The Positive Illusory Bias in Children with ADHD and Learning Disabilities: Development and Measurement Issues

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Overall Goal of Symposium

Extend the findings of previous research on Positive Illusory Bias in children with ADHD and Learning Disabilities by examining their perceptions of their problem behaviours.

This research was funded by the Social Sciences and Humanities Council of Canada

What is the Positive Illusory Bias (PIB)?

A disparity between self-report of competence and actual competence such that self-reported competence is substantially higher than actual competence

(Hoza et al, 2002)

Measurement of PIB

- Discrepancy between
  - self-reports of competence or problems and reports of parents or teachers
  - predictions or evaluations of performance on a task and actual performance
- Discrepancy > typically functioning children

Evidence for PIB: ADHD
Self-report vs. Parent or Teacher

Citation	Age	Sample	% male	Criterion
Evangelista et al, 2007	7-10	ADHD=67 Ctl=40	56	Teacher
Hoza et al, 2004 CP, DEP, LA	7-10	ADHD=487 Ctl=287	80	Parent, Teacher Comorbidity
Hoza et al, 2002 CP, DEP, LA	7-13	ADHD=195 Ctl=73	100	Teacher Comorbidity
Owens & Hoza, 2003	9-12	IA=38 HICB=59 Ctl=83	76	Teacher Achievement Scores

Owens et al, 2007

Conclusion: Ratings Studies

- Compared to controls, children with ADHD, 7-13
  - Consistently overestimate competence compared to parent or teacher ratings
  - Consistently overestimate competence compared to scores on standardized academic achievement tests
- No gender differences
- PIB predicted by hyperactivity-impulsivity
- PIB not predicted by inattentiveness
- Comorbid depression reduces PIB
- Comorbid aggression increases PIB

Owens et al, 2007

Evidence for PIB: ADHD Prediction of Performance

Citation	Age	Sample	% male	Criterion
Diener & Milich, 1997	8-11	ADHD=30 Ctl=90	100	Social, SPH
Hoza et. al, 2001	7-12	ADHD=83 Ctl=66	100	Find a Word Post-Performance
Hoza et al, 2000	7-12	ADHD=120 Ctl=65	100	Social Post-Performance
Milich & Okazi, 1991	9-11	ADHD=23 Ctl=22	100	Find a Word Prediction
Ohan & Johnston, 2002	7-13	ADHD=45 Ctl-43	100	Maze SPH Social SPH
O'Neill & Douglas, 1991	7-12	ADHD=20 Ctl-20, LD=20	100	Story Recall Prediction
Whalen et al, 1991	7-13	ADHD=15 Ctl=25	100	Word Search Prediction

Conclusion: Prediction Studies

- **Compared to Controls, boys with ADHD, age 7-13**
  - **Consistently predict higher performance than actual performance**
  - **Consistently evaluate their earlier performance more positively than actual performance**

Owens et al, 2007

Evidence for PIB: Learning Disabilities

Citation	Grade	Sample	% male	Criterion
Heath, 1995 Depression	5 & 8	LD=66 Ctl=69	50	DIS -Achievement & academic self-competence
Heath & Glen, 2005	5-8	LD=40 Ctl=39	56	PP Spelling SPH
Stone & May, 2002	9-12	LD=52 Ctl=49	60	DIS - Academic self, parent & teacher PP - prediction

Conclusions: PIB- LD

- Compared to controls, children with LD, grades 5-12
  - Overestimate their performance on academic achievement tests
  - Overestimate their performance compared to parent and teacher ratings
- PIB not evident in depressed children with LD

Why might children with ADHD or LD have a PIB?

- **Cognitive Immaturity**
- **Self-Protective Hypothesis (social desirability)**

Owens et al, 2007

Self-Protective Hypothesis

Children with ADHD overestimate their competence as a coping mechanism that presents a confident front to others and allows them to protect their self-esteem.

Self-protective hypothesis valid in social domain but not clear about academic domain

Owens et al, 2007

Why is PIB important?

- PIB **adaptive** because
  - Enhances self-esteem, motivation, performance, task persistence
  - Decreases negative affect (Owens et al, 2007)
- PIB **maladaptive** because may
  - Not recognize need for improvement, acknowledge negative feedback, alter approach to task completion (Owens et al, 2007)
  - increase resistance to treatment
  - impact self-advocacy skills
- Validity of **self-report measures**

Objectives of Symposium

- Problem Behaviours
- Cognitive Immaturity Hypothesis
- Self-Protective Hypothesis
- Learning Disabilities without comorbid ADHD

Outline of Symposium

- **Daniella Biondic, Clarisa Markel** (ADHD, 9-14)
  - Self-reports vs parent reports of ADHD symptoms
- **Angela Varma, Natalie Muradian** (ADHD boys, 13-17)
  - Self-reports vs parent and teacher reports of ADHD symptoms
- **Jill Haydicky, Vicky Timmermanis, & Changkeun (Trevor) Lee** (LD boys, 12-18)
  - Self reports vs parent reports of problem behaviours
  - Self-reports of academic achievement vs standardized achievement test results