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Development and psychometric testing of a new theory-based tool to measure self-care of diabetes: the Self-Care of Diabetes Inventory®

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Abstract Content: **Background.** Self-care is vital for patients with diabetes mellitus (DM). Instruments measuring diabetes self-care present limitations and are not based on theory.
Aim. To develop a new *Self-Care of Diabetes Inventory* (SCODI) and to test its psychometric properties.
Methods. 40 items were developed based on clinical recommendations and grouped into 4 dimensions: self-care maintenance, monitoring, management, and confidence, based on the Middle-range theory of self-care of chronic illness. Content validity was assessed by a multidisciplinary panel of experts. A multi-centre cross-sectional study was conducted in a consecutive sample of 200 diabetes patients. Dimensionality was evaluated by explorative factor analysis. Multidimensional model based reliability was estimated. Multiple regression models estimating associations between SCODI scores and glycated haemoglobin (HbA1c), body mass index (BMI), and presence of diabetes complications, were used for construct validity. Test-retest reliability was assessed.
Results. Content validity ratio was 100%. A multidimensional structure emerged for the 4 scales. Multidimensional model based reliabilities were >0.80 for the 4 scales. Significant associations were found between self-care maintenance and HbA1c ($p = 0.02$) and between self-care monitoring and diabetes complications ($p = 0.04$). Self-care management was associated with BMI ($p = 0.004$) and diabetes complications ($p = 0.03$). Self-care confidence predicted self-care maintenance, monitoring and management (all $p < 0.0001$) confirming theory. Intra-class correlation coefficient was > 0.9 for each of the scales.
Conclusion. The SCODI is a valid and reliable theory-based tool to measure self-care in diabetes. Its use can innovate the approach to diabetes self-care in clinical practice and research.

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In case my abstract is not accepted for oral presentation it should still be considered for POSTER PRESENTATION: Yes

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