

Received: 11.02.2010
Accepted: 10.09.2010

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ATTRIBUTION OF REASONS FOR SCHOOL SUCCESS AND FAILURE BY ADOLESCENT STUDENTS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER WHO RESPOND TO METHYLPHENIDATE THERAPY

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Background

Material/ Methods:

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SUMMARY

We report on a study which assessed possible differences of causal attributions between ADHD youth who respond on Methylphenidate therapy and those who do not respond.

29 students (12 to 18 years of age) diagnosed with ADHD and who responded to Methylphenidate treatment, examined by a psychologist and a psychiatrist according to Conners` criteria, were compared with 11 ADHD students, who did not respond on Methylphenidate therapy. Data were taken from another study that investigated causal attributions in ADHD patients.

Analyses confirmed that external attributions regarding luck were significantly higher for the non-responder group than for the responder group. Implications of these findings are discussed.

ADHD patients, especially therapy-refractory ones, often have a low self-esteem, which implies that they prefer external attributions.

Key words: attribution theory, causal attribution, motivation, self-esteem, problem solving

INTRODUCTION

Motivation is particularly critical for students with ADHD in association with learning difficulties, as they often show feelings of learned helplessness (Paris & Winograd, 1990). Such students are unlikely to try alternative ways of solving a problem when they encounter difficulty in task completion, as they may believe there is nothing they can do in such situations. Students with ADHD-associated learning difficulties tend to attribute failure to uncontrollable causes, such as their lack of ability, task difficulty or teachers' bias, or success to luck or help from a teacher. It has been suggested that such students need larger cerebral areas to save what has been learned, and, given a possibly reduced dopamine level mainly in the forebrain, they forget faster than healthy controls. According to attribution theory (Weiner, 1984), the frequent and repeated failures experienced by poor learners can lead to the development of beliefs of inevitable helplessness in school learning. One way to deal with low perceived competence is to raise these students' expectations of success, that is, raise their self-perception of competence and belief that outcomes are attributable to factors under their personal control.

Attempts to modify inappropriate causal attributions by students with ADHD have tended to focus on attributing successes to increased effort (Licht & Kistner, 1986). These attempts have not been entirely successful. Very often such students find they continue to fail in spite of their increased effort (particularly if they do not know how to try harder). This can reinforce their belief in lack of ability and increase feelings of helplessness (Craske, 1988).

A more fruitful direction may be get such students to attribute failures to both insufficient effort and ineffective task strategy (Licht & Kistner, 1986). A potentially effective technique is to combine such attributional retraining with training in cognitive strategy (Reid & Borkowski, 1987; Borkowski, Weyhing & Carr, 1988; Cole & Chan, 1990; Borkowski, 1992) such as modelling based on videotape analysis (Wilson & Linville, 1982; Försterling, 1985).

To date little research has been done on the use of strategies in the development of attributions. Most work has focused on attributions to ability versus effort (e.g., Cooley & Ayres, 1988; Kistner, Osborne & LeVerrier, 1988; Wigfield, 1988). Even in studies on simultaneous use of attributional retraining and strategy training (Reid & Borkowski, 1987; Borkowski et al. 1988), subjects were only instructed to attribute success to effort. Getting students to attribute their success to the use of effective strategy may be more convincing, but requires extending current knowledge on the development of attributions of strategy use.

Nicholls' studies (1978, 1984) showed that younger children sometimes do not distinguish ability and effort until they are seven or eight years of age. It is critical to find out when attributions of strategy might appear in students' motivational orientations.

Given the recent focus on the interface of motivation, cognition and learning (Borkowski et al., 1990, p. 54; 1990; Paris & Winograd, 1990; Chan, 1991), the relations among attributions, self-perceptions of competence, metacognitive abilities, and achievement need to be examined. This study was designed to examine some causal attributions with respect to ability, effort, luck, and strategy use by students with and without ADHD.

MATERIAL AND METHODS

Subjects (12 to 18 years, mean 16.5 ± 3.2 ; 8 girls, 21 boys, 18 of whom attended elementary school, and 11 high school), who responded well to Methylphenidate treatment (decrease from 22.5 ± 2.9 to 15.8 ± 4.5 on the 18-item Conner Scale after 3 months Methylphenidate treatment with at least 20mg Methylphenidate daily) were recruited in an outpatient clinic and completed a 10 item questionnaire. They were compared with 11 Methylphenidate non-responders (10 to 19 years, mean 15.9 ± 4.1 ; 3 girls, 8 boys, 8 of whom attended elementary school and 11 high school). According to Hollingshead and Redlich's criteria (1958), 4 (6) belonged to social class I, 9 (15) to Social class II, 12 (10) to III, 9 (6) to 5 (3) to IV and 1 (0) to V. They were diagnosed by a psychiatrist and a psychologist as ADHD on the basis of Conners' questionnaire (Conners, 1973).

The causal attribution scale (Italian name: Questionario di attribuzione) is a 10-item scale designed by Cornoldi, Gardinale, Masi and Petteno (1996) to assess students' tendency to attribute their experiences of success and failure in school to five likely reasons: effort, ability, strategy use, support and luck. Five items describe incidents such as doing well on a test, and the other five failure incidents. For each item, five different reasons are listed and students are required to rate each to indicate how true they consider that particular reason to be for them. A sample item is presented in Table 1.

Ratings for the reasons (effort=10, ability=8, strategy use=6, support=4 and luck=2) are summed for a total score and five subscores. For example, a high score on the Capacity subscale indicates a greater tendency to attribute experiences of school failure to ability (Score > 8). A low score (< 4) indicates a greater tendency to attribute failure to bad luck. The reliability coefficients (Cronbach alpha) for the ADHD sample obtained ranged from .63 to .81: (effort: .64 to .79, ability: .67 to .78, strategy use: .74 to .81, support: .65 to .70, luck: .63 to .74).

Table 1. Sample items

If you got a bad school report, it was likely because	
a.	you aren't very bright at school
b.	you were lazy and didn't try
c.	you didn't use good study methods
d.	you were very unlucky that year
e.	you didn't get enough support

RESULTS

The means, standard deviations, and mean comparisons for the Methylphenidate responder versus non-responder groups on 10 items are depicted in Table 2.

Table 2. Means and standard deviations for items for two groups

Item No	MPH non-responder		MPH responder		P
	Mean	SD	Mean	SD	
1.	3.8	1.4	6.6	1.7	0.03
2.	4.2	1.3	6.3	1.4	0.04
3.	4.0	1.9	7.9	2.1	0.03
4.	3.9	2.1	8.4	1.5	0.02
5.	4.0	2.1	8.3	1.6	0.03
6.	3.8	1.7	8.9	2.2	0.02
7.	3.5	2.2	7.4	1.7	0.02
8.	4.1	1.6	6.9	1.3	0.04
9.	3.7	1.8	7.1	1.7	0.05
10.	3.8	2.0	8.2	1.4	0.02

Statistical analyses were conducted using SPSSx, Release 8.0.

Analysis indicates that Methylphenidate non-responders were more likely than the responders to attribute successes to luck, but less likely to attribute successes to effort or to use effective strategies. On the other hand, non-responders were more likely than the responder group to attribute failures to their lack of ability, bad luck, or nonuse of effective strategies. These findings suggest that the non-responder students were more likely than the responder group to believe that their school failures and successes were related to external or uncontrollable factors, such as luck and ability, but were less likely to believe that successes could reflect factors under their personal control, such as effort and use of effective strategies. Attributional retraining programs help to develop a favourable attributional style, i.e. to believe that successes could be due to effort and effective strategies.

CONCLUSION

ADHD patients, especially therapy-refractory ones, often have a low self-esteem, which implies that they prefer external attributions.

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