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## The effect of Ashwagandha (*Withania somnifera*) supplementation on sleep, mood, and cognitive function in healthy university students

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University students often face high levels of stress and sleep disturbances due to their academic demands and lifestyle factors<sup>(1)</sup>. Ashwagandha (*Withania somnifera*), an adaptogenic herb, has shown the potential to mitigate stress and improve cognitive function<sup>(2)</sup>. However, limited research has examined its effects on these variables in university students. This study aimed to determine the effects of ashwagandha supplementation on sleep quality, mood, and cognitive function in university students.

A randomized, double-blind, placebo-controlled crossover study was used. Nine university students (5 males, 4 females; Age: 21 ± 1 years; BMI: 25 ± 2.5 kg/m<sup>2</sup>) were randomly assigned to receive 500 mg of standardized ashwagandha root extract capsules for 7 days or a placebo (encapsulated cornstarch) with a 7-day washout between treatments. Sleep was measured during the 7-day supplementation period using the Loughborough Daily Sleep Diary. Postsupplementation mood and cognitive function were measured by the Profile of Mood States (POMS) scale<sup>(3)</sup> and computerised Stroop, and Deary-Liewald simple and choice reaction tasks<sup>(4)</sup>. Paired sample t-tests were used to determine differences between the ashwagandha and placebo conditions with calculated effect sizes (Cohen's d).

Participants reported lower confusion indicator on the POMS following ashwagandha compared to the placebo (mean ± SD: 4.8 ± 2.0 vs 7.6 ± 3.1 arbitrary units; P = 0.03; d = -0.92). No other differences were found for any other mood indicators, sleep, or cognitive function parameters (P > 0.05).

These data suggest that ashwagandha may improve feelings of confusion in university students but further studies with larger sample sizes are needed to verify these findings and elucidate the underlying mechanisms.

### References

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