



Chronotype, Insomnia, and ADHD: A Discussion on the Confounding Effect of Shift Work in Medical Students

Kronotip, İnsomnia ve DEHB: Tıp Fakültesi Öğrencilerinde Vardiyalı Çalışmanın Karıştırıcı Etkisine Dair Bir Tartışma

✉ Tuğba Koca Laçın

University of Health Sciences Türkiye, Ankara Etlik City Hospital, Clinic of Psychiatry, Ankara, Türkiye

Dear Editor,

I was intrigued by the article by Kocakaya and Öztürk, titled “Do Chronotype and Insomnia in Medical Students Provide Insights into Attention Deficit Hyperactivity Disorder?” published in your journal. This study aimed to investigate the relationship between attention deficit hyperactivity disorder (ADHD) symptoms, insomnia, and chronotype among medical students. The findings revealed that depression, anxiety, a history of self-harm, and insomnia may serve as predictors of ADHD, whereas chronotype was not identified as an independent predictor of ADHD symptoms.

One well-established feature of ADHD is that sleep disturbances are more common in individuals with ADHD than in the general population. The most frequently observed sleep problems associated with ADHD include insomnia, sleep-related breathing and movement disorders, and circadian rhythm sleep-wake disorders. Specifically, insomnia affects approximately 40-80% of adults with ADHD.¹ However, the results regarding chronotype preferences in ADHD vary, as some studies suggest that patients lean more toward an evening chronotype, while others indicate that they are mostly intermediate types.² Recently, an increasing number of researchers have postulated that sleep disorders may be predictors of ADHD.³

The findings of Kocakaya and Öztürk align well with the existing literature. In their study, 87.2% of individuals identified as high risk for ADHD reported experiencing insomnia, and the ADHD group displayed a greater prevalence of delayed circadian rhythms. A notable strength of their study is the exclusion

of participants with bipolar disorder or those currently using antidepressants, as this helped to minimize the potential confounding effects of mood disorders. However, the study does not specify whether participants who engage in shift work were included.

Accurate identification and evaluation of sleep disorders (particularly insomnia) and chronotype preferences require that individuals have appropriate conditions for sleep in accordance with the diagnostic and statistical manual of mental disorders, 5th edition diagnostic criteria. Additionally, the current sleep issue must not be better explained by another sleep disorder and should not occur only during the course of another sleep disorder. The current data indicate that individuals who begin shift work are more susceptible to sleep disorders, decreased sleep duration, increased depression and stress levels, and disrupted circadian rhythms, with these effects often intensifying over time.⁴ Furthermore, shift workers frequently struggle to adhere to sleep hygiene recommendations and typically lack the conditions necessary for restorative sleep.⁵

Given that the sample in Kocakaya and Öztürk’s study consisted of third-, fourth-, and fifth-year medical students-who often work night shifts as part of their training-ascertaining whether shift workers were included in the study becomes crucial. The inclusion of individuals who work shifts and who experience alternating schedules may have affected the study outcomes. The discussion should emphasize that individuals working shifts may experience insomnia and could show variations in chronotype preferences and circadian rhythms, potentially leading to additional sleep problems that might exacerbate ADHD symptoms.

Address for Correspondence/Yazışma Adresi: Tuğba Koca Laçın, MD, University of Health Sciences Türkiye, Ankara Etlik City Hospital, Clinic of Psychiatry, Ankara, Türkiye

E-mail: tugbalacinkoca@gmail.com ORCID-ID: orcid.org/0000-0002-9098-5557

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Footnotes

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