I'll take you under my wing: Positive parenting in foster care

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Chapter 5

Positive parenting in foster care: Testing the effectiveness of a video-feedback intervention program on foster parents' behavior and attitudes

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Published in Children and Youth Services Review, 2020, 110, 1-11.
doi: 10.1016/j.childyouth.2020.104779

ABSTRACT

The current randomized controlled trial examined the effectiveness of Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline in Foster Care (VIPP-FC) on parenting behavior and attitudes in foster parents (*N* = 60, 31 to 61 years, 83% female). The intervention group (*n* = 30) received VIPP-FC, consisting of six sessions. During the first four sessions, a specific theme from Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD; e.g., attachment vs. exploration behavior), and an additional foster care theme (e.g., subtle or missing attachment signals) are discussed. Each theme is discussed during the consecutive sessions and the last two sessions are booster sessions during which all themes are discussed. The control group (*n* = 30) received a dummy intervention consisting of six telephone calls about general child developmental topics. The Ainsworth Scales for sensitivity and non-interference, the Erickson scale for supportive presence, and the Questionnaire Attitudes towards Parenting were used to measure parental sensitivity, sensitive discipline, and attitudes towards parenting, respectively. The intervention and control group did not differ on demographic characteristics or outcome variables at pretest. Multilevel analyses based on the intent-to-treat principle yielded no evidence that VIPP-FC was more effective in improving foster parents' sensitive parenting behavior or eliciting more positive attitudes compared to the control condition. We suggest that the outcomes in this study may be explained by a possible selection bias, which may have resulted in a ceiling effect. Future research might include foster families that experience more severe challenges (i.e., elevated levels of child behavior problems) or indicate a need for help and support.

INTRODUCTION

The large majority of children in foster care have had adverse experiences such as abuse and/or neglect in their birth families (Greeson et al., 2011). A foster care placement also means that children are being separated from their birth parents and thus from their attachment figures (Van den Dries, Juffer, Van IJzendoorn, & Bakermans-Kranenburg, 2009). Because of the adverse experiences before placement foster children may find it hard to trust new adults in their life and form a secure attachment relationship with their foster parents. Foster parents, on the other hand, may struggle to take care of children who have experienced such early life adversities and may therefore benefit from parenting support, such as intervention programs.

Previous meta-analytic research showed that foster children and their caregivers are more likely to form an insecurely disorganized attachment relationship compared to children and their parents in biological families (Van den Dries et al., 2009; Vasileva & Petermann, 2018). Parental sensitivity plays an important role in the development of secure attachment relationships (Bakermans-Kranenburg, Van IJzendoorn, & Juffer, 2003). Moreover, children with limited experiences of sensitive parenting are more vulnerable to stress, i.e., they have higher levels of cortisol as a response to a stressful event, and they have trouble with developing self-regulatory abilities (Doom & Gunnar, 2015). An insecure (disorganized) attachment relationship and a dysregulated stress system may partially contribute to the development or perseverance of behavior problems (Koss & Gunnar, 2018), which may increase the risk of placement breakdown in foster care (Konijn et al., 2019; Oosterman, Schuengel, Slot, Bullens, & Doreleijers, 2007; Vanderfaeillie, Goemans, Damen, Van Holen, & Pijnenburg, 2017). A high number of placement breakdowns, in turn, adds to the risk of developing psychological, behavioral, and emotional problems later in life (Newton, Litrownik, & Landsverk, 2000). This vicious cycle jeopardizes every next foster care placement and should be prevented.

Improved sensitive parenting may prevent or decrease the risk of developing an insecure (disorganized) attachment. Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline in Foster Care (VIPP-FC) is a parenting intervention aimed at increasing sensitive parenting and the use of sensitive discipline strategies of foster parents, and to prevent child emotional and behavioral problems (Schoemaker et al., 2018). The intervention is based on attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969) and coercion theory (Patterson, 1982). VIPP-FC is a recent adaptation of Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD; Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2008). VIPP-SD can be used in families with 0 to 6-year old children and has been demonstrated to be effective in improving sensitive parenting and positive child

outcomes in several populations (Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2017a, 2017b), but the effectiveness of VIPP-FC has not been examined yet. This paper describes the effectiveness of VIPP-FC on parental sensitivity, parental sensitive discipline, and attitudes towards parenting of (kinship and non-kinship) foster parents in the Netherlands.

Parental sensitivity plays an important role in the development of attachment relationships. Sensitive caregivers observe and interpret their children's signals correctly and they subsequently respond to those signals in an adequate and prompt manner (Ainsworth et al., 1978). Children whose caregivers respond sensitively in times of need (for example, during stressful situations) are more likely to form a secure attachment relationship with those caregivers, whereas children whose parents respond insensitively (i.e., indifferently, inconsistently, or in a frightening way) are more likely to develop an insecure (disorganized) attachment relationship with their caregivers (Ainsworth et al., 1978; Main & Hesse, 1990). An insecure (disorganized) attachment increases the risk of problems with children's adaptive and resilient development (Groh et al., 2014; Sroufe, Egeland, Carlson, & Collins, 2005), and children with an insecure (disorganized) attachment are at higher risk for developing behavior problems and psychopathology later in life (Fearon, Bakermans-Kranenburg, Van IJzendoorn, Lapsley, & Roisman, 2010; Groh, Roisman, Van IJzendoorn, Bakermans-Kranenburg, & Fearon, 2012; Van IJzendoorn, Schuengel, & Bakermans-Kranenburg, 1999).

Foster children often do not have experiences with a sensitive birth parent and meta-analytic research showed that they are indeed more often insecurely disorganized attached compared to children in biological families (Van den Dries et al., 2009; Vasileva & Petermann, 2018). Because of the lack of experiences with a sensitive caregiver who they can trust to help them regulate their emotions and behaviors, foster children may not seek help and comfort when they are in distress despite their need for help and comfort. For foster children to trust their foster parents and to feel secure within their foster family, it is important that foster parents are not only aware of clear behavioral signals of the child but also of behavior that one would expect but is missing or shown only subtly. For example, if foster parents offer comfort in situations when foster children have physically hurt themselves but are not expressing their pain, they show the foster children that they are trustworthy, that it is safe for children to show their needs and that these needs will be met. Comfort can also be offered in the form of positive physical contact (e.g., cuddle), with which foster children often have limited or no experiences. Positive physical contact can support an affinitive bond between child and caregiver through increased oxytocin levels, can also decrease cortisol levels and therefore helps regulating stress in both children and adults (Field, 2010). Such sensitive responses of foster parents can help children change their expectation patterns of the world and people around them (Bakermans-Kranenburg et al., 2003).

To decrease behavior problems in children it is not only important to respond sensitively to children's behavioral signals, but also to sensitively set limits and rules. According to Patterson's coercion theory, inconsistent parental disciplining and the absence of positive reinforcement of desired behavior of children are related to the development or persistence of externalizing behavior problems (Patterson, 1982). If children show negative behavior as a response to parental commands or requests and caregivers give in and withdraw their command or request, the children's undesirable behavior is reinforced and will be repeated in the future. Research showed that foster parents use more negative discipline and are more inconsistent in disciplining if children show externalizing behavior problems (Vanderfaeillie, Van Holen, Trogh, & Andries, 2012). Because foster children often show behavior problems, supporting foster parents to increase their sensitive disciplining may help reduce difficult child behavior.

In addition to the parenting behavior they show, caregivers have certain parenting attitudes or ideas or preconceptions about desirable parenting behavior (Orme & Combs-Orme, 2014). A number of studies have shown a significant relation between parenting attitudes and parenting behavior (e.g., Kiang, Moreno, & Robinson, 2004), although some studies did not find this association (e.g., Van Zeijl et al., 2006). Foster care studies did confirm that foster parents' attitudes are related to parenting behavior (Geary, 2007; Gillis-Arnold, Jasper Crase, Stockdale, & Shelly, 1998; Jones Harden, Meisch, Vick, & Pandohie-Johnson, 2008). Research is thus not consistent and parenting attitudes and parenting behavior, i.e., sensitivity and sensitive discipline, may be different parental constructs that should be examined separately. The current study distinguishes between attitudes towards sensitivity and attitudes towards sensitive discipline.

Because foster children are at risk of developing an insecure (disorganized) attachment relationship, behavior problems, and a dysregulated stress system, and because foster parents may (consequently) experience high levels of parenting stress, it is important to develop and implement evidence-based intervention programs for foster care. Several parenting interventions have been developed and examined in foster care. Examples of attachment-based interventions are Attachment and Biobehavioral Catch-up (ABC: Dozier et al., 2006) and Promoting First Relationships (PFR: Spieker, Oxford, Kelly, Nelson, & Fleming, 2012). Both ABC and PFR aim to improve sensitive parenting and child outcomes with the use of video feedback (i.e., filming caregiver-child interactions and reviewing the video-tape with the caregiver afterwards). Meta-analytic results have shown that parenting interventions that use video feedback can help caregivers to recognize and respond to their child's behavioral signals adequately (Bakermans-Kranenburg et al., 2003). Research showed that ABC is effective in improving parental sensitivity (Bick & Dozier, 2013), in reducing parental stress (Sprang, 2009), avoidant attachment behaviors (Dozier et al., 2009), and behavior problems

displayed by foster children (Dozier et al., 2006; Lind, Raby, Caron, Roben, & Dozier, 2017; Sprang, 2009), and in normalizing diurnal cortisol slopes in foster children (Dozier et al., 2006). Effectiveness studies of PFR showed positive effects on parental sensitivity, parenting knowledge, and attachment security (Pasalich, Fleming, Oxford, Zheng, & Spieker, 2016; Spieker et al., 2012).

In the current study, a parenting intervention with a strong evidence base in increasing sensitive parenting and sensitive discipline (i.e., Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD; Juffer et al., 2008, 2017a, 2017b) was adapted to use in foster care (VIPP-FC; Schoemaker et al., 2018). The original VIPP-SD program consists of six home visits: The first four home visits address a specific theme regarding sensitive parenting (e.g., attachment vs. exploration behavior) and sensitive discipline (e.g., positive reinforcement), and during the last two home visits (i.e., the booster sessions) all themes are repeated. To meet the specific needs of foster parents and children, two themes were added to the original VIPP-SD program: first, the importance of sensitive responding to missing or subtle behavioral signals to improve attachment security, and second, the importance of positive physical contact to improve stress regulation.

Current Study

The current study aimed to examine the effectiveness of VIPP-FC on parenting behavior and attitudes of foster parents using a randomized controlled trial (RCT). The study specifically hypothesized that VIPP-FC would increase foster parents' sensitive parenting, sensitive discipline, and that VIPP-FC would elicit more positive attitudes towards sensitive parenting.

Kinship and non-kinship foster care may be differently associated with parenting behavior and attitudes. It is, however, unclear whether kinship or non-kinship foster parents benefit most from parenting interventions because most effectiveness studies do not report effects of intervention programs for kinship and non-kinship foster families separately (Schoemaker et al., 2019). To ensure equal distribution of kinship and non-kinship foster families among the intervention and control group in the current study, randomization was stratified by type of care. This may, however, cause a potential crossover nesting problem by type of foster care. As type of foster care may influence the multilevel estimates per condition, any significant interaction effect of time*condition may be caused by kinship or non-kinship foster care instead of by condition over time. Possible crossover nesting problems were therefore additionally examined by controlling for type of foster care (kinship vs. non-kinship).

METHODS

Participants

Foster families with a foster child between 1 and 6 years of age were eligible for participation, because both the sensitive parenting and sensitive discipline themes of VIPP-SD can be used when children are one year or older (Juffer et al., 2008). In order to complete the RCT in as many foster families as possible and to diminish the attrition rate due to external factors such as reunification of the child with the birth parent(s), the expected duration of the placement had to be at least six months and part-time and short-term crisis placements were thus excluded from the study. Children with severe physical disabilities, diagnosed intellectual disability (IQ < 70) and/or diagnosed autism spectrum disorder were also excluded. These children may need specific intervention methods in addition to video feedback to improve positive caregiver-child interactions (e.g., Poslawsky et al., 2014). Twins placed in the same foster family could also not participate, because based on the original VIPP-SD program only one foster parent-child dyad per family could participate in the current study. If multiple foster children within the same foster family were eligible for participation, the most recently placed child was included or, if the children were concurrently placed, the oldest child within our age range was included in the study. The most recently placed child was expected to be less likely to have already developed a secure attachment relationship and thus could profit from enhanced sensitive parenting, and the oldest child was expected to be more likely to display behavior problems than a(ny) younger child(ren) and the foster parents could profit from support for these problems.

Foster families were recruited through nine Dutch foster care organizations, and through announcements on Facebook, in a Dutch foster care magazine, and announcements distributed among several foster care network groups. In order to ensure blindness to study condition (intervention or control group), eligible and interested foster families were told that this study aimed to investigate various treatments to support foster parents. A total of 434 foster families were eligible for participation (Figure 1) of which the large majority (85%) indicated that they were not interested in participation because they were currently receiving extra support (e.g., another parenting intervention) in addition to care-as-usual or that they just completed an intensive period of receiving extra support. A study protocol describing the detailed recruitment procedure has been published (Schoemaker et al., 2018).

The sample consisted of 60 foster families of which the primary caregiver (M_{age} = 45.43, SD_{age} = 7.42, range: 31-61 years; 83% female) participated together with one foster child (M_{age} = 3.63, SD_{age} = 1.35, range: 1-6 years; 45% boys), who had been living with the current family for a mean period of 27.56 months (*SD* = 15.98, range: 5 to 63 months). The foster families consisted of one to four foster children (*M* = 1.74, *SD* = 0.83) and zero to five birth children (*M*

= 1.87, *SD* = 1.39). The majority were non-kinship foster families (73%). Of all foster families 18 (30%) had received extra help since the foster care placement, of which 44% was parenting support. A previously performed power analysis showed that statistical power is adequate (0.86; G*Power 3.1.9.2) to test the effectiveness of VIPP-FC on parental sensitivity and sensitive discipline with a study sample of 60 foster families and a repeated measures design with α = 0.05 (Schoemaker et al., 2018).

Before the pretest, both foster parents and either the birth parents with legal custody (in case of a voluntary foster care placement; Bastiaensen & Kramer, 2011) or the legal guardian of the children signed an informed consent form. The study was approved by the Medical Ethics Committee of the Maasstad Hospital in Rotterdam, The Netherlands (NL39376.101.13) and the trial was registered in the Netherlands Trial Register (NTR; Trial ID: NTR3899).

Procedure

To examine the effectiveness of VIPP-FC an RCT was conducted (Schoemaker et al., 2018) which consisted of three measurements: a pretest before the intervention, a posttest one week after the intervention, and a post-posttest three months after the posttest. All measurements consisted of a home visit and a visit to the laboratory during which several observations and questionnaires were administered. A flow diagram of the study procedure (including recruitment of foster families and the study design) is presented in Figure 1.

Randomization stratified by kinship or non-kinship foster care was performed after the pretest using a computer-generated blocked sequence with a block size of 10 families. From the 60 foster families with informed consent of both foster parents and the birth parents/legal guardian of the child, five foster parents stopped participating after randomization because they felt the study was too time-consuming (n = 3), because they just completed another intervention and the child expressed that he did not want to have another “filming lady” coming over (n = 1), or because the foster parent had cancelled several posttest appointments and eventually did not respond to phone calls or email anymore (n = 1). After the first posttest, four more foster parents decided to stop participating in the study, because they were too busy (n = 2), because the child was in the reunification process (n = 1), or because the foster parent was severely ill and had to start an intensive treatment (n = 1). Following the intent-to-treat principle, missing data of these nine foster care dyads were imputed using multiple imputation and included in the data analyses (White, Carpenter, & Horton, 2012; also see section 2.5).

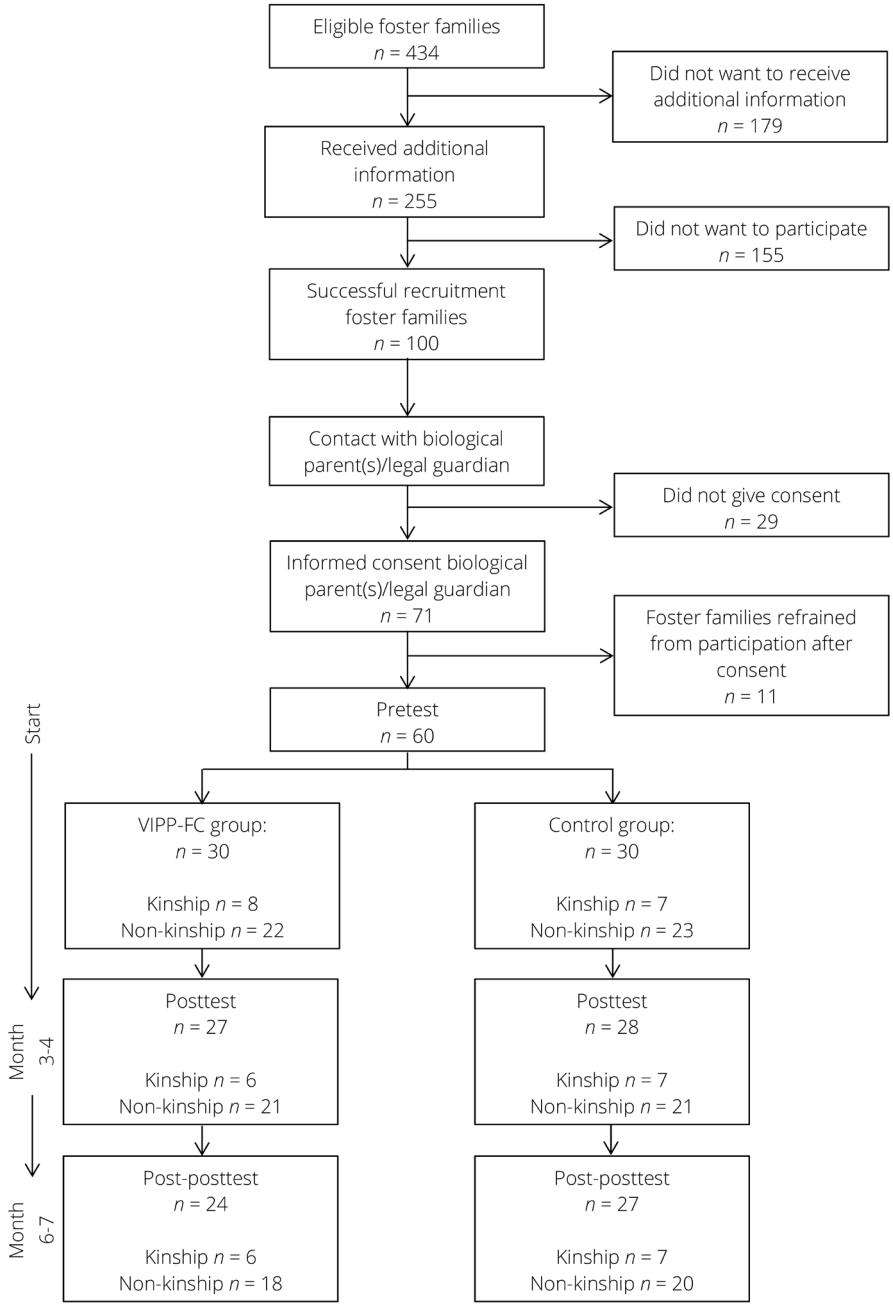

Figure 1. *Flow diagram of study procedure.*

Intervention

VIPP-FC. VIPP-FC consists of six intervention home visits with a biweekly interval between the first four home visits and an interval of about three to four weeks between the last two home visits. The total duration of the intervention is three to four months. During the intervals between home visits the intervener prepared written feedback on the videotaped interactions of foster parent and child during real-life situations, which were recorded during the former home visit for 10 to 30 minutes. Examples of recorded situations: foster parent and foster child interacting during a mealtime, playing together, and cleaning up toys. Each home visit started with filming after which the intervener provided the previously prepared video feedback to the foster parent (while the child was asleep or playing alone): showing the recorded interactions of the previous home visit and adding comments to crucial moments or to episodes of interest. The focus of the video feedback was on reinforcing and stimulating positive interactions and sensitive discipline, using specific themes per home visit.

The first four home visits focused on a specific theme regarding sensitive parenting (e.g., attachment vs. exploration behavior), sensitive discipline (e.g., understanding and distraction), and foster care (e.g., subtle or missing signals). The last two home visits were booster sessions during which all themes were repeated. All situations and themes were standardized to ensure program fidelity. An overview of the themes per session is presented in Table 1. A detailed description of VIPP-FC can be found in Schoemaker et al. (2018).

All interveners followed the mandatory 4-day VIPP-SD training and an additional VIPP-FC training of one day. After the training they conducted a first VIPP-FC case under supervision of a qualified VIPP-SD supervisor or trainer and received a certificate and were registered in the VIPP Training and Research Centre's database after successful completion of both the training and the first case (Leiden University, 2018; Tavistock and Portman NHS Foundation Trust, 2019a, 2019b). A total of nine interveners conducted VIPP-FC in the current study. Intervision meetings were organized and led by a qualified VIPP-SD trainer.

Control condition. The foster parents in the control group received a dummy intervention that consisted of six telephone calls (i.e., Euser et al., 2016; Werner, Vermeer, Linting, & Van IJzendoorn, 2018). The interval between calls was similar to the interval between VIPP-FC intervention home visits. The calls followed a protocolled semi-structured interview during which the foster parent was invited to talk about general developmental topics (e.g., eating behavior, sleeping behavior, playing with peers, etc.), but no specific information or advice about (a)typical child development was given by the research assistant.

Table 1. *Themes in the VIPP-FC program.*

Session	Sensitive Parenting	Sensitive Discipline	Foster Care
1	Exploration versus attachment behavior	Inductive discipline and distraction	Subtle or missing behavioral signals
2	'Speaking for the child'	Positive reinforcement	Showing affection and indiscriminate friendliness
3	Sensitivity chain	Sensitive time-out	Importance of warm physical contact
4	Sharing emotions	Empathy for the child	Seeking help (by foster child)
5	Booster session	Booster session	Booster session
6	Booster session	Booster session	Booster session

Measurement Instruments

Parental sensitivity. Parental sensitivity was observed during two free play episodes (with and without toys) and during a structured play episode that were not part of the VIPP-FC intervention. During the free play episode with toys the research assistant gave the foster parents and children several toys and they were instructed to play together for five minutes. During the free play episode without toys the foster parents and children could decide for themselves what they wanted to do for five minutes (except playing with toys). During the structured play episode the foster parents and children completed a task together, e.g., build a tower of cups (2-year-olds) or do a jigsaw puzzle (5-year-olds) that was intended to be slightly too difficult for the children (according to their age), and the foster parents were instructed to help the children in the same way they normally would do. All episodes were videotaped to enable coding parental sensitivity at another moment later in time.

Parental sensitivity was independently coded by coders not involved in the intervention of that specific family, using the slightly adapted Ainsworth Scales for *sensitivity* and *non-interference* (Ainsworth, Bell, & Strayton, 1974; Mesman, 2017). *Sensitivity* was defined as observing and interpreting the signals of the child accurately and responding to these signals promptly and adequately (Ainsworth et al., 1978), and was scored on a 9-point scale, ranging from (1) 'highly insensitive' with rare or absent sensitive responses to (9) 'highly sensitive' with the parent responding sensitively to the child's signals almost continuously throughout the episode. *Non-interference* was defined as the child being allowed to take the lead in the interaction and was scored on a 9-point scale, ranging from (1) 'highly interfering' with the parent unnecessarily interfering with the child's behavior and intentions almost throughout the whole episode to (9) 'not at all interfering'. Total *sensitivity* and *non-interference* scores were calculated by averaging the scores on the three episodes per scale. Coders were trained by an expert to work with the coding scales. Fifteen videos were double coded by four coders (among which

the first author) with good average interrater reliability per coder pair on *sensitivity* (ICC = 0.83, range: 0.76 to 0.91) and on *non-interference* (ICC = 0.81, range: 0.77 to 0.85). *Sensitivity* and *non-interference* were highly correlated ($r = .82$, $p < .001$; Table 4). An overall sensitivity score was computed by averaging the scores of the two coding scales on the three episodes with a higher score indicating more parental sensitivity. Cronbach's alphas at pretest, posttest, and post-posttest were .81, .74, and .76, respectively.

Parental sensitive discipline. Parental sensitive discipline was observed during a Don't Touch task and a Clean Up task that were not part of the VIPP-FC intervention. During the Don't Touch task the foster parents were asked to unpack a bag of attractive toys provided by the researcher (e.g., toys that made sounds, were colorful and/or could be used interactively), put the toys in front of their foster child, and to refrain their foster child from touching the toys. After one minute, the children could play with the most unattractive toy (i.e., a stuffed animal rabbit), and after another minute, the task was over and the children could play with all the toys. During the Clean Up task the foster parents and children were asked to clean up the toys they just played with during the free play episode described above. This task was completed when all the toys were put away, or after five minutes if not all toys were cleaned up yet. Again, both episodes were videotaped to be able to code parental sensitive discipline at another moment later in time.

Parental dysfunctional (insensitive) discipline was independently coded by coders not involved in the intervention of that specific family, with a *physical discipline* scale, a *harsh physical discipline* scale, a *lax discipline* scale, and a *verbal overreactive discipline* scale (Joosen, Mesman, Bakermans-Kranenburg, & Van IJzendoorn, 2012; Verschueren, Dossche, Marcoen, Mahieu, & Bakermans-Kranenburg, 2006), and parental sensitive discipline was coded with the Erickson scale for *supportive presence* (Egeland, Erickson, Clemenhagen-Moon, Hiester, & Korfmacher, 1990; Erickson, Sroufe, & Egeland, 1985). Because the majority of the foster parents did not show dysfunctional disciplining behaviors, only the *supportive presence* scale was used in statistical analyses. *Supportive presence* was defined as verbally of nonverbally expressing positive regard and emotional support in a discipline context. For example, reassuring the child when they find the task difficult, and moving closer to the child to give them a physical sense of support. Supportive presence was scored on a 7-point scale, ranging from (1) the parent did not show interest in how the child behaves and performed the task, to (7) the parent offering positive reinforcement and emotional support throughout the whole episode. The scores on the two episodes were averaged with higher scores indicating more sensitive discipline. Cronbach's alphas at pretest, posttest, and post-posttest were .50, .84, and .82, respectively. Coders were trained by an expert to work with the coding scales. Fifteen videos were double coded by six coders. The average interrater reliability per pair of coders was good (ICC = 0.76, range: 0.69 to 0.91).

Attitudes towards parenting. Foster parents' *attitudes towards sensitivity and sensitive discipline* were measured with a questionnaire regarding their attitudes towards parenting (Questionnaire Attitudes towards Parenting; Bakermans-Kranenburg & Van IJzendoorn, 2003; Van Zeijl et al., 2006). Foster parents rated 19 statements: nine statements regarding attitudes towards sensitivity (e.g., "In my opinion, I should praise my child at least once every day") and ten statements regarding attitudes towards sensitive discipline (e.g., "If very young children do something that is not allowed, it's pointless to give an explanation" (reverse coded)). The statements were rated on a 5-point Likert scale ranging from (1) totally disagree to (5) totally agree. Attitudes towards sensitivity and attitudes towards sensitive discipline were not correlated (r = -.03, p = .81; Table 4) and therefore considered as two separate constructs. Two scale scores were computed with a higher average score indicating more sensitive attitudes. Cronbach's alphas at pretest, posttest, and post-posttest for attitudes towards sensitivity were .58, .73, and .59 and for attitudes towards sensitive discipline .23, .43, and .51, respectively. Because of the low Cronbach's alphas for attitudes towards sensitive discipline, only the scale scores for attitudes towards sensitivity were used for data analyses.

Data Analyses

All demographic and outcome variables were normally distributed. Outliers were defined as $-3.29 < z > 3.29$ (Tabachnick & Fidell, 2012). No outliers were identified.

Multilevel analyses were performed to examine the main effects of time (pretest vs. posttest vs. post-posttest), condition (VIPP-FC vs. control), and the interaction effects of time*condition on parental sensitivity, parental sensitive discipline, and attitudes towards parenting while controlling for the number of foster and birth children and whether foster parents have had received extra support in the period before they participated in the study (yes vs. no). Potential crossover nesting problems due to the presence of both kinship and non-kinship foster families in the intervention and control group (i.e., type of foster care may influence the estimates per condition) were additionally taken into account by controlling for type of foster care. R version 3.5.1 (R Core Team, 2018) on a Dell XPS 9370 with an i7 8550U processor overclocked at 2.0Ghz, with 16GB of RAM was used. The multilevel analyses were based on the intent-to-treat principle (White et al., 2012), thus data of the total sample (N = 60) were used. Repeated measures over time (level 1) were nested within foster families (level 2), who were nested within type of foster care (kinship vs. non-kinship; level 3). Fully conditional multilevel imputations were performed, for which four methods were used conjunctively: the 'MI' function in the Amelia package (Honaker, King, & Blackwell, 2011), with the 'mice' function from the mice package (Van Buuren & Groothuis-Oudshoorn, 2011), and the 'panImpute' and 'jomoImpute' functions from the mitml package (Grund, Robitzsch, & Lüdtke, 2016) to assess robustness of the imputed datasets as well as access the full range of analysis options. The final maximum number of iterations was set to 10 and a fixed starting seed was set for reproducibility. Pooling

of results on 100 imputation sets was performed using the 'summary' function from mitml and miceadds, as well as using the 'summary' and 'modelRandEffStats' functions from the merTools package (Knowles, Frederick, & Whitworth, 2018).

As series of multilevel models were estimated, incrementally comparing nested models through a likelihood ratio test using the 'anova' function from mitml and merTools (which yielded equivalent results; Browne & Rasbash, 2004; Raudensbush & Bryk, 2002). The main effects of time (pretest vs. posttest vs. post-posttest), condition (VIPP-FC vs. control), and the interaction effects of time*condition on parental sensitivity, parental sensitive discipline, and attitudes towards parenting of the models with the best fit are reported in this paper (i.e., the models that include number of foster and birth children and extra support provided to the foster parents before study participation as covariates). Because parental sensitivity and sensitive discipline were measured in different situations (e.g., parental sensitivity during free play with and without toys), exploratory analyses were performed to examine intervention effects on parenting behavior in these different situations separately. Descriptive analyses showed that foster parents had rather high scores on parental sensitivity, sensitive discipline, and attitudes towards parenting. Median splits were used to select foster parents with the lowest scores on parental sensitivity, sensitive discipline, and attitudes towards parenting. Subsequent exploratory analyses were performed to investigate the intervention effects for these foster parents. Model comparisons and effect estimates were evaluated at 5% alpha level, using the 'lmerTest' function in merTools.

RESULTS

Descriptive Statistics and Correlation Analyses

VIPP-FC versus control group. Descriptive statistics are presented in Table 2. The intervention and control group did not significantly differ on demographic characteristics or outcome variables at pretest.

Kinship versus non-kinship foster families. In the total group, no statistically significant differences between kinship and non-kinship foster families on demographic or outcome variables were found at pretest with one exception. Kinship foster parents were on average older (M = 51.04, SD = 7.47, range: 31 to 58 years) than non-kinship foster parents (M = 43.84, SD = 6.60, range: 32 to 61 years); $t(52) = -3.41$, $p = .001$.

Within the intervention group, again, kinship foster parents were on average older (M = 54.50, SD = 3.08, range: 49 to 58 years) than non-kinship foster parents (M = 43.62, SD = 6.22: range: 35 to 61 years; $t(25) = -4.10$, $p < .001$). Kinship families additionally showed less sensitive

discipline than non-kinship families at pretest (*M* = 4.47, *SD* = 0.60 vs. *M* = 5.24, *SD* = 0.85, respectively; *t*(28) = 2.34, *p* = .026). No other statistically significant differences in demographic characteristics or outcome variables were found for kinship and non-kinship foster families that received the VIPP-FC intervention. Within the control condition, there were no statistically significant differences between kinship and non-kinship families.

Correlation analyses. Bivariate correlations between demographic and outcome variables at pretest are presented in Table 3. Placement duration was significantly longer when children were older (*r* = .32, *p* = .013). Furthermore, foster parents showed more sensitive discipline during the pretest when the child had been living with the foster family for a longer period of time (*r* = .26, *p* = .049).

Table 4 displays the correlations between the outcome variables at pre-, post-, and post-posttest. Correlations between the same construct over time were all statistically significant with one exception. The pretest assessment of parental sensitive discipline was not correlated with the post-post assessment (*r* = .25, *p* = .08). Correlations between the outcome variables within one time point were also statistically significant with some exceptions. First, parental sensitivity and parental sensitive discipline were not statistically significantly correlated at post-posttest (*r* = .15, *p* = .89). Second, no statistically significant associations were found between parental sensitivity and attitudes towards sensitivity or between parental sensitive discipline and attitudes towards sensitivity at pretest (*r* = -.01, *p* = .96, *r* = .01, *p* = .92, respectively), posttest (*r* = .12, *p* = .41, *r* = .11, *p* = .48, respectively) or post-posttest (*r* = .07, *p* = .65, *r* = -.02, *p* = .92, respectively).

Multilevel Analyses

Parental sensitivity. No significant main effects for time or condition were found (*ES* = 0.34, *SE* = 0.21, *p* = .10, 95% CI: -0.06 to 0.74 and *ES* = 0.93, *SE* = 0.66, *p* = .16, 95% CI: -0.36 to 2.23, respectively), indicating that the sensitivity scores over time (pre- vs. vs. post- vs. post-posttest) and between conditions (intervention vs. control group) did not yield statistically different results. In addition, no significant interaction effect of time*condition (*ES* = -0.19, *SE* = 0.29, *p* = .51, 95% CI: -0.76 to 0.38) on parental sensitivity was found (Table 5), indicating that the change over time on parental sensitivity was not statistically different for the intervention and control group. The model examining whether the results were influenced by crossover nesting of type of foster care (kinship vs. non-kinship foster care) did not yield a statistically significant main effect for type of foster care (*ES* = -0.50, *SE* = 0.33, *p* = .13, 95% CI: -1.15 to 0.15) nor a significant interaction effect of time*condition (*ES* = -0.19, *SE* = 0.29, *p* = .51, 95% CI: -0.76 to 0.38).Thus, in the current study VIPP-FC did not significantly increase parental sensitivity in foster parents compared to the control group and no crossover nesting problem for type of foster care was revealed that could explain this non-significant intervention effect.

Table 2. *Descriptive statistics of the intervention and control group at pretest.*

	VIPP-FC group		
	Total (n = 30)	Kinship (n = 8)	Non-kinship (n = 22)
	M (SD)[a]	M (SD)[a]	M (SD)[a]
	Pretest (n = 60)		
Child characteristics			
Age (years)	3.60 (1.45)	2.63 (1.60)	3.95 (1.25)
Gender (% boys)	46.7	50.0	45.5
Placement duration (months)	29.20 (16.41)	22.63 (12.56)	31.59 (17.23)
Foster parent characteristics			
Age (years)	46.04 (7.27)	54.50 (3.08)	43.62 (6.22)**
Gender (% male)	16.7	12.5	18.2
Highest education level completed (%)			
Primary	6.7	12.5	4.5
Secondary	46.7	37.5	50.0
Higher	36.7	25.0	40.9
Current working situation (%)			
Full-time	10.0	0.0	13.6
Part-time	46.7	50.0	45.5
Unemployed	26.7	25.0	27.3
Extra help received (% yes)	33.3	12.5	40.9
Foster family characteristics			
Foster children in family	1.59 (0.75)	1.33 (0.82)	1.67 (0.73)
Biological children in family	2.00 (1.30)	2.33 (1.51)	1.90 (1.26)
Outcome variables			
Parental sensitivity	7.27 (0.99)	7.29 (1.06)	7.27 (0.99)
Sensitive discipline	5.03 (0.86)	4.47 (0.60)	5.24 (0.85)**
Attitudes towards sensitivity	3.86 (0.51)	4.09 (0.26)	3.80 (0.55)
	Posttest (n = 55)		
Outcome variables			
Parental sensitivity	7.45 (0.76)	7.11 (0.54)	7.55 (0.79)
Sensitive discipline	4.91 (1.30)	3.46 (1.02)	5.32 (1.07)
Attitudes towards sensitivity	3.76 (0.73)	3.99 (0.89)	3.68 (0.68)
	Post-posttest (n = 51)		
Outcome variables			
Parental sensitivity	7.60 (1.01)	7.03 (0.81)	7.80 (1.02)
Sensitive discipline	5.28 (1.15)	5.17 (1.02)	5.32 (1.21)
Attitudes towards sensitivity	3.84 (0.52)	3.94 (0.66)	3.79 (0.48)

[a] unless otherwise indicated

** $p < .01$, to indicate differences between kinship and non-kinship foster care

Control group		
Total (*n* = 30)	Kinship (*n* = 7)	Non-kinship (*n* = 23)
M (*SD*)[a]	*M* (*SD*)[a]	*M* (*SD*)[a]
3.67 (1.27)	4.14 (1.35)	3.52 (1.24)
43.3	14.3	52.2
25.86 (15.63)	23.14 (17.87)	26.73 (15.21)
44.81 (7.67)	48.20 (10.04)	44.05 (7.10)
16.7	14.3	17.4
10.0	28.6	4.3
43.3	42.9	43.5
36.6	0.0	47.8
16.7	28.6	13.0
40.0	28.6	43.5
23.3	0.0	30.4
26.7	42.9	21.7
1.89 (0.89)	1.80 (1.30)	1.91 (0.81)
1.73 (1.49)	2.20 (1.79)	1.62 (1.43)
6.71 (1.27)	6.33 (1.09)	6.83 (1.32)
4.93 (1.30)	4.71 (1.29)	4.99 (1.32)
3.68 (0.48)	3.58 (0.55)	3.70 (0.48)
7.02 (1.16)	7.10 (1.35)	6.99 (1.14)
4.43 (1.26)	4.38 (1.13)	4.44 (1.32)
3.58 (0.43)	3.69 (0.28)	3.55 (0.47)
7.38 (0.93)	7.38 (0.64)	7.38 (1.01)
4.66 (1.42)	5.29 (1.76)	4.48 (1.30)
3.64 (0.41)	3.69 (0.52)	3.63 (0.40)

Table 3. *Pearson correlations between demographic and outcome variables at pretest.*

	1.	2.	3.	4.	5.
Child characteristics					
1. Gender[a]					
2. Age	.25				
3. Placement duration	.10	.32*			
Foster parent characteristics					
4. Gender[a]	-.05	-.09	-.12		
5. Age	.25	.02	.16	.04	
Outcome variables – Pretest[b]					
6. Parental sensitivity	-.06	-.25	.20	.10	-.04
7. Sensitive discipline	-.05	-.03	.26*	.14	-.22
8. Attitudes towards sensitivity	-.15	-.21	-.18	.03	-.15

[a] 0 = male, 1 = female, [b] correlations between outcome variables at pretest are presented in Table 4
* $p < .05$, ** $p < .01$

Table 4. *Pearson correlations of outcome variables at pre-, post-, and post-posttest.*

	1.	2.	3.	4.	5.	6.	7.	8.
Pretest								
1. Parental sensitivity								
2. Sensitive discipline	.43**							
3. Attitudes towards sensitivity	-.01	.01						
Posttest								
4. Parental sensitivity	.62**	.18	.04					
5. Sensitive discipline	.38**	.61**	-.06	.42**				
6. Attitudes towards sensitivity	.20	.19	.42**	.12	.11			
Post-posttest								
7. Parental sensitivity	.30*	.28*	.14	.37**	.39**	.11		
8. Sensitive discipline	.19	.25	.00	.40**	.60**	.16	.15	
9. Attitudes towards sensitivity	-.03	-.07	.60**	.02	-.02	.82**	.07	-.02

* $p < .05$, ** $p < .01$

Sensitive discipline. No significant main effects for time or condition (*ES* = -0.11, *SE* = 0.13, $p = .40$, 95% CI: -0.37 to 0.15 and *ES* = -0.02, *SE* = 0.42, $p = .96$, 95% CI: -0.85 to 0.81, respectively), nor a significant interaction effect of time*condition (*ES* = 0.21, *SE* = 0.19, $p = .25$, 95% CI: -0.15 to 0.57) on parental sensitive discipline were found (Table 5). The sensitive discipline scores over time (pre- vs. post- vs. post-posttest) and between conditions (intervention vs. control group) were not statistically different. The intervention and control group also did not statistically differ in change

over time on parental sensitive discipline. The crossover nesting model for type of foster care yielded a main effect for type of foster care (*ES* = -0.55, *SE* = 0.28, *p* = .044, 95% CI: -1.09 to -0.01), suggesting that kinship and non-kinship foster parents within the intervention and control groups statistically differed from each other on sensitive disciplining behavior. However, the main effects for time and condition, and the interaction effect remained the same (main effect for time: *ES* = -0.11, *SE* = 0.13, *p* = .40, 95% CI: -0.37 to 0.15, main effect for condition: *ES* = -0.01, *SE* = 0.41, *p* = .98, 95% CI: -0.81 to 0.79, interaction effect time*condition: *ES* = 0.21, *SE* = 0.19, *p* = .25, 95% CI: -0.15 to 0.57), indicating that the crossover nesting problem of type of foster care did not explain the statistically non-significant interaction effect of the first model. VIPP-FC thus did not significantly improve parental sensitive discipline in foster parents compared to the dummy intervention.

Attitudes towards parenting. No significant main effects for time or intervention versus control condition (*ES* = -0.04, *SE* = 0.12, *p* = .72, 95% CI: -0.27 to 0.19 and *ES* = 0.22, *SE* = 0.18, *p* = .23, 95% CI: -0.14 to 0.58, respectively), nor a significant interaction effect of time*condition (*ES* = -0.02, *SE* = 0.09, *p* = .83, 95% CI: -0.18 to 0.15) on attitudes towards sensitivity were found (Table 5). The attitudes towards parenting did not yield statistically different results over time (pre- vs. post- vs. post-posttest) or between conditions (intervention vs. control group). The change over time on attitudes towards sensitivity was also not statistically different for the intervention and control group. These results remained the same after controlling for crossover nesting of type of foster care and no statistically significant main effect for type of foster care was found (*ES* = 0.15, *SE* = 0.11, *p* = .19, 95% CI: -0.07 to 0.37). Within the intervention or control group, kinship and non-kinship foster parents did not statistically differ from each other in attitudes towards sensitivity. Thus, foster parents' attitudes towards sensitive parenting did not become more positive improve after completing VIPP-FC compared to the control group and no crossover nesting problem for type of foster care was revealed that could explain this statistically non-significant interaction effect between time and condition of the first model.

Exploratory Analyses

Parenting behavior in different situations. Separate multilevel analyses on the sensitivity scores of the three different observational episodes did not result in statistically significant main or interaction effects for play with toys or play without toys. For structured play a statistically significant main effect for time was found (*ES* = 0.49, *SE* = 0.13, *p* < .001, 95% CI: 0.23 to 0.74) and the main effect for condition and the interaction effect were marginally non-significant (main effect for condition: *ES* = 0.94, *SE* = 0.48, *p* = .050, 95% CI: 0.00 to 1.88, interaction effect time*condition: *ES* = -0.36, *SE* = 0.19, *p* = .054, 95% CI: -0.72 to 0.01). Parental sensitivity in the structured play episode increased over time and the foster parents in the control group seemed to improve more in parental sensitivity over time than the foster parents in the intervention group during the structured play episode. Examining the Don't Touch and Clean Up task separately yielded statistically non-significant results for parental sensitive discipline.

Table 5. *Multilevel analyses with main and interaction effects for time and condition (VIPP-FC vs. control) for parental sensitivity, sensitive discipline, and attitudes towards sensitivity.*

		ES	*SE*	*p*	*95% CI*
Parental sensitivity	(Intercept)	6.98	0.82	<.001	5.37 to 8.59
	Time	0.34	0.21	.10	-0.06 to 0.74
	Condition	0.93	0.66	.16	-0.36 to 2.23
	Time*condition	-0.19	0.29	.51	-0.76 to 0.38
Sensitive discipline	(Intercept)	5.66	0.66	<.001	4.38 to 6.95
	Time	-0.11	0.13	.40	-0.37 to 0.15
	Condition	-0.02	0.42	.96	-0.85 to 0.81
	Time*condition	0.21	0.19	.25	-0.15 to 0.57
Attitudes towards sensitivity	(Intercept)	4.06	0.31	<.001	3.45 to 4.67
	Time	-0.04	0.12	.72	-0.27 to 0.19
	Condition	0.22	0.18	.23	-0.14 to 0.58
	Time*condition	-0.02	0.09	.83	-0.18 to 0.15

Foster parents with least sensitive parenting behavior and attitudes at pretest. Because the total sample showed a rather high overall parental sensitivity score at pretest (*M* = 6.99, *SD* = 1.16, range: 3.75 to 9), a median split was performed but neither statistically significant main effects for time or condition nor a significant interaction effect were found for the foster parents with the lowest overall sensitivity scores (Supplementary Table 1). Multilevel analyses with the foster parents with the lowest parental sensitive discipline overall scores and with the most insensitive attitudes towards parenting after median split also did not result in statistically significant main or interaction effects (Supplementary Table 1).

DISCUSSION

Foster parents may benefit from parenting support, such as intervention programs, that helps them with the struggles that may arise when taking care of children who often show challenging behavior due to adverse early life experiences. The current study examined the effectiveness of VIPP-FC on sensitivity, sensitive discipline and attitudes of foster parents. It was hypothesized that VIPP-FC would increase foster parents' parental sensitivity, sensitive discipline, and attitudes towards parenting. However, in the current study, the intervention group did not show improvements in parental sensitivity, sensitive discipline, or more sensitive attitudes towards parenting after receiving VIPP-FC compared to the control group. Effects remained the same after controlling for crossover nesting of type of foster care (kinship vs. non-kinship foster care).

Previous meta-analytic research has shown that parenting interventions are effective in improving parenting behavior and attitudes of foster parents (Schoemaker et al., 2019). However, the foster parents in the current study showed generally high scores on parental sensitivity, sensitive discipline, and attitudes towards parenting at pretest, leaving little room for improvement. In addition to this possible ceiling effect in parental outcomes, there may also be a selection bias: the foster families who would benefit most from a parenting intervention may not have been included in the study sample. The majority of foster families that chose not to participate in the current study stated that they did not have time to participate, because they were too busy with other (parenting) intervention programs at that moment, or because they just completed an extra (parenting) support trajectory and were not willing to start another intensive period. These non-participants may have included a group of foster families who face the most severe parenting challenges that potentially could have been reduced with VIPP-FC by improving their parenting behavior and attitudes.

The current study contained several limitations. First, there was limited room for improvement in the foster families' functioning; the participating foster families seemed to function relatively well, likely due to a selection bias. As a result, a ceiling effect may have occurred that may explain why we did not find evidence for the effectiveness of VIPP-FC on foster parents' sensitivity, sensitive discipline, and attitudes. Second, the observation scale of sensitive discipline at pretest and the questionnaire subscale sensitive attitudes at pre- and post-posttest had moderate Cronbach's alphas, indicating that the scale scores of sensitive discipline and sensitive attitudes were moderately reliable at these measurement points.

A recent study examined the effect of VIPP-FC/A (VIPP-FC adapted to adoption: VIPP-FC/A) on parental sensitivity of adoptive parents of post-institutionalized children (Barone, Barone, Dellagiulia, & Lionetti, 2018). Similar to foster parents, parents of late-adopted children may struggle to take care of children who are at risk of developing insecure attachment relationships and behavior problems due to early life adversities such as neglect and institutionalization. Adoptive parents may thus also benefit from intervention programs that help them to overcome these parenting challenges. Results showed that VIPP-FC/A was effective in increasing sensitive parenting behavior in adoptive families (Barone, Barone, et al., 2018). Improved maternal sensitivity of adoptive parents in the intervention group contributed to improved emotional availability and decreased behavior problems of the adopted children, especially if the children's temperament was characterized by high scores on negative affect (Barone, Ozturk, & Lionetti, 2018). Children with negative affective traits experience more difficulties with emotional regulation and behavioral inhibition (Doom & Gunnar, 2015). These regulatory difficulties may lead to (more severe) parenting challenges for new caregivers if these children are placed out of home. A meta-analysis of parenting interventions for foster and adoptive families showed that the overall positive effect on parental sensitivity was

indeed larger for studies that specifically recruited families that took care of children who displayed high levels of behavior problems compared to studies that did not specifically include such an at-risk sample (Schoemaker et al., 2019). Overall, these studies suggest that future research should focus on foster families that experience more severe challenges and who may therefore be in need of help and support. Examining the effectiveness of VIPP-FC in an at-risk group may result in improved parenting behavior and attitudes after receiving the intervention program compared to the control group.

We did not find evidence for a crossover nesting problem for type of foster care. Thus, type of foster care (kinship or non-kinship foster care) did not seem to influence the multilevel estimates per condition and therefore type of foster care could not explain the non-significant intervention effects of VIPP-FC. Our study did not have enough power to examine the moderating role of type of placement (kinship vs non-kinship placements). This would be an important direction for future research. In case of an out-of-home placement, kinship care is generally preferred to non-kinship care (Ehrle & Geen, 2002; Winokur, Holtan, & Batchelder, 2018). Placing children with kin means that usually children do not have to adjust substantially to new caregivers and a new environment, because kinship foster parents often originate from the same community or family network as their birth parents (Peters, 2005). However, because kinship foster parents often share the same (socioeconomic) environment as birth parents, placing children in kinship foster care may imply placing them in at-risk care. The most common reason for out-of-home placement of children is maltreatment (Winokur et al., 2018) and the intergenerational transmission of parenting and maltreatment has been studied extensively (Madigan et al., 2019; Mileva-Seitz, Bakermans-Kranenburg, & Van IJzendoorn, 2016). Foster care research revealed that kinship foster parents generally show less sensitive behavior (i.e., emotional support) towards their foster children (Geary, 2007) and have less positive attitudes towards parenting than non-kinship foster parents (Gebel, 1996; Jones Harden, Clyman, Kriebel, & Lyons, 2004). Moreover, insensitive (disciplinary) behavior and negative parenting attitudes are associated with risk factors related to lower socioeconomic status, such as lower education and lower family income, more often seen in kinship foster families than in non-kinship foster families (Bøe et al., 2014; Ehrle & Geen, 2002; Farmer, 2009; Mennen & Tricket, 2011; Pelchat, Bisson, Bois, & Saucier, 2003; Vittrup & Holden, 2010). Kinship foster parents' parenting behavior and attitudes may thus have more room for improvement and they may therefore benefit more from intervention programs than non-kinship foster parents. However, research revealed that foster children in non-kinship care showed more behavior problems, psychopathology, and had a higher risk of breakdown than children placed with kin (Konijn et al., 2019; Winokur et al., 2018; Xu & Bright, 2018). Non-kinship foster parents may therefore need more help and support to deal with child behavior problems to subsequently prevent placement breakdown than kinship foster parents. Unfortunately, most effectiveness studies do not report effects of intervention programs for kinship and

non-kinship foster families separately, and the moderating effect of type of foster care could therefore not be examined in a recent meta-analysis (Schoemaker et al., 2019). More research is needed to examine the specific and potentially different effects of parenting interventions for kinship and non-kinship foster parents.

In the Netherlands the screening and preparation of kinship and non-kinship foster parents is slightly different. Kinship foster parents' parenting capabilities are screened and the child's safety within the foster parents' home is investigated before placement (Vereniging van Nederlandse Gemeenten, 2016). Aspiring non-kinship foster parents are screened and prepared for the foster care placement with the STAP (Collaboration, Team spirit, Aspiring Foster parents [Samenwerking, Teamgeest, Aspirant Pleegouders]; De Baat, 2014) or a comparable training. The STAP training focusses on the development of knowledge, attitudes, and skills needed to raise a child with adverse early life experiences (De Baat, 2014). Kinship foster parents are also prepared with the STAP or a comparable training. However, because children will almost immediately be placed with kinship foster parents if the screening was positive it is not always possible to complete the whole training (Jeugdzorg Nederland, 2013). At the beginning of the foster care placement kinship and non-kinship foster parents may differ in parenting knowledge, attitudes, and skills. It may thus be that foster parents (either kinship or non-kinship) that need extra support, require intervention programs that are specified to their individual needs.

Conclusion

The current study investigated the effectiveness of VIPP-FC on parental sensitivity, parental sensitive discipline, and attitudes towards parenting in foster parents. Sensitive parenting plays an important role in child development, e.g., the development of secure attachment relationships and prevention or reduction of child behavior problems. Our study did not find evidence for the effectiveness of VIPP-FC in improving foster parents' sensitive parenting behavior and attitudes. In addition, results did not change when type of foster care (kinship vs. non-kinship) was taken into account. We suggest that these findings may be explained by a possible selection bias and a subsequent ceiling effect. Thus, future intervention studies might include at-risk samples and examine factors (i.e., foster family characteristics) that may contribute to the effectiveness of parenting interventions.

Acknowledgements

The authors would like to thank Sabine van der Asdonk, Sheila van Berkel, Whitney de Haan, and the research assistants for their help with coding the observations of parental sensitivity and discipline.

Supplementary Table 1. *Exploratory analyses with main and interaction effects for time and condition (VIPP-FC vs. control) per situation and for the foster parents with the lowest overall scores for parental sensitivity, sensitive discipline, and attitudes towards parenting (n = 30).*

		ES	*SE*	*p*	*95% CI*
Parental sensitivity					
Play with toys	(Intercept)	6.81	0.74	.24	5.37 to 8.25
	Time	0.33	0.18	.07	-0.03 to 0.68
	Condition	0.90	0.60	.14	-0.28 to 2.08
	Time*condition	-0.18	0.25	.49	-0.67 to 0.32
Play without toys	(Intercept)	8.28	5.29	.12	-2.10 to 18.67
	Time	0.00	1.30	1.00	-2.55 to 2.54
	Condition	2.01	4.10	.62	-6.02 to 10.03
	Time*condition	0.06	1.83	.97	-3.52 to 3.65
Structured play	(Intercept)	6.84	0.73	<.001	5.41 to 8.27
	Time	0.49	0.13	<.001	0.23 to 0.74
	Condition	0.94	0.48	.05	0.00 to 1.88
	Time*condition	-0.36	0.19	.05	-0.72 to 0.01
Lowest overall score	(Intercept)	7.24	0.86	<.001	5.56 to 8.91
	Time	0.29	0.22	.20	-0.15 to 0.72
	Condition	0.81	0.72	.26	-0.59 to 2.21
	Time*condition	-0.11	0.32	.72	-0.73 to 0.51
Sensitive discipline					
Don't Touch	(Intercept)	5.54	0.77	<.001	4.03 to 7.04
	Time	-0.19	0.17	.25	-0.52 to 0.14
	Condition	-0.03	0.51	.95	-1.04 to 0.98
	Time*condition	0.19	0.24	.43	-0.28 to 0.66
Clean Up	(Intercept)	5.77	0.69	<.001	4.42 to 7.12
	Time	-0.05	0.15	.77	-0.34 to 0.25
	Condition	-0.05	0.49	.92	-1.02 to 0.91
	Time*condition	0.24	0.21	.26	-0.18 to 0.65
Lowest overall score	(Intercept)	5.83	0.66	<.001	4.54 to 7.12
	Time	-0.14	0.14	.33	-0.42 to 0.14
	Condition	0.03	0.45	.94	-0.84 to 0.91
	Time*condition	0.22	0.20	.27	-0.17 to 0.62
Attitudes towards sensitivity					
Lowest overall score	(Intercept)	3.67	0.45	<.001	2.78 to 4.56
	Time	0.05	0.12	.66	-0.18 to 0.29
	Condition	-0.21	0.27	.44	-0.74 to 0.32
	Time*condition	0.12	0.11	.26	-0.09 to 0.33