Using a multidimensional unfolding method to explore subjective constructions of HRQoL in a Chinese general population

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Background:
- Health-related quality of life (HRQoL) is a complex concept that consists of multiple domains, such as physical function, mental well-being and social/role function, with a diverse list of items that can be included in each domain.
- HRQoL is closely associated with people’s subjective assessment of their own health, it is crucial to include health items that are relevant and important to targeting populations’ subjective health evaluation.
- A limited number of researches investigating which health items of HRQoL are considered most important and relevant by lay people to be used in describing HRQoL.
- This study aimed to address this issue across a sample of a Chinese general population and to explore the lay conceptualisation of HRQoL.

Methods:
- 42 health items representing aspects of health considered as being important in a Chinese cultural setting (these included the 5 dimensions of EQ-5D): selected from a scoping review of Chinese generic HRQoL measures and a series of qualitative interviews conducted in China.
- 110 Chinese participants were asked to rank these statements of health items, from most important to least important (from 1 to 42).
- A type of multidimensional scaling (MDS) analytic method – unfolding – was conducted to analyse participants’ preferences for health items.

An Example of MDS:
MDS can represent dissimilarities between objects by distances between points in a multidimensional space, allowing researchers to visually explore the structure of the dataset (See the example below).

Results:
The unfolding program PREFSCAL yielded a two-dimensional arrangement for the 110*42 matrix of ranked preference data. A distance between a participant and a health item represents the preference of the participant for the item.

Limitations:
This method assumes that the degree of preference of a certain stimulus given by a respondent can be represented by a Euclidean distance but the validity of the assumption may not be true in general.

Health items used in this study contained Chinese specific concepts that may be relevant to a Chinese community only. Future studies using the multidimensional unfolding approach are recommended to further explore the subjective conceptualisation of HRQoL in other populations or within a cross-cultural context.

Conclusion:
This study used a novel approach to explore the subjective understandings of HRQoL in a Chinese general population. It indicates how lay people coming from a Chinese cultural setting may perceive health and which aspects of health are most important to them. The study also shows that multidimensional unfolding is a feasible approach to assess preference structures in a general population.