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THE EFFECT OF COVID–19 OUTBREAK AND VACCINATION ON SLEEP QUALITY, SLEEP CHRONOTYPE (MORNINGNESS–EVENINGNESS), DEPRESSION, ANXIETY AND STRESS; A CROSS-SECTIONAL STUDY AMONG ISFAHANI RESIDENTS

AMRA B.¹, SOLTANINEJAD F.¹, GHADERI F.¹, MASNAVI E.², ROBILLARD R.³, HASSANZADEH S.^{4*}

¹ Bamdad Respiratory and Sleep Research Center, Department of Internal Medicine, Pulmonary and Sleep Ward, Isfahan University of Medical Sciences, Khorshid hospital, Isfahan, Iran

² Department of Obstetrics and Gynecology, School of Medicine and Social Determinants of Health Research Center, Yasuj University of Medical Sciences, Yasuj, Iran

³ Sleep Research Unit, Royal Ottawa Institute of Mental Health Research School of Psychology, University of Ottawa, Ottawa, Canada

⁴ Department of Internal Medicine, School of Medicine and Social Determinants of Health Research Center, Yasuj University of Medical Sciences, Yasuj, Iran

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ABSTRACT

Background. Have been reports suggesting physical or psychological complications associated with for anti–COVID–19 vaccination. We aimed to investigate the effect of COVID–19 infection and vaccination on sleep quality, chronotype, depression, anxiety, and stress among Isfahani population.

Materials and methods. 2000 adult residents (aged ≥ 18 years) were enrolled between January 10 to September 10, 2022. The participants completed three questionnaires: the Pittsburgh Sleep Quality Index Questionnaire, the Reduced Morningness–Eveningness Questionnaire, and the Depression, Anxiety and Stress Scale – 21 items, in addition to demographics (age and gender), history of COVID–19 (severity and management), and vaccination. The questionnaire scores were calculated and compared between the groups with and without COVID–19 infection, based on vaccination status and disease severity using IBM SPSS Statistics (version 25).

Results. The mean age of participants was 33.04 ± 10.52 years; and most were female (61.65%). A history of COVID–19 was positive in 926 individuals (186 with inpatient and 740 with outpatient management), and negative in the remaining participants ($N=1074$). Patients with COVID–19 had a greater Pittsburgh Sleep Quality Index score ($P=0.024$) with significant difference based on the severity of COVID–19 ($P<0.001$). Anxiety severity was different between patients with and without COVID–19 ($P=0.001$). Among all participants, 144 were unvaccinated for COVID–19, 191 had received one dose, and 1665 had completed immunization (two doses). Those who received two doses had a lower mean score on the Reduced Morningness–Eveningness Questionnaire, compared to unvaccinated and one-dose participants, and lower mean depression and anxiety scores, compared to the one-dose group ($P<0.05$). Chronotype and severity of depression and anxiety differed significantly by vaccination status ($P<0.001$).

Conclusion. COVID–19 infection and vaccination may affect sleep quality and anxiety levels. Therefore, strategies for managing sleep hygiene and improving sleep quality during COVID–19 rehabilitation are recommended, along with raising physicians' awareness for the proper diagnosis and treatment of these complications. with raising physicians' awareness for the proper diagnosis and treatment of these complications.

KEYWORDS: COVID–19, COVID–19 Vaccines, Sleep Quality, Chronotype, Depression, Anxiety, Stress

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ADDRESS FOR CORRESPONDENCE:

Sajad.Hassanzadeh,
Yasuj University of Medical Sciences
Shahid Dr. Ghorban Ali Jalil Street, Yasuj, 7591994799,
Iran.
Tel.: +98 (917) 7057209
E-mail : sajad.hassanzadeh@gmail.com