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Child adjustment in divorced families: Can we  
successfully intervene with Dutch 4- to 6-year-olds?  
Feasibility study Children of Divorce Intervention  
Program (CODIP) in the Netherlands

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## Abstract

In the Netherlands, about 70,000 children are involved in their parents' divorce or separation each year while still living at their parents' home (Spruijt, 2007). Research points out that children of divorce perform worse in school, have more behavioral problems, score lower on psychological and emotional wellbeing, have a lower self-esteem, and have more problematic social relationships than children of intact families (e.g. Amato & Keith, 1991; Spruijt, 2007). Parental divorce or separation is regarded as one of ten major adverse childhood experiences (ACE), found to be related to diverse important categories of emotional state, health risks, disease burden, sexual behavior, disability, and healthcare costs, decades later (Felitti & Anda, 2010). Despite these risks, in the Netherlands, evidence-based preventive support for young, up to 6 years-old children of divorce is currently lacking. Evidence-based preventive intervention for Dutch children of divorce is therefore very much needed, mainly for children up to six years of age for whom in particular support is currently lacking.

The Children of Divorce Intervention Program (CODIP) is an evidence-based intervention to prevent divorce related problems in children, developed in the USA and applied in several countries. In this program, children discuss their divorce-related feelings, deal with unrealistic perceptions and attitudes regarding the divorce, and enhance their coping capacities. In a supportive environment, participating children are trained in cognitive behavior strategies and inherent coping skills. Positive effects of CODIP were found (based on self-report, parental report as well as teacher report) in quasi-experimental and experimental studies in the United States regarding internalizing and externalizing problems. These effects were maintained during follow-up, two years after the intervention (Alpert-Gillis et al., 1989; Pedro-Carroll & Alpert-Gillis, 1997a; Pedro-Carroll, Alpert-Gillis, & Cowen, 1992; Pedro-Carroll & Cowen, 1985; Pedro-Carroll, Sutton, & Wyman, 1999).

Previously, a pilot study showed promising results that participation in an adapted Dutch version of CODIP-NL can be an effective and much appreciated way to contribute to prevention of divorce related problems in Dutch children aged 6-8 years (Klein Velderman et al., 2011). The current project encompasses the adaption of the 12 session CODIP module for kindergarten and first grade children of divorce (Pedro-Carroll, & Alpert-Gillis, 1997b) to the Dutch setting, and the assessment of the feasibility of this adapted version (i.e., 'CODIP-NL'). It therewith focuses on studying preconditions for a solution to fill the lacuna regarding evidence-based preventive support for Dutch 4-6 year old children of divorce.

Objectives of the study were threefold: 1) translating and adapting the CODIP module for kindergarten and first grade to the Dutch context; 2) testing the feasibility of introducing CODIP in the Dutch setting; and 3) gaining insight in the feasibility of replicating the positive and desired effects of CODIP for 4-6 years as proven in the USA. To reach the first objective, the program was adapted to the Dutch setting by an experienced team of academically schooled psychologists, educational specialists and supervisors. To reach the second and third objectives, an extensive pilot study was conducted.

The pilot study consisted of four CODIP-NL support groups, provided to a total of 17 children. Parents, school teachers, and trainer received questionnaires pre and post intervention, to evaluate the implementation of CODIP-NL as well as child adjustment.

Results showed that the program could indeed be adapted to the Dutch setting in an acceptable format. Parents were enthusiastic about CODIP-NL. The majority of parents had perceived positive responses of their child to the intervention, and found that their child was positively changed by participation in CODIP-NL. Father- or mother-reported child adjustment data (available on 65 and 47% of participating children respectively) did not show any significant differences between pre- and posttest. Comparison of parent-reported child positive functioning scores of the pre- and posttest revealed a small (mothers) and medium (fathers) but statistically non-significant increase. The increases in reported child positive functioning in our study were larger than the increases reported in US research among children participating in CODIP.

The trainer of the first four pilot groups reported that she like working with this new module of CODIP-NL for 4- to 6-year-olds. She appreciated program materials and felt it was possible to reach program objectives by means of the instructions provided. The trainer reported a medium sized positive impact of the intervention on children's positive functioning (increased). Moreover, trainer-reported conduct problems tended to have decreased after participation in CODIP-NL, but this pre- to posttest difference was not found statistically significant.

Finally, teacher reports revealed a significant medium-sized reduction of participating children's conduct problems after participation in CODIP-NL in comparison with before participation. In addition, small, but non-significant converging differences were found for children's emotionality (decreased), hyperactivity (decreased), prosocial behavior (increased), and total difficulties (decreased).

In sum, this study constitutes a first step in the implementation of CODIP for 4- to 6-year-olds in the Netherlands. We found modest but promising first results indicating that the introduction of this module in the Netherlands is feasible, and that it might be well possible to contribute to participating children's positive functioning in a much appreciated way. Meanwhile, the gap regarding interventions for young children of divorce in the Netherlands has not been solved. In this study, CODIP-NL has proven to be a promising and much appreciated direction for future intervention in this domain.

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# 1 Introduction

A staggering number of 1.0 million marriages (1.9 divorces for every 1000 persons) ended in divorce in the EU-27 in 2009 (European Commission, 2013). These numbers exclude live-in partnerships. To compare with; 2.2 million marriages (4.4 marriages for every 1000 persons) took place in 2010. In the United States the divorce rates are as high (NVSS, 2010). Both the EU and US divorce rates are among the highest of the world (UN, 2008). In a lot of cases children are involved. For example in England and Wales half of the couples divorcing had at least one child under the age of 16 in 2010 (Office for National Statistics, 2011). In the Netherlands, an estimated number of 70,000 (i.e., 1.75% of all) at home living children are involved in their parents' divorce or separation each year (Spruijt, 2007). This estimation consists of 57,000 children younger than 18 years of age, and 13,000 aged 18 years and older. The parental separations concerned include termination of both common-law relationships as well as long-standing live-in partnerships.

Research has shown that children encounter notably negative consequences of their parents' divorce (Amato & James, 2010). For them, parental divorce is an unwanted, uncontrollable, and often unexpected life event (Herbert & Harper-Dorton, 2002; Hodges, 1991; La Greca, 1992) typically following a history of conflict. It often leads to less contact with, and less emotional support from one or both parents. Moreover, in some cases the child has to move to a different municipality and/or school. For most children it is an enormously challenging, if not overwhelming situation, leading to problems such as self-blame, misconceptions, inaccurate attributions, fears of abandonment, and feelings of isolation.

Amato and Keith's (1991) meta-analysis shows that children of divorce achieve worse in school, have more behavioral problems, score lower on psychological and emotional wellbeing, have a lower self-esteem, and display more problems in social relationships than children growing up in intact families. Although most children of divorce develop reasonably well in the long term the individual and societal costs of a minor problematic group can be large. Research points to a range of problems that endure into adulthood: increased absence from school, early school drop-out, and sick-leave; psychological problems; depression, increased levels of smoking, and heavy drinking among women; younger marriages, teenage parenthood, and out-of-wedlock children; problematic relationships and divorce in own relationships (e.g., Amato & James, 2010; McLanahan & Bumpass, 1988; Van der Valk & Spruijt, 2004; Wauterickx, Gouwy, & Bracke, 2006).

Note. This study builds on our previous experience from the feasibility study on CODIP for Dutch 6-8 year-olds. Objectives were to large extent similar to the previous study, but focusing on a different age group. Therefore, where possible, relevant sections from the previous research report (Klein Velderman, Pannebakker, De Wolff, Pedro-Carroll, Kuiper, et al., 2011) were copied into the current report.

Parental divorce or separation is regarded as one of ten major adverse childhood experiences (ACE; including various types of child maltreatment, and childhood adversities rooted in household dysfunctions) studied by Felitti and Anda (2010) in their ACE study. Felitti and Anda illustrated the long-lasting, strongly proportionate and often profound relationship between ACE and important categories of emotional state, health risks, disease burden, sexual behavior, disability, and healthcare costs, decades later (Felitti & Anda, 2010).

## **1.1 The Dutch lacuna: no evidence-based interventions**

Despite above mentioned risks, and the key importance of available support (FamiliesAndSocieties, 2014), preventive support for children of divorce is limited (e.g., Cloostermans, Klein Velderman, & Pannebakker, 2013; Vermeij, Van der Wel, & Krooneman, 2005). Available support is highly fragmented and spread across various organizations. Most of this concerns rather local or isolated initiatives, in particular support groups, websites, brochures, and opportunities for individual (telephone) consultation. These are primarily aimed at children aged between eight and twelve years. Accordingly, there is a need for an evidence-based prevention program for children of divorce in the Netherlands, mainly for children up to six years of age for whom in particular support is currently lacking (see also Klein Velderman et al., 2011). The US Children of Divorce Intervention Program (CODIP) could be an evidence-based answer to fill this lacuna, and is therefore focus of this study.

Previously, a pilot study showed promising results that participation in an adapted Dutch version of CODIP can be an effective and much appreciated way to contribute to prevention of divorce related problems in Dutch children aged 6-8 years (Klein Velderman et al, 2011). This project encompasses the adaption of the 12 session CODIP module for kindergarten and first grade children of divorce to the Dutch setting, and the assessment of the feasibility of this adapted version (i.e., 'CODIP-NL'). It therewith focuses on studying preconditions for a solution to fill the lacuna regarding evidence-based preventive support for Dutch 4-6 year old children of divorce.

## **1.2 The Children of Divorce Intervention Program (CODIP)**

Objective of the current study was to make the CODIP module for kindergarten and first grade children (ages 4-6), applicable for the Dutch situation and to test it in a pilot study. CODIP is a prevention program aiming at the prevention of problematic development of children at risk because of their parents' divorce. Clinical aspects of CODIP are shaped by developmental theory, which focuses on age-based reactions to parental divorce and intervention approaches tailored to children's developmental characteristics. CODIP is based on theories of resilience. These suggest that wellness can be promoted by protective factors that provide supportive scaffolding for children experiencing difficult times (Vygotsky, 1978). The key is to foster supportive outreach and reduce risk across systems that affect children, including schools, courts, communities, and families (Pedro-Carroll, 2001). Moreover, CODIP is also based on a transitional-events model that emphasizes the stressful challenges and changes associated with marital disruption in families (Felner, Farber, & Primavera, 1983; Sandler, Tein, Metha, Wolchick, & Ayers, 2000).

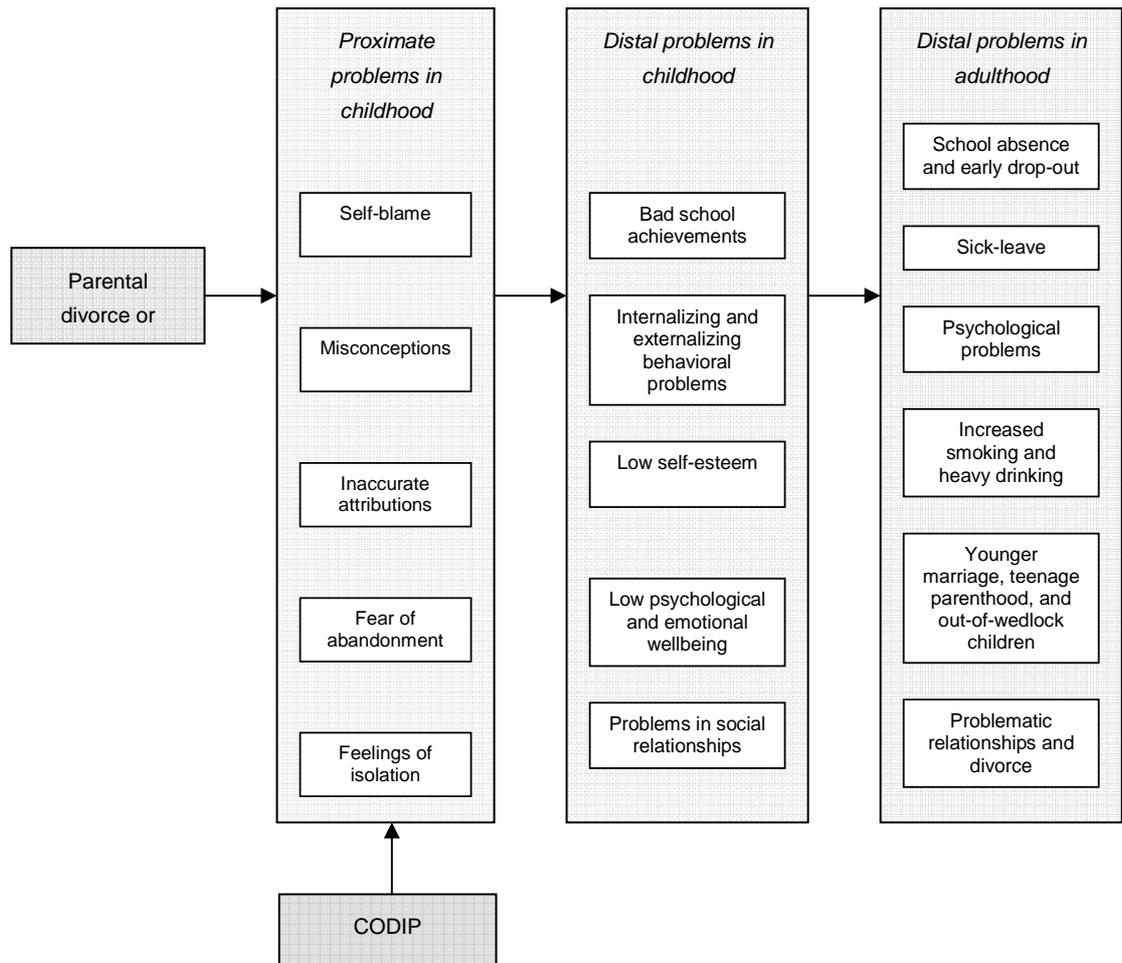


Figure 1.1: Systematic representation of the problem definition of this study, including an indication of proximate and distal consequences of parental divorce, and the model of intervention (CODIP).

CODIP focuses on proximate divorce-related problems of children of divorce by enhancing their effective coping styles, clarifying misconceptions, framing realistic appraisals of control, and providing accurate attributions for parental problems (see Figure 1.1). To achieve this, a supportive group environment is created in which children learn to deal with their feelings about and perceptions of the divorce. Games and activities are designed to enhance coping skills and self-esteem. Active coping – involving problem solving skills and positive thinking – was found to increase children's feelings of confidence in their ability to cope and lead to greater resilience among children (Sandler et al., 1994, 2000). Accordingly, CODIP builds on the assumption that timely support for children of divorce, focusing on acute effects of the divorce, can bring about considerably positive effects in the short and long term. More information on the objectives and contents of CODIP is provided in Chapter 2.

Experimental studies (with quasi-experimental or pre-post with matched controls, and randomized controlled designs) showed positive effects of CODIP (based on self-reports, parent and teacher reports) on internalizing and externalizing problems

for children of different ages and demographic backgrounds (e.g., Alpert-Gillis et al., 1989; Pedro-Carroll et al., 1992, 1999; Pedro-Carroll & Cowen, 1985). Effects for the kindergarten and first grade module persisted over a 2-years follow-up. Furthermore, the intervention resulted in increased competence and better adjustment of participating children to the new family situation. One study examined divorce related cognitions and also found positive effects on this outcome (Pedro-Carroll et al., 1992).

CODIP is thus extensively evaluated and internationally proven to be effective<sup>1</sup>. Therewith CODIP could be an evidence-based solution to fill the Dutch lacuna regarding evidence-based prevention programs for children of divorce, preventing behavioral, psychological and emotional problems of children in the short term as well as lowering individual and societal costs in the long term.

### 1.3 Child ages

Findings from a longitudinal study in the US, from the National Survey of Children, suggest that parental divorces or separations that occur before the child is age 6, pose greater risk to subsequent social and emotional development, than those occurring when the child is older (Zill, Morrison, & Coiro, 1993). And although firm conclusions about risk relating to the child's age at the time of parental divorce are difficult to reach, young children may be at somewhat greater disadvantage because of their limited cognitive and verbal skills, and their dependence on parents for needed structure and stability in their lives. Age at the time of parental divorce shapes a child's emotional reactions and ability to adjust to family changes. It influences cognitive understanding of the divorce, how family changes are seen, the child's coping abilities and dependence on parents and peers. Moreover, the complex legal, emotional and economic aspects of divorce are often misunderstood by preschool-aged children. Most children of this age are pervasively sad about their parents' breakup, and their wishes for reconciliation are frequent and fervent. Misconceptions about the reasons for marital rupture occur frequently, often implicating the child. In addition, feelings of loss and sadness, fears of abandonment, deprivation, yearning for the noncustodial parent, and confusion about what divorce does and does not mean, pose frequent struggles for children at this young age (cf., Pedro-Carroll, 2010).

The kindergarten and first grade CODIP module (Pedro-Carroll & Alpert-Gillis, 1997b) was designed to address psychological reactions and developmental characteristics, primarily of 5- and 6-year-olds. Children of divorce, at this age, often react to parental divorce with a fear of abandonment. Fantasies of parental reconciliation, guilt and misconceptions because of magical thinking are also common.

### 1.4 Dappere Dino's™ (Daring Dinosaurs): CODIP-NL for 6-8 year-olds

Previously, the overall conceptual outline of CODIP-NL was articulated for our pilot into CODIP for Dutch 6-8 year-olds (named 'Dappere Dino's™'). That study showed promising results that participation in CODIP-NL can be an effective and much appreciated way to contribute to prevention of divorce related problems in Dutch

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<sup>1</sup> See also CODIP's registration in SAMHSA's National Registry of Evidence-based Program and Practices (NREPP) at <http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=220>.

children aged 6-8 years (Klein Velderman et al, 2011; ZonMw 15701.2004; Pedro-Carroll, & Klein Velderman, in press):

- The majority of children liked the adapted program and regarded the group as a safe place to discuss their feelings. Children had made friends and found new ways to solve problems.
- Parents were also enthusiastic about CODIP-NL for 6-8 year-olds. The majority of parents had perceived positive responses of their child to the intervention, and found that their child was positively changed by participation in CODIP-NL.
- Finally, trainers of the first four pilot groups reported that they liked working with this new intervention. Moreover, they reported strong effects of CODIP-NL 6-8 years on positive functioning of the children and on total behavioral problems (decreased).

Recently, a small scale evaluation took place of the second version of Dappere Dino's™ (based on above mentioned feasibility study), currently used in Dutch practice (Klein Velderman & Pannebakker, 2014; Klein Velderman, Cloostermans, & Pannebakker, 2014). Children, trainers and parents appeared to be enthusiastic about the intervention. Results based on trainer-, teacher-, and parents-reported pre- and posttest measures, resemble previous findings. Findings showed increases in children's psychosocial functioning, and decreases in emotional problems, conduct problems, and total problems after participation in Dappere Dino's™.

## 1.5 Study objectives

Field parties indicated the need for support for children aged 4-6 too (e.g., Cloostermans et al., 2013). These children need different methods fitting their developmental needs and capacities, e.g., use of puppet play and pictures, instead of writing and reading (see also Paragraph 1.3). This study encompasses an initial feasibility study on the introduction of CODIP for Dutch 4-6 year-old children of divorce. It focuses on studying preconditions for a solution to fill the lacuna regarding evidence-based preventive support for Dutch 4-6 year old children of divorce.

This study builds on previous work and findings and answers to requests from the field to fill the lacuna for younger children. Its objectives are:

- 1) Translation and initial adaptation of CODIP materials for school-going 4-6 year-old children of divorce to the Dutch context;
- 2) Testing the feasibility of implementing the CODIP module for school-going children of divorce aged 4-6 years in two pilot groups in the Dutch setting;
- 3) Determining the feasibility of replicating positive and desired effects of CODIP for 4-6 year-olds as proven in the USA.

In order not to lose the core principles of the original program, the process of adapting and testing CODIP in the NL took place in two stages. Stage 1 related to the first study goal. The CODIP module for kindergarten and first grades children was translated and adapted for four to six years old Dutch children of divorce. We

called this adapted version “Stoere Schildpadden™”, which means ‘Though Turtles’ referring to the turtle hand puppet used in the program. (From hereof, in this report, we refer to the Dutch version of the program as ‘CODIP-NL’). The second study stage concerned an empirical stage: A pilot study was conducted in order to provide answers to the second and third study goals, regarding the feasibility of implementing the CODIP-NL module 4-6 years, and the possibility of replicating positive intervention effects of CODIP as proven in studies abroad.

In sum, this study is the first one to provide information about the preconditions for introducing CODIP for kindergarten and first grades children in the Netherlands and about the feasibility of this CODIP-NL 4-6 years program in the Dutch setting.

## 2 The intervention: CODIP program characteristics

As was introduced in Chapter 1, CODIP is a preventive group program that emphasizes support and skill building for children of divorce. It contains components dealing with children's feelings about and perceptions of the divorce as well as games and activities designed to enhance coping skills and self-esteem. The overall objectives of the CODIP module for the kindergarten and first grade are the same as for the CODIP second and third grade module (see also Pedro-Carroll & Jones, 2005; Pedro-Carroll & Klein Velderman, in press).

### 2.1 Objectives of CODIP

CODIP has five basic objectives, directly targeting proximate negative child outcomes of parental divorce (Figure 1.1):

1) Providing a supportive group environment:

A fundamental underpinning of CODIP groups is to provide a safe, supportive environment for children. Contact with peers who have gone through comparable experiences helps participating children to reduce their sense of isolation and develop a sense of companionship and trust. Therefore a safe, accepting environment is established in which children can respond at their own pace. To do so, CODIP meetings should be scheduled consistently and conducted in an area that offers privacy. Experience with CODIP also stresses that confidentiality is essential (Pedro-Carroll, 1997, p. 218).

2) Facilitating identification and appropriate expression of feelings:

CODIP seeks to enhance the participants' ability to identify and appropriately express a range of emotions that are associated to the divorce. A variety of play techniques are used to help children identify a range of emotions, including the interactive use of books, pictures of facial expression, and the active participation of a group puppet. To facilitate identification and appropriate expression of feelings, trainers are encouraged to maintain a safe group environment where all feelings are accepted. Foremost, trainers must carefully balance the need for children to express their feelings while moderating the dose of emotionally laden material with more neutral experiences (Pedro-Carroll & Jones, 2005; Pedro-Carroll & Klein Velderman, in press).

3) Promoting accurate understanding of divorce-related concepts and clarifying divorce-related misconceptions:

A third CODIP goal is to help children separate their strong divorce-related fears from reality. Because feelings of guilt and responsibility for the separation and hopes and wishes for reconciliation pose an emotional burden for children, clarifying misconceptions is an essential part of the intervention. In CODIP structured puppet play is used to help clarify divorce-related misconceptions. Besides, "Daring Dinosaurs", a board game developed specifically for CODIP, contains cards that reflect misconceptions children often have about the reasons for family problems, with opportunities for group discussion and puppet play to clarify common reasons for self-blame (see also Pedro-Carroll & Jones, 2005; Pedro-Carroll & Klein Velderman, in press).

4) Enhancing coping skills:

Several CODIP sessions are devoted to training social problem solving, communication skills, and the appropriate expression of anger, using age-appropriate games and techniques to encourage skill acquisition and generalization. Specifically, children are taught to differentiate between problems they can, and problems they cannot control. This key distinction helps them to master the psychological task of disengaging from inter-parental conflicts and to redirect their energies into age-appropriate pursuits.

5) Enhancing children's perceptions of self and family and reinforcement of coping skills:

This final program objective emphasizes positive qualities of children and families. Several self-esteem building exercises are used to highlight the children's positive qualities. For example, each child completes an 'I am special' book detailing his/her characteristics, likes, feelings, wishes, and place in the group and family, and repeating session messages. Sessions in regard to this fifth objective strive to heighten children's awareness and acceptance of non-traditional family structures and of positive post-divorce family changes that may have occurred.

## 2.2 Inclusion criteria

As for the second and grade CODIP module, to qualify for CODIP kindergarten and first grade module, a child must:

- a) Be within the targeted age range for a specific module (4-6 years in this study; see below);
- b) Have parents who at one time lived together and are now separated (including termination of both common-law relationships as well as long-standing live-in partnership);
- c) Have written parental consent, and;
- d) Be capable of functioning adequately in a group (i.e., show no evidence of serious aggressive behaviors or severe emotional problems that warrant more intensive services).

These selection criteria are particularly important for the following reason: The inclusion of children who are not appropriate for the group (e.g., because of serious aggressive behaviors) can be frustrating for all parties because it can lead to managing the child's inappropriate behavior becoming the major focus, rather than managing the program's central divorce-related objectives. In other words, CODIP is designed as a preventive intervention, not as intensive group therapy for serious emotional difficulties (Pedro-Carroll & Jones, 2005, p. 65). Children with serious behavior problems should be referred to more intensive support programs.

## 2.3 The CODIP kindergarten and first grade module

The CODIP module for kindergarten and first grade children consists of 12 weekly group sessions of 45 minutes each. These CODIP module sessions are organized in 4 primary parts: 1) Establishing the group, feelings, families, and family changes; 2) Developing coping skills; 3) Child-parent relationships; and 4) Children's perceptions of themselves and their families. The module tends to work best with 4 to 6 group members.

The Children's Institute has developed procedure manuals for conducting the support groups, tailored to the developmental needs of children. These manuals offer trainers clear guidelines for their work and are well structured: First an introduction is given about the intervention program and its goals. Next, the authors give a module overview and information about program implementation, including a) train-the-trainer, b) group facilitation techniques, and c) group process issues. The main part of the manual consists of information about the module sessions. For each session, goals, procedure and needed materials are listed and subsequently illuminated. The program procedure is written out very precisely, naming concrete acts, giving sample quotations, and providing with review questions, closing remarks, and/or notes to the trainers. Copies of written program materials such as the 'I am special book', and a 'Certificate of Achievement' for the child are also given in the manual. Play is a significant element of the program. The procedure manuals are consequently accompanied by, for example, the 'Feeling Faces' poster and the 'Daring Dinosaurs board game'.

#### **2.4 Parent involvement**

Although CODIP is aimed directly and primarily at children, parents are involved in all stages of the intervention. Prior to the start of the CODIP group sessions, parents are invited to attend an interview on admission where they receive information on the content of CODIP and the reaction CODIP can evoke in children. Also, during the intervention, parents receive written information and advice in regard to their children and the divorce, and are invited to a facultative parent evening. At the end of the CODIP sessions, the parents attend an one-to-one evaluation meeting with the trainer of the group. By means of this parental involvement, the parents are advised on how to support their child, which will enhance the chance of expanding effects to and maintaining them in the home situation.

## 3 Methods

As described in the Introduction (Chapter 1), this study consisted of two study stages: Stage 1 relating to the translation and adaptation of the CODIP kindergarten and first grade module to Dutch intermediate and end users, and Stage 2 relating to the empirical stage (i.e., the pilot study) regarding the feasibility of implementing the CODIP-NL module and the possibility of replicating positive intervention effects of CODIP as proven in studies abroad. This study was approved by the Medical Ethical Board of the Leiden University Medical Center (LUMC; reference P12.166; received in Stage 1).

### 3.1 STAGE 1: Translation and adaptation

Thorough translations of the well-developed CODIP program materials (Children's Institute; see Chapter 2), were the basis of a first Dutch version of the manual and other written materials. First translations from English into Dutch (by Mrs. Anne van Dorst) were as literally as possible. Some expressions were reconsidered or altered when a literal translation was not appropriate.

In order to prevent that translated and adapted CODIP materials deviated from the core elements that constitute the effectiveness of the original program, the conceptual outline and consultation of JoAnne Pedro-Carroll, PhD, who is founder and developer of CODIP in the United States, were leading during the process of adapting the US-version of CODIP to the Dutch user population. This outline depicted underlying theoretical principles of the program from which concrete program activities can be derived, using earlier publications about CODIP, and was previously developed in close collaboration with Dr. Pedro-Carroll. CODIP was to be adapted, e.g., in order to meet the characteristics of the Dutch user population, only as far as the adaptations stayed in line with the theories (for change) that constituted the original program.

Hence, based on the translated materials and adhering to this conceptual outline the first versions of the Dutch program materials were designed. Program materials were designed to be attractive to intermediate users (organizations and trainers expected to expose children to the program) as well as end users (participating children of divorce). For reading or picture books used in the original US-version of CODIP, possible alternatives were sought or de novo designed. Where possible, alternatives, e.g. for US reading books, posters, etcetera, were selected from our previous work on the 6-8 year-olds module.

In addition, a draft implementation plan was developed, including conditions for the practical realization of CODIP (e.g. train-the-trainer, supervision), characteristics of the trainers and executive organization(s). Although CODIP can be implemented in a variety of settings, such as mental health centers, community centers, private practitioners' offices, after-school care programs, and court-connected service groups (Pedro-Carroll, 2005), in the current study we focused on implementation in the school setting by school social workers.

The US program developers regard schools as a natural setting for CODIP groups, because of the accessibility of large numbers of children sharing similar

experiences who can continue in their supportive relationships after the groups end (Pedro-Carroll, 2005). Furthermore, school-based professionals are ideal candidates for group leaders because of the potential continuity of their contacts with program children and their families. For the present study, we decided to work with professionals in the setting of school social work for a number of reasons:

- 1) Professionals working within these setting have a relevant higher educational degree,
- 2) Professionals working within these setting are experienced in working with this age group in the 'preferred context' of schools (see above);
- 3) Previous work showed that it was very well feasible to implement CODIP for older 6-8 years old children in this setting (Klein Velderman et al., 2011, 2014; Klein Velderman & Pannebakker, 2014).

The principal trainer from the pilot organization participating in the current study (see below), was asked to comment on the first draft of the Dutch procedure manual.

### 3.2 STAGE 2: Pilot study

#### **Procedure**

The pilot groups were organized by one pilot organization: the School Social Work department of Stichting Jeugdformaar in the The Hague region. This organization was responsible for conducting a minimum of two CODIP-NL support groups of 4 to 5 children each. Each group was to meet for 12 weekly, 45-minute CODIP-NL sessions, at schools, during school time. Each group was to be co-led by the trained principal trainer, and a co-trainer; both school social workers.

#### *Data collection*

To reach the study objectives as formulated in the Introduction, the pilot study focused on two aspects. A first aspect was the process evaluation. The second is the impact evaluation. Parents, trainer and school teachers were informants in this study. Combined questionnaires targeted process and program outcomes, pre and post intervention.

For the process evaluation, both parents and the trainer received questions in their questionnaire after the intervention (post), focusing on various parts of the intervention (e.g., duration, group size, materials, and content) and effectiveness as experienced. We included evaluation questionnaires that were also used by the Children's Institute in US studies, supplemented by additional questions. The trainer also kept a logbook after each intervention session (see below). To assess the impact of the intervention, child adjustment measures are compared, pre, and post participation, regarding parent, trainer, and teacher -reported child adjustment measures. The child's school teacher and both parents received questions in a questionnaire before the start (pre) and after the intervention (post). At the start of the intervention, the trainer does not yet know the children well enough to score them on their competences and behaviors. Therefore, trainer ratings for CODIP-NL children were done after session four (pre), and after the final session (post). For the impact evaluation, we connect closely to US research that constitutes the evidence-base of CODIP. In addition to the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997), we used questionnaires that were already translated from

US research (forward English to Dutch, and backward Dutch to English; by independent translators) and used in previous Dutch research (Klein Velderman et al., 2011; Klein Velderman & Pannebakker, 2014).

### **Subjects**

The study included 17 children, supported in four pilot groups (2 to 6 children each). Inclusion criteria were similar to those in Alpert-Gillis et al. (1989), those for the original US-version of CODIP, and for CODIP-NL 6-8 years (see Chapter 2).

Costs of the intervention were paid by a grant from ZonMw (Grant No. 15701.2004), and participation was therefore free of charge for children and their parents. Participants were reached through direct communication between school social work professionals, schools, and parents of children attending these schools.

### **Measures**

#### *Process evaluation*

- *Parent report*

At the posttest, the parent questionnaire included a list for parents about the program as developed by Pedro-Carroll and colleagues (Pedro-Carroll & Cowen, 1985): This questionnaire asked parents about how their child may have changed since the program began. The questionnaire started with 6 close-ended items (e.g., 'Since the program began, my child 'talks about his/her feelings', or 'is able to handle problem situations'), to be rated on a 5-point scale ranging from (1) much less to (5) much more. Additionally, three open-ended questions asked 'In what ways have your child's feelings and behavior changed since the program began?', 'What were your child's reactions to his/ her 'special' group?', 'What did you value most of the program's sessions?' and 'What have you missed as part of the program's sessions?'.

In addition to the US CODIP evaluative questionnaire (see above), at the posttest, parents were asked some additional evaluative questions, specifically addressing several intervention aspects (e.g., duration, group size, materials, content).

- *Trainer report*

*Logbooks.* – After each intervention session, the trainer filled out a logbook. In this logbook, she first registered date of session, possible absence of children, and the amount of time she spent on preparation. Second, an open-ended question asked her to give an overall description of this session. Third, the objectives of this session were listed. For each objective, the trainer scored if she felt she had reached this objective: yes, partly, no. Similarly she was asked to state for each session activity if these were put into practice: yes as described, yes but deviated from manual instruction, no. When deviated from instruction, she was asked to explain how and why. Finally, the trainer was asked to reflect on session materials: were materials used and if so, were these regarded as positive, neutral or negative. Again the trainer was asked for an explanation. In current use of CODIP for 6-8 years, these logbooks also serve as a method for monitoring program fidelity. In addition to the logbooks, at the posttest, the trainer was asked some additional evaluative

questions, specifically addressing several intervention aspects (e.g., duration, group size, materials, content), training and supervision.

As part of pilot implementation the trainer was supervised by professionals from PI Research by means of telephone conferences. These supervisors were previously involved in the development of CODIP-NL 6-8 years and in providence of structured training of CODIP-NL 6-8 years trainers. During the supervisory sessions, main program topics and general questions of the trainer were discussed.

In addition, a group meeting was held, attended by the trainer and researchers, to discuss and reflect on the implementation of the CODIP group sessions. This meeting included more in-depth reconstructions of the intervention sessions: How did it go? What was the general feeling about things like program activities, group process, child adjustment, and so on? What possible questions existed in regard to the implementation of the intervention? Were there any difficult situations during the sessions? This served to review the program process on the whole; to highlight and discuss possible practical problems for future implementation; and to focus on possible changes needed or optional in a second version of CODIP for 4-6 years.

#### *Impact evaluation*

- *Parent report*

*Parent Evaluation Form (PEF, derived from the questionnaire as previously developed and used by the Children's Institute; Alpert-Gillis et al., 1989)* – This 22-item questionnaire measures parents' views of children's feelings (e.g., 'Feels responsible for family problems if they occur'); behavior (e.g., 'Talks with me about how he/she feels'); and problem solving skills (e.g., 'Tries to solve own problems'). Items are rated on a 4-point Likert scale, ranging from (1) very true to (4) not true at all. High PEF sum scores indicate better adjustment. In previous US studies, the PEF had an alpha of .84 and a 2-week test-retest reliability of .72 (Alpert-Gillis et al., 1989). The alpha of mother-reported PEF in the current study held .86 at the pretest and .77 at the posttest, and for fathers .87 and .89 respectively. Note that an alpha above .9 is regarded as 'excellent', between .7 and .9 as 'good', between 0.6 and .7 as 'acceptable', between .5 and .6 as 'questionable', and smaller than .5 as 'poor' (George & Mallery, 2003; Kline, 2000).

*Strengths and Difficulties Questionnaire Parent Form (SDQ PF; Goodman, 1997)* – This brief behavioral screening questionnaire consists of 25 items assessing psychological adaptation of children. It generates scores for conduct problems, hyperactivity, emotional symptoms, peer problems, and prosocial behavior. All but the last are summed to generate a total difficulties score. The parent or teacher form for ages 4-16 was used. For 4 year-olds (45 months) the SDQ parent form has a sensitivity score of .74 and specificity of .89 using a clinical score on the Child Behavior Checklist (Dutch version; Verhulst & Koot, 1996) as criterion, based on a cutoff point of 9 (Theunissen, De Wolff, Vogels, & Reijneveld, 2011). Cronbach's alphas in the current study held .79 and .73 at the pretest for mothers and fathers respectively, versus .79 and .85 at the posttest.

- *Trainer report*

*Group Leader Evaluation Form (GLEF; developed and previously used by the Children's Institute; Alpert-Gillis et al., 1989)* – This 23-item questionnaire assesses children's strengths or competences (11 items), as well as problems that children of divorce experience (12 items). An overall adjustment score is constructed based on both competences as well as problems.

Items relate to, for instance, children's perception of divorce (e.g., 'Believes he/she can bring parents back together'); ability to deal with feelings (e.g., 'Expresses feelings appropriately'); interpersonal functioning (e.g., 'Is supportive when other group members are troubled'); and problem-solving skills (e.g., 'Recognizes differences between problems he/she can and cannot solve'). Trainers rate each item on a 4-point Likert scale, ranging from (1) very true to (4) not true at all. High scores indicate better adjustment. In previous US studies, the GLEF had a 2-week test-retest reliability of .92 and an alpha of .92 (Alpert-Gillis et al., 1989). Cronbach's alphas in the current study were .88 at the pretest, and .94 at the posttest.

*Strengths and Difficulties Questionnaire Teacher Form (SDQ TF)* – In addition to the GLEF, teachers filled out the teacher form of the SDQ. As the SDQ PF (see above), this 25-item questionnaire assesses psychological adaptation of children and generates scores for conduct problems, hyperactivity, emotional symptoms, peer problems, and prosocial behavior. Cronbach's alphas in the current study for trainer-reported SDQ total problems (based on 20 separate items) were 0.60 at the pretest, and 0.78 at the posttest.

- *Teacher report*

For each participating child, his or her primary school teacher filled out a pre- and posttest questionnaire. As the trainer did, teachers filled out the SDQ Teacher Form (see above). Cronbach's alphas resembled .77 and .67 for the pre- and posttest respectively.

## **Analyses**

To analyze the results of our pilot study we used a straight-forward statistical design. Trends in the process and impact evaluation were described, qualitatively as well as quantitatively. The process of implementing CODIP is described qualitatively by discussing open ended questions, and quantitatively by conducting frequency counts. The impact evaluation questionnaires are analyzed quantitatively by the usage of paired T-tests. Statistical significance is presented at the two-tailed 5 percent level ( $p < .05$ ). As a result of the choice for a small pilot study as a design for this feasibility study, we realize that the statistical power of our design is limited. Therefore, we shed light on statistically significant differences at the 10 percent level (equaling one-tailed  $p < .05$  results) as trends in our findings. Also, (standardized) mean difference scores for pre- and post-test outcomes are computed, as measures for effect sizes over time. The use of (standardized) effect sizes over time (Cohen's  $d$ ) allows us to compare our results with the US (i.e., the US results reflected differences between pre- and post-test mean scores). Moreover, usage of effect sizes over time offers us the possibility to compare the magnitude of differences between pre- and posttest measures. That is, effect sizes facilitate the interpretation of the substantive, as opposed to the statistical, significance of our results. An (absolute) effect size of 0.00 points to no effect,  $d$  of

0.20 to a small effect,  $d$  of 0.50 to a medium effect, and a  $d$  of 0.80 to a large effect (Cohen, 1969).

## 4 Results

In this chapter, first the pilot study sample is described. Next, we highlight some of the results of the process evaluation. Finally, results of the impact evaluation are presented.

### 4.1 Sample

A total of 8 boys and 9 girls participated in this study. They were 4 (50 months) to 7 years (85 months) old (pretest by the trainer after Session 4;  $M = 5.7$ ,  $SD = 0.7$ ). Trainer- and teacher-reported data was available on all 17 participating children. Complete mother-reported pre- and posttest data was available on 11 of the 17 participating children (65%), and father-reported pre- and posttest data was available on 8 children (47%). The length of time parents had been living separately at the time of data collection differed strongly: from three months up to over four years. Not in all cases, common-law relationships had officially been terminated (i.e., juridical procedures were in some cases ongoing).

### 4.2 Process evaluation

#### Parent-reported process variables

Eleven mothers and nine fathers reported on the process variables. The parents (mothers and fathers) were generally enthusiastic about CODIP-NL. Data are presented for mothers and fathers separately.

#### Mothers

All mothers ( $n = 11$ ) agreed that their child had responded positively to participation in CODIP-NL. "He thought it was nice to know he had children in his class who also have divorced parents." Also, 82% of the mothers ( $n = 9$ ) noted that the feelings and behavior of their child had changed since participating in CODIP-NL. "Takes initiative in talking about feelings or problems; talks more about what she does when being with her father, seems to be more open about this." Mothers reported one or more of the following ways in which their child had positively changed since the program began:

- Talks more about his/her feelings (55%;  $n = 6$ );
- Talks more about changes in the family (45%;  $n = 5$ );
- Feels him-/herself more comfortable about the divorce (55%;  $n = 6$ );
- Asks for support more often (27%;  $n = 3$ );
- Is able to handle problem situations (36%;  $n = 4$ );
- Understands divorce is a grown up problem children cannot change (73%;  $n = 8$ ).

The evaluative questionnaire furthermore revealed that most mothers were satisfied about the amount of sessions that constituted CODIP-NL (80%,  $n = 8$ ; too short 20%,  $n = 2$ ; missing  $n = 1$ ). Similarly, most mothers thought the length of the sessions was good (90%,  $n = 9$ ; too short 10%,  $n = 1$ ; missing  $n = 1$ ). Within the sessions, mothers appreciated most the fact that their child had peers to talk to ( $n = 3$ ), that their child better understood the situation ( $n = 3$ ), the playful way of teaching by the trainers ( $n = 3$ ), and the feedback to them as a parent ( $n = 3$ ). When mothers were asked what they had missed as part of the program's sessions, two mothers

responded they would have liked to have had more specific feedback on the wellbeing of their child, instead of more general feedback. The other nine mothers did not miss a thing.

After each session, the children received a worksheet. All mothers reported to have seen the worksheets (1 missing) and talked about the worksheets at home with their child. The vast majority of them (80%,  $n = 8$ ) was positive. One mother thought the worksheets were “somewhat too general. It could have been more focused on the topics.” Another mother argued there were “too much drawings. My son finds that difficult to do. [...] I do think the worksheets were good to repeat certain things at home or to talk about feelings at home.”

Parents received three newsletters with written information about the intervention: one before the start of the intervention, one after the fifth session, and one after the last one. All mothers read these newsletters (1 missing), and also regarded these as useful. “He himself told little [about the program], and now I was up to date.”

Four mothers (40%; 1 missing) attended the meeting for parents. In one case, there was no meeting for parents organized. In two cases, the ex-partner attended. Two mothers couldn't make time for the parent meeting. One mother didn't want to attend the meeting.

#### *Fathers*

Fathers reported roughly the same as mothers did. Only substantial differences of fathers compared to mothers are reported here.

Eighty-nine percent ( $n = 8$ ) of the fathers reported that his child feels him-/herself more comfortable about the divorce after participation.

Within the sessions, fathers valued most the fact that children of divorce get special attention ( $n = 3$ ), their child had peers to talk to ( $n = 2$ ), learned ways to cope with their emotions ( $n = 2$ ). The fathers didn't miss anything as part of the program's sessions.

After each session, the children received a worksheet. Three fathers (33%) reported they hadn't seen the worksheets. Five fathers reported to have seen the worksheets (67%; 1 missing) and talked about the worksheets at home with their child. All five fathers who recognized seeing the worksheets were positive. “Again positive: practical and easy way to talk to your child yourself/to be up to date.”

Six fathers (67%) attended the meeting for parents. In one case, the ex-partner attended. Two fathers couldn't make time for the parent meeting because of work or holiday.

### **Trainer-reported process variables**

#### *Materials*

Overall, the appreciation of materials by the trainer in her logbook was positive: the program materials were liked and regarded as practical. The trainer evaluated all the materials with a ++ (positive, as opposed to +/- 'neutral', or -- 'negative') and ended the evaluation of materials with a remark: 'SUPER'. The trainer only

recommended not to use markers and soft-cover binders with preschoolers but pencils and ring binders instead. From the logbooks as well as the interview after the pilot study, we received specific, detailed suggestions for further development of certain program materials. For instance, four basic 'Feeling faces' (pictograms of emotions on a poster and as cards in a grab-bag; previously used in Dappere Dino's™) were used in the curriculum. The trainer reported that the four different feelings were in some cases too easy for some children but in other cases hard for participating children. The trainer suggested to increase the amount of feelings used in the curriculum (there are more feeling faces available from Dappere Dino's™), in cases where the cognitive capacities of the children in that specific group would allow to do so. Also the trainer suggested to increase the amount of 'movement-exercises', because of the attention span for this age-group. For example in the first session a ball-game could be used as an introduction game instead of getting to know each other while sitting on chairs. The trainer also asked if some of the materials could be enlarged.

The trainer regarded the amount and the duration of sessions (12 sessions of 45 minutes) as fine.

#### *Goals*

Most of the subgoals of every session were accomplished according to the trainer. Some of the subgoals were reported as partly accomplished. Mostly these partly accomplished subgoals were related to abilities of children to differentiate between solvable and unsolvable problems, and their skills to ask for help, support or information. It is noteworthy that although some of these goals were reported as difficult to complete, the trainer reported in subsequent sessions that the goals were accomplished.

#### *Working method*

In the logbooks the trainer reported if she executed the exercises as described in the manual. The trainer reported that almost all the exercises were executed as described in the manual. In two groups the trainer reported difficulties in executing exercises concerning the problem-solving skills. Reported reasons were a need for repetition after school holidays or lack of children's concentration. In these cases the trainer executed the exercises in a different way (for example not doing a stand-alone puppet play but doing a conversation with the puppet and the children) or didn't do the exercise at all.

#### *Group Size*

The trainer worked with different group sizes per group. In three out of four groups at least 4 children participated. In one group only two children participated. In the logbook the trainer reported to have achieved all the subgoals, used almost all working methods as described in the manual and evaluated all materials with a ++ rating in this small group. In the interview the trainer reported that a positive aspect of this small group was that she could give more attention to individual problems and learning new skills. According to the trainer, larger groups need more guidance, and differences between children's cognitive capacities and in their social-emotional development can be harder to take into account. The trainer reported that the two participating children were relatively bright children.

### 4.3 Evaluation of effects

#### Parent-reported child adjustment

Figure 4.1 depicts the (paired) pre- and posttest Parent Evaluation Form (PEF) scores reported by mothers ( $n = 11$ ) and fathers ( $n = 8$ ) of children participating in CODIP-NL. No statistically significant differences existed between any of the mother- and father reported child adjustment. However, non-response was higher for fathers than for mothers. From hereof, we therefore primarily focus on the more complete pre- to posttest maternal reports ( $n = 11$ ).

Increases in PEF scores reported by mothers were not statistically significant,  $p = .18$ ,  $d = 0.43$  (see Table 4.1). The same held true for father reports ( $p = .17$ ,  $d = 0.54$ ; see Table 4.2).

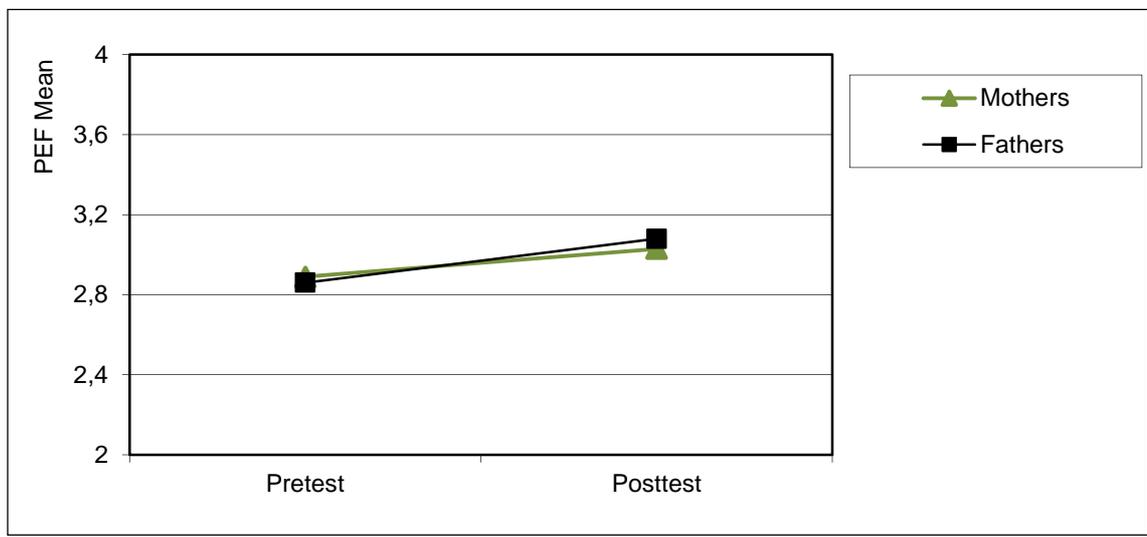


Figure 4.1: Average pre- and post-test Parent Evaluation Form (PEF) scores of CODIP-NL pilot study participants, as reported by mothers ( $n = 11$ ) and fathers ( $n = 8$ ).

Figure 4.2 compares the Dutch PEF scores (as reported by mothers) with results of children in previous US research (Pedro-Carroll et al., 1999). As can be seen, pre- as well as posttest scores in the Dutch sample were statistically significantly lower than of children participating in CODIP (US Program),  $p < .01$ . In the US, CODIP had not resulted in a pre- to posttest difference in PEF scores,  $d = 0.12$ . The magnitude of the increase in PEF scores between pre- and posttest as found in the current study, is more in resemblance of that in the US control group consisting of children from intact families ( $d = 0.53$ ), than US CODIP participants or divorce controls ( $d = -0.24$ ).

Mother-reported SDQ (Strengths and Difficulties Questionnaire) hyperactivity scores seemed to have slightly decreased ( $d = 0.39$ ). Also, mother-reported SDQ prosocial behavior seemed to have slightly decreased ( $d = -0.32$ ). However, none of the differences in SDQ adjustment scores between the pre- and posttest was found to be statistically significant ( $p > .05$ , 2-sided).

Table 4.1: Paired *t*-test results on the pre- and posttest differences of adjustment measures rated by mothers.

Measure	N	Pretest		Posttest		Diff. post-pretest		t	df	p	d
		M	SD	M	SD	M	SD				
PEF	11	2.89	0.35	3.03	0.29	0.14	0.33	1.44	10	.18	0.43
SDQ:	11										
Emotionality		1.64	1.43	1.64	1.21	0.00	1.67	0.00	10	1.00	0.00
Conduct problems		1.55	1.44	1.82	2.18	0.27	1.68	-0.54	10	.60	-0.18
Hyperactivity		3.73	3.29	3.00	2.65	-0.73	1.95	1.23	10	.25	0.39
Peer problems		0.82	1.33	0.82	0.75	0.00	1.41	0.00	10	1.00	0.00
Prosocial behavior		8.00	1.48	7.45	1.75	-0.55	1.75	-1.03	10	.33	-0.32
Total difficulties		7.73	5.26	7.27	4.80	-0.46	3.86	0.39	10	.70	0.12

Abbreviations: Diff. post-pretest = Difference from pre- to posttest, PEF = Parent Evaluation Form, SDQ = Strengths and Difficulties Questionnaire.

Note. Higher PEF scores indicate more positive child adjustment. Higher SDQ scores indicate more problems.

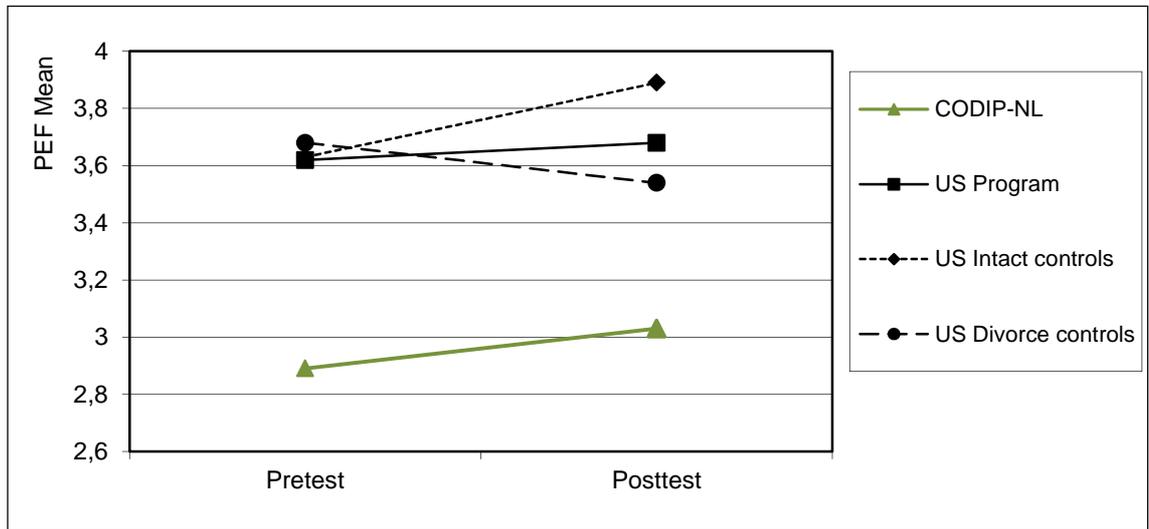


Figure 4.2: Average pre- and post-test Parent Evaluation Form (PEF) scores of CODIP-NL pilot study participants (*n* = 11; mother-report), and US comparison groups (*n* = 34; Pedro-Carroll et al., 1999).

On the SDQ total difficulties score, before as well as after participation, four out of eleven children scored on or above 9. Average pre- and posttest total difficulties scores were below the clinical cut-off of 9 (see Methods section). These as well as all other results were based on the paired results, that is, results about children for whom pre- and posttest data were available. When we take a closer look at all available pretest scores (*n* = 14), it shows that it were specifically three children with scores above the SDQ's clinical cut-off (12, 13, and 17) for whom pretest scores were present, but posttest scores were lacking.

Table 4.2: Paired *t*-test results on the pre- and posttest differences of adjustment measures rated by fathers.

Measure	Pretest		Posttest		Diff. post-pretest		<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>	
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>					<i>SD</i>
PEF	8	2.86	0.43	3.08	0.38	0.22	0.41	1.53	7	.17	0.54
SDQ:	8										
Emotionality		2.13	2.59	2.13	2.48	0.00	1.93	0.00	7	1.00	0.00
Conduct problems		2.00	1.93	1.63	1.19	-0.38	1.77	0.60	7	.57	0.22
Hyperactivity		3.38	2.33	3.75	2.82	0.38	1.77	-0.60	7	.57	-0.22
Peer problems		1.13	1.13	0.88	1.13	-0.25	1.17	0.61	7	.56	0.22
Prosocial behavior		7.50	1.20	7.38	1.85	-0.13	1.13	-0.31	7	.76	-0.13
Total difficulties		8.63	5.34	8.38	6.07	-0.25	4.23	0.17	7	.87	0.06

Abbreviations: Diff. post-pretest = Difference from pre- to posttest, PEF = Parent Evaluation Form, SDQ = Strengths and Difficulties Questionnaire.

Note. Higher PEF scores indicate more positive child adjustment. Higher SDQ scores indicate more problems.

The paternal scores of SDQ total difficulties remained stable between the pretest and posttest,  $d = 0.06$  (see Table 4.2). None of the differences in father-reported SDQ pre- and posttest scores was found to be statistically significant ( $p > .05$ , 2-sided). Note that the average father-reported SDQ total difficulties lay below the clinical cut-off of 9.

#### Trainer-reported child adjustment

Post-test trainer-reported child adjustment (Overall GLEF) scores statistically significantly exceeded pretest scores ( $p < .05$ ,  $d = 0.61$ ). After participating, children tended to show less problems ( $p = .09$ ,  $d = 0.44$ ) and significantly had more competencies ( $p < .05$ ,  $d = 0.68$ ) than before participation, see Table 4.3.

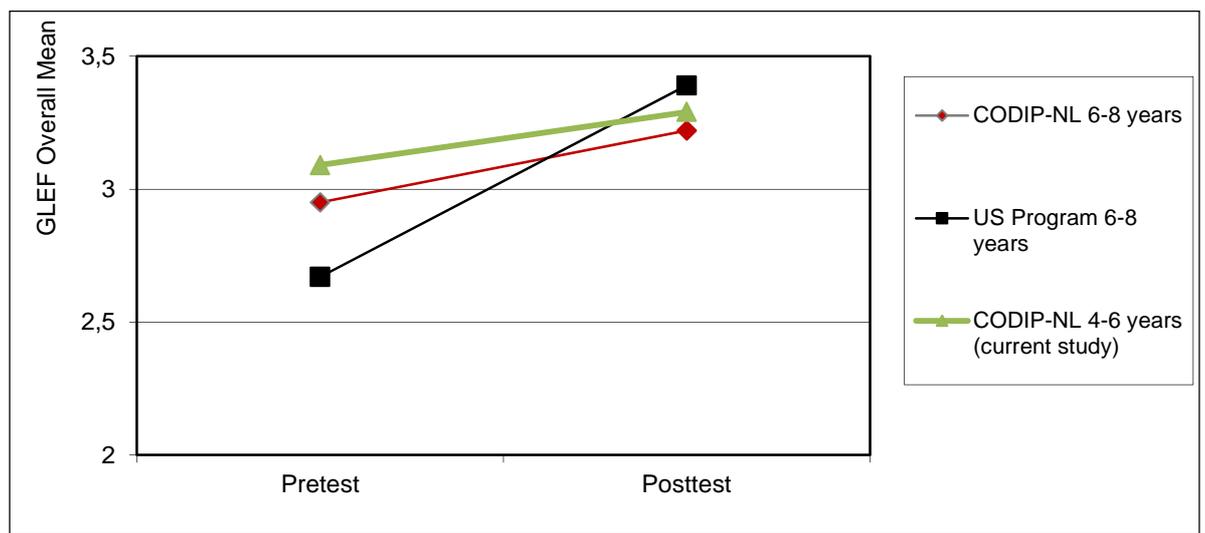


Figure 4.3: Average pre- and post-test Group Leader Evaluation Form (GLEF) overall scores of CODIP-NL pilot study participants (current study;  $n = 17$ ), CODIP-NL 6-8 years pilot study participants (Klein Velderman & Pannebakker, 2014;  $n = 21$ ), and US CODIP group participants (Alpert-Gillis et al., 1989).

Figure 4.3 compares GLEF results of the current study to those found in our recent pilot study on 6-8 year-olds (Dappere Dino's™; Klein Velderman & Pannebakker, 2014), and compared to those based on trainer reports in previous US research on second and third grade children (Alpert-Gillis et al., 1989)<sup>2</sup>. For all three groups, pretest scores represent scores after Session 4, and posttest scores represent scores after the last intervention session. It shows that children in our study start off at a significantly higher level than six to eight years old US children participating in CODIP ( $p < .01$ ) or children in our previous pilot on Dutch 6-8 year-olds ( $p < .01$ ). However, at the posttest, the scores of children in the current study significantly resemble the US scores ( $p = .43$ ), and scores of 6-8 year-olds in our previous study ( $p = .17$ ). So despite the increase in adjustment scores in the current study ( $d = 0.61$ ), the American children trainers ( $d = 1.44$ ), and the older Dutch children ( $d = 1.03$ ) exceed this progress as reported by the trainer.

Table 4.3: Paired  $t$ -test results on the pre- and posttest differences of adjustment measures rated by the CODIP-NL trainer.

Measure	Pretest		Posttest		Diff. post-pretest		$t$	$df$	$p$	$d$	
	$N$	$M$	$SD$	$M$	$SD$	$M$					$SD$
GLEF	17										
Problems		3.11	0.32	3.24	0.36	0.13	0.30	1.82	16	.09 <sup>+</sup>	0.44
Competencies		3.07	0.39	3.35	0.51	0.28	0.43	2.73	16	.02 <sup>*</sup>	0.68
Overall		3.09	0.33	3.29	0.42	0.20	0.34	2.47	16	.03 <sup>*</sup>	0.61
SDQ:	17										
Emotionality		1.12	1.36	1.06	1.44	-0.06	1.03	0.24	16	.82	0.06
Conduct problems		0.35	0.61	0.24	0.44	-0.12	0.49	1.00	16	.33	0.24
Hyperactivity		3.00	2.62	2.71	2.71	-0.29	2.37	0.51	16	.62	0.12
Peer problems		0.41	0.80	0.29	0.69	-0.12	0.78	0.62	16	.54	0.16
Prosocial behavior		8.71	1.21	8.65	1.58	-0.06	1.48	-0.16	16	.87	-0.04
Total difficulties		4.88	2.96	4.29	3.72	-0.59	3.66	0.66	16	.52	0.16

Abbreviations: Diff. post-pretest = Difference from pre- to posttest, GLEF = Group Leader Evaluation Form, SDQ = Strengths and Difficulties Questionnaire.

Note. Higher GLEF scores indicate more positive child adjustment. Higher SDQ scores indicate more problems.

\* $p < .05$  (two-tailed). <sup>+</sup> $p < .10$  (two-tailed).

In addition to the GLEF, the trainer filled out the SDQ TF. As can be seen in Table 4.3, there was a small positive difference (decreased conduct problems,  $d = 0.24$ ) between pre- and posttest. However, after participation in CODIP-NL no statistically significant decreases in reported problems as measured using the SDQ TF were found.

#### Teacher-reported child adjustment

As can be seen in Table 4.4, there were small positive teacher-reported differences in emotionality (decreased,  $d = 0.34$ ), prosocial behavior (increased,  $d = 0.38$ ), and total difficulties (decreased,  $d = 0.32$ ) between pre- and posttest. However, these

<sup>2</sup> Because the GLEF was not used in the US evaluation of CODIP for kindergarten and first grade children (Pedro-Carroll et al., 1999), this figure compares results of the current study with those found in previous research and US research for the older age group instead.

differences were not statistically significant. However, participants' conduct problems had significantly lowered after participation in CODIP-NL,  $d = 0.67$ .

Table 4.4: Paired  $t$ -test results on the pre- and posttest differences of adjustment measures rated by the CODIP-NL trainer.

Measure	Pretest		Posttest		Diff. post-pretest		$t$	$df$	$p$	$d$	
	$N$	$M$	$SD$	$M$	$SD$	$M$					$SD$
SDQ:	17										
Emotionality		2.18	1.74	1.71	1.57	-0.47	1.38	1.41	16	.18	0.34
Conduct problems		1.76	1.75	0.94	1.52	-0.82	1.24	2.75	16	.01*	0.67
Hyperactivity		3.47	3.34	3.94	3.15	0.47	2.27	0.86	16	.41	0.21
Peer problems		1.88	1.22	1.65	1.50	-0.24	1.60	0.61	16	.55	0.15
Prosocial behavior		6.88	2.40	7.71	2.39	0.82	2.19	1.55	16	.14	0.38
Total difficulties		9.29	5.36	8.24	4.64	-1.06	3.34	1.31	16	.21	0.32

Abbreviations: Diff. post-pretest = Difference from pre- to posttest, SDQ = Strengths and Difficulties Questionnaire.

Note. Higher SDQ scores indicate more problems.

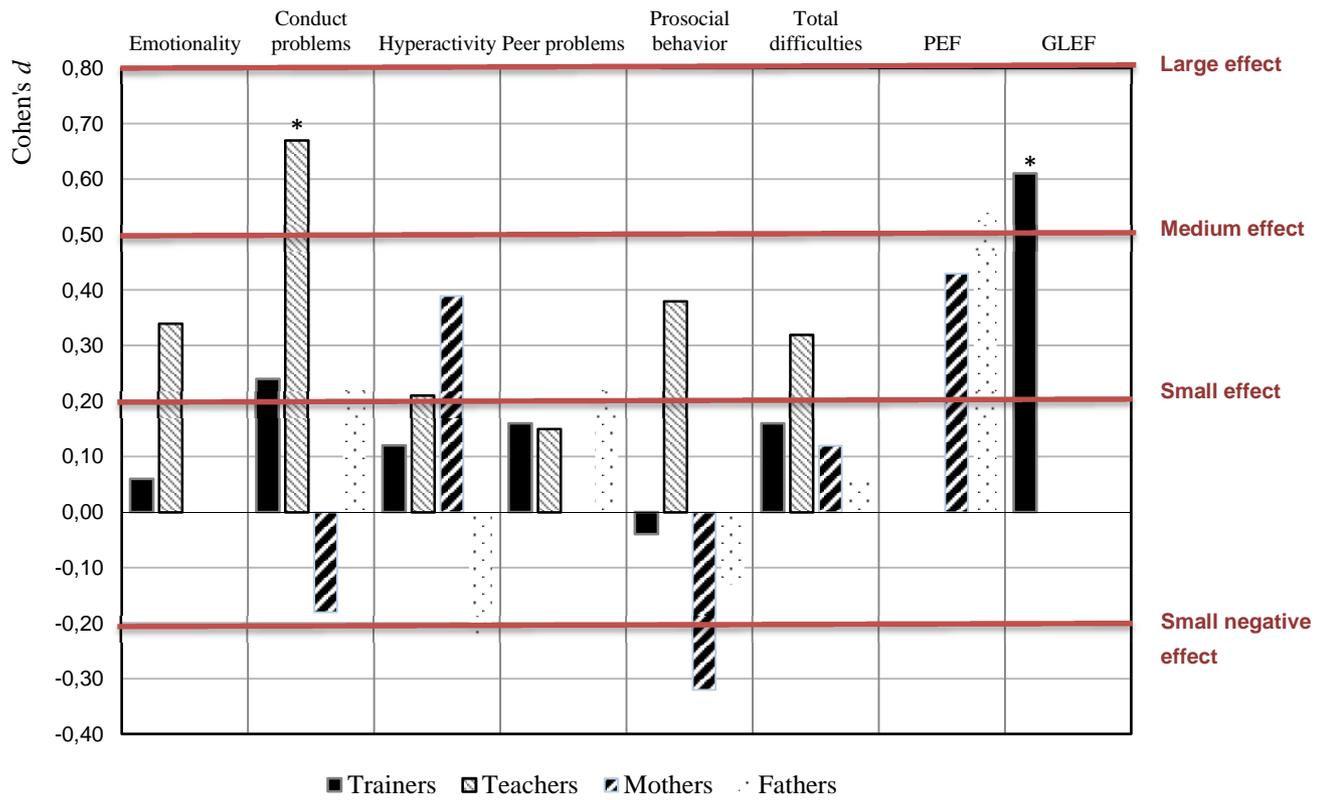
\* $p < .05$  (two-tailed).

#### Relative effect sizes for different informants

As a comparison, Figure 4.3 displays Cohen's  $d$  effect sizes for PEF, GLEF, and SDQ pre- to posttest differences based on trainer, teacher, mother and father reports. It concerns trainer- and teacher-reported data based on all 17 participants, and mother- and father-reported data based on 11 and 8 participating children respectively. In this figure, small ( $d = 0.20$ ; positive and negative), medium ( $d = 0.50$ ), and large ( $d = 0.80$ ) effects are marked (Cohen, 1969).

The only statistically significant decrease in SDQ problems between pre- and posttest was found on teacher-reported conduct problems ( $p < .05$ ,  $d > 0.50$ ). In addition, a statistically significant increase in trainer reported positive functioning (GLEF) was found ( $p < .05$ ,  $d > 0.50$ ).

In terms of effect sizes, a medium sized ( $d > 0.50$ ) positive difference between pre- and posttest was found on PEF positive functioning reported by fathers. Small positive differences ( $d > 0.20$ ) between pre- and posttest were found on teacher-reported emotionality, trainer- and father-reported conduct problems, teacher- and mother-reported hyperactivity, father-reported peer problems, teacher-reported prosocial behavior, teacher-reported total difficulties, and mother-reported positive functioning (PEF). Mothers reported a small negative difference in prosocial behavior after participation compared to before participation, and the same held true for father-reported hyperactivity.



Note. \* $p < .05$  (two-sided).

Figure 4.3: Average effect sizes for pre- and post-test differences on the SDQ PF and TF by the trainer ( $n = 17$ ), teachers ( $n = 17$ ), mothers ( $n = 11$ ), and fathers ( $n = 8$ ).

## 5 Discussion and conclusion

This report described the translation and adaptation of CODIP for 4 to 6 years old children to the specific characteristics of Dutch intermediate and end users. In 2013, a pilot study was conducted - in collaboration with the department of school social work of Stichting Jeugdformaats - to study this adapted module 'CODIP-NL' in the Dutch setting. Seventeen children participated in four first pilot groups on the intervention. Parents, trainer and primary school teachers filled out questionnaires about satisfaction with the intervention (parents and trainer) as well as on child functioning (all three informants). Dutch results were compared with US results to test the feasibility of replicating the positive effects of CODIP as proven in previous US research.

Pilot study results showed that mothers were enthusiastic about CODIP-NL. All mothers had perceived positive responses of their child to the intervention, and nine of the eleven mothers found that their child was positively changed by the intervention. A small but non-significant mother-reported decrease in prosocial behavior of participating children was found. Comparison of mother-reported child positive functioning scores of the pre- and posttest (available on  $n = 11$ , i.e., 65% of the children), also revealed a small but statistically non-significant increase. This increase in mother-reported child functioning was larger than the increase reported in a previous US study among children participating in CODIP. Father-reported child adjustment data (only available on 47% of the children) did not significantly differ from mother-reported data. As for mothers, fathers reported a statistically non-significant, but medium sized increase in positive functioning after participation compared to before.

The trainer of the first four pilot groups reported that she liked working with the program. She was appreciative about materials, and felt that it was possible to reach program goals by means of the instructions provided. The trainer provided us with some specific suggestions for the further development of the intervention (e.g., provision of examples of 'movement exercises' in the trainer manual). The results of the trainer's questionnaires revealed a medium sized statistically significant increase in positive functioning of the children after participation, and a small but non-significant decrease in conduct problems.

Finally, teacher reports displayed a significant medium-sized reduction of participating children's conduct problems after participating in CODIP-NL in comparison with before participation. In addition, teacher-reported data revealed small but non-significant pre- to posttest differences in children's emotionality (decreased), hyperactivity (decreased), prosocial behavior (increased), and total difficulties (decreased).

### **Strengths and limitations**

The current study was limited because of the size of the sample, the lack of Dutch comparison groups, and missing parental reports.

Due to our small sample size ( $n = 17$ ), the power of statistical analyses was low. For instance, we did find small sized differences between pre- and posttest score, but power was lacking to reach statistical significance. Still, we found a significant

positive outcome based on trainer-report of positive functioning as measured using the GLEF, and a positive result for teacher-reports of conduct problems on the SDQ.

No Dutch control group was available in this study, and no independent informants were consulted that were blind to child participation in CODIP-NL. We aimed at comparing our results with previous findings. However, trainer reports on the GLEF were not available on US participants of this age group. Instead, current findings were compared with previous findings on older children. Increases in GLEF scores were in the same direction, but of smaller magnitude than found in previous research.

PEF data were available from previous US research. Comparison with the current study's data showed that Dutch PEF scores at a generally much lower level than in previous US research on the same age group. At the same time, pre- to posttest increases in the current study outweighed previous results in terms of US children's positive functioning scores. It is hard to interpret these differences. It must be noted that complete mother-reported data was only available on eleven (65%) of the children. Because father-reported data was available on an even smaller subsample ( $n = 8$ ), we chose to primarily focus on mother reports of children's functioning. However, this may have biased our findings. For instance, a closer look at children for whom pretest data was available, but posttest data lacking ( $n = 3$ ), showed that these children had all scored in the clinical range of the SDQ. It could be that children dealing with the most problems in their daily lives, were underrepresented in the final results.

Strengths of this study pertain to our precise approach with an explicit focus on translation and adaption of the initial program. We purposely chose this design for this first feasibility study. Klein Velderman et al. (2007) suggested to start with a feasibility study before investing in dissemination, of what is later found to be a badly fitting program. Veerman and Van Yperen (2007) stated that randomized controlled trials may be premature and thus unnecessary when conducted on interventions that are not yet fully developed or interventions that have yet to be accepted into actual practice. We believe that the current approach pays back the investment once it comes to the actual implementation in Dutch practice. Based on our findings, we can more optimally anticipate possible implementation problems at that later stage.

### **Conclusion**

We feel that we managed to accomplish our study objectives. In accordance to these objectives, output of this project consists of:

- A translated and adapted CODIP module for kindergarten and first grade children attuned to intermediate users (trainers) as well as end users (participating children of divorce aged 4-6 years) in the Dutch population. This includes a module for training trainers, as well as an attractive manual and materials for the group trainers and children in this particular age group.
- Information on the feasibility of introducing CODIP in the Netherlands. This entails results of a process evaluation as well as information on program satisfaction, and attractiveness and acceptability of the CODIP-NL module as reported by intermediate and end users.

- Reports on progression of participants in the four support groups of the pilot study. This entails results on child adjustment and behavioral development, based on parent, trainer and teacher report. Very modest but promising first results were found based on these reports that participation in CODIP-NL might lead to higher child adjustment scores or possibly reduced conduct problems.

We feel that this study constitutes the base for a future randomized controlled trial into the effects of CODIP-NL for 4-6 year-olds in the Dutch setting, shedding more light on pre- to posttest differences, in comparison with control groups consisting of children from divorced as well as intact families. This feasibility study has proved that the introduction of this module in the Netherlands is feasible, and that it might be possible to contribute to participating children's positive functioning. Meanwhile, the gap regarding interventions for young children of divorce in the Netherlands has not been solved. In this study, CODIP-NL has proven to be a promising and much appreciated direction for future intervention in this domain.

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