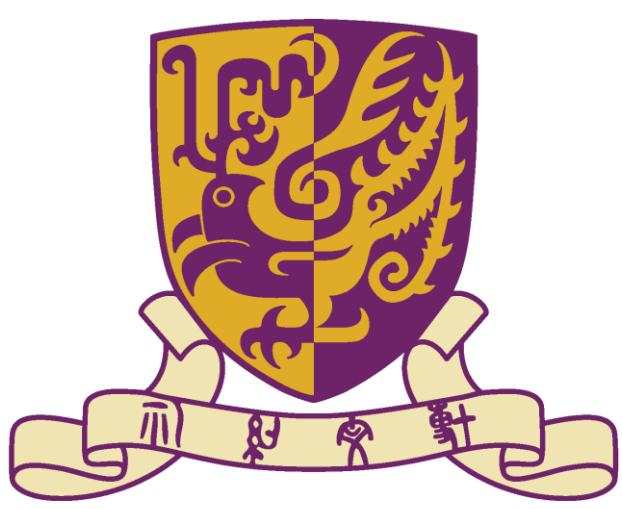


A Qualitative Exploratory Study on Developing and Selecting Potential Bolt-on for the EQ-5D Hong Kong SAR, China

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Background

The EQ-5D was built as a multi-attribute utility system to measure Health-related Quality of Life (HRQoL) and discussions on additional EQ-5D bolt-on dimensions had been emerging in recent years. The development of such bolt-on dimensions should be systematic and scientific to respect the generic nature of the original EQ-5D model, while the proposed bolt-on dimensions should improve the comprehensiveness and responsiveness of HRQoL measurements.

Objective

To identify and develop appropriate EQ-5D bolt-on dimensions for the Hong Kong SAR community.

Method

| Design | Face-to-face Interviews |
|-------------------|--|
| Time | March to August 2021 |
| Sample Size | $n=30$ |
| Sampling Criteria | Hong Kong SAR Permanent Residents aged ≥ 18 With Cantonese Speaking and Literacy Quota Sampling by Age Group, Gender and Education Level According to the Hong Kon SAR Census Data |

- A pool of potential bolt-on dimensions was prepared based on past EQ-5D bolt-on publications and other HRQoL instruments [1,2], while participants were encouraged to propose any related items
- Transcripts were analysed thematically, and ranking exercise was performed to support qualitative-quantitative comparisons.

Reference:

- Finch, A.P., et al., *An Exploratory Study on Using Principal-Component Analysis and Confirmatory Factor Analysis to Identify Bolt-On Dimensions: The EQ-5D Case Study*. Value Health, 2017. **20**(10): p. 1362-1375.
- World Health Organization, *The World Health Organization quality of life (WHOQOL) - BREF*. 2004, World Health Organization: Geneva.

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Results

Perception on ‘Health’ and ‘HRQoL’

- Being *pain-free* and *disease-free*
- Being able to *walk*
- Being able to *move around*
- Being able to *eat well*
- Being able to *sleep well*

| | Cumulative Top 3 Count | Total Rank Vote | Relative Ranking By Total Rank Vote |
|-----------------------------|------------------------|-----------------|-------------------------------------|
| Sleeping Quality | 22 | 78 | 1 |
| Interpersonal Relationships | 17 | 115 | 2 |
| Energy | 13 | 118 | 3 |
| Satisfaction | 14 | 129 | 4 |
| Appetite | 8 | 139 | 5 |
| Speech/ Cognition | 9 | 145 | 6 |
| Vision | 5 | 176 | 7 |
| Hearing | 7 | 180 | 8 |

Table 1 . Summary of the Ranking Exercise of Potential EQ-5D Bolt-ons

Sleeping Quality

“sleeping quality affects energy level, followed by vision, hearing and maybe sensory functions” (H003)

“sleeping was considered an essential recovery process from tiredness” (H007)

“sleeping quality and appetite are the basis of healthy living” (H018)

Table 2 . Quotes of Potential Bolt-on ‘Sleeping Quality’

- Highest Coding Frequency**
- Does not Solely Depends on Sleeping Time**
- Subjective Perception Which Linked to Various Biological Functions**

Interpersonal Relationships

“Seems like Interpersonal Relationship is the most important (bolt-on item... adding it (into the current EQ-5D) enriches the tool, as a brand new perspective” (H013)

“When I hold good interpersonal relationships, holding trust, or being trusted, my mental health should be enhanced.” (H018)

“... could be family, friends bringing me much positive energy, making me feel supported, this factor makes me pretty enjoy my own life...” (H019)

Table 3 . Quotes of Potential Bolt-on ‘Interpersonal Relationship’

- Highlighting the Casual Relationships between Interpersonal Relationship and Mental Health**

Perception on the EQ-5D-5L Instruments

- Focused on the *loss in HRQoL*
- Potential Overlapping** between 5 dimensions
- 66.7%** of respondents (n=20) stated: the current EQ-5D-5L was *not comprehensive* enough to describe health and HRQoL

Incorporating ‘Energy’ into ‘Sleeping Quality’ by Face Validity

“Energy and sleeping quality... it seems duplicated to me, say when you do not sleep well, it is an indication low or worsen energy...” (H023)

“Sleeping for eight hours would be enough, brings you great energy...if you can’t sleep well, you will have no energy” (H024)

Satisfaction

“The EQ-5D design... is lacking items related to social and interpersonal relationships...social well-being (aspect). ..., I found ...yes ‘Satisfaction’... this is also an important element, describing mentally...” (H013)

“... but by quality of life, satisfaction is somehow a mean to be an indicator to capture other meaningful information... could be the scarce happiness or not satisfied with personal achievements.... (H023)

Table 4 . Quotes of Potential Bolt-on ‘Satisfaction’

- The Interpretation of Satisfaction Varies**
- The Implication of a ‘Free’ Item**

Conclusions

- This study provided *qualitative evidence to select potential EQ-5D bolt-on* dimensions with respect to the culture and characteristics of the Hong Kong SAR
 - ‘Sleeping Quality’, ‘Interpersonal Relationship’, ‘Satisfaction’ were identified as potential EQ-5D bolt-ons in the Hong Kong SAR, China
 - Future research may *focus on testing and quantifying the improvements* imposed by introducing the shortlisted bolt-on dimensions