Health-related quality of life and utility values among patients with anxiety and/or depression in a low-income tertiary care setting: a cross-sectional analysis

Belay YB[1,2], Mihalopoulos C[1], Lee YY[1,3,4], Engel L[1]

135541

[1] School of Public Health and Preventive Medicine, Monash University Health Economics Group, Monash University, Melbourne, Australia, [2] School of Pharmacy, Mekelle University, Mekelle, Ethiopia, [3] School of Public Health, The University of Queensland, Brisbane, Australia

[4] Queensland Centre for Mental Health Research, Brisbane, Australia

Objectives

- To describe the health-related quality of life (HRQoL), estimate the associated health state utility values (HSUVs) and explore factors associated with HRQoL of patients with anxiety and/or depression in a resource-limited hospital setting.

Methods

Data source:

- Patients were recruited from the Amanuel Mental Specialize Hospital (AMSH) outpatient setting
- Medical records were reviewed and EQ-5D-5L data were collected via interviews

Survey content:

- Demographics/Clinical characteristics
- EQ-5D-5L/EQ-VAS
- Patient Health Questionnaire-9 (PHQ-9) /Generalised anxiety disorder-7 (GAD-7)

Statistical analyses:

- HSUVs were calculated based on the Ethiopian value set
- HSUVs by severity level and other clinical and demographic profile were described using means and standard deviations. T-test and one-way ANOVA analyses were used to compare the mean difference in HSUVs across different groups
- The univariate association between independent variables and HRQoL measures (HSUV and EQ VAS) was examined using ordinary least squares regression
- A hierarchical multiple regression analysis was then conducted to determine the relationship between demographic variables, clinical variables and behavioural variables with HSUVs and EQ VAS
- Model selection was performed based on the adjusted R-squared, Akaike information criterion (AIC), and Bayesian information criterion (BIC)

Results

- Data from 462 patients with anxiety and/or depression were included in the analysis
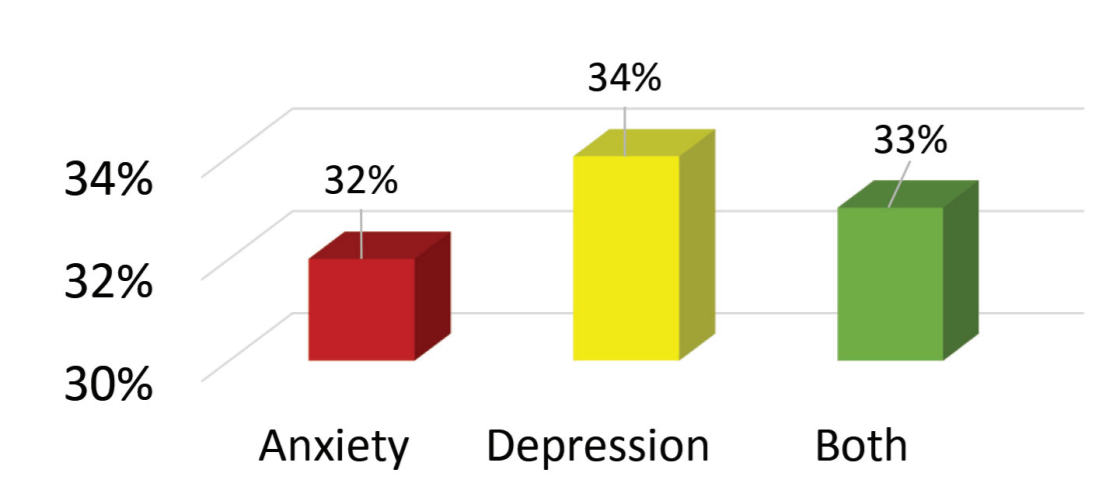

Fig1 Clinical diagnosis (percentage Frequency)

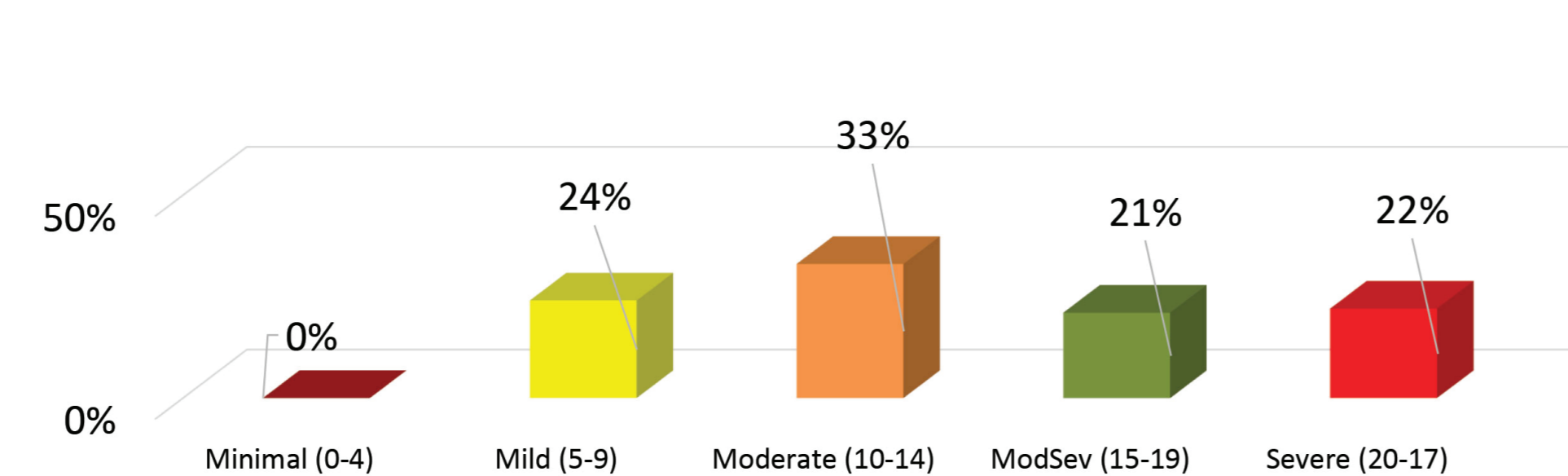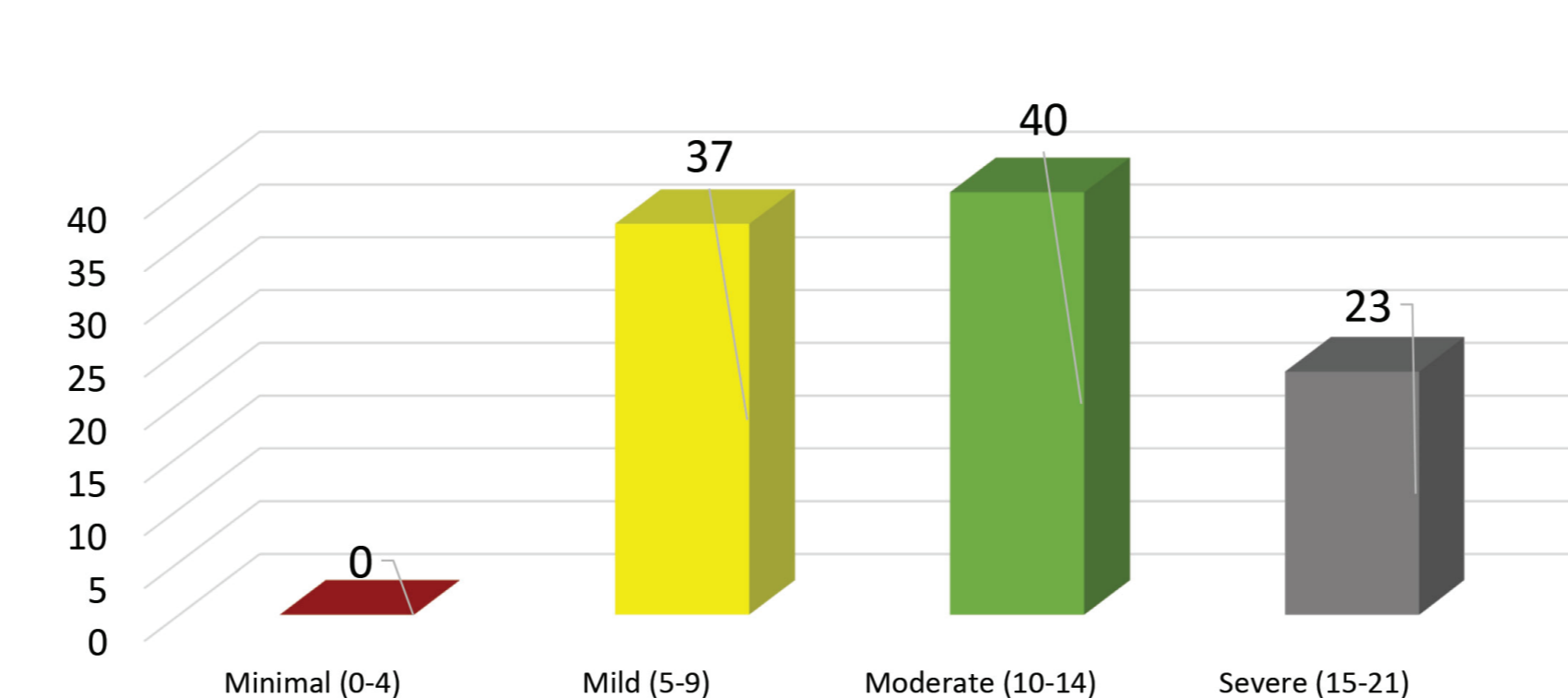Fig2 Depression Severity based on PHQ-9 score

Fig3 Anxiety Severity based on GAD-7 score

Patient-reported health problems on the EQ-5D-5L

- Regardless of differences in demographic and clinical characteristics, a higher proportion of reported problems were observed in the P/D and A/D dimensions of the EQ-5D-5L measure
- Older participants and pensioners exhibited a higher prevalence of problems across various dimensions of the EQ-5D
- People with severe anxiety or depression symptoms reported more problems compared to those with milder symptoms

Regression analysis results with HSUVs as the outcome variable

- HSUVs and EQ VAS scores decreased significantly by increasing levels of depression and anxiety (Table 1)
- Factors associated with lower HSUVs (Table 1), included:
  - Increase in age (univariate and multivariate analysis)
  - Being divorced (univariate analysis only)
  - No formal education (univariate analysis only)
  - Being retired/ pensioner (univariate analysis only)
- Having 'just enough income' (univariate analysis only)
- Increase in depression severity (PHQ-9) and anxiety severity (GAD-7) (univariate and multivariate analysis)
- Having comorbid conditions (univariate and multivariate analysis)
- Multiple medication use (univariate and multivariate analysis)
- Being a smoker and consuming alcohol (univariate analysis only)

Table 1 Summary score of HSUVs and EQ VAS by clinical characteristics (n=462)

Clinical profiles		EQ-5D-5L		EQ VAS	
		Mean (SD)	p-value	Mean (SD)	p-value
Diagnosis	Anxiety	0.88 (0.17)	0.005	75.3 (17.9)	<0.001
	Depression	0.89 (0.18)		74.4 (19.7)	
	Both	0.83 (0.16)		64.4 (17.9)	
Level of anxiety severity (GAD-7 scores)	Minimal	-		-	
	Mild	0.93 (0.10)	<0.001	76.8 (16.9)	<0.001
	Moderate	0.85 (0.19)		69.7 (19.6)	
	Severe	0.81 (0.20)		65.3 (19.5)	
Level of depression severity (PHQ-9 scores)	Minimal				
	Mild	0.95 (0.07)	<0.001	82.6 (13.8)	<0.001
	Moderate	0.91 (0.10)		72.4 (17.4)	
	Moderately severe	0.82 (0.23)		68.3 (20.8)	
	Severe	0.78 (0.21)		60.6 (18.3)	
	Multiple	0.84 (0.19)		68.1 (19.2)	

The mean HSUV and EQ VAS score were 0.87 (SD=0.17) and 71.4 (SD=19.1), respectively

Discussion & policy implications

- Our study findings indicate that older adults tend to report more problems across all five EQ-5D-5L dimensions
- HSUVs for depression varied from 0.91 for moderate to 0.78 for severe depression (table 1). In contrast, a study conducted in Sweden reported lower means ranging from 0.46 for moderate to 0.27 for severe depression [Sobocki et al., 2007]. This calls for a study to look at how people in high-income and low-income settings understand the EQ-5D questionnaire, which could potentially influence the instrument's validity
- Increasing age consistently showed a significant negative association with the HSUVs across all models
- The pattern of association of variables with EQ VAS score showed some minor differences compared with the HSUVs
- For instance, age showed significance only in the univariate analysis and Model 1 of the multiple regression analysis; however, it did not exhibit significance in Models 2 and 3. Marital status and income were associated with EQ VAS scores

- The discrepancy in results between the EQ VAS and EQ-5D-5L may be attributed to the fact that these measures capture different concepts.
- Social support packages that improve the income of individuals and counselling services related to marital or family issues might assist with improving the perceived HRQoL of patients
- Income might be linked to access to healthcare, particularly in Ethiopia, where high out-of-pocket expenses are prevalent, potentially affecting patients' HRQoL (FMOH, 2022)
- The utility values reported in this study for various health states could be beneficial in conducting economic evaluations of anxiety and depression interventions in Ethiopia and similar resource-constrained settings

Conclusions

- A higher proportion of reported problems was observed in the P/D and A/D dimensions of the EQ-5D-5L measure
- The reported mean HSUVs and EQ VAS scores of respondents were lower than those reported in the general population and among individuals with other physical health conditions
- Increasing age, higher levels of anxiety or depression severity and the presence of comorbid diagnoses were consistently associated with lower HSUVs and EQ VAS scores

Please scan this QR code to access the poster

Correspondence to:
Belay YB, PhD student, Monash University Health Economics Group (MUHEG),
Monash University, Australia
Email: yared.belay1@monash.edu