

Evaluation of Measurement Properties of Health Assessment Questionnaire-Disability Index (HAQ-DI) among Gout Patients in China

OBJECTIVES		Table 1. Characteristics of respondents (N=1,000) (following)					owing)		
• To evaluate the measurement properties of	easurement properties of Chinese version of the				eristics		N (%)		
Ugalth Aggaggment Questionnaire Digability	Disease duration (as of June 2024) (mean [SD]) 3.69 [3.10]								
Health Assessment Questionnaire Disability	y maex (HAQ-DI) among	Presence of	tophi						
Chinese gout patients.		Yes					178 (17.8%)		
METHODS		No					822 (82.2%)		
		EQ-5D-5L	utility (mea	n [SD])			0.77 [0.19]		
• A representative sample of Chinese gout pa	EQ-VAS (mean [SD]) 81.39 [10								
 stratification based on age, gender, residence, and education level. Sociodemographic characteristics, health-related information, and self-reported EQ-5D-5L and HAQ-DI responses were collected through an 			HAQ-DI score (mean [SD])						
			0-1 (absent or mild)						
			>1-2 (moderate)						
			>2-3 (severe) 17 (1.7%)						
online survey.				. •					
• Assessment of measurement properties :		Measure	ment proj	perties o	of the HA	Q-DI			
✓ Ceiling and floor effects were firstly evaluated;		• Ceiling	effects (14	.4%) and	l floor effe	cts (0%) were both 1	not found for the		
✓ Reliability was assessed by internal consistency	HAQ-DI.								
 Structural validity was verified by confirmatory factor analysis (CFA); Convergent validity was assessed using Spearman's rank coefficient, 			• Cronbach's α was 0.95 for the all HAQ-DI items, while that of the eight dimensions of the HAQ-DI ranged from 0.60 to 0.81.						
✓ Known-group validity was evaluated by a	determining HAQ-DI score	\checkmark The Kaiser-Mever-Olkin value was 0.967 (> 0.9) and the Bartlett test of sphericity							
differences between subgroups of each indicator;		returned a significant result ($n < 0.001$)							
✓ Effect sizes were then used to assess sensitivity of	of subgroup differences.	The fe			p < 0.001	O DI to its compare and	in a factor was		
DECILITE		▼ The fa			en or the HF	AQ-DI to its correspond	ing factor was		
KEJULIJ		accept	able (all > 0)	.60).					
Descriptive statistics		$\checkmark \text{ The fin} \\ 0.040$	ve model fit	indices are	χ^2/dt of 5.9	74, RMSEA of 0.071, H	RFI of 0.906, CFI of		
• A total of 1,000 patients were included in the	study (Table 1).	0.940,	and TLI OI	J.920.	1 1 • • `				
Table 1. Characteristics of responder	nts (N=1,000)	• Converg	gent validi	ty (see Ta	able 2):				
Characteristics	N (%)	\checkmark The to	tal HAQ-DI	score had	a strong neg	ative correlation with t	ne EQ-5D-5L utility		
Gender		 value (r = -0.724, p < 0.001). Known-groups validity: 							
Male	697 (69.7%)								
Female	303 (30.3%) 54 47 [12 4]	✓ The HAQ-DI scores differed significantly across subgroups (Table 3).							
Age (mean [SD]) Age group (vears)	34.47 [13.4]	Tabl	le 2. Correla	tions betv	veen the HA	Q-DI and the EQ-5D-	-5L(N = 1,000)		
18-29	36 (3.6%)					FO 5D 5I			
30-39	119 (11.9%)					EQ-3D-3L			
40-49	158 (15.8%)		Mobility	Self-		Pain/Discomfort	Anxiety/Depression		
50-59	292 (29.2%)	Drossing	0.5240			0.2705	0.4107		
60-69	206 (20.6%)	Dicssing	-0.3349	-0.0132	-0.3342	-0.3783	-0.410/		
70+	189 (18.9%)		-0.4311	-0.5207	-0.4888	-0.3728	-0.4011		
Kesidence	720(72.00/)	Eating	-0.4037	-0.5871	-0.4531	-0.2822	-0.3282		
Rural	720(72.0%) 280(28.0%)	walking	-0.4615	-0.4491	-0.4943	-0.4816	-0.4525		
Education level	200 (20.070)	Hygiene	-0.4597	-0.5548	-0.5094	-0.4207	-0.4257		
Primary or below	200 (20.0%)	Reach	-0.4530	-0.4747	-0.4922	-0.4432	-0.4443		
Junior high school	398 (39.8%)	Grip	-0.4119	-0.5538	-0.4628	-0.3090	-0.3419		
Senior high school	143 (14.3%)	Activity	-0.4933	-0.4873	-0.5402	-0.4873	-0.4886		

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• Sentsitivity (Tbale 3):

above 0.5.

Table 3. Known-groups validity for the HAQ-DI among different sub-groups (N = 1,000)						
	HAQ-DI					
	Mean (SD)	P value	Scheffe post hoc test	Effect size		
Number of chronic diseases		<0.001		0.539 (0.311, 0.767)		
I: 0 (N = 213)	0.648 (0.619)		I / IV/*** II /			
II: 1 (N = 446)	0.722 (0.584)		$1 < 1V^{***}, 11 < 1V^{***}$			
III: 2 (N = 222)	0.750 (0.526)		1^{1} , 11^{1} 1^{7}			
IV: ≥ 3 (N = 119)	0.972 (0.562)					
Hypertension		<0.001		0.404 (0.276, 0.531)		
Yes $(N = 404)$	0.880 (0.549)		1			
No (N = 596)	0.649 (0.587)		/			
Presence of tophi		<0.001		0.404 (0.276, 0.531)		
Yes $(N = 178)$	0.880 (0.549)		1			
No (N = 822)	0.649 (0.587)		/			
Severity of pain		<0.001		0.501 (0.338,0.665)		
0-6 (N = 424)	0.978 (0.518)		1			
≥6 (N = 576)	0.691 (0.584)		/			
Gout attacks in the last three months		<0.001		0.849 (0.718,0.980)		
I: 0 (N = 263)	0.479 (0.464)		/			
II: 1 (N = 536)	0.936 (0.586)		/			
Hospitalization in the past year		<0.001		1.022 (0.827, 1.217)		
Yes $(N = 779)$	0.523 (0.514)		/			
No $(N = 221)$	0.727 (0.568)		/			
Outpatient in the past three months	1.07 (0.562)					
Yes $(N = 446)$		<0.001	/	0.447 (0.296, 0.597)		
No $(N = 534)$	0.942 (0.587)		/			
EQ-VAS groups	0.686 (0.570)					
I: \geq 90 (excellent) (N = 298)		<0.001		0.225 (0.100, 0.349)		
II: 80–89 (good) ($N = 421$)	0.803 (0.548)		I < II * * *, I <			
III: 65–79 (fair) (N = 227)	0.673 (0.614)		III***, II < III**			
IV: < 65 (bad) (N = 54)		<0.001		1.825 (1.504, 2.144)		

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p<0.01; *p<0.001.

CONCLUSIONS

- sensitivity in measuring HRQoL of Chinese gout patients.
- future research.

References:

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 \checkmark Except for subgroups divided by hypertension (ES = 0.404), hospitalization in the past year (ES = 0.447), and outpatient in the past three months (ES = 0.225), effect sizes of all other subgroups were

• Chinese version of the HAQ-DI was verified to have satisfactory reliability, validity, and

• We recommend supplementing the responsiveness of the HAQ-DI to changes over time in

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