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Evaluation of Medication Regimen Complexity and its Association with Medication Adherence Among Malaysian Older Adult Outpatients in a Teaching Hospital: A Cross-Sectional Study in Pahang, Malaysia

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ABSTRACT

Introduction: Approximately 60% of Malaysian older adults have poor medication adherence. Nonetheless, the determinants of non-adherence among the Malaysian older adult population are still lacking. This research evaluates medication regimen complexity (MRC) and its association with medication adherence among Malaysian older adults. **Methods:** A cross-sectional study was conducted in outpatient settings of a teaching hospital in Pahang, Malaysia via in-person interview. Medication Regimen Complexity Index (MRCI) and Malaysia Medication Adherence Assessment Tool (MyMAAT) were used to collect patients' medical information and medication adherence status. Univariate (χ^2 and t-test) and multivariate (logistic regression) analyses using SPSS software were applied. **Results:** A total of 429 participants were recruited, with the mean of total MRC is 17.38 ± 7.07 and the prevalence of non-adherence is 51.0% (n = 219). While adjusted for co-variables, multivariate logistic regression indicates three significant determinants of non-adherence: (1) Total MRC (adjusted odds ratio/aOR= 1.375, $p < 0.001$), (2) partially self-managed medication (aOR = 3.625, $p < 0.001$) and (3) fully managed medication by the family members/caregivers (aOR = 8.138, $p < 0.001$). The logistic regression model fit is good based on the Hosmer & Lemeshow test ($p = 0.162$) and the area under receiver operating characteristic/ROC curve is 0.917. **Conclusion:** Non-adherence might occur due to high MRC and patient's inability to manage their medications by themselves. Further studies should increase the generalisability of the Malaysian older adult population from other states in Malaysia, since the study is conducted only in a unicentric based in Pahang, Malaysia.

Keywords: Medication regimen complexity, Medication adherence, Malaysian older adult, regression analysis, Cross-sectional study