

Cotswold Community Study

Dr. Jackie Stordy, Mr. Andrew Thomas
April 2007

The effect of a long chain polyunsaturated fatty acid supplement on boys with severe behaviour and emotional problems

Participants

- 19 boys at the Cotswold Community
- Age 8-16y, mean 12.6y (SD2)
- 1 boy was receiving medication for ADHD (methyl phenidate)
- 1 boy refused to take the supplement
- 1 boy consent to take the supplement was withheld

Assessments

- Conners' Parent rating scale
- Conners' Teacher rating scale
- Routine data collected on incidents, restraints and restraint duration

Study Design

- 11 weeks baseline/ 1 set of Conners' rating scales
- 20 weeks supplementation at end 1 set of Conners' rating scales
- Continuous record of incidents, restraints and grade of restraints throughout baseline and supplementation.

Daily nutrient supply from supplement (Efalex)

- 480mg DHA
- 108mg EPA
- 96mg GLA
- 36mg AA
- 30mg vitamin E

What changed? Teacher rating % improvement, raw scores

Subscale	% change	P value
Oppositional	26	<0.006
Cognitive problems/ inattention	22	<0.002
Hyperactivity	32	<0.001
Social problems	35	<0.001

What changed? Teacher rating % improvement, raw scores

Global Scale	% change	P value
ADHD Index	26	<0.001
CGI restless impulsive	29	<0.001
Global Total	20	<0.004

What did not change? Teacher rating, raw scores

- Anxious/shy
- Perfectionism
- CGI emotional lability

Interpreting T scores

Low scores are good

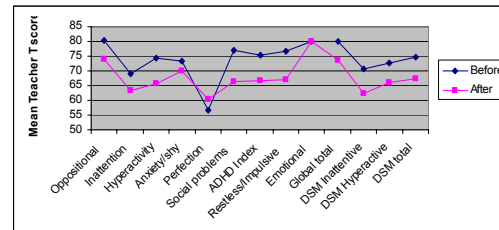
- 70+ markedly atypical, significant problem
- 66-70 moderately atypical, significant problem
- 61-65 mildly atypical, possible significant problem
- 56-60 slightly atypical, raise concern
- 45-55 average should not raise concern

What changed? Teacher rating % improvement, raw scores

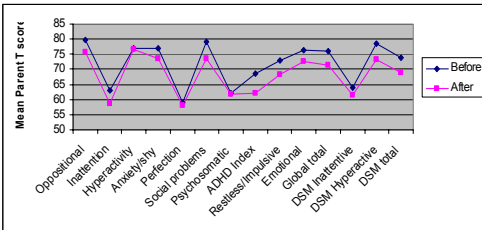
DSM-IV Global Scale	% change	P value
Inattentive	27	<0.001
Hyperactive-impulsive	25	<0.001
Total	26	<0.001

But how do these boys compare with the whole population?

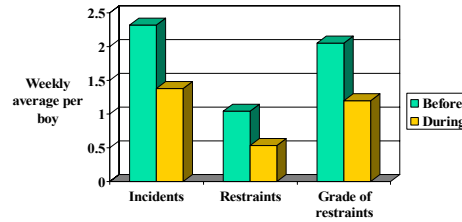
Mean T scores before and after 20 weeks supplementation (Teacher rating)



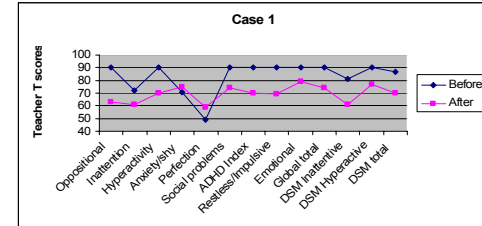
Mean T scores before and after 20 weeks supplementation ('Parent' rating)



Average weekly incidents and restraints for 12 weeks before and during 20 weeks supplementation - 17 boys



Case 1 Teacher rating before and after 20 week's supplementation with LCPs while on methyl phenidate



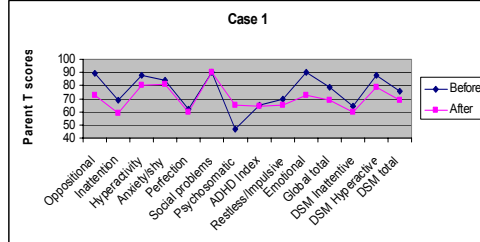
Changes in routinely collected data

Incidents, restraints and grades of restraints

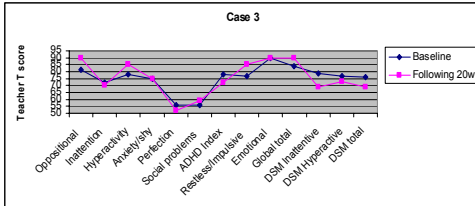
Average weekly incidents and restraints for 17 boys supplemented for 20 weeks and 2 boys who did not take supplement

	Supplemented % change (p)	No supplement % change (p)
Incidents	- 39 (<0.01)	-17 (ns)
Restraints	-51(<0.001)	+2 (ns)
Restraint grade	- 47 (0.01)	- 2 (ns)

Case 1 Parent rating before and after 20 week's supplementation with LCPs while on methyl phenidate



Case 3 Teacher rating during 11 week baseline and following 20 weeks without supplement



Working hypothesis

Cotswold Community Study

Supplementation improved scores for social problems and ADHD behaviours, some boys moved from significant problems to population averages

