

## Effect and mediating mechanisms of the Good Behavior Game: A study in Flanders, Belgium

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## Research goals

- Effectiveness of the GBG after termination of the intervention and at follow-up one year later:
  - On children's antisocial behavior, using teacher & peer reports & (external) *observations*
  - On children's *prosocial behavior*, *on-task behavior*, and *school achievement* (in addition to antisocial behavior)
  - On children's psychological well-being, like self-esteem (next to aspects of social adjustment)
- How does the GBG work? Role of *teacher behavior* and peer interactions

## GBG study in Flanders

- 15 Flemish schools, 2 classes per school
- Randomized experimental and control group
- 2006-2007: GBG in one 2nd gr class per school
- 2007-2008: GBG in one 3rd gr class per school
- Data collection
  - Beginning 2nd gr (September/October 2006) – prior to the implementation
  - End 2nd gr (May/June 2007)
  - Beginning 3rd gr (September/October 2007)
  - End 3rd gr (May/June 2008) – after termination of the intervention
  - Follow-up in 4th gr (May/June 2009)
- Instruments
  - Standardized achievement tests
  - Questionnaires for teachers & children
  - Child interviews
  - Teacher & child observations

## Focus of present presentation

Does the GBG influence child & teacher behavior?

Does teacher behavior mediate the effect of the GBG on children's behavior?

Presentation of the results of the first intervention year, focusing on observed teacher and child behavior in the classroom.

# Teacher behavior

- **Structure:** defining & reinforcing appropriate behavior, while giving disruptive behavior little attention
  - better structuring practices
  - more compliments & less corrections
- **Involvement:** Focusing on positive child behavior
  - improving teacher-child relationship
- **Autonomy support:** Giving children the opportunity to participate & take responsibility

# Instruments: observations

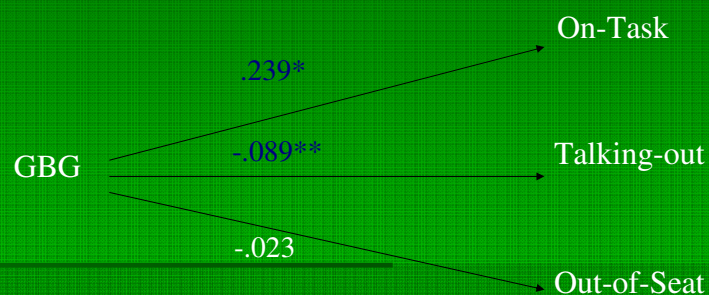
Observations occurred in the morning during a lesson of mathematics and language, during non-GBG moments (generalisation effects)

- Child behavior
  - **On-task behavior**
  - **Disruptive behavior**
    - Talking-out behavior
    - Out-of-seat behavior(Van der Sar, 2004)
- Teacher behavior
  - **Counting compliments and corrections:** Observation-instrument Good Behavior Game (van der Sar, 1999)
  - **Structure, involvement, autonomy support** (Leflot et al., 2006) inspired by Teacher as Social Context (Wellborn, Connell, Skinner, & Pierson, 1992) and Classroom Assessment Scoring System (La Paro, Pianta, & Stuhlman, 2002)

## Analysis: SEM

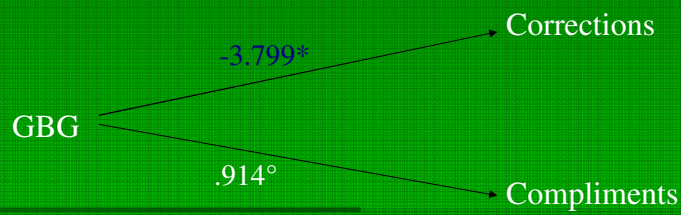
- Non-mediation models: direct effect of GBG on
  - Observed on-task, talking-out, & out-of-seat behavior
  - Observed compliments and corrections
  - Observed structure, involvement, & autonomy support
- Mediation models
  - With compliments and corrections
  - With structure, involvement, & autonomy support
- Controlled for initial levels of child & teacher behavior by calculating difference scores for all variables
- SE were corrected for dependence due to clustering within classrooms
- Mplus 5 (Muthén & Muthén, 2007)

## Results: Effect model Child behavior



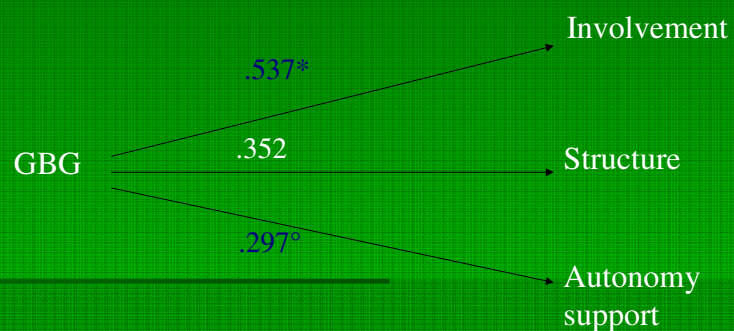
\*\* p < .01, \* p < .05, ° p < .10

## Results: Effect models Teacher behavior (1)



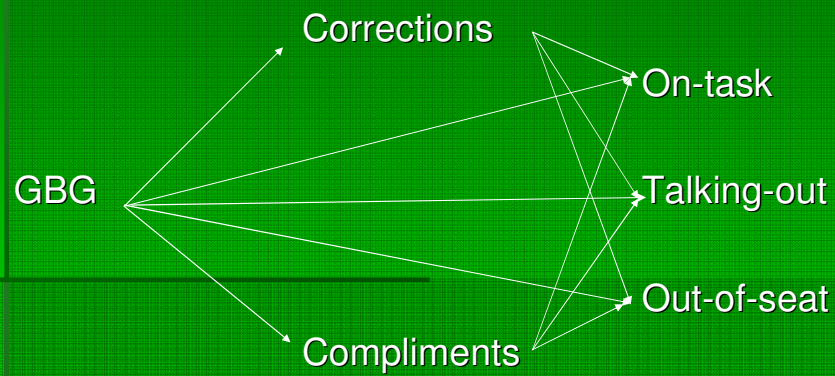
\*\* p < .01, \* p < .05, ° p < .10

## Results: Effect models Teacher behavior (2)

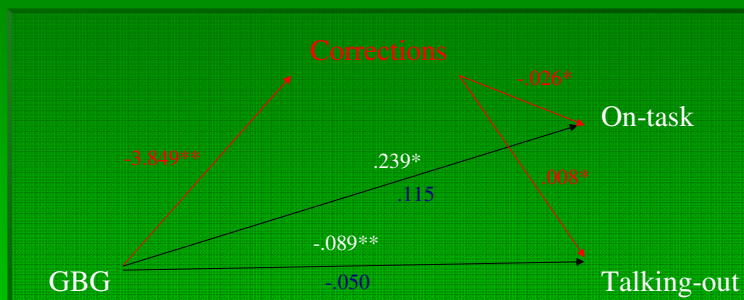


\*\* p < .01, \* p < .05, ° p < .10

## Results: Mediation model



## Results: Mediation model



\*\*  $p < .01$ , \*  $p < .05$ ,  $^{\circ} p < .10$

# Conclusions

After 1 intervention year, using observations of teacher and child behavior:

- Direct effects
  - Compared to the control children, GBG children's on-task behavior significantly increased while their talking-out behavior significantly decreased
  - Teachers in the GBG classrooms showed a reduction in the use of corrections (and an increase in the use of compliments) compared to the control teachers
  - GBG teachers displayed improved relationships with their pupils (and showed an increase in autonomy support) as compared to the control teachers
- Mediation effect
  - The reduction in the use of corrections by the teacher mediated the effect of the GBG on children's on-task and talking-out behavior.