

The Relationship between Amplitude and Stability of Circadian Rhythm with Sleep Quality and Sleepiness: A Population Study, Kerman 2018

Authors : Akram Sadat Jafari Roodbandi, Farzaneh Akbari, Vafa Feyzi, Zahra Zare, Zohreh Foroozanfar

Abstract : Introduction: Circadian rhythm or sleep-awake cycle in 24 hours is one of the important factors affecting the physiological and psychological characteristics in humans that contribute to biochemical, physiological and behavioral processes and helps people to set up brain and body for sleep or active awakening during certain hours. The purpose of this study was to investigate the relationship between the characteristics of circadian rhythms on the sleep quality and sleepiness according to their demographic characteristics such as age. Methods: This cross-sectional descriptive-analytic study was carried out among the general population of Kerman, aged 15-84 years. After dividing the age groups into 10-year demographic characteristics questionnaire, the type of circadian questionnaire, Pittsburgh sleep quality questionnaire and Euporth sleepiness questionnaire were completed in equal numbers between men and women of that age group. Using cluster sampling with effect design equal 2, 1300 questionnaires were distributed during the various hours of 24 hours in public places in Kerman city. Data analysis was done using SPSS software and univariate tests and linear regressions at a significance level of 0.05. Results: In this study, 1147 subjects were included in the study, 584 (50.9%) were male and the rest were women. The mean age was 39.50 ± 15.38 . 133 (11.60%) subjects from the study participants had sleepiness and 308 (26.90%) subjects had undesirable sleep quality. Using linear regression test, sleep quality was the significant correlation with sex, hours needed for sleep at 24 hours, chronic illness, sleepiness, and circadian rhythm amplitude. Sleepiness was the meaningful relationship with marital status, sleep-wake schedule of other family members and the stability of circadian rhythm. Both women and men, with age, decrease the quality of sleep and increase the rate of sleepiness. Conclusion: Age, sex, and type of circadian people, the need for sleep at 24 hours, marital status, sleep-wake schedule of other family members are significant factors related to the sleep quality and sleepiness and their adaptation to night shift work.

Keywords : circadian type, sleep quality, sleepiness, age, shift work

Conference Title : ICEHF 2019 : International Conference on Ergonomics and Human Factors

Conference Location : Bali, Indonesia

Conference Dates : January 14-15, 2019