DEVELOPMENT OF POPULATION TARIFFS FOR THE CARERQOL-7D INSTRUMENT FOR HUNGARY, POLAND AND SLOVENIA – A DISCRETE CHOICE EXPERIMENT STUDY TO MEASURE THE BURDEN OF INFORMAL CAREGIVING

Petra Baji[1], Miklós Farkas[2], Dominik Golicki[3], Valentina Prevolnik-Rupel[4], Renske Hoefman[5], Werner B.F. Brouwer[6], Job van Exel[6], Zsombor Zrubka[1], László Gulácsi[1], Márta Péntek[1]

1 Department of Health Economics, Corvinus University of Budapest, Hungary
2 Department of Accounting and Finance, University of Bristol, United Kingdom
3 Department of Experimental and Clinical Pharmacology, Medical University of Warsaw, Poland
4 Institute for Economic Research, Ljubljana, Slovenia
5 The Netherlands Institute for Social Research, Den Haag, The Netherlands
6 Erasmus School of Health Policy & Management (ESHPM); Erasmus School of Economics (EHE), Erasmus University Rotterdam, The Netherlands

Correspondence: Petra Baji Ph.D., petra.baji@uni-corvinus.hu

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Background: The CarerQol-7D instrument can be used in economic evaluations to measure the care-related quality of life of informal caregivers [1]. The CarerQol-7D includes two positive dimensions (fulfilment and support) and five negative dimensions of caregiving (relational problems, mental health problems, physical health problems, financial problems, and problems with daily activities), using three-level answering scales (no, some, a lot of problems). The second part of the questionnaire, the CarerQol-VAS, measures happiness of caregivers on a horizontal visual analogue scale ranging from 0 (completely unhappy) to 10 (completely happy). At the moment, tariff sets for the CarerQol-7D instrument are only available in Australia, Germany, Sweden, The Netherlands, UK, and US.
Objectives: The objective of our study was to develop tariff sets for the CarerQol-7D instrument for Hungary, Poland and Slovenia and to compare these to the existing value sets.
Methods: Discrete choice experiments (DCE) were carried out in Hungary, Poland and Slovenia. For reasons of comparability, we adapted the original DCE design used to obtain value sets in The Netherlands and later in Australia, Germany, Sweden, UK, and US [2,3]. In the DCE task respondents were asked to imagine that they provide care or support to a loved one due to an illness, disability or infirmity of old age. We presented the respondent with ten choices between two caregiving situations described by the CarerQol-7D attributes and in each choice scenario, they were asked to choose the one which they prefer (Figure 1).

Figure 1 Example for a choice set in the discrere choice experiment task

Caregiving situation A	Caregiving situation B
You have **a lot of fulfilment** from carrying out your care tasks	You have **some fulfilment** from carrying out your care tasks
You have **no relational problems** with the care receiver	You have **a lot of relational problems** with the care receiver
You have **a lot of problems** with your own **mental health**	You have **no problems** with your own **mental health**
You have **a lot of problems** combining your care tasks with your own **daily activities**	You have **some problems** combining your care tasks with your own **daily activities**
You have **some financial problems** because of your care tasks	You have **no financial problems** because of your care tasks
You receive **some support** with carrying out your care tasks, when you need it	You receive **no support** with carrying out your care tasks, when you need it
You have **no problems** with your own **physical health**	You have **no problems** with your own **physical health**

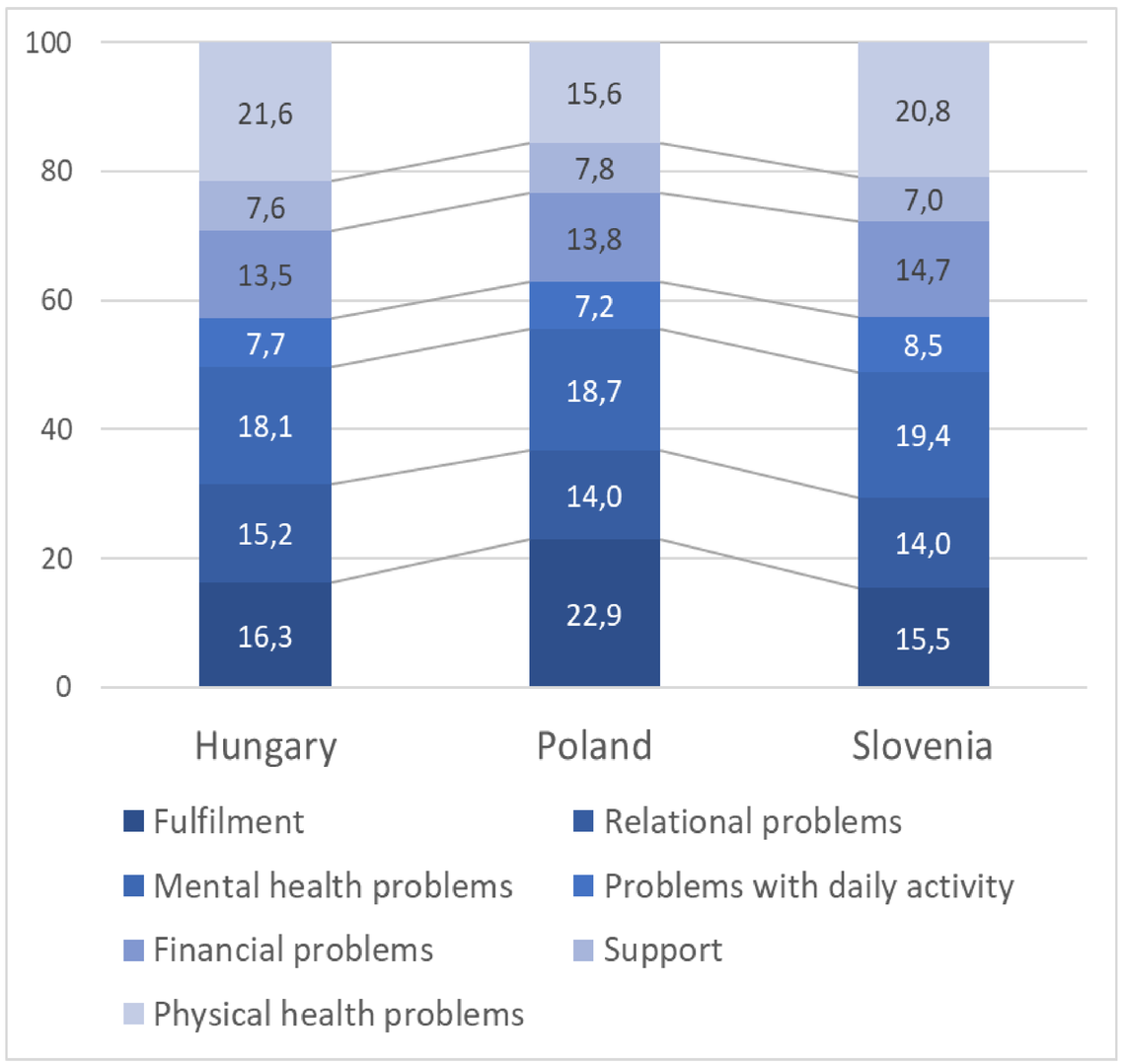
Data were collected in an online survey between November 2018 and January 2019, in representative samples of 1,000 respondents per country. Tariffs were calculated from coefficient estimates from panel mixed multinomial logit models with random parameters.
Results: The average age of the respondents was 53.2 (SD=15.1), 45.1 (SD=15.7) and 46.4 (SD=16.0) in Hungary, Poland and Slovenia, respectively. The share of women was between 51-53%. In all countries, the majority of respondents had some kind of experience with informal care either as care recipient, caregiver, or they know someone who provided or received such care.
All seven CarerQol-7D domains contributed significantly to the utility associated with different caregiving situations. Table 1 presents the CarerQol-7D tariffs for the three countries separately. Total utility scores for CarerQol-7D states can be calculated by adding up the tariff per category of the seven CarerQol-7D dimensions.
For illustration (Figure 2), we plotted the relative weights of the seven attributes ranked in the best possible caregiving situation (CarerQol-7D score = 100). Attributes valued highest were “Physical health” (tariffs for no problems were between 15.6-21.6), “Mental health” (18.1-19.4) and “Fulfilment” (15.5-22.9).

Table 1 CarerQol tariffs for Hungary, Poland and Slovenia

		Hungary		Poland		Slovenia	
CarerQol-7D dimension	**Level**	**Tariff**	**SE**	**Tariff**	**SE**	**Tariff**	**SE**
Fulfilment	No	0.0	0.0	0.0	0.0	0.0	
	Some	12.2	1.7	17.7	2.9	10.4	
	A lot	16.3	2.2	22.9	3.8	15.5	
Relational problems	No	15.2	1.9	14.0	2.0	14.0	
	Some	10.5	1.7	11.3	2.3	11.5	
	A lot	0.0	0.0	0.0	0.0	0.0	
Mental health problems	No	18.1	1.7	18.7	2.6	19.4	
	Some	13.5	1.5	13.6	2.0	14.8	
	A lot	0.0	0.0	0.0	0.0	0.0	
Problems with daily activities	No	7.7	1.3	7.2	2.6	8.5	
	Some	4.6	1.1	4.6	1.8	6.2	
	A lot	0.0	0.0	0.0	0.0	0.0	
Financial problems	No	13.5	1.5	13.8	2.9	14.7	
	Some	9.8	1.2	11.1	2.1	9.6	
	A lot	0.0	0.0	0.0	0.0	0.0	
Support	No	0.0	0.0	0.0	0.0	0.0	
	Some	6.1	1.0	7.8	1.4	3.1	
	A lot	7.6	1.1	7.8	1.4	7.0	
Physical health problems	No	21.6	2.3	15.6	3.0	20.8	
	Some	17.9	1.7	13.9	2.1	18.6	
	A lot	0.0	0.0	0.0	0.0	0.0	

Value sets were comparable across the countries, although in Poland “A lot of fulfilment” was valued higher (22.9) than in Hungary (16.3) and Slovenia (15.5). Compared to existing value sets, “Fulfilment” was more important, while “Financial problems” were less important, in the tariff sets of these three Central European countries.
Conclusion: Country specific tariff sets are now available for the Hungarian, Polish and Slovenian versions of the CarerQol-7D instrument. This facilitates including the impact of informal care in economic evaluations.

Figure 2 Weights of attributes in the best scenario (CarerQol-7D=100)



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