Is a Longer Recall Period Better? A Study of EQ-5D-5L With a "1-Week" Recall Period in the General Population

MSR31

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BACKGROUND

- EQ-5D-5L is a widely used health-related quality of life (HRQoL) instrument where individuals were asked to rate their health based on "today" as the recall period.
- Studies involving individuals with chronic diseases such as respiratory diseases or dementia suggested that using "today" as a recall period may limit the instrument's ability to capture fluctuations in health.
- **Objective:** This study compared the psychometric properties of two EQ-5D-5L versions **differing in recall period (today vs. 1 week)** in the Singaporean general population.

METHOD

- Online surveys were completed by Singaporean participants aged ≥15 years (N=592) at two timepoints.
- Participants completed standard EQ-5D-5L with "today" (T) as the recall period and reported demographic and health characteristics at baseline.
- Participants completed the modified EQ-5D-5L with recall period of "1 week" (1W) and WHOQOL-BREF about 1 week after baseline.
- We compared the **ceiling effects, dimensional agreement** (Cohen's kappa, k), **agreement with EQ Index and EQ VAS scores** (paired t-test, ICC, and Cohen's d), **convergent validity** between the two recall periods. For **known-groups validity**, Index and VAS were compared between individuals with / without disability and chronic disease and individuals with different alcohol consumption and physical activity status.

RESULTS

Table 1. Participant characteristics at baseline.

Characteristics	Mean ± SD / n (%)
Age	48.3 ± 14.2
Sex: Male	328 (55.4)
Ethnicity: Chinese	515 (87.0)
Have at least one type of disability	37 (6.3)
Have at least one chronic condition	233 (39.4)

Table 2. Dimensional agreement between both recall periods.

Dimension	Cohen's kappa
Mobility	0.54 (Fair)
Self-care	0.43 (Fair)
Usual activities	0.38 (Slight)
Pain / Discomfort	0.56 (Fair)
Anxiety / Depression	0.61 (Moderate)

Table 3. Agreement between both recall periods with EQ Index & EQ-VAS.

Scores	TODAY	1 WEEK	Difference in means	Cohen's d effect size	p	ICC
EQ Index	0.86 ± 0.19	0.87 ± 0.18	0.01	-0.05	0.149	0.69 (moderate)
EQ-VAS	73.92 ± 18.46	73.47 ± 22.63	0.46	0.02	0.608	0.45 (low)

Figure 1. Cohen's d effect size for EQ Index and EQ-VAS using both recall periods.

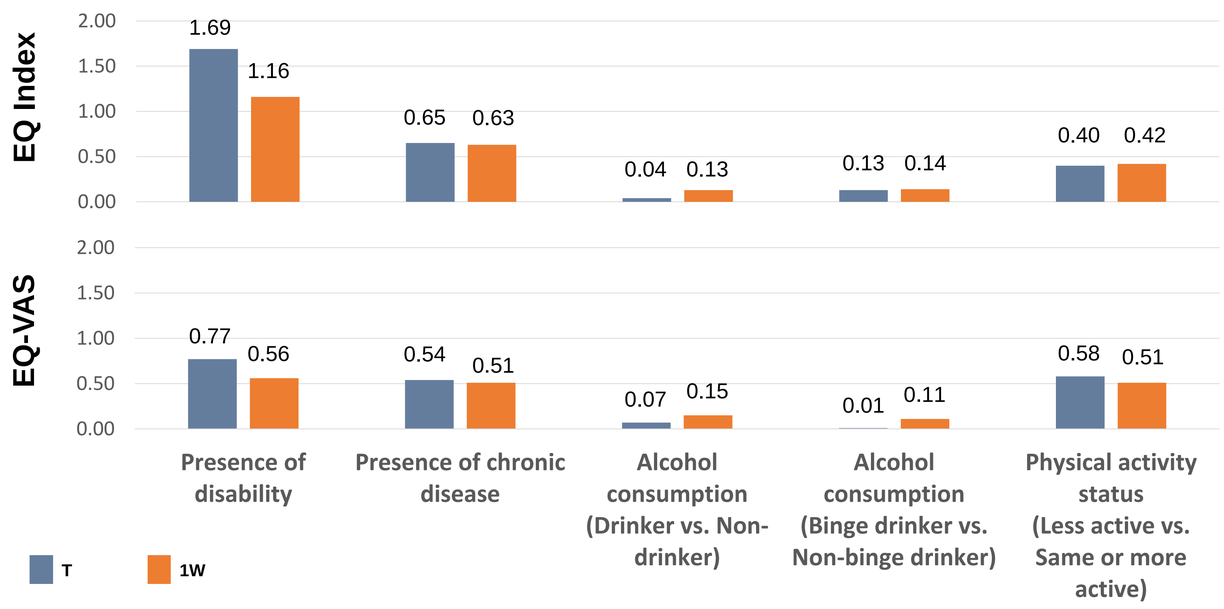

Table 4. Convergent validity (correlations) of both recall periods with WHOQOL-BREF.

	Recall period	WHOQOL-BREF (Physical)	WHOQOL-BREF (Psycho)	WHOQOL-BREF (Social)	WHOQOL-BREF (Environment)
Mobility	T	-0.45 ***			
	1W	-0.43 ***			
Self-care	T	-0.11			
	1W	-0.37 ***			
Usual activities	T	-0.38 ***	-0.17 *		-0.22 **
	1W	-0.46 ***	-0.22 **		-0.33 ***
Pain / Discomfort	T	-0.42 ***	-0.23 **	-0.27 **	
	1W	-0.39 ***	-0.26 **	-0.22 *	
Anxiety / Depression	T		-0.61 ***		
	1W		-0.68 ***		
EQ Index	T	0.58 ***	0.39 ***	0.32 ***	0.38 ***
	1W	0.59 ***	0.42 ***	0.31 ***	0.46 ***
EQ-VAS	T	0.64 ***	0.56 ***	0.43 ***	0.56 ***
	1W	0.54 ***	0.39 ***	0.31 ***	0.42 ***

0.00 to 0.30 (0.00 to -0.30) Negligible correlation; 0.31 to 0.50 (-0.31 to 0.50) Low correlation; 0.51 to 0.70 (-0.50 to -0.70) Moderate correlation; 0.71 to 1.00 (-0.71 to -1.00) High / Very high correlation; Not relevant

- **Ceiling effects:** The ceiling effects ("11111") of both recall periods are similar (T: 43.2%; 1W: 45.1%).
- **Dimensional agreement (Table 2):** The dimensional agreement between both recall periods ranged from 0.38 for usual activities (slight) to 0.61 for anxiety / depression (moderate).
- **Agreement in scores (Table 3):** Moderate agreement was observed between EQ Index generated using both recall periods (ICC: 0.69). The agreement between both recall periods in EQ-VAS was low (ICC: 0.45).
- **Convergent validity (Table 4):** The convergent validity between EQ-5D and WHOQOL-BREF was mostly similar regardless of the recall period used, except for the convergent validity between EQ self-care and WHOQOL-BREF physical domain (1W > T), EQ usual activities and WHOQOL-BREF environment domain (1W > T), and EQ-VAS and WHOQOL-BREF psychological domain (1W < T), and EQ-VAS and WHOQOL-BREF environment domain (1W < T)
- **Known-groups validity (Figure 1):**
  - **Presence of disability:** When comparing individuals with and without disability, T generated larger effect size for both EQ Index and EQ-VAS than 1W.
  - **Presence of chronic disease:** The effect sizes in EQ Index and EQ-VAS generated by T and 1W were similar between those with and without chronic disease.
  - **Alcohol consumption:** The effect size in EQ-VAS of individuals who consumed alcohol (vs. non-drinker) and binge drinker (vs. non-binge drinker) were larger when 1W recall period was used.
- **Physical activity status:** Comparing individuals who self-reported as less active than peers than those who reported similar or higher level of activeness than peers, using T as recall period generated higher effect size.

CONCLUSION

- The low Cohen's kappa and ICC in this study shows that the responses generated by TODAY and 1 WEEK recall periods are not identical, indicating fluctuations in health exist in the general population.
- However, the magnitude of difference seem to be small at the aggregated level, as evident by the similar overall mean of EQ Index and EQ-VAS between both recall periods.
- The effect sizes generated by both recall periods seemed to be different, especially between individuals with/without disability, individuals with different alcohol consumption status, and those with different level of physical activity involvement.

CONTACT INFORMATION

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