

TITLE

3-Month Physical Activity Checklist: development and validation with Taiwanese adults with mental illness

ABSTRACT

Background: Physical activity has been shown to be an effective intervention to improve psychological and emotional functions for individuals with mental illness. Many scales have been used to measure physical activity in general populations, but most existing scales may not be easily applied to individuals with mental illness.

Objective: The aim of this study was to test the reliability and validity of the 3-Month Physical Activity Checklist developed to measure physical activity performance in Taiwanese adults with mental illness.

Design: A survey questionnaire design was used to gather cross-sectional data for the scale.

Data collection and participants: Data were collected from a convenience sample of patients recruited in 2007-2010 from two mental health clinics in central Taiwan. The study was conducted in three phases: test-retest reliability and scale restructuring ($n=28$), test-retest reliability and criterion-validity testing of the restructured scale ($n=60$), and cross-sample testing ($n=273$). In third phase, participants were diagnosed with anxiety disorders ($n=153$), schizophrenia ($n=98$), and bipolar disorders ($n=22$).

Measures and analysis: Data were collected by self-report 3-Month Physical Activity Checklist and an administered Chinese version of the 7-Day Physical Activity Recall. Data were analyzed by intraclass correlation coefficients and chi-square test.

Results: The restructured scale had 2-week test-retest reliability coefficients for light, moderate, and vigorous activity of 0.71, 0.78, and 0.86, respectively. Moderate to high agreement was found between the two scales for light ($r = .47$), moderate ($r = .64$), and vigorous activities ($r = .73$). Recommended physical activity levels were achieved

by 28.6% of participants ($n=78$) and differed significantly by type of mental disorder ($\chi^2=21.98$, $p<0.000$).

Conclusions: The 3-Month Physical Activity Checklist has acceptable reliability and criterion validity to measure physical activity performance of Taiwanese adults with mental illness. The scale can be used by mental health professionals to identify levels and types of physical activity, which may be used to evaluate treatment effects or nursing care outcomes for patients with mental illness.

Key words: 3-Month Physical Activity Checklist, mental illness, physical activity, reliability, validity.