



## TITLE: Association Between Poor Sleep Quality and Glycemic Control in Adult Patients with Diabetes Referred to Endocrinology Clinic of Guilan: A Cross-sectional Study

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### ABSTRACT (upto 300 words)

**BACKGROUND:** DIABETES IS A PREVALENT CHRONIC MEDICAL COMORBID CONDITION WORLDWIDE. DIABETES MELLITUS IS ASSOCIATED WITH VARIOUS SLEEP DISORDERS.

**OBJECTIVES:** WE AIMED TO DETERMINE THE PREVALENCE OF POOR SLEEP AND THE MAIN FACTORS OF SLEEP INTERRUPTIONS IN PATIENTS WITH DIA- BETES MELLITUS. WE FURTHER EVALUATED THE ASSOCIATION OF SLEEP INTERRUPTIONS WITH GLYCEMIC CONTROL IN THIS COHORT.

**METHODS:** WE CONDUCTED A CROSS-SECTIONAL STUDY ON 266 PATIENTS WITH TYPE 1 AND TYPE 2 DIABETES WHO WERE RECRUITED FROM A UNIVERSITY OUTPATIENT ENDOCRINOLOGY CLINIC. PATIENTS COMPLETED A CHECKLIST INCLUDING DEMOGRAPHIC AND DISEASE-RELATED CHARACTERISTICS IN ADDI- TION TO THE PITTSBURGH SLEEP QUALITY INDEX (PSQI) TO EVALUATE SLEEP QUALITY. USING THE PSQI CUTOFF SCORE OF 5, WE CREATED TWO SUBGROUPS OF GOOD SLEEPERS (GS) AND POOR SLEEPERS (PS).

**RESULTS:** OUR RESULTS SHOWED THAT GOOD SLEEPER AND POOR SLEEPER DIABETIC PATIENTS WERE SIGNIFICANTLY DIFFERENT REGARDING SEX, EMPLOY- MENT STATUS, BMI, PRESENCE OF DIABETES- RELATED COMPLICATIONS, HBA1C, AND 2-HOUR POSTPRANDIAL BLOOD SUGAR (2HPPBS) (ALL SIGNIFICANT AT  $P < 0.05$ ). THE MOST PREVALENT FACTORS OF SLEEP INTERRUPTIONS WERE “WAKING UP TO USE A BATHROOM”, “FEELING HOT”, “PAIN”, “HAVING COUGHS OR SNORES”, AND “BAD DREAMS”. AMONG THE SUBJECTIVE FACTORS OF SLEEP INTERRUPTION, PROBLEMS WITH SLEEP INITIATION, MAINTENANCE, OR EARLY MORNING AWAKENINGS IN ADDITION TO HAVING PAIN OR RESPIRATORY PROBLEMS SUCH AS COUGHING OR SNORING HAD THE MOST EFFECTS ON HBA1C.

**CONCLUSIONS:** OUR STUDY SHOWED SIGNIFICANT SUBJECTIVE SLEEP DISTURBANCES (BOTH QUALITY AND QUANTITY) IN PATIENTS WITH DIABETES MELLITUS (BOTH TYPE I AND II) AND ITS ASSOCIATION WITH DIABETES CONTROL. WE FURTHER IDENTIFIED THE MAIN FACTORS THAT LED TO SLEEP INTER- RUPTIONS IN THIS COHORT.

**KEYWORDS:** SLEEP-WAKE DISORDERS, DIABETES MELLITUS, QUALITY OF LIFE

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