

THE PLAYING-2-GETHER INTERVENTION IN THE CLASSROOM: TOWARDS A FEASIBLE IMPLEMENTATION IN REGULAR CLASS PRACTICE

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ABSTRACT

Playing-2-gether is an attachment and learning theory based intervention aimed at improving the quality of teacher-child interactions to decrease preschoolers' externalizing problem behavior. A large-scaled randomized controlled trial has shown the efficacy of this intervention amongst preschoolers at risk. However, issues of feasibility arised, as the intervention consisted of one-on-one play sessions between teacher and child outside the classroom. Therefore, a practice-based research was conducted to investigate whether an adaptation of the Playing-2-Gether intervention to a regular class context is effective and feasible. For this research, student teachers collaborated with experienced teachers to adapt and try-out Playing-2-gether in their classrooms (n = 17). After the intervention, qualitative data of student and experienced teacher perceptions concerning effectiveness and feasibility were collected (e.g., semi-structured interviews, open-ended questionnaires). Qualitative analysis was conducted using NVivo. The facilitating factors for feasibility of the Playing-2-gether intervention include observing the target child before implementing the intervention, setting and visualizing clear rules for non-target children concerning the teacher's availability during the intervention, implementing the intervention in a central place in the classroom, using Playing-2-gether hand puppets and pictograms to structure the intervention, and involving non-target children in the implementation of the intervention. Moreover, the results of this small-scaled study indicate that this adaptation of the Playing-2-gether intervention may lead to teacher perceptions of a better teacher-child relationship quality and increased behavioral adjustment for internalizing and externalizing preschoolers, but not for children with signs or symptoms of autism spectrum disorder.

THE PLAYING-2-GETHER INTERVENTION: THEORY, PRACTICE AND RESEARCH

Externalizing problem behavior refers to disruptive and harmful behaviors for others (e.g., talking back, being disobedient, hurting other children, taking away things from children; Matthijs & Lochman, 2010; Smidts & Oosterlaan, 2007). This type of behavior in preschool has been shown to be linked to concurrent and future child maladjustment in several domains, such as peer rejection, school failure, and mental disorders (e.g., Dodge, Coie, & Lynam, 2006; Nagin & Tremblay, 1999). As this problem behavior is not only a risk factor for the child's development, but also for the teacher's well-being and for the classroom climate (e.g., Spilt, Koomen, & Thijs, 2011), it is important to redirect this behavioral maladjustment in an early stage. Therefore it is necessary to develop and evaluate interventions that focus on changing preschooler problem behavior.

The Playing-2-gether intervention was developed for preschoolers showing relatively high levels of externalizing problem behavior and their teachers (Vancraeyveldt, Van Craeyevelt, Verschueren, & Colpin, 2010). The intervention, which is built on attachment and learning theory, aims at decreasing child externalizing problem behavior through targeting teacher-child interactions. In the following sections we discuss the theoretical foundations of the intervention, the practical implications, and the research on the efficacy of this program.

The Playing-2-gether intervention: Theoretical background

Attachment theory

According to attachment theory, building a secure attachment bond with a primary caregiver is important to promote child behavioral adjustment (see meta-analysis by Fearon, Bakermans-Kranenburg, van Ijzendoorn, Lapsey, & Roisman, 2010). For most children, parents are the primary attachment figures. Relationships with teachers are, in contrast with parent-child relationships, by definition time-limited and not exclusive. Moreover, teachers engage in caregiving behaviors, but the range of caregiving behaviors is more restricted compared with parents (Howes & Hamilton, 1992) and their primary role, especially in formal education, is that of an instructor (Kesner, 2000). On the other hand, children spend a lot of time with their teachers (sometimes more than with their parents) for at least one school year. Also, young children have been found to seek comfort from teachers in times of stress (Koomen & Hoeksma, 2003) and to use the teacher as a resource to regulate stress (Ahnert, Harwardt-Heinecke, Kappler, Eckstein-Madry, & Milatz, 2013). As such, research has shown that teachers may act as temporary attachment figures playing the role of secure base and safe haven (e.g., Verschueren & Koomen, 2012).

The attachment perspective conceives the teacher-child relationship quality along positive and negative affective dimensions, most often the dimensions of closeness (i.e., the amount of warmth and openness in teacher-child communications) and conflict (i.e., the disagreement and negativity in the relationship; Pianta, Hamre, & Stuhlman, 2003).

During the past two decades, research has consistently shown that the affective quality of the teacher-child relationship (as represented by the amount of closeness and conflict) longitudinally predicts children's behavioral adjustment, above and beyond relevant child and family characteristics (e.g., Buyse, Verschueren, Doumen, Van Damme, & Maes, 2008). Recently, a dyadic teacher-child intervention (e.g., Banking Time; Pianta & Hamre, 2001) that focuses on building high-quality teacher-child relationships was developed and evaluated (e.g., Driscoll & Pianta, 2010; Driscoll, Wang, Mashburn, & Pianta, 2011).

Learning theory

Learning theory stresses the importance of teacher-child interactions for children's behavioral development as well. More specifically, the operant conditioning model theorizes about how (desired and undesired) behavior is learned (e.g., Cowan & Sheridan, 2009; Hermans, Eelen, & Orlemans, 2007). In the ABC-model for example, behavior management is promoted through manipulating the antecedents and consequences of child behavior (see for example Cowan & Sheridan, 2009; Hermans et al., 2007). More specifically, the teacher should set up the conditions under which desired behavior is likely to occur (e.g., stating clear rules, using pictograms, ...), and, if the desired child behavior occurs, the teacher should reinforce this behavior (e.g., praising desired behavior, ...). If undesired child behavior still arises, this behavior may be punished (e.g., time-out, ...). Research in the school context has shown the efficacy of adequate teacher behavior management techniques for improving behavioral adjustment (e.g., Cowan & Sheridan, 2009; Leflot, van Lier, Onghena, & Colpin, 2010).

Interventions based on attachment and learning theory

As attachment theory and learning theory focus on different aspects of teacher-child interactions that are judged to be complementary in improving child behavioral adjustment, these theoretical perspectives may be combined in two-component interventions. In these interventions, a first component may be attachment-based and aimed at improving the relationship quality. The improved relationship is, in turn, expected to act as an affective base, which facilitates the effectiveness of behavior management techniques focused on in a second, learning theory based, intervention component.

Nevertheless, few two-component interventions exist that focus on improving teacher-child interactions amongst preschoolers. One notable exception is the two-

component, dyadic Teacher-Child Interaction Therapy (McIntosh, Rizza, & Bliss, 2000) and its elaboration in the classroom, Teacher-Child Interaction Training (Lyon et al., 2009). In small-scaled studies, the effectiveness of these interventions in improving behavioral adjustment was shown (Gershenson, Lyon, & Budd, 2010; Lyon et al., 2009; McIntosh et al., 2000).

The Playing-2-gether intervention: One-on-one play sessions outside the classroom

Building on the results of the abovementioned interventions, the Playing-2-gether intervention was developed for preschoolers with relatively high levels of externalizing problem behavior (Vancraeyveldt et al., 2010). The program focuses on enhancing teacher-child interactions to decrease child externalizing problem behavior. Playing-2-gether consists of two six-week components during which one-on-one play sessions with the target child take place outside the classroom. These play sessions are held for a minimum of two times a week, for approximately 15 minutes per session. During these sessions, the teacher is given the opportunity to practice skills to improve the teacher-child relationship quality (first component) and the teacher's behavior management (second component) in a safe learning environment.

In the first component, Relationship-Game, the play sessions are child-centered. More specifically, the child can choose the activity or the game, and the teacher has to follow the child's lead. During these play sessions, the teacher practices skills that improve teacher sensitivity and that focus on making a strong connection with the child. For example, the teacher observes the child during the game, imitates his play, describes his actions and labels his feelings (Driscoll & Pianta, 2010). The teacher also pays attention to the children's relational needs and tries to respond to them in an adequate manner (cf. "developing relational themes" in Banking Time; Pianta & Hamre, 2001).

In the second component, Rule-Game, the sessions are more teacher-centered. In these sessions, the teacher chooses the activity or the game, and the child has to follow the teacher's lead. Moreover, the teacher practices skills to improve child behavioral adjustment, such as giving clear commands, introducing rules and pictograms (i.e., a pictogram of a kangaroo who urges the child to act appropriately), ... (Cowan & Sheridan, 2009). If child disruptive behavior persists, the teacher can make use of time-out, but it is important that the sessions remain a positive time spent together.

The Playing-2-gether intervention: Randomized controlled trial

In a large-scale randomized controlled trial led by the School Psychology and Child and Adolescent Research Unit of the University of Leuven (Belgium), the Playing-2-gether intervention was found to be effective in improving teacher-child

relationship quality and behavioral adjustment of 175 preschool boys at risk for externalizing behavior, whilst coaching and training was provided (Vancraeyveldt, Verschueren, Van Craeyevelt, Wouters, & Colpin, 2013; Vancraeyveldt, Verschueren, Wouters, Van Craeyevelt, Van den Noortgate, & Colpin, 2015).

Concerning behavioral adjustment, the results show small, but significant positive effects of Playing-2-gether in reducing (teacher-rated) child externalizing problem behavior. More specifically, intervention children, compared to control children, showed a significantly larger decrease on a general measure of child externalizing problem behavior, and on hyperactivity/inattention and conduct problems at post-test. Concerning teacher-child relationship quality, Playing-2-gether was shown to reduce teacher-child conflict. Interestingly, no intervention effect on teacher-child closeness was found. The first intervention component in itself (i.e., Relationship-Game) resulted in all abovementioned effects, and in an additional effect on closeness. The second intervention component did not yield additional effects in comparison to the first intervention component.

The Playing-2-gether intervention: Need for practice-based research

Although the effects of the intervention were found to be positive, implementing one-on-one Playing-2-gether play sessions outside the classroom was found to be difficult in practice. In several schools, it was not easy to find a teacher who could take over the class group whilst the Playing-2-gether sessions were held outside the classroom. Furthermore, several teachers did not feel comfortable about leaving their classroom to give extra attention to one child only. To ensure a sustainable implementation of the intervention in daily practice, an adaptation to the intervention was needed, without neglecting the theoretical basis of the intervention (e.g., the importance of dyadic teacher-child interactions).

Building on this, several research questions came to mind. *First*, we aimed to investigate whether the Playing-2-gether intervention could be adapted to a feasible variant which could be implemented within the classroom. And if so, would this variant be effective in improving teacher-child relationship quality and improving child behavioral adjustment? *Second*, building on research that shows a negative association between the teacher-child relationship quality and students' internalizing behavior (e.g., O'Connor, Dearing, & Collins, 2011), we intended to investigate whether the Playing-2-gether intervention would be effective in decreasing other problem behaviors, such as internalizing behavior. We also aimed to give indications for its effects for preschoolers with signs or symptoms of autism spectrum disorder. *Third*, we aimed to explore whether the implementation of the intervention in the classroom would be different for experienced teachers in comparison to student teachers.

To investigate these questions, a collaboration between the University of Leuven (Belgium) and the Teacher Training Department of the University Colleges

Leuven-Limburg (Belgium) was set up. This resulted in the practice-based study which is the focus of the rest of this paper.

RESEARCH GOAL

The main goal of this practice-based research was to adapt the Playing-2-gether intervention to preschool classrooms to ensure feasibility and sustainability in daily practice. To this aim, Playing-2-gether sessions were implemented within the classroom and evaluated in a practice-based research. Different formats of the intervention were tested throughout a structured case study protocol. More specifically, we intended to evaluate the effectiveness and the feasibility of different organizational formats (e.g., group play sessions, one-on-one sessions) and different Playing-2-gether activities in the classroom for children with different types of problem behavior (e.g., externalizing or internalizing behavior).

Moreover, the literature has shown that the chances of implementation, feasibility, and sustainability of an intervention are predicted by (the interplay of) multiple factors (Durlak & DuPre, 2008). However, few research to date has focused on identifying these factors in a regular education setting with an indicated intervention. Our second research goal is to give at least some insight into these factors.

RESEARCH DESIGN

A multiple case study in the context of a practice-based research was set up. Therefore, we formed a duo of an experienced preschool teacher and a student teacher who implemented Playing-2-gether in their classroom ($n = 17$). In every participating classroom, the mentor of the student teacher or the experienced teacher selected one or two children for whom they perceived problem behavior (e.g., externalizing or internalizing problem behavior, symptoms or signs of autism spectrum disorder) and collected informed consents of the parents of this child or these children. There were 18 participating children (ten boys and eight girls) between 2.5 and six years old.

In collaboration with a researcher supervisor and the mentor of the student teacher, the student teachers and experienced teachers adapted Playing-2-gether to the needs of the selected children in their classrooms. These try-outs took six weeks. In each school, the research supervisor also held a coaching session with the student teacher and experienced teacher. After the intervention, qualitative data of student teachers and experienced teachers (e.g., bachelor theses, semi-structured interviews, open-ended questionnaires) were collected. Based on the literature (e.g., Durlak & DuPre, 2008) and on the experiences within the supervision sessions, a codebook for feasibility of the intervention was developed and discussed by the members of the research team. Building on this codebook, qualitative content analysis (e.g., Mortelmans, 2010) was conducted using Nvivo

software. *First*, for every interview, questionnaire, and bachelor thesis separately, the data was linked to the different categories in the codebook. Three researchers participated in this coding process. *Second*, the main researcher compared the data in the different categories for all interviews, questionnaires and bachelor theses. A summary was written down and provided to the other researchers and some members of the field of activity (i.e., schools) for a member check. In the following, we illustrate our findings with quotes from the interviews with the experienced teachers and the bachelor theses of student teachers. These quotes are slightly adapted to ensure the readability of the text. Moreover, we anonymized the names of the student and experienced teachers.

RESULTS

Feasibility of Playing-2-gether in the classroom

In general, most student and experienced teachers found that implementing Playing-2-gether in the classroom was **feasible**, even though it was **not always easy in the beginning**.

“This research project was a positive experience for me. In the beginning, I was doubtful whether implementing Playing-2-gether in the classroom would be useful. After two sessions, I noticed that everything in my class ran smoothly and that I could really make time to play with the target preschooler. As the target preschooler was very enthusiastic during the sessions and frequently asked me when we would play again, I noticed that Playing-2-gether meant a lot for the preschooler. That made me feel good. It made me also feel that the research was worthwhile because the preschooler really enjoyed her time alone with me.” - Student teacher Eve, 4 to 5 year old preschoolers

“In the beginning of the project, I was thinking “This will be hard to implement, I don’t know if this will work”, but the student teacher in my school, Eve, explained to me one step at a time what we were going to do. And, actually, the intervention yielded good results, also in my classroom. So now I know how I can implement Playing-2-gether next year. It has been a positive experience for me.” - Experienced teacher Rianne, 5 year old preschoolers

Although Playing-2-gether was generally reported to be feasible in practice, several organizational, classroom, teacher, and child factors improved or, in contrast, reduced the feasibility of the intervention. In the following, we zoom in on the main analyses concerning **teacher factors, organizational factors and class management which improved feasibility**. A more extended version of the analyses can be found in Vancraeyveldt, Vastmans, Huyse, Colpin, Verschueren, and Bertrands (2014).

First, it is important to note that **student and experienced teachers** expressed **different concerns** before and during the implementation of the intervention. Student teachers were mainly concerned about class management (i.e., “Will I be able to handle the behavior of the other children in the class when I’m giving one-on-one attention to this target child?”), whereas experienced teachers were mainly concerned about finding the time to implement the intervention in their busy schedules.

“During Relationship-Game, the target child chose the toys he would play with and the material he would play with; he didn’t need that much guidance. In contrast, the other children in my classroom needed help to start their activities. At that moment, I found it very difficult to focus on the target child.” - Student teacher Vera, 3 to 4 year old preschoolers

“I really needed to force myself to implement Playing-2-gether on a fixed day because otherwise, I would not implement it. Afterwards, I would think: “O, I forgot it this week”. It is also important to really make time for it, because implementing Playing-2-gether in a fast and superficial manner makes no sense at all.” - Experienced teacher Dora, 5 year old preschoolers

Second, student teachers and experienced teachers **adapted Playing-2-gether to the needs of the target children**. For example, they only focused on Relationship-Game skills if they did not see the added value of extensively focusing on behavior management techniques for a particular child (for example for children with internalizing problem behavior). **Carefully observing the target child before implementing the intervention** was found to be an important part of the intervention.

Third, it was found to be important to make **agreements** with non-target children concerning **the teachers’ availability during Playing-2-gether**. For younger children and for busier classrooms, this was found to be more difficult. As mentioned before, student teachers experienced more difficulties in managing the other children in comparison to experienced teachers.

“I made clear arrangements with the other preschoolers in my internship classroom. When I was implementing Playing-2-gether, the preschoolers first needed to try to solve their little problems themselves. They could ask help from their friends. Only if they were not able to solve their problem alone or with their friends, they were allowed to come to me.” – Student teacher Eve, 4 to 5 year old preschoolers

“There were a lot of preschoolers who came and watch while I was implementing Playing-2-gether with the target preschooler. I agreed with them that they could watch us but that they had to keep their hands on their backs so they would not disturb the session.” - Student teacher Faith, 3 year old preschoolers

For most (student) teachers, it was necessary to organize the Playing-2-gether play sessions in a **central** place in the classroom, as the (student) teacher is able to easily intervene if conflicts in the classroom arise. Some student and experienced teachers also **visualized** their agreements with the preschoolers. For example, one student used a “Stop, the teacher is busy” sign, while another teacher wore a special Playing-2-gether watch to indicate that he was busy.

Fourth, Playing-2-gether **hand puppets and pictograms** were found to be useful to introduce the intervention, to help structure the Playing-2-gether sessions, and to visualize the goal of these sessions. These hand puppets and pictograms also convey messages concerning behavioral adjustment in a non-directive manner to the target child.

“It is helpful to introduce Playing-2-gether using hand puppets of an adult and a child kangaroo (i.e., the logo of Playing-2-gether). Preschoolers are very sensitive to hand puppets and they easily connect with them. For example, you can introduce Playing-2-gether by saying that Kanga (the mother kangaroo) and Roo (the child kangaroo) come to stay over in the classroom, because Roo needs to learn a lot. The teacher chooses one preschooler (the Playing-2-gether target preschooler) to take care of Roo. This preschooler is allowed to play a game with Roo in the afternoon. A small group of preschoolers can play along with the target preschooler and Roo. More specifically, the target preschooler can choose the game they will be playing, and the other preschoolers and the teacher have to follow his lead. Roo watches them play. The games and materials which they can play with are stored in a Playing-2-gether suitcase.” - Student teacher Vera, 3 to 4 year old preschoolers

“I used two pictograms to represents Relationship-Game and Rule-Game. On these pictograms, the teacher and the child kangaroo are playing together. During Relationship-Game, the target Playing-2-gether child has to stick the ball on the picture of the child kangaroo. This means that the child (kangaroo) has the ball in hands, so he can choose the game. During Rule-Game the target child has to stick the ball on the picture of the teacher kangaroo. These pictograms were hanging in the classroom on Wednesday and Friday, the days during which I would implement Playing-2-gether with the target child.” - Student teacher Melissa, 4 year old preschoolers

Fifth, involving non-target children in the implementation of Playing-2-gether was found to be helpful. A useful way to do this was making small Playing-2-gether groups (see example student teacher Vera). It was important to alternate the members of these groups, so all children would have the chance to participate in Playing-2-gether.

Finally, most student teachers noted that the second, behavior management, part of Playing-2-gether was not as 'new' for them as the first, attachment-based part of the intervention.

Effectiveness of Playing-2-gether in the classroom

Concerning effectiveness, most (student) teachers in particular reported an improvement in the teacher-child relationship and/or a slight improvement in child behavioral adjustment throughout the different formats of the intervention, both for children with internalizing and externalizing problem behavior.

"I noticed that the Playing-2-gether program has an effect on the behavior of the target preschooler and the other preschoolers in the group. We did not have much time to implement the program, so the effect is rather small." - Student teacher Sarah, 5 year old preschoolers, focused on one preschooler with externalizing problem behavior, for whom she implemented Playing-2-gether in small groups of preschoolers.

"I see clear differences when I compare my observations of the behavior of Nora and Brandon before the implementation of Playing-2-gether with my observations after the implementation of Playing-2-gether. The children are more open towards me and dare to engage spontaneously in conversations. I'm very satisfied with these results." - Student teacher Faith, 3 year old preschoolers, focused on two children with internalizing problem behavior for whom she separately organized the Playing-2-gether sessions (first in small groups, then one-on-one)

"I cannot change his behavior, but my relationship with him is improved. Sometimes he has better days, but sometimes he has bad days. I cannot change his behavior. It is still there. But I still notice some improvement." - Experienced teacher Dora, 5 year old preschoolers, focused on one child with externalizing problem behavior

No improvement was reported for the children with signs or symptoms of autism spectrum disorder.

“I told the student: Relationship-Game will be difficult for you to implement with this child, because during Relationship-Game, the child experiences no structure. That is exactly what happened, it was difficult to implement Relationship-Game with this child.” - Experienced teacher, Ines, is talking about the student teacher who implemented Relationship-Game with a child with signs or symptoms of autism spectrum disorder

DISCUSSION

This qualitative study indicates that the Playing-2-gether intervention can be adapted to the regular class practice and that this adaptation may lead to a teacher-perceived increased behavioral adjustment and a better teacher-child relationship quality for internalizing and externalizing preschoolers, but not for children with signs or symptoms of autism spectrum disorder. These findings are in line with positive effects of the Playing-2-gether intervention for children with externalizing behavior (Vancraeyveldt et al., 2013; Vancraeyveldt et al., 2015) and with longitudinal studies demonstrating negative links between teacher-child relationship quality and internalizing problems of children (O'Connor et al., 2011). Several organizational, classroom, teacher and child factors were found to improve or reduce the intervention's effectiveness and feasibility in a real-life class context (e.g., Durlak & DuPre, 2008). More specifically, it was found to be important to observe the target child before implementing the intervention, to make clear agreements with non-target children concerning the teachers' availability during the sessions, to visualize these agreements, to hold the Playing-2-gether sessions in a central place in the classroom, to use Playing-2-gether hand puppets and pictograms to structure the sessions, and to involve non-target children in the implementation of Playing-2-gether. These factors should be taken into account when implementing Playing-2-gether and other indicated interventions in regular education in the future.

This study has several limitations and suggestions for further research. *First*, we selected preschoolers based on the teacher-perceived problem behavior. Given the focus of the intervention (i.e., improving teacher-child interactions), it may be valuable as well to select children with an initially high-conflict and non-close teacher-child relationship. Also, the results concerning effectiveness should be interpreted with caution, as we conducted qualitative analyses with small, selective samples in a practice-based research.

Second, most (student) teachers noted that the second, behavior management part of Playing-2-gether was not as innovative as the first, attachment-based part. Given these findings and the findings of the stand-alone effects of this first, intervention component (e.g., Vancraeyveldt et al., 2015), future research may

focus on adapting, implementing and evaluating the attachment-based part of the intervention instead of the two-component Playing-2-gether.

Third, in this practice-based research, we involved Bachelor students Preschool education. An extensive guidance trajectory was found to be necessary to help these students in (a) adapting and implementing the Playing-2-gether intervention in the classroom, but also (b) finding their way in the classroom during their internship. In sum, working with students revealed interesting results, but it also clouded some findings concerning the implementation of Playing-2-gether in the classroom. Nevertheless, strengthening teacher-child interaction skills seems like a valuable approach for students to improve the teacher-child relationship quality with all children in their classroom (not only with children with problem behavior). Therefore, a research-based online course for students was developed (Huysse, Vancraeyveldt, Colpin, Verschueren, & Bertrands, 2015), which has been positively evaluated by the students. Moreover, some students also experience positive effects in their interaction with children during later internships (Vancraeyveldt, Huysse, Vastmans, Colpin, Verschueren, & Bertrands, 2014).

Fourth, training and guiding the implementation of Playing-2-gether throughout this project was a time-intensive process and required a lot of expertise of the researchers of UC Leuven-Limburg. For schools, it would be more cost-effective to train and coach teachers in Playing-2-gether themselves, for example under supervision of the guidance counselor or the school psychologist. At UC Leuven-Limburg we are exploring different promising options to develop a feasible coaching trajectory for the intervention.

Despite these limitations, the results of this study are valuable for researchers who intend to integrate more fundamental university research into practice-based research. The results are also an example of a strong collaboration between a university and university colleges. Moreover, the study is important for teachers and schools who are interested in the implementation of evidence-based interventions for problem behavior in their own school. Finally, this research contributes to the improvement of educational practice as it is a good example of how to implement and evaluate evidence-based interventions in a real-life school context. The results of this practice-based research, which is based on fundamental university research, may inspire more fundamental research at the university, in turn.

REFERENCES

- Ahnert, L., Harwardt-Heinecke, E., Kappler, G., Eckstein-Madry, T., & Milatz, A. (2013). Student-teacher relationships and classroom climate in first grade: how do they relate to students' stress regulation. *Attachment & Human Development, 14*, 249-263. doi: 10.1080/14616734.2012.673277
- Buyse, E., Verschueren, K., Doumen, S., Van Damme, J., & Maes, F. (2008). Classroom problem behaviour and teacher-child relationships in kindergarten: The

moderating role of classroom climate. *Journal of School Psychology*, *46*, 367–391. doi:10.1016/j.jsp.2007.06.009

Cowan, R. J., & Sheridan, S. M. (2009). Evidence-based approaches to working with children with disruptive behavior. In T. B. Gutkin & C. R. Reynolds (Eds.), *The handbook of school psychology* (pp. 569–590). New York: Wiley.

Dodge, K. A., Coie, J. D., & Lynam, D. (2006). Aggression and antisocial behaviour in youth. In W. Damon, R. M. Lerner, & N. Eisenberg (Series Eds.), *Handbook of child psychology: Social, emotional, and personality development* (Vol. 3, 6th ed., pp. 719–788). Hoboken, NJ: John Wiley & Sons.

Driscoll, K. C., & Pianta, R. C. (2010). Banking time in Head Start: Early efficacy of an intervention designed to promote supportive teacher-child relationships. *Early Education and Development*, *21*, 38–64. doi: 10.1080/10409280802657449

Driscoll, K. C., Wang, L., Mashburn, A. J., & Pianta, R. C. (2011). Fostering supportive teacher-child relationships: Intervention implementation in a state-funded preschool program. *Early Education and Development*, *22*, 593–619. doi: 10.1080/10409289.2010.502015

Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology*, *41*, 327–350. doi:10.1007/s10464-008-9165-0.

Fearon, R. P., Bakermans-Kranenburg, M. J., van Ijzendoorn, M. H., Lapsley, A. M., & Roisman, G. I. (2010). The significance of insecure attachment and disorganization in the development of children's externalizing behaviour: A meta-analytic study. *Child Development*, *81*, 435–456. doi: 10.1111/j.1467-8624.2009.01405.x

Gershenson, R. A., Lyon, A. R., & Budd, K. S. (2010). Promoting positive interactions in the classroom: Adapting Parent-Child Interaction Therapy as a universal prevention program. *Education and Treatment of Children*, *33*, 261–287. doi: 10.1177/0145445509344215

Hermans, D., Eelen, P., & Orlemans, H. (2007). *Inleiding tot de gedragstherapie [Introduction to behaviour therapy]*. Houten: Bohn Stafleu van Loghum.

Huyse, M., Bertrands, E., Colpin, H., Verschueren, K., & Vancraeyveldt, C. (2015). *An online course for the Playing-2-gether intervention*. Retrieved from samen-spel.weebly.com (password protected).

Howes, C., & Hamilton, C. E. (1992). Children's relationships with child care teachers: Stability and concordance with maternal attachment. *Child Development*, *53*, 879–892. doi: 10.1111/j.1467-8624.1992.tb01667.x

Kesner, J. E. (2000). Teacher characteristics and the quality of child-teacher relationships. *Journal of School Psychology*, *28*, 133–149. doi: 10.1016/S0022-4405(99)00043-6

Koomen, H. M. Y., & Hoeksma, J. B. (2003). Regulation of emotional security by children after entry to special and regular kindergarten classes. *Psychological Reports, 93*, 1319-1334. doi: 10.2466/PRO.93.8.1319-1334

Leflot, G., van Lier, P. A. C., Onghena, P., & Colpin, H. (2010). The role of teacher behaviour management in the development of disruptive behaviour: An intervention study with the Good Behaviour Game. *Journal of Abnormal Child Psychology, 38*, 869–882. doi: 10.1007/s10802-010-9411-4.

Lyon, A. R., Gershenson, R. A., Farahmand, F. K., Thaxter, P. J., Behling, S., & Budd, K. S. (2009). Effectiveness of Teacher-Child Interaction Training (TCIT) in a preschool setting. *Behaviour Modification, 33*, 855–884. doi: 10.1177/0145445509344215

Matthijs, W., & Lochman, J. E. (2010). *Oppositional defiant disorder and conduct disorder in childhood*. UK: John Wiley & Sons.

McIntosh, D. E., Rizza, M. G., & Bliss, L. (2000). Implementing empirically supported interventions: Teacher-Child Interaction Therapy. *Psychology in the Schools, 37*, 453–462.

Mortelmans, D. (2010). *Handboek kwalitatieve onderzoeksmethoden*. Leuven: Acco.

Nagin, D., & Tremblay, R. E. (1999). Trajectories of boys' physical aggression, opposition, and hyperactivity on the path to physically violent and nonviolent juvenile delinquency. *Child Development, 70*, 1181-1196. doi: 10.1111/1467-8624.00086

NVivo qualitative data analysis software. QSR International Pty Ltd. Version 9, 2010.

O'Connor, E. E., Dearing, E., & Collins, B.A. (2011). Teacher-child relationship and behavior problem trajectories in elementary school. *American Educational Research Journal, 48*, 120-162. doi: 10.3102/0002831210365008

Pianta, R. C., & Hamre, B. (2001). *Students, teachers, and relationship support [STARS]: User's guide*. Lutz, FL: Psychological Assessment Resources.

Pianta, R. C., Hamre, B. K., & Stuhlman, M. (2003). Relationships between teachers and children. In W. M. Reynolds, G. E. Miller, & I. B. Weiner (Eds.), *Handbook of psychology. Vol. 7: Educational psychology* (pp. 199–234). New York: Wiley.

Smidts, D. P., & Oosterlaan, J. (2007). How common are symptoms of ADHD in typically developing preschoolers? A study on prevalence rates and prenatal/demographic risk factors. *Cortex, 43*, 710–717. doi: 10.1016/S0010-9452(08)70500-8

Spilt, J. L., Koomen, H. M. Y., & Thijs, J. T. (2011). Teacher wellbeing: The importance of teacher-student relationships. *Educational Psychology Review, 23*, 457-477. doi: 10.1007/s10648-011-9170-y

Vancraeyveldt, C., Bertrands, E. M., Vastmans, K. Colpin, H., Verschueren, K., & Huyse, E. (2014). *First results of the Playing-2-gether online course*. Unpublished internal report, Teacher Training Department, UC Leuven-Limburg.

Van Craeyveldt, C., Van Craeyveldt, S., Verschueren, K., & Colpin, H. (2010). *Samen-Spel in de kleuterklas. Leerkrachthandleiding [Playing-2-gether in preschool. Teacher manual]*. Belgium: KU Leuven, School Psychology and Child and Adolescent Development.

Van Craeyveldt, C., Vastmans, K., Huyse, M., Colpin, H., Verschueren, K., & Bertrands, E. (2014). *Qualitative analysis: the Playing-2-gether program in the classroom*. Unpublished internal report, Teacher Training Department, UC Leuven-Limburg, Belgium.

Van Craeyveldt, C., Verschueren, K., Van Craeyveldt, S., Wouters, S., & Colpin, H. (2013). Teacher-reported effects of the Playing-2-gether intervention on child externalising problem behaviour. *Educational psychology: An international Journal of Experimental Educational Psychology*. doi: 10.1080/01443410.2013.860218

Van Craeyveldt, C., Verschueren, K., Wouters, S., Van den Noortgate, W., Van Craeyveldt, S., & Colpin, H. (2015). Improving teacher-child relationship quality and teacher-rated behavioral adjustment amongst externalizing preschoolers: Effects of a two- component intervention. *Journal of Abnormal Child Psychology*, 43, 243-257. doi: 10.1007/s10802-014-9892-7

Verschueren, K., & Koomen, H. M. Y. (2012). Teacher-child relationships from an attachment perspective. *Attachment & Human Development*, 14, 205–211. doi: 10.1080/14616734.2012.672260