World Academy of Science, Engineering and Technology
International Journal of Nursing and Health Sciences
Vol:12, No:09, 2018

Association of Daily Physical Activity with Diabetes Control in Patients with Type II Diabetes

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Abstract : Background: Combination of drug treatment, dietary management, and regular exercise can effectively control type II diabetes mellitus (T2DM). Performing daily physical activities other than structured exercise is much easier and whether daily physical activities including work, walking, housework, gardening, leisure exercise, or transportation have a similar effect on diabetes control is not well studied.Aims and Objectives: This study aims to determine whether daily physical activity undertaken by patients with T2DM is associated with their diabetes control. Design: A correlation study with prospective design. Methods: Purposive sampling of 206 patients with T2DM was recruited from a medical center in Central Taiwan. The International Physical Activity Questionnaire was used to assess daily levels of physical activities, and the Diabetes Compliance Questionnaire was used to assess medication and dietary compliance. Data of diabetes control (hemoglobin A1c, HbA1c)were followed up every three months for one year after recruitment. Results: In this study, the average age of the participants was 62.5 years (±10.4 years), and the average duration of diabetes since diagnosis was 13.2 years (±7.8), 112 of the participants were women (54.4%) and 94 of the participants were men (45.6%). The mean HbA1c level was 7.8% (±1.4), and 78.2% of the participants presented with unsatisfactory diabetes control. Because the participants were distributed across a wide age range, and their physical health, activity levels, and comorbidities might have varied with age, the participants were divided into two groups: 121 participants who were younger than 65 years (58.7%) and 85 participants who were older than 65 years (41.3%). Both younger (< 65 years) and older (> 65 years) patients with diabetes engaged in more moderate and low levels of physical activity (89.3% and 87%, respectively). Results showed that the levels of daily physical activity were not significantly associated with diabetes control after adjustment for medication and dietary compliance in both groups. Conclusion: Performing daily physical activity is not significantly correlated with diabetes control. Daily physical activity cannot completely replace exercise. Relevance to Clinical Practice: Health personnel must encourage patients to engage in exercise that is planned, structured, and repetitive for improving diabetes control.

Keywords : daily physical activity, diabetes control, international physical activity questionnaire (IPAQ), type II diabetes mellitus (T2DM)
Conference Title : ICN 2018 : International Conference on Nursing
Conference Location : London, United Kingdom
Conference Dates : September 27-28, 2018