## Abstract

Depression is a common psychological disorder which is usually associated with persistent symptoms that lead to psychosocial impairments. Detection and intervention in early stages could effectively minimize tragic consequences of depression. Subjective evaluations are the most common methods in diagnosing depression which may be biased. Tradition diagnosing method is also limited as the patient could only be diagnosed when they seek help. The development of objective diagnostic tools for depression that can be used for continuous monitoring could help detecting depression earlier and more effectively.

Sleep disturbances are prevalent among depressive patients. The current review aims at providing an overview on up-to-date studies that investigating sleep-wake disturbance in this population using actigraphy. The meta-analysis showed that depressive people woke more at night as shown by a significant greater in WASO when compared to healthy controls. MDD patients also stay longer in bed as demonstrated by a greater TIB than the control group. These findings act as a foundation for the development of objective assessment method for depression.

*Keywords*: sleep-wake disturbances, depression, wake after sleep onset, time in bed, total sleep time, actigraphy, meta-analysis