

## **Abstract**

### **Background**

Depression is prevalent among adolescents. There are also adolescents with sub-clinical level of depressive symptoms, namely subthreshold depression. Sleep disturbances are often linked to depression in adolescents but their connections with subthreshold depression in adolescents are yet to be discovered. In this study, we examined and compared the sleep profile of adolescents with major depressive disorder, adolescents with subthreshold depression, and healthy controls. Sleep parameters including as total sleep time (TST), wake after sleep onset (WASO), sleep onset latency (SOL) and sleep efficiency (SE), were used.

### **Methods**

Actigraphy sleep was measured in 70 adolescents (16 with major depressive disorder, 20 with subthreshold depression and 34 healthy controls) for two weeks. The National Institute of Mental Health Diagnostic Interview Schedule for Children, Version 5 (DISC-5) was used to determine the presence of psychiatric disorders in participants and the Center for Epidemiological Studies Depression Scale for Children (CES-DC) was used to measure depressive symptoms in participants. The comparison between sleep profiles of the three groups was determine by Kruskal-Wallis tests and full sample and per group linear relationships between sleep parameters and depression severity were determined via simple linear regressions.

### **Results**

The healthy control group was found to have significantly longer TST and WASO, and significantly shorter SOL than the subthreshold depression group. The healthy control group was also found to have significantly longer TST and significantly shorter SOL than the MDD