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## Validation of the Sinhala version of the Morisky Medication Adherence Scale to determine medication adherence in patients with bipolar affective disorder on lithium therapy

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### Abstract

**Rationale, aims and objectives:** The Morisky Medication Adherence Scale (MMAS-8) is a self-reported scale used in assessing medication adherence in patients on chronic therapy. Medication adherence is a neglected area of research in Sri Lanka and in this study we have attempted to validate the Sinhala translation of the MMAS-8 to determine medication adherence among patients stabilized on lithium therapy for bipolar disorder (BD).

**Methods:** The MMAS-8 was translated to Sinhala with standard forward and backward translations from English to Sinhala. Patients with BD on stable doses of lithium were administered the Sinhala version of the MMAS-8. During the same visit, the serum lithium concentration was measured. Criterion validity was assessed using therapeutic serum lithium concentrations as the gold standard. Internal consistency was assessed using Cronbach's alpha and Spearman's rank correlation was used to assess test-retest reliability.

**Results:** From a sample of 240 patients, 82.1% were considered adherent, with serum lithium concentration >0.4 mmol/L. The mean MMAS-8 score was 6.95±1.3. According to the MMAS-8 scale, 13.3% reported low adherence while 43.3% reported medium and high adherence equally using MMAS cut offs <6, 6 to<8 and 8 respectively. The scale sensitivity to identify adherence at a cut-off score of 6 was 86.3%. The test-retest reliability value was 0.708 (p<0.001). Internal consistency was found with a Cronbach's alpha value of 0.608 for the 8 items of the scale.

**Conclusion:** The Sinhala version of MMAS-8 can be used as a sensitive instrument to identify medication adherence in patients with bipolar disorders.

### Keywords

Bipolar affective disorder, Eight-item Morisky Medication Adherence Scale, medication adherence, MMAS-8, person-centered healthcare, serum lithium, Sinhala version, validation

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### Introduction

Poor adherence to therapy for chronic diseases is a global problem and various studies have quoted different levels of adherence. Poor adherence is a particular problem in psychiatric illness as the insight of the patient about the illness and medication may be impaired. Bipolar disorder (BD) is a common psychiatric illness and the prevalence of poor adherence to therapy in BD has been quoted as

ranging from 12% to 64% [1]. Poor adherence to medication in BD is known to cause detrimental effects including poor symptom control, relapses and suicidal tendency [1-5]. Identifying patients who display poor adherence is therefore important in managing this chronic relapsing psychiatric illness. Lithium is a mood stabilizer used to treat BD since the 1970s and is still used as a first line drug [6]. As it has a narrow therapeutic index, therapeutic drug monitoring (TDM) is recommended every 3 months to determine the appropriate dose [7]. A