

Abstract

Introduction

Chronotypes are the descriptions of individual circadian preferences that vary from morningness (morning larks) to eveningness (night owls). Previous research had suggested that insomnia was more prevalent in eveningness and both insomnia and eveningness were associated with higher severity of depressive symptoms and suicidality. The aim of the current study is to explore the relationship between chronotype and depression while addressing the confounding effect of insomnia.

Study Design

A cross-sectional study of a cohort of patients with major depressive disorder (MDD)

Method

A cohort of psychiatric patients who suffered from MDD were identified by consecutive sampling in a 4-week clinic-attendance in 2006 at the Li Ka Shing Psychiatric Centre (LKSPC). They served as the study subjects and were invited for assessment in the current study. Diagnosis of MDD was ascertained by the Mini International Neuropsychiatric Interview (MINI), and the depression severity was assessed by Hamilton Rating Scale for Depression - 17 (HAM-D). Each subject also completed a battery of questionnaires including Morningness-Eveningness Questionnaire (MEQ), Hospital Anxiety and Depression Scale (HADS), Insomnia Severity Index (ISI), general sleep questionnaire (GSQ) and a 1-week sleep diary.

Results

Out of the 253 recruited subjects, 19.4%, 56.1% and 24.5% patients were classified as eveningness, intermediate, and morningness respectively according to the MEQ. The evening-type subjects had higher ISI score ($p < 0.01$), more severe depressive symptoms ($p < 0.01$), higher suicidality ($p < 0.05$) and lower remission rate ($p < 0.01$). Logistic regression analysis revealed that eveningness was associated with a 2.5-fold risk in having non-remission of the depression comparing to the non-eveningness group (OR = 2.50; 95% CI, 1.07 – 5.88, $p < 0.05$) after adjusted for insomnia severity and other confounding variables.

Conclusions

Eveningness was associated with more sleep disturbances, worse depressive outcomes and higher suicidality. The association of non-remission of depression with eveningness was independent of insomnia, suggesting a significant underpinning of circadian involvement in depression.

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