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Development of an assessment scale for treatment compliance in type 2 diabetes mellitus in Turkish population: Psychometric evaluation

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Introduction & Aim: Compliance to the treatment is important for the management of the type 2 diabetes mellitus and prevention of complications. The purpose of the study was to develop a scale and test the psychometric properties of it for the treatment compliance of diabetic Turkish population.

Methods: This multi-center study was conducted in four training and research hospitals. The sample was consisted of 350 convenient type 2 diabetic patients. Items of the scale were determined after a literature review and qualitative interviews with the patients. Items were psychometrically analyzed. Content validity of the scale was evaluated using the opinions from experts and pilot study. Principal component analysis and the VARIMAX rotation technique were used to evaluate the construct validity in exploratory factor analysis. Criterion validity was evaluated with the diabetes care profile. Reliability was evaluated with Cronbach's α coefficient and test-retest analysis of internal consistency.

Results: The scale consisted of seven factors that explained 47.36% of the total variance. The KMO test was conducted to determine whether the sample size was sufficient or not before the factor analysis. The KMO test result of the study was 0.75. The Cronbach's α value of the sample was 0.77. The test-retest reliability analysis result was $r=0.991$. We found a positive correlation between the total scores of the developed scale and diabetes care profile ($r=0.31$).

Conclusion: The results of the study demonstrate that the scale with 30 items is a valid and reliable scale in the evaluation of patient compliance with type 2 DM treatment. Thus, nurses and healthcare providers can evaluate the compliance of the type 2 diabetic patients to the treatment with this scale.

Biography

Ayla Demirtas has completed her first Master's degree from Gazi University in 1997, second Master's degree from Gulhane Faculty of Nursing in 2005 and received PhD from Gulhane Faculty of Nursing. Her interests include nursing care in diabetes mellitus, Geriatrics, Metabolic syndrome, chronic obstructive pulmonary disease and diseases of cardiovascular system. She is currently working in Gulhane Faculty of Nursing, University of Health Sciences, Turkey, as a Faculty Member.

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