

Diabetes and Its Relationship with Circadian Rhythm Sleep Disorders

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INTRODUCTION

Sleep disorders may increase the risk of diabetes mellitus. The objective of this study was to assess the association between circadian rhythm sleep disorders with diabetes.

Sleep disorders are conditions that interfere with or prevent you from receiving a good night's sleep, which can lead to daytime tiredness and other symptoms. From time to time, everyone can have difficulty sleeping.

Adults should sleep for at least seven to nine hours every night, according to experts; however some people require more and some require less.

Damage to microscopic blood vessels in your eyes (diabetic retinopathy), nerves (diabetic neuropathy), and kidneys (diabetic kidney disease) create many of the health concerns associated with type 1 diabetes (diabetic nephropathy). Type 1 diabetics are also more likely to have heart disease and stroke.

Diabetes type 1 is an autoimmune disease. Antibodies target your pancreas, causing it to malfunction. The organ has been destroyed and is no longer producing insulin.

Type 2 diabetes was previously known as non-insulin-dependent diabetes or adult-onset diabetes. However, it has become increasingly common in children and teenagers in the last 20 years, owing to an increase in the number of young people who are overweight or obese. Type 2 diabetes affects approximately 90% of diabetics.

Your pancreas normally produces some insulin when you have type 2-diabetes. However, either it is insufficient or your body does not utilise it properly. Insulin resistance is a condition in which your cells do not respond to insulin. It most commonly affects fat, liver, and muscle cells.

Type 2 diabetes is usually less severe than type 1. However, it can still create serious health problems, particularly in the tiny blood arteries that go through your kidneys, nerves, and eyes. Type 2 diabetes increases your chances of developing heart disease and stroke.

This cross-sectional study was conducted on 10044 adults aged 35-65 years. Anthropometric indices including weight, height, body mass index (BMI), and waist to hip ratio (WHR), from all participants were measured. Chi-square and independent T-test were used to assess bivariate associations and multiple logistic regression models were fitted to assess the effect of sleep disorder on diabetes while adjusting for the effect of associated factors.

Overall 10044 individuals took part in the study, half were female (53%). The mean \pm SD age was 47.32 ± 8.28 years. The prevalence of diabetes in the population was 8.4%. Around 1.6 % and 8.4% of the patients reported ASPD and DSPD, respectively. In multiple logistic regression model, DSPD was associated with a significant higher prevalence of diabetes (OR: 1.43, 95% CI (1.13, 1.82)).

CONCLUSION

Our study found a significant association between DSPD with increased prevalence of diabetes.

BIOGRAPHY

I have completed BSc at the age of 22 years from Shiraz University of Medical Sciences and MSc studies from Kermanshah University of Medical Sciences. I have published 4 papers in reputed journals and have been serving as a reviewing member of two journals.

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