

THE RELATIONSHIP BETWEEN SLEEP QUALITY, CHRONOTYPE, AND RESILIENCE AND SUICIDE RISK IN MAJOR DEPRESSION

Amine Kilictutan, Simge Seren Kirlioglu Balcioglu

Department of Psychiatry, Basaksehir Cam and Sakura City Hospital, Istanbul, Türkiye

BACKGROUND AND AIM: Major depressive disorder (MDD) is associated with a substantially increased risk of suicide. Although sleep quality, chronotype, and psychological resilience have each been linked to suicide risk in MDD, their combined effects remain unclear. This study examined the associations of these factors with suicide risk and their potential direct and indirect effects.

METHODS: (Ethics Committee Approval must be obtained and the number should be specified). Two hundred patients with MDD were consecutively recruited from inpatient and outpatient clinics. Written informed consent was obtained from all participants (IRB: 2025.03.98). Sociodemographic and clinical data were collected, and depression severity and suicide risk were assessed using the Hamilton Depression Rating Scale and the Columbia–Suicide Severity Rating Scale. Sleep quality, chronotype, and psychological resilience were evaluated using the Pittsburgh Sleep Quality Index (PSQI), Morningness–Eveningness Questionnaire, and Connor–Davidson Resilience Scale.

Multivariable linear regression analyses were performed to identify independent predictors of suicide risk. Mediation and moderation analyses were conducted using GLM-based models

with 5,000 bootstrap resamples. Statistical significance was set at $p < 0.05$.

RESULTS: Most participants (89.5%) had poor sleep quality (PSQI > 5). Poor sleep quality was associated with greater depression severity and lower resilience. An evening chronotype was linked to earlier illness onset, higher depression severity, poorer sleep quality, and reduced resilience. In multivariable analyses, number of hospitalizations and depression severity independently predicted suicide risk (Adj. $R^2 = 0.215$). Sleep quality had a direct effect on suicide risk, while resilience did not mediate but significantly moderated the relationship between depression severity and suicide risk.

CONCLUSIONS: These findings highlight sleep disturbance and chronotype as clinically relevant features associated with suicide risk in MDD. Importantly, higher psychological resilience attenuated the adverse impact of depression severity on suicide risk, suggesting that resilience-enhancing interventions, alongside systematic assessment of sleep and chronotype, may offer meaningful clinical benefit, particularly in patients with severe depressive symptoms.

Keywords: Depression, suicide, sleep quality, chronotype, psychological resilience