

EFFECTS OF SUPERBRAIN YOGA EXERCISE ON THE BEHAVIORAL INDICATORS LEADING TO ATTENTION DEFICIT WITH HYPERACTIVITY DISORDER (ADHD): A PRE-POST COMPARATIVE STUDY

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Purpose: Impact of learning difficulties on mental health and high prevalence of ADHD in Uruguay call for brief, safe, low-cost therapeutic interventions (Viola, Garrido & Varela, 2008).

General Objective: Test tools for improving behavior of school children in the classroom.

Specific Objectives: Gather evidence on the efficacy of Superbrain Yoga (SBY) (Choa, K.S., 2005) to improve classroom behaviors involved in ADHD.

Scientific Questions: Does regular practice of SBY improve behaviors involved in ADHD? Is it a harmless practice? How long does it take to produce significant results? Do effects last after practice is discontinued?

Working Hypothesis: Superbrain Yoga improves classroom behavior descriptor scores.

Method: Measure behavior variables with Conners Teachers Rating Scale – Hyperactivity Index (CTRS-HI Spanish, abbreviated 10-item version -Conners 3AI) at Baseline, after 2 months and after 5 months of daily school-day practice (5 days a week) 7 to 21 times/day. Behavior descriptors: 1) Constantly fidgeting; 2) Temper outbursts, explosive, unpredictable behavior; 3) Inattentive, easily distracted; 4) Disturbs other children; 5) Appears as angry or withdrawn; 6) Mood changes quickly and drastically; 7) Restless or overactive; 8) Excitable, impulsive; 9) Fails to finish things he/she starts; 10) Easily frustrated. Teachers must rate this behavior as “Not at all” (Score = 0); “Just a little” (Score = 1); “Pretty much” (Score = 2); “Very much” (Score = 3). Maximum potential score: 30. Clinical population would rate above 17 (no scores provided to teachers).

QUESTIONARIO DE CONDUCTA DE CONNERS PARA MAESTROS
(Conners 3-AI, HI-2)
(C.C.E.; Teacher's Questionnaire, C. Keith-Connors) Forma Abreviada.

Nombre completo del niño(a):	
Fecha de nacimiento (d/m/a):	
Edad (años cumplidos):	
Sexo:	
Doc. Ident. No.:	
Nivel y año escolar (Ej.: Primaria, 4º):	
Nombre de la escuela:	
Nombre completo del padre, madre o responsable:	
Nombre completo del (a) Maestro(a):	
Fecha de aplicación (d/m/a):	

	Nada	Poco	Bastante	Mucho
1. Tiene excesiva inquietud motora.				
2. Tiene explosiones impredecibles de mal genio.				
3. Se distrae fácilmente, tiene escasa atención.				
4. Muestran frecuentemente a otros niños.				
5. Tiene aspecto enfadado, furioso.				
6. Cambia bruscamente sus estados de ánimo.				
7. Intempestivo, siempre en movimiento.				
8. Es impulsivo e intilable.				
9. No termina las tareas que empieza.				
10. Sus esfuerzos se frustran fácilmente.				
TOTAL (dejar en blanco para el investigador)				

20 children in the sample did not score any points at baseline. After 5 months of practice of SBY, they still did not score any points of disruptive behavior. This may provide evidence of the safety of the practice.

Sample: 90 school children in state-run school in Tacuarembó, Uruguay. Medium/low social economic demographics.



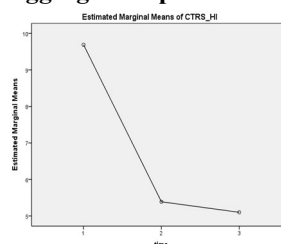
Independent variable: Superbrain Yoga Exercise



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RESULTS

Aggregate improvement: 44.4% at 2 months; 47.4% at 5 mos.



CTRS-HI mean scores at **baseline**, then at **2 months** of practice, then at **5 months** of practice.

Improvement for Grades 3 and 4 only: 62.7% at 2 months; 79.3% at 5 months (this was the only group n=55 where regular proper practice throughout the full 5 months was ascertained).

Improvement for Grade 5 only: 60.7% after 2 months (in line with grade 3 and 4); 66.3% after 5 months. Grade teacher frequent absences could account for improvement slowdown vs. grades 3 and 4.

CONCLUSIONS: This study seems to indicate that regular practice of Superbrain Yoga improves classroom behaviors involved in ADHD in school children. We may infer harmlessness of the practice by those children who did not score any disruptive behavior points at any of the three measurements. The performance of grades 3 and 4 seems to show that overall behavior improvement could be as high as 79% if proper practice is ascertained throughout the whole 5 months. Grade 5's outcome may indicate that if regular practice is suspended, the children may bounce back to previous patterns of disruptive behavior. Significant overall results were evident after barely 2 months of practice. Practical significance is of utmost importance, considering SBY low cost in energy, time and money.

REFERENCES. Choa KS (2005) *Superbrain Yoga*. IISPF:Manila; Viola, L. Garrido, G. & Varela, A (2008) *Estudio epidemiológico sobre la salud mental de los niños uruguayos*. Clínica de Psiquiatría Pediátrica, Facultad de Medicina, UDELAR, Montevideo, Uruguay