Comparison of psychometric Performance of Self-Complete and Proxy Versions of the Bangla EQ-5D-Y-3L and Factors Influencing Agreement

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Objectives

The EQ-5D-Y-3L, a widely used measure of health-related quality of life (HRQoL) in children. The tool was translated into Bangla and pilot-tested in Bangladesh.

Objectives
• Compare the psychometric properties of self-complete and proxy versions of Bangla EQ-5D-Y-3L.
• Assess agreement between versions.
• Identify socio-economic factors influencing agreement.

Methods

| Study setting and participants	Instrument and data collection	Data Analysis
• Two public schools (one urban and one rural) • Each covering Grades 1 to 12 • Children aged 8-18 years and their parents were recruited (240 parent-child dyads)	• Bangla versions of the EQ-5D-Y-3L (self-complete and Proxy 1) • Parent-child dyads completed EQ-5D-Y-3L & VAS • Acceptability and perception questions • Socioeconomic & demographic questions • Data collection: September 2024	• Descriptive statistics • Response rate, completion time, ceiling effects, reliability, and validity • Agreement using Prevalence-Adjusted and Bias-Adjusted Kappa (**PABAK**), • Validity: Spearman's correlation coefficient • Predictors : Logistic regression

Results

Fig.1 Gender distribution (n=120)

Female 54% Male 46%
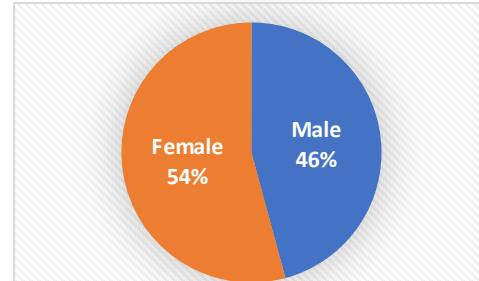
Fig 2. Age groups (Children, n=120)

8-11 Years 12-14 Years >15 Years
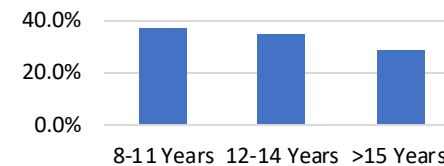
Fig 3. Residence (Children, n=120)

Urban Rural
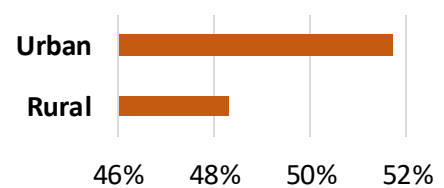
Table 1. EQ-5D-Y-3LResponses with agreements

Dimensions (EQ-5D-Y-3L)	Self-report, N (%)	Proxy, N (%)	Agreement
Mobility			
No Problem	45 (95.7)	47 (100)	**95.7%**
Some Problem	2 (4.3)	0.0 (0.0)	(PABAK: 0.92)
A lot of Problems	0.0 (0.0)	0.0 (0.0)	
Looking after myself			
No Problem	45 (95.7)	45 (95.7)	**95.7%**
Some Problem	2 (4.3)	2 (4.3)	(PABAK: 0.92)
A lot of Problems	0.0 (0.0)	0.0 (0.0)	
Doing usual activities			
No Problem	42 (89.4)	43 (91.5)	**85.1%**
Some Problem	4 (8.5)	2 (4.5)	(PABAK: 0.70)
A lot of Problems	1 (2.1)	2 (4.5)	
Having pain/discomfort			
No Problem	30 (63.8)	36 (76.6)	**53.2%**
Some Problem	17 (36.2)	11 (23.4)	(PABAK: 0.16)
A lot of Problems	0.0 (0.0)	0.0 (0.0)	
Feeling worried, sad or unhappy			
No Problem	35 (74.5)	34 (72.3)	**53.2%**
Some Problem	11 (23.4)	12 (25.5)	(PABAK: 0.16)
A lot of Problems	1 (2.13)	1 (2.1)	

Key findings

• Completion Time: 5.1 min (self), 5.2 min (proxy)

• Mean VAS: Self-report: 86.8; proxy: 88.6.

• Ease of Use: 96% (children) vs. 78% (parents) rated it easy or very easy

• 48% (self-report) vs. 58% (proxy) reported no problems

• Highest Agreement: Mobility & Self-care (PABAK≥0.70)

• Lowest Agreement: Pain/Discomfort (PABAK=0.10)

• Test-Retest Reliability: Mobility & Self-care (PABAK=0.92)

• Higher agreement: rural residents and middle-income participants.

Conclusions

The Bangla self-complete and proxy versions of the EQ-5D-Y-3L demonstrated feasibility and moderate agreement for measuring HRQoL among children in Bangladesh. Further research with larger samples is recommended to apply the versions across diverse groups.

Acknowledgement