

Samir Ahid^{1,2}, Amna Kooli^{1,3}, Fatima Al Sayah^{4,5}, Bram Roudijk⁵, Elly Stolk⁵, Redouane Abouqal^{2,6}

¹ Pharmacoeconomics and Pharmacoepidemiology Research Team, University Mohammed V. Rabat. Morocco | ² Faculty of Pharmacy. Mohammed VI University of Health Sciences (UM6SS). Casablanca. Morocco | ³ Novartis Pharma Tunisia | ⁴ School of Public Health, University of Alberta, Edmonton, Canada | ⁵ EuroQoL Research Foundation, Rotterdam, The Netherlands | ⁶ Laboratory of Biostatistical, Clinical and Epidemiological Research. University Mohammed V. Rabat. Morocco

BACKGROUND

- In Low-middle Income countries (LMIC) such as Morocco, operating with scarce resources under budget constraints, affordability remains a key concern to access innovative health technologies. Economic evaluations to inform decisions about allocation of health resources are not widely used in Morocco. This is partly due to the lack of country-specific utility weights, which are necessary to derive appropriate Quality Adjusted Life Years (QALYs) that are used in these economic evaluations. The EQ-5D-3L has been previously translated in local dialect and is widely used in local studies.

OBJECTIVE

- Our objective was to develop a value set for the EQ-5D-3L using preferences of the Moroccan general population for use in local economic assessments.

Table 1. Participant characteristics

Characteristic	Overall (N=347)
Age group	N (%) or mean ± SD
20-29 years	100 (28.9)
30-39 years	78 (22.5)
40-49 years	64 (18.5)
50-59 years	53 (15.3)
60 years or more	51 (14.7)
Female	178 (51.5)
Urban Dwelling	226 (65.3)
Current marital status	
Married	200 (59.0)
Engaged/Divorced/Never married/Widowed	139 (41.0)
Highest educational level	
No formal education	94 (27.7)
Elementary	37 (10.9)
Junior high	34 (10.0)
High school	48 (14.2)
University	126 (37.2)
Total household income	
< 2570 derhams	94 (28.1)
2570 - 5000 derhams	105 (31.4)
> 5000 derhams	133 (39.8)
Health insurance available	231 (67.9)
Current employment status	
Employed (full time/part-time/daily worker)	160 (47.1)
Unemployed/ Student/ Retired	180 (52.9)
Language spoken at home	
Arabic	288 (85.7)
French	0 (0.0)
Shalha	5 (1.5)
Both Arabic & French	30 (8.9)
Both Arabic & Shalha	12 (3.6)
Other	1 (0.3)
Presence of a chronic health condition	109 (33.6)
Total number of chronic health conditions	0.7 ± 1.1
0	209 (60.7)
1	79 (23.0)
>= 2	56 (16.3)
Depressive symptoms (PHQ-2)	
PHQ-2 Total Score	1.5 ± 1.3
PHQ-2 < 3 (absent)	287 (85.2)
PHQ-2 ≥ 3 (present)	50 (14.8)

METHODS

- We used quota sampling based on age, sex, dwelling and literacy to recruit a representative sample of the general population.
- Composite time trade-off (cTTO) and discrete choice experiment (DCE) were used as the main elicitation techniques. A total of 28 EQ-5D-3L hypothetical health states grouped into three blocks were valued using cTTO. Additionally, 60 pairs of hypothetical health states, grouped into six blocks with 10 pairs in each were valued using DCE.
- Interviews were conducted by trained interviewers using the computer assisted face to face interviews with the EuroQoL Valuation Portable Technology Platform (EQ-PVT).
- To estimate the value set, we used a main-effects hybrid regression model of a random effects linear regression for c-TTO data, and a logistic regression and a conditional logistic regression for DCE data.

RESULTS

- A total of 343 participants completed the interviews.
- The socio-demographic characteristics of this sample indicate representativeness of the Moroccan general population.
- Based on the hybrid model, the utility scoring algorithm for the EQ-5D-3L is: 1- mo2*0.0554091 - mo3*0.4049695 – sc2 *0.0907691 – sc3*0.3363128 – ua2*0.068519 – ua3*0.2063712 – pd2*0.0589146 - pd3*0.3700525 – ad2*0.0759711-ad3*0.2559113.
- Utility scores ranged from -0.5736 for the worst (33333) to 1.0 for the best (11111) EQ-5D-3L health state.

Figure 1. EQ5D-3L profile

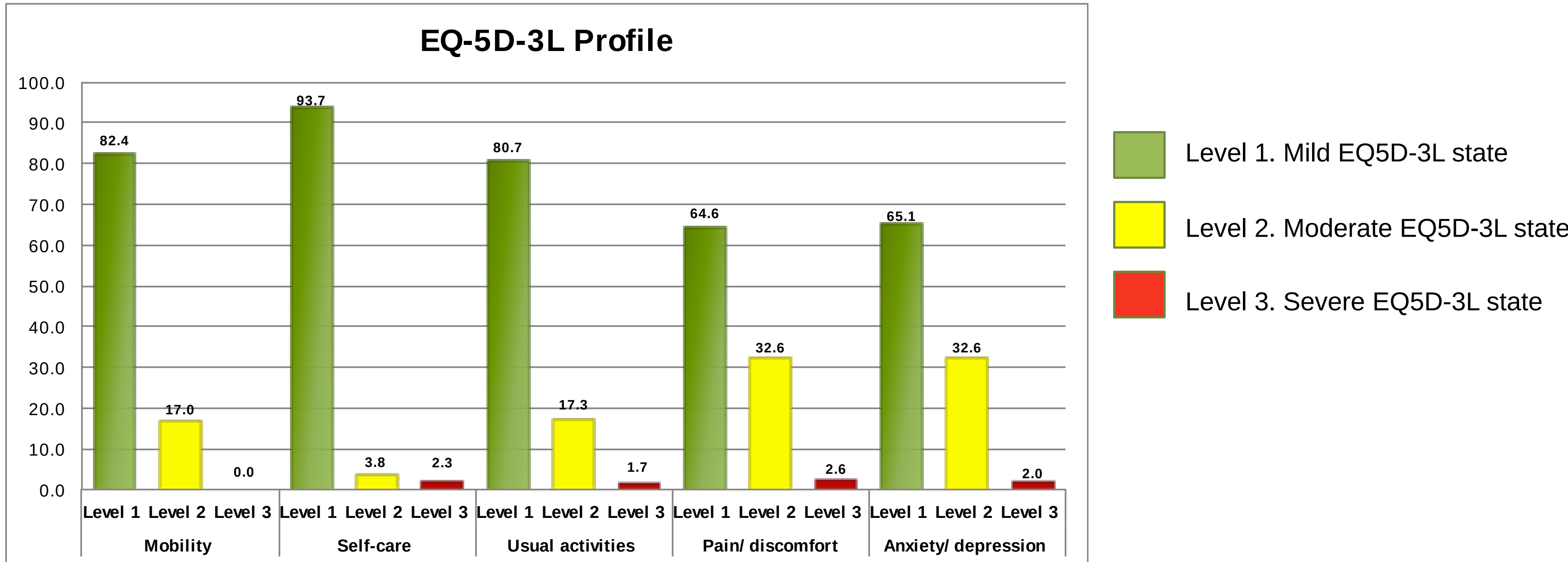


Table 2. EQ5D-3L profile				
Final model ^a	Coefficient	Standard Error	Z value	P>Z
Mobility 2	0.0554091*	0.0092214	6.01	0.000
Mobility 3	0.4049695*	0.011978	33.81	0.000
Self Care 2	0.0907691*	0.0090027	10.08	0.000
Self Care 3	0.3363128*	0.011448	29.38	0.000
Usual Activities 2	0.068519*	0.0089837	7.63	0.000
Usual Activities 3	0.2063712*	0.0108533	19.01	0.000
Pain/Discomfort 2	0.0589146*	0.008938	6.59	0.000
Pain/Discomfort 3	0.3700525*	0.0114414	32.34	0.000
Anxiety/Depression 2	0.0759711*	0.0092806	8.19	0.000
Anxiety/Depression 3	0.2559113*	0.0106184	24.1	0.000

^aA hybrid regression model accounting for heterogeneity was used. *Coefficient is significant at the 1% level.

CONCLUSION

- This is the first value set of EQ-5D-3L for Morocco and in Middle East North Africa (MENA) region. These results promote and facilitate the use of health utility estimation in economic evaluations in Morocco and neighbouring countries.

Funding

This study was supported by a research grant from Novartis

Acknowledgements

Special thanks to the graduate students who completed the interviews for this study: Yazid Rouahi, Hanae Zarrik, Younes Allou

Contact

Samir Ahid s.ahid@um5s.net.ma / sahid@um6ss.ma



جامعة محمد الخامس بالرباط
Université Mohammed V de Rabat

