

Abstract

Background: Depression in schizophrenia is common and it is identified as a major risk factor for suicidal behaviour. The differentiation of depression from negative symptoms and extra-pyramidal side-effects of neuroleptic medication is difficult. The Calgary Depression Scale for Schizophrenia (CDSS) was developed specifically to assess depressive symptoms in schizophrenia. Previous studies have shown that it is reliable and valid, particularly in assessing depression regardless of negative symptoms and extra-pyramidal side-effects. There is no validated Chinese version so far.

Aim: To investigate the psychometric properties of the Cantonese version of the Calgary Depression Scale for Schizophrenia (CDSS-C)

Methodology: 52 Cantonese-speaking Chinese patients with schizophrenia admitted as in-patient for a psychotic episode, together with another 50 stable out-patients with schizophrenia were recruited. These subjects were interviewed with the Schedules for Clinical Assessment in Neuropsychiatry (SCAN) for diagnosis of major and minor depressive episode. They were also assessed with the Scales for the Assessment of Positive Symptoms (SAPS), the Scales for the Assessment of Negative Symptoms (SANS), the Simpson-Angus Scale (SAS) and the Beck Depression Inventory (BDI). Blinded to the results of these assessments, trained raters interviewed the subjects with the CDSS-C. Inter-rater and test-retest reliability was also examined. The optimal cut-

off scores were determined with the Receiver Operating Characteristics (ROC) curve, using the diagnosis from the SCAN as 'gold standard'.

Results: The overall Cronbach's alpha coefficient was 0.80 for in-patient and 0.81 for out-patient. Early wakening (item 7) was found to have lowest correlation with the total score in both in-patient and out-patient group. The intra-class correlation coefficient (ICC) for inter-rater reliability ranged from 0.76 to 0.87 ($p < 0.01$). The ICC for test-retest reliability was 0.86 ($p < 0.01$). The CDSS-C had significant correlation with the score of the BDI in the in-patient and the out-patient group. The CDSS-C did not show significant correlation with the SAS in both groups. However, there were significant correlations between the CDSS-C and the SAPS delusion score as well as the SANS total score in the in-patient group but not in the out-patient group. The Area under Curve (AUC) values of the ROC curves were significantly greater than 0.5 in both groups of subjects. The optimal cut-off scores for in-patients (2/3 for major depressive episode and 1/2 for both major and minor depressive episode) are lower than those for out-patients (7/8 for major depressive episode and 5/6 for both major and minor depressive episode).

Conclusion: The CDSS-C shows satisfactory reliability. It also demonstrates some aspects of validity including concurrent validity and discriminant validity against extrapyramidal side-effects. However, further studies are necessary to confirm its validity especially in in-patients with a psychotic episode.

Keywords: schizophrenia, depression, Calgary Depression Scale for Schizophrenia,
Chinese

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