SLEEP QUALITY AND SELF-CARE IN ADULTS WITH TYPE 2 DIABETES: A MULTICENTER OBSERVATIONAL STUDY

Leonardi S.*, RN, PhD Candidate[1]; **Fabrizi D.,** RN, PhD, Postoctoral Research Fellow in Nursing[1]; **Baroni I.,** RN, PhD, Clinical research nurse[2], **Caruso R.,** RN, PhD, Associate Professor of Nursing[1,3] ; **Luciani M.,** RN, PhD, Assistant Professor of Nursing[1]; **Ausili D**., RN, PhD, Full Professor of Nursing[1],

1 School of Medicine and Surgery, University of Milano - Bicocca, Monza, Italy
2 I.R.C.C.S.Policlinico San Donato, Italy
3 IRCCS MultiMedica Sesto San Giovanni, Italy
**Presenting author*

Background. Type 2 diabetes (T2DM) accounts for 90% of all cases. Sleep is important in diabetes management. Poor sleep quality can affect blood sugar control in people with T2DM, increasing glycated hemoglobin (A1c) and leading to diabetes-related complications.T2DM requires daily self-care behaviors, including adherence to therapies, blood glucose monitoring, diet and physical activity. Riegel's theory describes self-care in three dimensions: self-care maintenance, self-care monitoring, and self-care management. Despite evidence of a link between sleep and A1c, there is a lack of studies on the association between multidimensional sleep and self-care. It remains unclear whether this relationship influences blood sugar control.

Aim. To describe the association between overall sleep and its dimensions and self-care in patients with T2DM and to evaluate whether this relationship affects glycemic control.

Methods. A multicentre cross-sectional study was conducted using a convenience sample in adults with T2DM. We assessed glycemic control using A1c levels. Sleep quality was measured using Pittsburgh Sleep Quality Index (PSQI), and self-care behaviors was measured using Self Care of Diabetes Inventory (SCODI). Multivariable linear regression models were used to evaluate the association between sleep quality and self-care dimensions.

Results. Participants (N=300) were mostly male (64%) with a median age of 70 years [64-77]. A1C was above the goal of < 7% in 36% of patients. Poor sleep quality (PSQI > 5) was observed in 124 people (41%). Poorer overall sleep quality was associated with lower self-care maintenance (β = -.53, 95% CI -.88; -.18), whereas no significant associations were observed for other dimensions. Among the PSQI components, frequent sleep disturbances (≥3 times/week) were associated with poorer self-care maintenance (β = -11.70, 95% CI -22.97;-.43). Interaction analyses suggested that specific sleep quality components may influence the relationship between self-care behaviors and glycemic control.

Conclusions. Sleep quality is a fundamental behavioral factor that influences patients' ability to practice effective self-care. Recognizing sleep as key to T2DM management could transform care models. Incorporating sleep assessments and targeted interventions into diabetes education programs may enhance patients' engagement and improve metabolic outcomes

Keywords. Sleep quality; Type 2 Diabetes Mellitus; self-care ; Middle Range Theory; A1c; PSQI