

Abstract

Background: Depression is one of the leading causes of impaired quality of life and poor functioning worldwide. The need for further assessment of individual symptom construct of depression is more pressing than ever with the advocate of a dimensional approach to mental illness in the Diagnostic and Statistical Manual of Mental Disorder, Fifth edition (DSM-5). To better understand and gauge the severity of anhedonia, one of the core symptoms of depression, the Dimensional Anhedonia Rating Scale (DARS) is developed which focuses on assessing the four pleasure domain of anhedonia, namely Pastimes/Hobbies, Foods and drinks, Social Activities and Sensory Experiences. Lacking any Asian data in the original study, a Chinese version of the Dimensional Anhedonia Rating Scale is thus developed and validated to facilitate future research in Hong Kong.

Aims: This study aimed to examine the psychometric properties of the Chinese version of the Dimensional Anhedonia Rating scale (C-DARS) in a cohort of depressed patients. Correlations between anhedonia rating and other clinical characteristics and comparison between patients with and without treatment resistant depression were carried out.

Method: The C-DARS was developed by backward and forward translations, and reviewed by an expert panel and a focus group. One hundred and fifty-one depressed patients were recruited. The internal consistency and test-retest reliability at two- to four-week interval were examined. Exploratory factor analysis was conducted to examine the underlying factor structure of the C-DARS. Concurrent validity was examined by the correlations between the C-DARS and the Chinese version of the Snaith Hamilton Pleasure Scale (SHAPS), while divergent validity was examined by the correlation of the C-DARS with the Hamilton Depression Rating Scale (HAMD). The Chinese version of the Patients Health Questionnaire (PHQ) and the World Health Organization Disability Assessment Scale (II) Traditional Chinese Version (WHODAS II CT) were administered for correlational study. Socio-demographic characteristics and pharmacological treatment of the patients were also collected for univariate analyses and regression analyses.

Results: The C-DARS showed excellent internal consistency (Cronbach's alpha = 0.93) and high test-retest reliability (intraclass correlation coefficient = 0.83). The factor structure of the C-DARS corresponded to the original DARS with four latent constructs measuring four different pleasure domains. Concurrent validity was established, with a negative correlation coefficient of -0.72 between the C-DARS and

the Chinese version of the SHAPS. Divergent validity was established by a negative correlation coefficient of -0.34 between the C-DARS and the HAMD. The C-DARS also demonstrated a moderate strength of association with functioning by the correlational analysis between C-DARS and Overall WHODAS II CT ($r = -0.391, p < 0.01$). In the regression analysis, C-DARS was found to be a statistically significant predictor of depression severity ($\beta = -0.362, p < 0.001$) and treatment resistance ($\chi^2 = 6.50, p = 0.011$).

Conclusion: The C-DARS is a psychometrically sound and valid measure of anhedonia severity in our study. It could be easily applied in a busy clinic and provide a comprehensive understanding of the hedonic deficit of patients with depression for treatment planning. The scale would also be helpful for future research as it enables a dimensional assessment of anhedonia.

Keywords: anhedonia, depression, treatment resistant depression, functioning,

Dimensional Anhedonia Rating Scale (DARS)