

**00554 Cultural Adaptation and Validation of Duke Activity Status Index (DASI) in Singapore**

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**Aims:** The DASI is a self-administered questionnaire to measure functional capacity of patients with cardiovascular diseases (CVD). It was originally developed in English for use in the US. We aimed (i) to adapt the DASI culturally for Singaporean patients and translate it into Chinese language, and (ii) assess its psychometric properties.

**Methodology:** The DASI was revised to make suitable for the local population, keeping the metabolic equivalent similar to the original questions, by an expert panel. The adapted English version was translated into Chinese, then back-translated into English by professional translators for assessing linguistic equivalence. The draft versions were administered to 12 English speaking and 10 Chinese speaking CVD patients. Final versions were produced using patients' feedback. The DASI was assessed for internal consistency, construct validity and concurrent validity in a sample of 125 CVD patients.

**Result:** Ten of the 12 questions were revised to adapt with local culture. An additional question was introduced as an alternative to a question asking ability to perform sexual activities, which might be sensitive to some patients. The psychometric analysis included 116 patients (79 English speaking, 37 Chinese speaking) who completed all the questions. The Cronbach's  $\alpha$  for internal consistency was 0.81 and 0.84 for the English and Chinese versions of DASI, respectively. The spearman's correlation between the DASI score and the New York Heart Association functional status and the Canadian Cardiovascular Society functional status for angina was -0.44 and -0.29, respectively, for the English version, and -0.49 and -0.34 for the Chinese version (all P-values <0.05). The exploratory factor analysis based on the combined sample of two versions identified two factors which were largely associated with items requiring higher and lower metabolic demand, respectively.

**Conclusion:** The Singapore versions of the DASI appear to be acceptable and valid for measuring functional capacity of patients with CVD in Singapore.