

Effects of a Novel Natural Ingredient Combination Containing Cannabinol-rich Hemp Seed Oil, and Herbal Extracts on Subjective Sleep Quality in Poor Sleepers

Introduction

Poor sleep quality is increasingly prevalent in modern societies and is associated with adverse long-term health outcomes, diminished quality of life, and reduced occupational productivity. Although numerous natural products are marketed for sleep support, many lack robust clinical substantiation. In the present study, we evaluated the effects of a novel formulation containing broad-spectrum hemp oil rich in CBD (cannabidiol) and CBN (cannabinol), and herbal extracts in individuals reporting poor subjective sleep quality.

Methods

An intervention study was conducted over a one-month period in adults with self-reported poor sleep quality. Sleep quality was assessed using the Pittsburgh Sleep Quality Index (PSQI). Participants used the study product nightly before bedtime throughout the intervention period. PSQI assessments were performed before and after the intervention period. Participants received weekly reminders to ensure compliance and to document their sleep patterns. Differences between pre- and post-intervention values were evaluated using a two-tailed Student's t-test; $p < 0.05$ was considered statistically significant.

Results

A total of 29 participants (mean age 50.7 years) completed the study. Reported adverse events were limited and mild, consisting of frequent urination ($n=1$) and gastric acid-related symptoms ($n=1$). The global PSQI score decreased by 35.9% following the intervention, indicating a statistically significant improvement in sleep quality. Significant improvements were also observed in sub-scores, including subjective sleep quality, sleep duration, habitual sleep efficiency, sleep disturbances, and daytime dysfunction. Non-significant reductions were observed in sleep latency and medication use. Females appeared to show a greater magnitude of response than males.

Conclusions

The tested combination of CBN, hemp seed oil, and herbal extracts was associated with significant improvements in overall subjective sleep quality and in multiple PSQI component domains in a population classified as poor sleepers ($PSQI \geq 5$). The intervention was well tolerated, with only mild adverse effects reported. These findings suggest that this formulation may represent a useful (adjunctive) approach for individuals experiencing poor sleep quality.

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