, since some of the categories were not considered at all or only by a residual number or participants. Excluding these extreme categories, the EASYCare-2010 could become a simpler instrument, with dichotomous items replacing polychotomous items, requiring a choice between two alternatives (yes-no) instead of one of three or more alternative responses. Binary items are easier to answer, while polychotomous items demand additional concentration on finer distinctions.[22] Since there may be older people who only show extreme deficits in one category, this level of sensitivity would still be clinically useful, and the EASYCare-2010 instrument could be reorganized while maintaining all response options. Polychotomous items could be replaced by dichotomous items, but when a problem is identified a second level of items would identify its severity. A reduction of items should be considered in a new revised version of the EASYCare-2010, in line also with the first meeting at the *Consensus Conference* sponsored by the WHO in 1993 and with the interest showed by workers and researchers from six different countries.[11]

Considering that the EASYCare instrument is intended to identify or recognize threats to health, well-being and independence of older people at an early stage of morbidity with a simple and fast approach,[23] the findings of this study point to the benefits of a reduction of alternatives when asked to choose one answer. The dichotomous format of questions could more easily alert for the importance of being attentive to an answer which, although not of in itself revealing threat, would warrant clinical evaluation. Alternatively, more rapid assessment methods, for example through a call centre approach may facilitate a more comprehensive but efficient approach to assessment. Because

the organization of Primary Health Care is not homogeneous across countries,[24] it would be important to validate the instrument in the various locations around the world using EASYCare. Similar or different results obtained by the different countries and cultures would point to the necessary modifications in the review and updating of the instrument for use beyond 2016.

What is already known about the topic?

- The EASYCare is a holistic assessment of the health and care needs of older people.
- In order to extend healthy active life the EASYCare is a tool that helps in the identification of the threats to health independence and well-being in old age.
- The EASYCare-2010 version is unlike the previous versions more extensive but lack of validity and reliability evidence of EASYCare has been raised recently by the scientific community.

What this paper adds?

- This study showed that the EASYCare-2010 could become a simpler instrument, with dichotomous items replacing polytomous items.
- This study showed that in Portugal the EASYCare-2010 is a valid and reliable scale for the assessment of needs among older community-dwelling people.

Conflict of interest

Ian Philp is a Director of the EASYCare Foundation Ltd, which holds the international copyright for all EASYCare tools and methods. The EASYCare Standard assessment is available free of charge once registered with the Foundation. Any commercialisation of EASYCare methods by third parties must be approved by the Foundation with royalties paid. Foundation profits are distributed to charities.

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