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# The development and validation of Perceived Adherence Lifestyle Modification Questionnaire (PALM-Q) among type 2 diabetes mellitus patients

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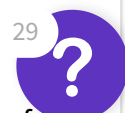
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**Abstract** The aim of this study was to develop and validate a questionnaire identifying the perceived adherence status among T2DM patients. This study used the exploratory sequential mixed method. Phase 1 of the study involved nine experts from the related field for the content validation, seven diabetes patients for the cognitive interview and 50 diabetes patients for pilot testing. In Phase 2, we collected 355 diabetes patients for construct validity assessment. Whereas 155 diabetes patients for



the criterion validity and cut-off point development. The initial items pool was 43 items with five sections: section A; demographic data; section B; knowledge, section C; barrier and section D; motivation. Using the Rasch Measurement Model (RMM), the item reliability obtained was 0.7, which indicates a good reliability value. Furthermore, the criterion validity between the PALM-Q and HbA1c results found a good negative correlation of -0.6. The questionnaire is able to categorize the perceived adherence level into three categories: presume perceived adherence, unpredictable perceived adherence, and perceived non-adherence. The PALM-Q is valid and reliable as a useful screening tool to assess the perceived adherence to lifestyle changes.

**Keywords**

**Author Keywords:** Lifestyle; Adherence; Questionnaire; Diabetes; Validity; Rasch

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