

## What predicts how well teachers implement Banking Time with disruptive preschoolers?

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This study examined the implementation of a teacher-child intervention, Banking Time, with 59 preschool teachers and children with disruptive behavior. Implementation quality was assessed with regard to dosage, quality, and generalized practice. Additionally, program and teacher characteristics were examined to better understand what predicted intervention implementation.

Preschool children who display disruptive behavior (e.g., hyperactivity, impulsivity, aggression) are at risk for a host of negative outcomes, including a poor relationship with their classroom teacher. A warm and sensitive teacher-child relationship serves as a protective factor for a child with disruptive behavior by encouraging positive and pro-social behaviors and decreasing the likelihood of negative interaction cycles.

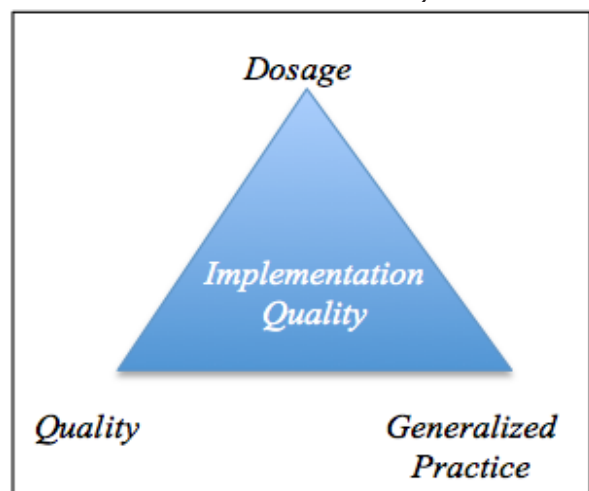
Due to the importance of a positive teacher-child relationship, several social-emotional interventions have been developed that aim to improve the quality of it. One such intervention, Banking Time (BT), is designed to improve the interactions between a teacher and a specific child. BT has been shown to improve the quality of the teacher-child relationship when it is implemented correctly and effectively.

Intervention implementation, or the process through which an intervention is conducted, has become an increasingly important area of research. By understanding how an intervention is implemented, one can better understand how, why, and for whom an intervention is most effective. One model for understanding implementation quality is to examine three aspects of implementation: dosage, (how often teachers engaged in the intervention), quality of delivery, (how well teachers engaged), and generalization of practice (did teachers extend what they learned).

### The Study

The goal of this study was to examine implementation quality (dosage, quality of delivery, and generalization of practice), as well as teacher and program characteristics that predicted different aspects of implementation quality, in a randomized-controlled trial of BT. With regard to teacher and program characteristics, we were particularly interested in teacher demographics, teacher beliefs, and preschool program type.

Participants included 59 preschool teachers from a larger randomized control trial. Teachers were mostly female (94.7%), had a bachelor's degree (67.8%), and had an average of 8.54 years of teaching experience. For each teacher, the three children in their classroom with the highest level of disruptive behavior and parental consent were selected to be included in the study. Children were randomly assigned to one of three windows across the course of the year.



Teachers implemented Banking Time with consultant support for seven consecutive weeks for each child. During each session, a teacher and child participated in an activity that was chosen by the child, and teachers were instructed to engage in the following behaviors: observe the child's behaviors and emotions, narrate the child's actions and allow the child to lead the activity, accurately label the child's feelings and emotions, and develop relational themes that represent important aspects of the teacher and child's relationship. Additionally, teachers were asked to limit questioning and refrain from teaching skills.

Teachers received ongoing implementation support from a consultant, which included training, consistent face-to-face meetings, and video-review of teachers' sessions. We assessed implementation quality using three primary categories. The first, dosage, was measured by a composite of the following variables: the number of videotapes a teacher submitted, number of session notes completed, the frequency of which a teacher implemented a BT session (consultant-rated), and number of contacts between teacher and consultant. The second, quality, was assessed based on consultants' ratings of teachers' videotaped sessions and consultants' report of teacher engagement in the intervention and consultancy. The third, generalized practice, was measured with a three-minute clean-up portion of a structured play task. Coders rated teachers on their use of BT-specific behaviors, including observation and narration.

### Findings

Results suggest that teachers vary in implementation quality based on both program type and teacher characteristics. These differences occur across all three categories of implementation quality assessed.

*Dosage.* With regard to the amount of time teachers engaged in BT and consultant support sessions, teachers in state-funded preschool programs demonstrated the highest amount of dosage, compared to Head Start and private preschool programs. Similarly, teachers with authoritarian, or adult-centered, beliefs engaged in a higher number of sessions than those with

child-centered beliefs. Additionally, teachers of minority ethnicity engaged in a lower number of sessions.

*Quality.* Teachers in Head Start and private preschool programs, as well as teachers who were of minority ethnicity status, demonstrated a lower quality of intervention implementation.

*Generalized practice.* Teachers with more negative attributions, specifically responsibility attributions about a child's disruptive behavior, displayed a higher amount of generalized practice.

### Implications

Findings from this study suggest that multiple aspects of implementation need to be examined in order to best understand how teachers respond to and use an intervention. Teachers within a state-funded preschool program implemented BT better in terms of dosage and quality. This may be due to the fact that many state-funded programs are within an elementary school, and thus teachers may have had more support for implementation of the intervention (e.g., space, resource teachers, administration).

Teachers of minority ethnicity tended to implement BT less often and with lower quality. This may be due to the intervention being unable to generalize to a diverse population. Understanding the intervention recipients, and potentially making adaptations in order to be culturally sensitive, is an important component of intervention delivery.

Teacher beliefs are also important to consider when implementing an intervention. This study demonstrates that teachers with authoritarian beliefs were more likely to engage more frequently in the intervention, and teachers with more negative attributions were more likely to extend the intervention into other areas of their practice. This aligns with literature suggesting that teachers most in need of intervention may benefit the most from engagement in that intervention.

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