

Validity of a Revised Short Form-12 Health Survey Version 2 in Different Ethnic Populations

Maudrene LS Tan, ¹*MSc*, Hwee Lin Wee, ^{* 2,3}*PhD*, Agus Salim, ⁴*PhD*, Jeannette Lee, ¹*PhD*, Stefan Ma, ⁵*PhD*, Derrick Heng, ⁵*PhD*, E-Shyong Tai, ^{1,6}*PhD*, Julian Thumboo, ^{* 3,6}*FAMS (Rheumatology)*

Abstract

Introduction: The Short Form-12 version 2 (SF-12v2) is a shorter version of the Short Form-36 version 2 (SF-36v2) for assessing health-related quality of life. As the SF-12v2 could not be resolved into the physical- and mental-component summary score (PCS and MCS, respectively) in the general population of Singapore, this study aims to determine and validate the Singapore SF-12 version 2 (SG-12v2). **Materials and Methods:** The SG-12v2 was generated using the same methodology as the SF-12v2. Bootstrap analysis was used to determine if the SG-12v2 were significantly different from the SF-12v2. Content validity was assessed using percentage of variance (R^2) of the Singapore version of SF-36v2 PCS and MCS explained by the SG-12v2 items. Agreement between the SF-36v2 and the SG-12v2 was assessed using Bland-Altman diagrams. Criterion validity was demonstrated if effect size differences between SF-36v2 and SG-12v2 were small (Cohen's criteria). Known-group validity of SG-12v2 was reported for participants with and without chronic diseases. **Results:** Five items differed between the SG-12v2 and SF-12v2. Bootstrap analysis confirmed that SG-12v2 and SF-12v2 were significantly different. The SG12v2 explained 94% and 79% of the R^2 of the SF-36v2 PCS and MCS, respectively. Agreement was good and effect size differences were small (<0.3). Participants with chronic diseases reported lower SG-12v2 scores compared to participants without chronic diseases. **Conclusion:** The SG-12v2 offers advantage over the SF-12v2 for use in the general population of Singapore. The SG-12v2 is a valid measure and will be particularly useful for large population health surveys in Singapore.

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¹Saw Swee Hock School of Public Health, National University of Singapore, Singapore

²Department of Pharmacy, National University of Singapore, Singapore

³Department of Rheumatology & Immunology, Singapore General Hospital, Singapore

⁴Department of Mathematics and Statistics, La Trobe University, Australia

⁵Epidemiology and Disease Control Division, Ministry of Health, Singapore

⁶Department of Medicine, National University Health System, Singapore

Address for Correspondence: Prof Julian Thumboo, Department of Rheumatology and Immunology, Singapore General Hospital, Outram Road, Singapore 169608.

Email: julian.thumboo@sgh.com.sg