

# The Effects of Increasing Teachers' Praise-to-Behavior Correction Ratios on Disruptive Behaviors Among Students with Autism

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## Abstract

Increasing praise-to-behavior correction ratios is commonly recommended as an effective form of classroom management. Limited research examines the effectiveness of praise as a reinforcer for students with autism. This study measured the association of change in praise-to-behavior correction ratios (P:BC) with changes in student outcomes in autism support classrooms. This study showed significant associations between change in P:BC and changes in student outcomes. Therefore, consultation should continue to target P:BC as an intervention strategy.

## Background

- Teacher attention is an inexpensive and effective modifier of student behaviors. (Coissart et al, 1973)
- Recommended ratios of teacher praise-to-behavior correction range from 4:1 to 8:1.
- Limited experimental data supports specific ratios, with one study finding that a 1:1 ratio can reduce disruptive behavior. (Pisacreta et al., 2011)
- No research examines the effect of praise-to-behavior correction ratios on behavior for children with autism. Research indicates that:
  - despite social impairments, social consequences can reinforce appropriate behavior in students with autism. (Dube et al, 2004; Kang et al., 2012)
  - social reinforcers (e.g. attention) can maintain problem behaviors in children with autism. (Love et al, 2009)

## Objective

- Evaluate the effect of changes in teacher praise-to-behavior correction ratios on changes in maladaptive student behaviors.

## Methods

### Participants

- 73 self-contained autism support classrooms (~560 students, Kindergarten through Grade 5)
- Classrooms were located in a large, urban, mid-Atlantic school district.

### Procedure

- Teacher professional development and classroom visits (~1 hour per month)
- Consultation to increase use of praise, positive behavior correction, visual schedules, and token systems
- **Classroom Observation (20 minutes):** Teacher and student behaviors were measured once at the beginning and once at the end of the school year.
  - Observations were conducted by two consultants during typical daily activities.
  - Data were taken at the classroom level to preserve student anonymity.

### Measures

- **Independent Variables:** Change in teacher praise-to-behavior correction ratios
  - Ratio = rate of praise / rate of behavior correction
- **Dependent Variables:** Change in per-student rate of behaviors
  - Disruptive behaviors: active disruption of class
  - Self-injurious/aggressive behaviors: attempted or actual physical contact with self or others
  - Non-compliance: disregard of adult direction
  - Out-of-area: attempted or actual leaving of instructional area

### Data Analysis

- We report descriptive statistics on baseline scores for teacher and student behavior variables as well as change in these scores from baseline. Linear regression is used in estimating the association between change in praise to behavior correction ratio and change in student behavior from baseline.

## Results

### Baseline values and changes in teacher and per-student behavior

	Mean at baseline	SD of baseline	Mean of $\Delta$ behavior	SD of $\Delta$ behavior	p value for $\Delta$ behavior
Teacher Behavior					
P:BC ratio	1.3	1.7	0.9	2.3	p<.001
Student Behavior					
disruptive behavior	0.5	0.7	-0.2	0.8	0.08
aggressive behavior	0.2	0.5	-0.1	0.5	0.04
non compliance	0.5	0.7	-0.3	0.8	p<.01
out of area	0.4	0.5	-0.3	0.5	p<.001

### Association between change in teacher behavior and change in per-student behavior

	Regression coefficient for $\Delta$ P:BC	p value
$\Delta$ disruptive behavior	-.12	p<.01
$\Delta$ aggressive behavior	-.04	0.05
$\Delta$ non-compliance	-.04	0.04
$\Delta$ out of area	-.03	0.13

- Teacher praise-to-behavior correction ratios increased significantly from baseline
- Student maladaptive behavior decreased from baseline
- 3 out of 4 dependent variables had significant associations with change in P:BC

## Discussion & Conclusions

- Despite not achieving the 4:1 recommended ratio of praise-to-behavior correction, change in teacher praise-to-behavior correction had significant associations with changes in student disruptive behavior, aggressive behavior, and non-compliance.
- Targeting praise-to-behavior correction ratios is a worthwhile recommendation during consultation in autism support classrooms.
  - Teachers should be taught to recognize and monitor their use of praise and behavior correction.
- Further research is warranted to determine:
  - The effects of other strategies taught during consultation which may also have contributed to decreases in maladaptive student behavior.
  - The most effective praise-to-behavior-correction ratio for autism support classrooms.

## References

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