Utility Values for Dementia in Finland and Spain

Rochau U (1), Papon V (1), Arvandi M (1), Jahn B (1), Pitkälä KH (2), Coll-Planas L (3), Masó-Aguado M (3, 4), Litt J (5,6,7), Siebert U (1, 8, 9), Puntscher S (1)

(1) Institute of Public Health, Medical Decision Making and Health Technology Assessment, Department of Public Health, Health Services Research and Health Technology Assessment, UMIT TIROL - University for Health Sciences and Technology, Hall in Tirol, Austria; (2) University of Helsinki, Department of General Practice and Helsinki University Hospital, Unit of Primary Care, University of Helsinki, Helsinki, Finland; (3) Research Group On Methodology, Methods, Models and Outcomes of Health and Social Sciences (M3O). Faculty of Health Sciences and Welfare. Centre for Health and Social Care Research (CESS), University of Vic-Central University of Catalonia (UVic-UCC), Vic, Spain; (4) Institute for Research and Innovation in Life Sciences and Health in Central Catalonia (IRIS-CC), Vic, Spain; (5) Institute for Global Health (ISGlobal), Barcelona, Spain; (6) CIBER Epidemiología y Salud Pública (CIBERESP), Spain; (7) Universitat Pompeu Fabra (UPF), Barcelona, Spain; (8) Center for Health Decision Science, Departments of Epidemiology and Health Policy & Management, Harvard Chan School of Public Health, Boston, MA, USA; (9) Institute for Technology Assessment and Department of Radiology, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA

Introduction

Loneliness is associated with an increased risk of cognitive decline and dementia[1]. We sought utility values for dementia to inform evaluations of loneliness alleviating interventions in Finland and Spain using a decision-analytic model within the EU-H2020 RECETAS project[2,3].

Methods

We performed systematic literature searches in PubMed/MEDLINE supplemented by manual searches to identify systematic reviews and meta-analyses reporting utility values for dementia elicited with the EQ-5D questionnaires. Studies were screened for eligibility and either pooled or single values from the systematic reviews/meta-analyses were chosen. When multiple eligible utility estimates were available, we pooled them applying a random-effects meta-analysis. As utilities are often reported by dementia severity, weighted utilities based on the prevalence of dementia severity stages in Finland and Spain were estimated.

Results

We identified 17 systematic reviews/meta-analyses for dementia. From the results, we selected a single study[4] for Finland. Table 1 reports caregiver-rated utility values according to dementia stages, which were weighted by the severity distribution of dementia based on the Framingham Heart Study[5] as no distribution of dementia severity stages for Finland was found resulting in a mean utility of 0.53 for dementia in Finland.

For Spain, two studies from the systematic search[6,7] and one study from the manual search[8] were pooled (Figure 1). Results of the random-effects meta-analyses are shown in Table 1. Considering the distribution of dementia severity stages in Spain[9] resulted in a mean utility of 0.54 for dementia. The severity-weighted utility values were divided by the corresponding population[4,10] norms to derive the respective utility multiplier (Table 1).

Table 1. Overview Utilities

Country	Dementia Stage	(Pooled) Utility Value	Severity Distribution	Severity-weighted	Population Norm	Deterministic Utility Mulitiplier	Uncertainty Distribution, Parameters	Sources
Finland	mild	0.61	50.4%	0.53	0.68	0.78	Lognormal, SE 0.103*	4, 5
	moderate	0.50	30.3%					
	severe	0.39	19.3%					
Spain	mild	0.68	26.1%	0.54	0.81	0.64	Dementia: Beta, CI 0.48-0.59	6, 7, 8, 9, 10
	moderate	0.54	53.6%				Population norm: Beta, SE 0.005	
	severe	0.34	20.3%					

Note. *based on a standard deviation of ±20%;
SE, standard error; CI, confidence interval.

Conclusion

Overall, we found satisfactory evidence on dementia-related utility values to populate our decision-analytic model for the Finnish and Spanish RECETAS analyses. The results from our decision analyses will allow us to guide lay persons, clinicians, and health-policy decision makers on the tradeoffs between benefits, harms, and cost effectiveness of loneliness-alleviating interventions.
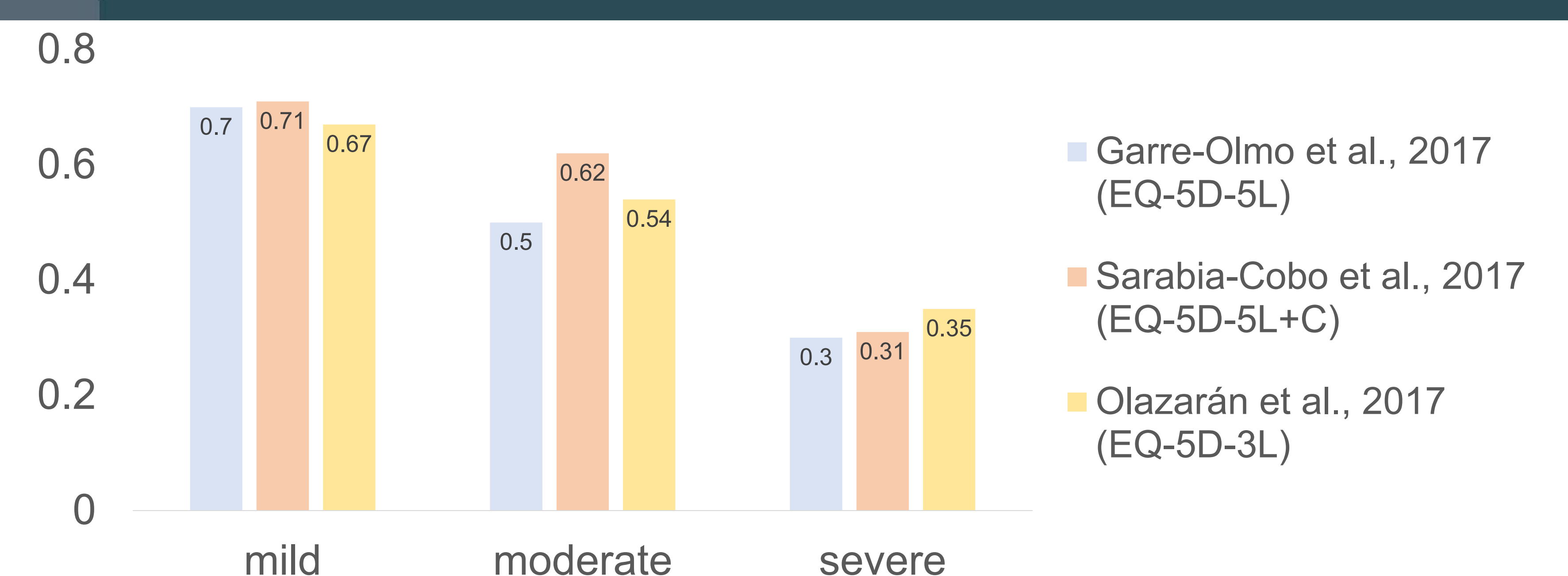

Figure 1. Spanish Studies Reporting Utility Values for Dementia by Severity Stages

Note. EQ-5D-5L+C includes a cognitive dimension

Legend:
- Garre-Olmo et al., 2017 (EQ-5D-5L)
- Sarabia-Cobo et al., 2017 (EQ-5D-5L+C)
- Olazarán et al., 2017 (EQ-5D-3L)

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