Hormonal birth control, nutrient deficiencies, and women's well-being

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Background

- HBC usage is associated with the depletion of essential micronutrients (e.g., Palmery et al., 2013)
- These nutrients are critical for neurotransmitter synthesis and energy regulation (e.g., Kennedy, 2016; Muscaritoli, 2021)

Method

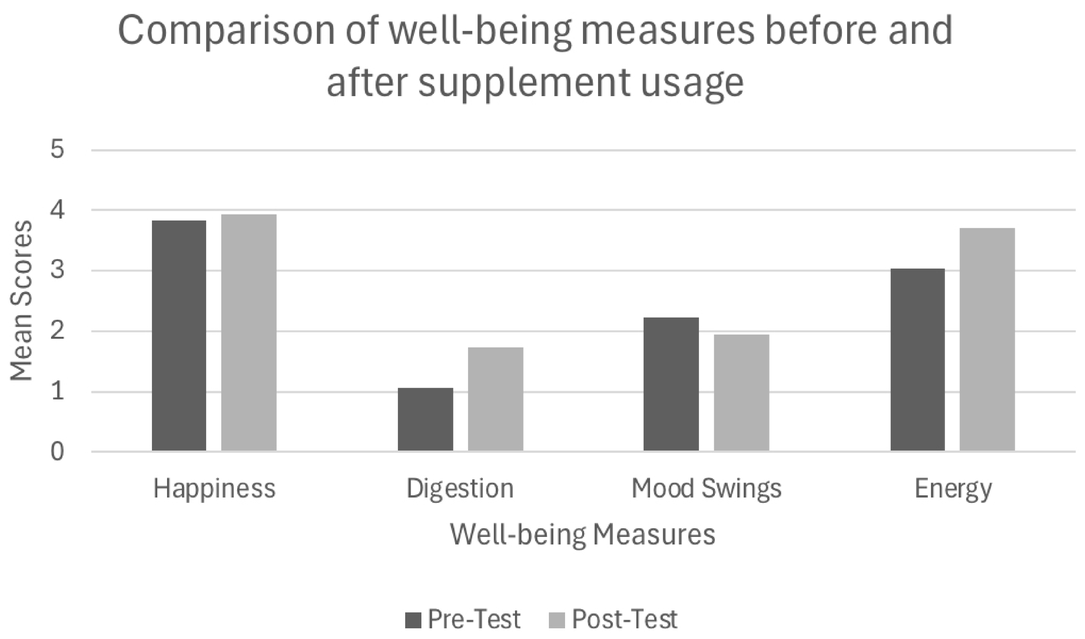
- College-aged women ($N = 3$) completed measures of happiness, digestion, mood swings, and energy on Day 2 of their HBC pill pack
- Participants answered the same measures after 28 days of taking a targeted nutritional supplement

Hypotheses

- Taking a targeted nutritional supplement will significantly increase HBC users' levels of happiness and digestive health while reducing mood instability and fatigue

Results

- There was no significant difference in happiness levels before taking the supplement versus after taking the supplement, $t(2) = -2.00$, $p = .18$
- There was no significant difference in digestive ability before taking the supplement versus after taking the supplement, $t(2) = -.99$, $p = .43$
- There was no significant difference in frequency of mood swings before taking the supplement versus after taking the supplement, $t(2) = .95$, $p = .44$
- There was no significant difference in energy levels before taking the supplement versus after taking the supplement, $t(2) = -2.44$, $p = .14$



Conclusion

- Current results suggest that nutritional supplementation may not significantly impact psycho-physiological well-being outcomes

Limitations

- The current sample size lacks the necessary power to detect a significant effect of treatment
- Increased recruitment and participation is required to evaluate true efficacy

References

Kennedy, D. O. (2016). B vitamins and the brain: Mechanisms, dose and efficacy—A review. *Nutrients*, *8*(2), 68. https://doi.org/10.3390/nu8020068

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Palmery, M., Saraceno, A., Vaiarelli, A., & Carlomagno, G. (2013). Oral contraceptives and changes in nutritional requirements. *European Review for Medial and Pharmacological Sciences*, *17*(13), 1804-1813.