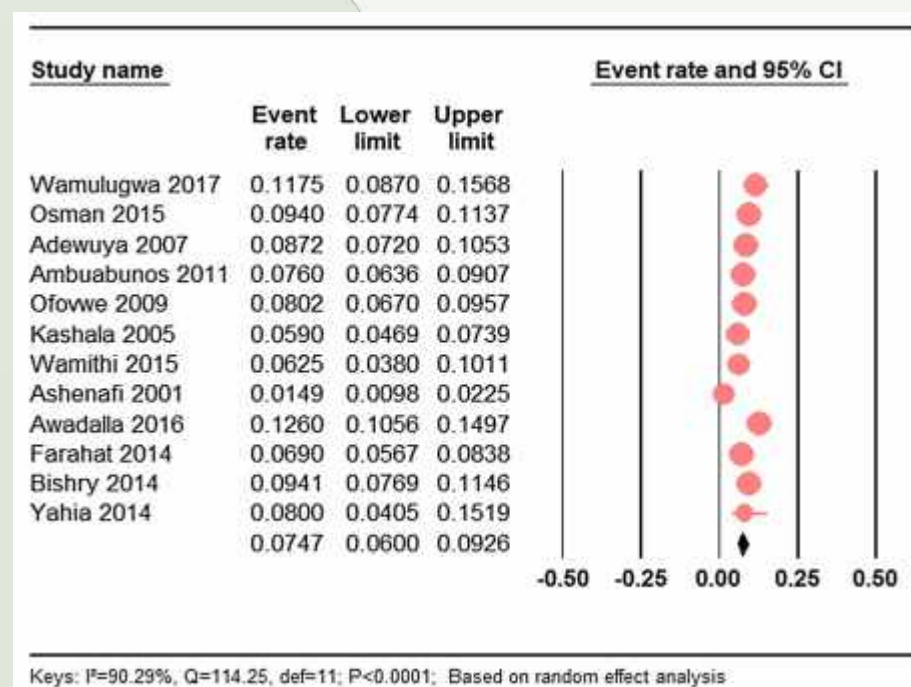


BROAD SPECTRUM MICRONUTRIENTS IMPROVE ADHD SYMPTOMS: SYSTEMATIC REVIEW AND CLINICAL TRIAL

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BACKGROUND



Keys: I²=90.25%, Q=114.25, def=11, P<0.0001. Based on random effect analysis
Ayano, G., Yohannes, K. & Abraha, M. Epidemiology of attention-deficit/hyperactivity disorder (ADHD) in children and adolescents in Africa: a systematic review and meta-analysis. *Ann Gen Psychiatry* 19, 21 (2020).

Diagnosis*

- Routine vs. private care
- Boys vs. girls

*Bussing, R., Zima, B. T., Gary, F. A., & Garvan, C. W. (2003). Barriers to detection, help-seeking, and service use for children with ADHD symptoms. *The journal of behavioral health services & research*, 30(2), 176–189.



METHODS

Objectives

We evaluated the best available evidence on efficacy of broad spectrum micronutrients on hyperactivity and inattentive symptoms, and conducted a trial to investigate efficacy in our setting.

	Open label Trial	Systematic review
Population	Children 6-13 years old	Children less than 18 years of age with ADHD
Intervention	Broad spectrum micronutrients	Broad spectrum micronutrients
Comparator	No intervention	No intervention
Outcome	Effect on hyperactivity and/or inattention	Effect on hyperactivity and /or inattention

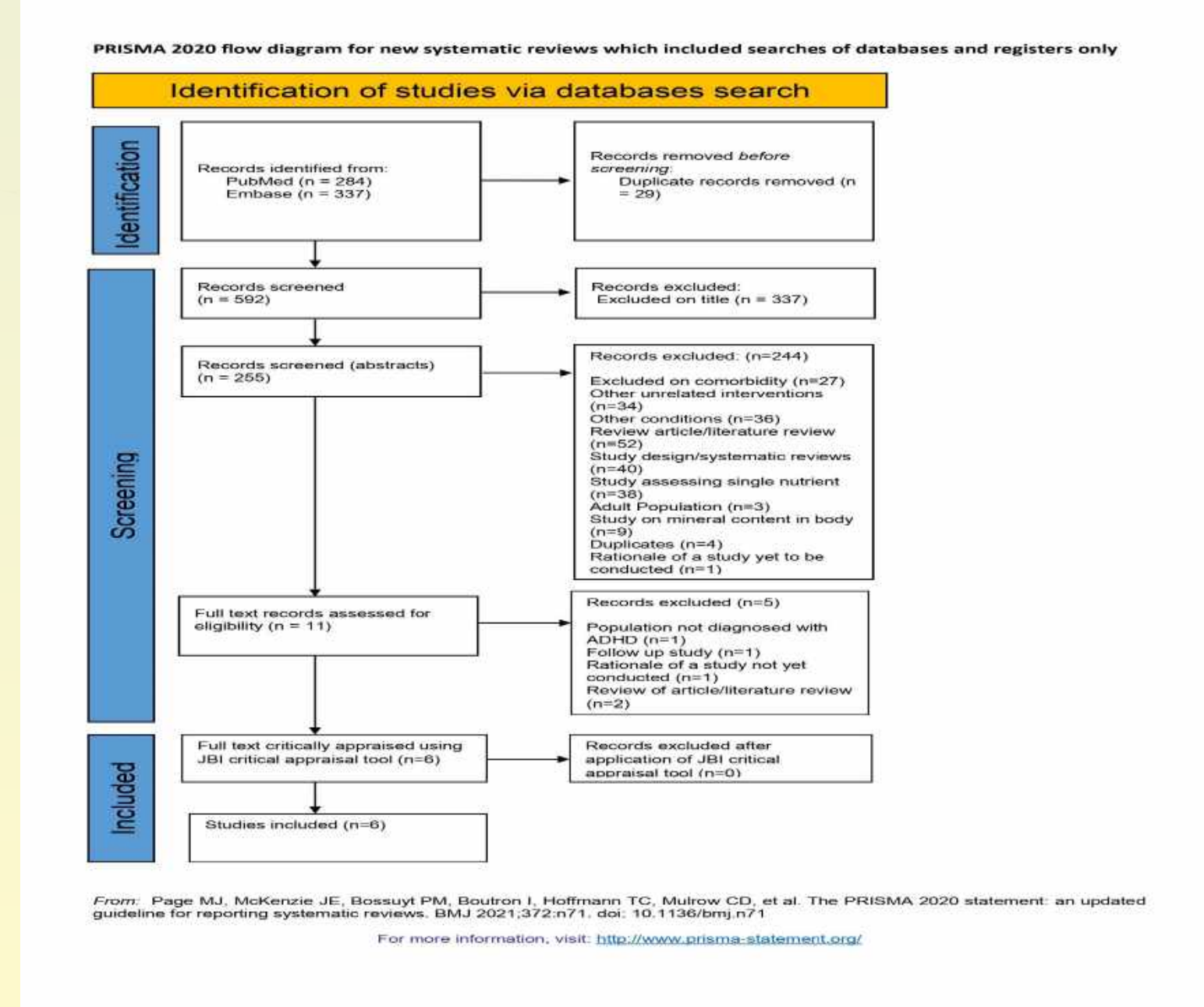
Open label trial

- 12 week follow up
- Conner's Parent Rating Scale-Revised Long Form and the Clinical Global Impression Scales

Systematic review

- Records from Pubmed and Embase from 1966

RESULTS



CONCLUSIONS

The review included six trials with significant heterogeneity in multi-nutrients administered, scales used to assess improvement in symptoms and duration of follow up. However, the multi-nutrient intervention groups showed significant improvement.

REFERENCES

- Ayano, G., Yohannes, K. & Abraha, M. Epidemiology of attention-deficit/hyperactivity disorder (ADHD) in children and adolescents in Africa: a systematic review and meta-analysis. *Ann Gen Psychiatry* 19, 21 (2020).
- Jamkhanda, P.G., & Khawaja, A. (2016). Role of norepinephrine reuptake inhibitors in attention deficit hyperactivity disorder: A mechanism-based short review. *International Journal of Nutrition, Pharmacology, Neurological Diseases*, 6, 146 - 151.

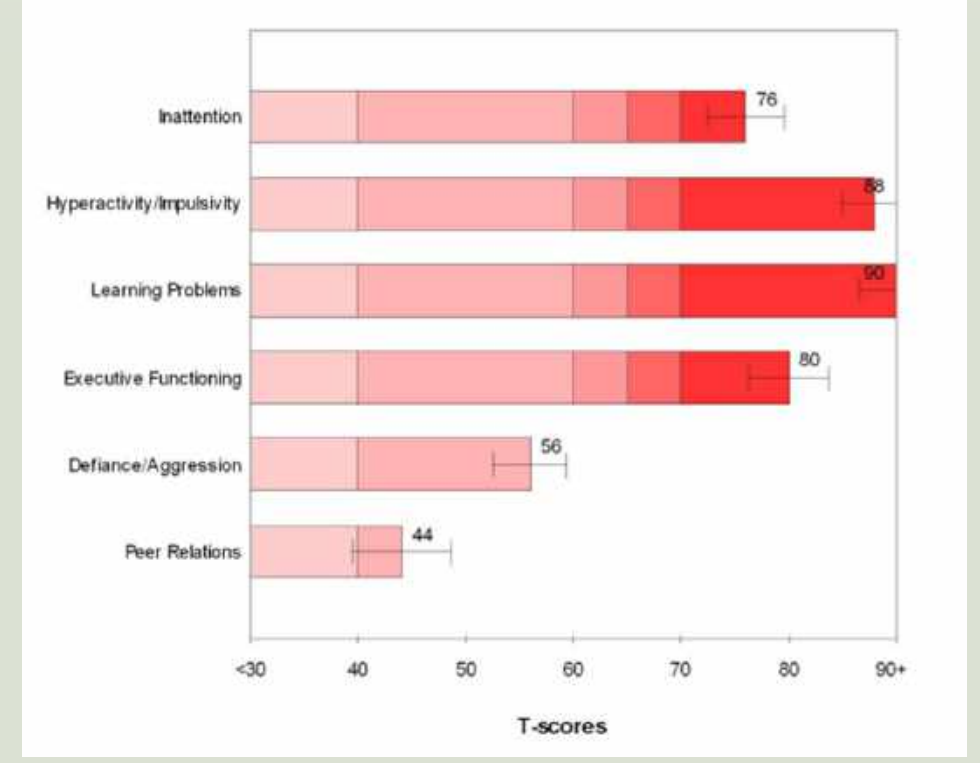
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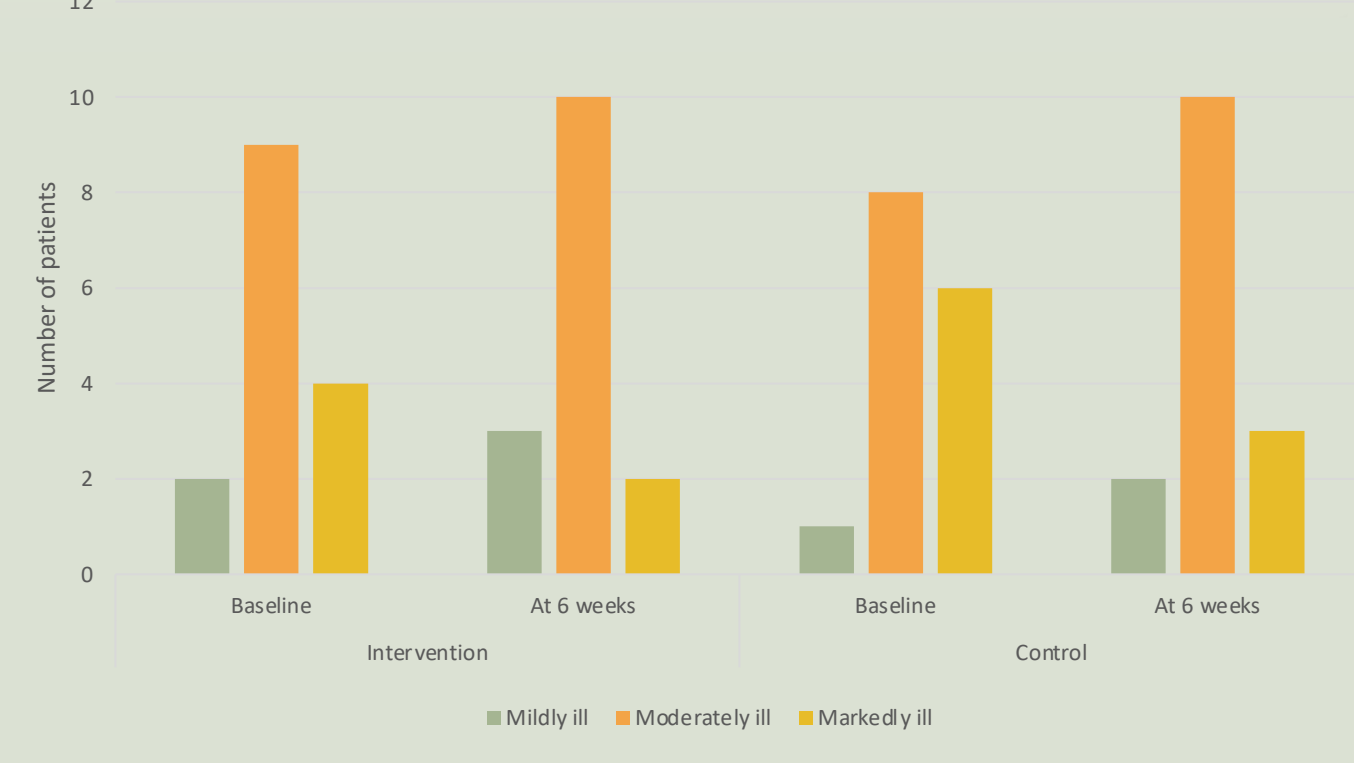
RESULTS

We recruited 30 children with a diagnosis of ADHD for the clinical trial. The median age was X years. X were female and Y were male.

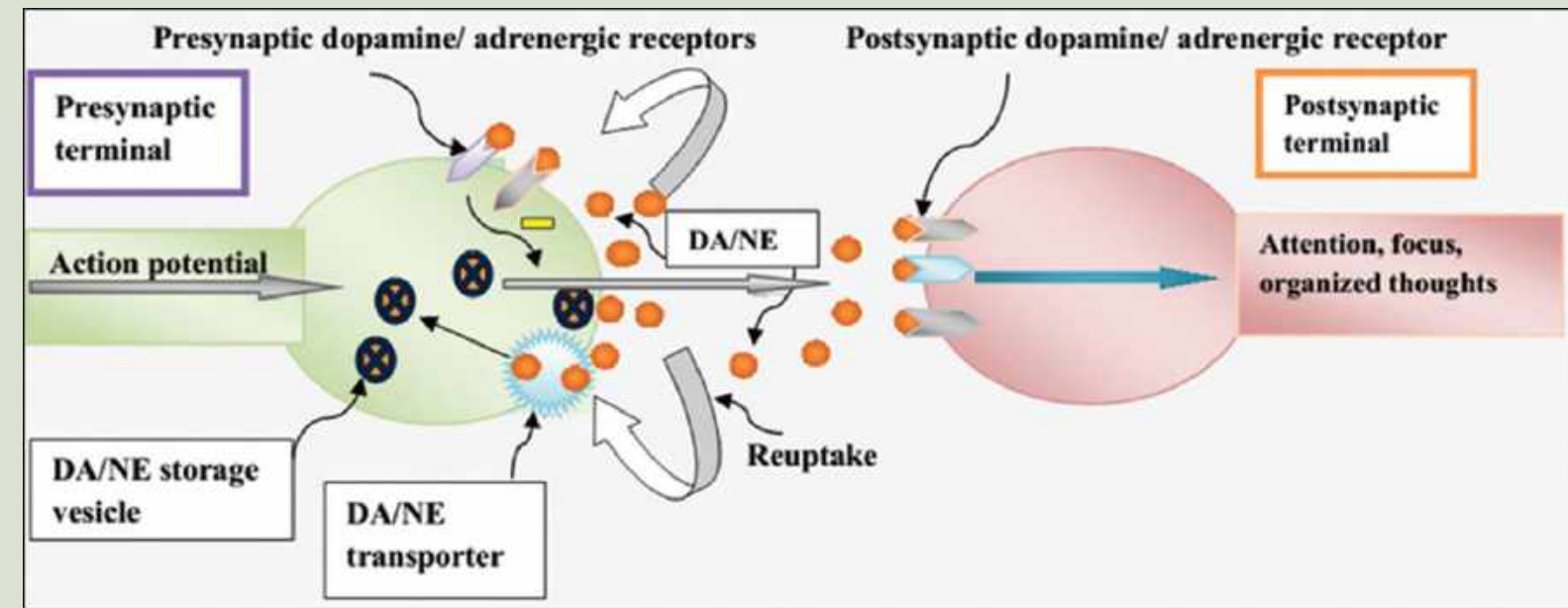
Conners Parent Rating Scale-Revised (L)



Clinical Global Impression Scale



Broad spectrum micronutrients



- Availability
- Adverse drug reactions
- Cost
- Scalable
- Prevalent micronutrient deficiencies

Jamkhanda, P.G., & Khawaja, A. (2016). Role of norepinephrine reuptake inhibitors in attention deficit hyperactivity disorder: A mechanism-based short review. *International Journal of Nutrition, Pharmacology, Neurological Diseases*, 6, 146 - 151.

