
DECREASING HARSH DISCIPLINE IN MOTHERS AT RISK FOR MALTREATMENT: A RANDOMIZED CONTROL TRIAL

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ABSTRACT: This study tested the effectiveness of the attachment-based program Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD; F. Juffer, M.J. Bakermans-Kranenburg, & M.H. van IJzendoorn, 2008) in decreasing harsh discipline of 43 mothers and their 1- to 4-year-old-children from severely deprived families. Based on previous studies, parenting stress was tested as a potential moderator of intervention effects on harsh discipline. Using a randomized control design, maternal harsh discipline was observed during home visits at the pretest and posttest, and mothers filled in questionnaires at both assessments. The VIPP-SD proved to be effective in decreasing maternal harsh discipline, but only for mothers who experienced higher levels of parenting stress at intake. These findings provide support for the program's ability to improve parenting in families who are most at risk for harsh parenting and for potentially maltreating child-parent interactions. The results are discussed in terms of the VIPP-SD elements most relevant to decreasing harsh discipline, and the challenges of parenting interventions in severely deprived populations.

RESUMEN: Este estudio puso a prueba la efectividad del programa de Intervención con Información de Vídeo para Promover una Crianza Positiva y una Disciplina Sensible (VIPP-SD), que está basado en la afectividad, en cuanto a disminuir la dura disciplina de 43 madres y sus niños de 1 a 4 años provenientes de familias severamente desfavorecidas. Con base en estudios previos, se examinó el estrés de crianza como posible moderador de los efectos de la intervención enfocada en la dura disciplina. Se observó la dura disciplina materna usando un diseño de control al azar, durante visitas a casa antes y después del examen, y las madres completaron cuestionarios en ambas evaluaciones. VIPP-SD demostró ser efectivo para disminuir la dura disciplina materna, pero sólo para madres que experimentaban altos niveles de estrés de crianza al inicio. Estos resultados sirven de apoyo para la habilidad del programa para mejorar la crianza en familias que más están bajo riesgo de una crianza dura y para las posibles interacciones niño-progenitor de maltrato. Se discuten los resultados en términos de los más relevantes elementos de VIPP-SD que sirven para disminuir la dura disciplina, así como los retos que tienen las intervenciones de crianza en grupos de población severamente desfavorecidos.

RÉSUMÉ: Cette étude a testé l'efficacité du programme basé sur l'attachement appelé Intervention Retour d'Information Vidéo (en anglais Video-feedback Intervention) pour Promouvoir le Parentage Positif et la Discipline Sensible (VIPP-SD, *Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline*) afin de diminuer la discipline sévère de 43 mères et leurs enfants de 1 à 4 ans, dans des familles extrêmement démunies. A partir d'études précédentes, le stress de parentage a été testé en tant que modérateur potentiel des effets de l'intervention sur la discipline

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sévère. Nous avons utilisé un modèle de contrôle randomisé. La discipline sévère maternelle a été observée durant des visites à domicile avant et après le test et les mères ont rempli des questionnaires aux deux évaluations. L'intervention VIPP-SD s'est avérée efficace pour la baisse de discipline sévère maternelle mais uniquement pour les mères ayant fait l'expérience de niveau de stress de parentage plus élevés au début de l'étude. Ces résultats offrent un soutien à la capacité du programme d'améliorer le parentage chez les familles qui sont le plus à risque de parentage trop sévère et d'interactions pouvant mener à une maltraitance enfant-parent. Les résultats sont discutés pour ce qui concerne les éléments de l'intervention VIPP-SD les plus à même de témoigner d'une baisse de la discipline sévère, ainsi que pour ce qui concerne les obstacles et défis aux interventions de parentage chez les populations les plus grandement démunies.

ZUSAMMENFASSUNG: Diese Studie untersuchte die Wirksamkeit des bindungsbasierten Programms "Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline" (VIPP-SD), indem harte Disziplin bei 43 Müttern und ihren 1-bis 4-jährigen Kindern aus stark benachteiligten Familien verringert wird. Basierend auf früheren Studien wurde elterliches Stresserleben als potenzieller Moderator beim Einfluss von Interventionseffekten auf harte Disziplin getestet. Mit Hilfe eines randomisierten Kontrolldesigns wurde die harte Disziplin von Müttern bei Hausbesuchen vor und nach der Intervention beobachtet und die Mütter füllten zu beiden Erhebungszeitpunkten Fragebögen aus. Die VIPP-SD erwies sich bei der Verringerung von mütterlicher harter Disziplin als wirksam, jedoch nur für Mütter, die zu Beginn mehr elterlichen Stress erlebten. Diese Ergebnisse liefern Unterstützung dafür, dass das Programm in der Lage ist, das Elternverhalten in Familien, die für harte Erziehung und potenziell misshandelnde Eltern-Kind-Interaktionen am meisten gefährdet sind, zu verbessern. Die Ergebnisse werden im Hinblick auf die wichtigsten VIPP-SD-Elemente zur Verringerung von harter Disziplin und hinsichtlich der Herausforderungen von Erziehungsinterventionen in stark benachteiligten Bevölkerungsgruppen diskutiert.

ABSTRACT: 抄録:この研究では、愛着に基づくプログラムである肯定的な育児と感受性のあるしつけをもたらすビデオフィードバック介入Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD)が、ひどく剥奪された家族の43人の母親とその1~4歳児に対して、厳しすぎるしつけを減少させる効果を、テストした。先行研究に基づき、育児ストレスが、厳しすぎるしつけに対する介入効果を媒介する可能性のある因子として、テストされた。ランダム化対照研究デザインを用いて、母親の厳しすぎるしつけは、テスト前後に家庭訪問で観察され、母親は両方の評価時に質問紙に記入した。VIPP-SDは、母親の厳しすぎるしつけを減少させる効果があったが、それはインテーク時に高水準の育児ストレスを体験していた母親だけだった。これらの所見は、厳しすぎる育児へのリスクおよび潜在的に虐待的な子どもと親の相互交流へのリスクが最も高い家族の育児を改善するというプログラムの能力を、支持する。結果は、厳しすぎるしつけを減少させるのに最も関係のあったVIPP-SD要素に関して、そしてひどく剥奪された人々における育児への介入の挑戦について、考察される。

摘要: 本文研究「以錄像反饋干預去促進正面親職及體貼懲罰」(VIPP-SD)這個以依附為基礎的計劃,測試它對出自嚴重貧困家庭的43位母親和他們1至4歲的子女是否能有效地減少嚴厲懲罰。根據以往的研究,本文測試親職壓力是否調節對嚴厲懲罰的干預效應。這研究用的是隨機對照設計,在前測和後測的家訪時我們觀察母親施的嚴厲懲罰,並在前測和後測時母親都填寫問卷。研究證明VIPP-SD能有效地減少母親施的嚴厲懲罰,但僅適用於在開始時有高度親職壓力的母親。對有嚴厲親職風險的家庭和對有潛在虐待性親子互動關係風險的家庭來說,本研究的結果證實VIPP-SD計劃能改善這些家庭的親職能力。另本文討論在VIPP-SD計劃中那些元素最能減少嚴厲懲罰,及在嚴重貧困人口中親職干預所面對的挑戰。

المخلص: اختبرت هذه الدراسة فعالية برنامج التدخل المبني على ردود فعل الفيديو لتعزيز الوالدية الإيجابية والانضباط الحساس (SD-VIPP) في خفض الانضباط القاسي المؤلف من 43 أم وأطفالهن من عمر سنة إلى 4 سنوات من الأسر المحرومة. واستناداً للدراسات السابقة، تم اختبار جهد الأبوة والأمومة كوسيط محتمل من تأثيرات التدخل على الانضباط القاسي وذلك باستخدام تصميم السيطرة العشوائية، وقد لوحظ قسوة انضباط الأمهات أثناء الزيارات المنزلية وذلك في الاختبار القبلي والبعدي وفي كل من تقييمات الاستبيانات التي ملأها الأمهات. أثبت SD-VIPP فعاليته في خفض الانضباط القاسي للأمهات وتحديد الأمهات اللواتي عانين من مستويات عالية من توتر الأبوة والأمومة في المدخول. وتوفر هذه النتائج دعم قدرة البرنامج على تحسين الأبوة والأمومة في الأسر الأكثر عرضة لخطر الأبوة والأمومة القاسية واحتمال إساءة معاملة تفاعلات الأهل والطفل. تمت مناقشة النتائج من حيث العناصر الأكثر صلة لخفض الانضباط القاسي وتحديات تدخلات الأهل بين الفئات السكانية المحرومة بشدة.

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The environmental conditions of economic deprivation and related daily stress are among the most salient factors that adversely influence parenting (Conger et al., 1992; Ricketts & Anderson, 2008). It has been shown that psychological stress embedded in the context of the ongoing challenges and threats of economic hardship is related to greater use of harsh discipline (Ricketts & Anderson, 2008), which in turn has been linked to a variety of deleterious child outcomes (Gershoff, 2002). In addition, some evidence has suggested that harsh parenting may

develop into child maltreatment in the long run (Carey, 1994; Fontes, 2005; Straus & Field, 2003). Therefore, the development of preventive interventions aimed at improving parenting in economically deprived families is very important to the protection of children (Jansen et al., 2012; Lundahl, Nimer, & Parsons, 2006). In this study, we test the effectiveness of an early parenting intervention program in families from severely disadvantaged backgrounds at risk for maltreatment, using a randomized control trial design.

Parental harsh discipline has been studied extensively because of its long-term negative effects on the emotional and behavioral development of children and adolescents (Bender et al., 2007; for a meta-analysis on spanking, see Gershoff, 2002). Physical, verbal, and psychologically controlling harsh discipline methods have been related to deleterious child outcomes such as poor school achievement and externalizing and internalizing disorders (e.g., Laskey & Cartwright-Hatton, 2009; Nanda, Kotchick, & Grover, 2012; Nelson, Yang, Coyne, Olsen, & Hart, 2013; Solomon & Serres, 1999; Weis, Dodge, Bates, & Pettit, 1992). There has been evidence that these associations are found independently of other parental risk factors and previous child problems (Taylor, Manganello, Lee, & Rice, 2010), and tend to occur even for mild forms of parental control skills (Strassberg, Dodge, Pettit, & Bates, 1994).

The most salient distal predictors of harsh discipline and punitive parenting are related to low socioeconomic status (SES), such as poverty and low educational level, which have been strongly associated with parental attitudes in favor of unsupportive and punitive behaviors (Clément & Chamberland, 2009; Jansen et al., 2012; Ricketts & Anderson, 2008). The Family Stress Model proposes that the relation between low SES and harsh parenting is mediated by parental stress (Conger et al., 1992). The lack of economic resources leads to family stress, which in turn may lead to parental emotional and behavioral problems which exacerbate the risk of daily stressors such as marital conflict and parental hostility. Mothers experiencing higher aversive interactions with other adults have been shown to also exhibit more aversive behaviors when interacting with their own children (Dumas, 1986). Indeed, stress has been considered a major factor in the development of harsh parenting (McCurdy, 2005), showing that parental negative affect related to stress may spill over into parent-child interactions (Gerard, Krishnakumar, & Buehler, 2006).

In addition to affective processes related to stress, cognitive factors also may play a role. Low-SES parents have been found to hold more positive attitudes toward harsh discipline methods (Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000). Regarding the cognitive processes that underlie the risk for the use of harsh parenting, Milner (1993, 2003) introduced a four-stage social-information-processing model describing the characteristics of parents at risk for harsh parenting or even maltreatment: (a) more biased and less attentive perceptions of children's behavior, (b) negative and child-centered interpretations of children's behavior (child behavior is perceived as a result of internal and stable child factors), (c) no regard to the situational cues when evaluating children's behavior, and (d) less competent skills to employ and modify child-centered responses and parenting strategies. Interestingly, these four stages are remarkably similar to (the inverse of) Ainsworth and colleagues' maternal sensitivity construct (accurately awareness/perception of the child's signals; adequately/prompting response to them) (Ainsworth, Blehar, Waters, & Wall, 1978), which is consistent with recent findings that early maternal lack of sensitivity predicts later harsh discipline (Joosen, Mesman, Bakermans-Kranenburg, & van IJzendoorn, 2012). Thus, the attachment theory framework from which the sensitivity construct originated also is

relevant to the origins of harsh discipline. The parent's lack of positive attachment-related skills such as sensitivity and empathy for the child leads to negative interpretations of child behavior and potentially harsh discipline practices. The parents' inability to recognize the needs of the child (Ainsworth, 1979; Bowlby, 1980) and the harmful consequences of violent discipline methods (Clément & Chamberland, 2009) compromises their parenting skills and ultimately child well-being.

The relation between compromised discipline skills and child development is at the heart of coercion theory (Patterson, 1982), which is based on social-learning principles. Coercion theory describes how parents' discipline attempts become increasingly negative and potentially harsh in the face of child resistance, thus escalating the conflict. Trying to obtain child cooperation, emotionally aroused parents engage in hostile attempts that are met with children's increased aversive responses to coerce the parent to withdraw the request. Extreme parental perceptions of ineffectiveness and powerlessness then tend to lead to withdrawal of the demand, which increases the chances of the child behaving adversely in the future, leading to escalating cycles of parental reliance on coercive and harsh strategies. Thus, attachment theory and coercion theory both emphasize the importance of positive, contingent, and nonaggressive parent-child interactions (Van Zeijl et al., 2006). In addition, there is often a risk that the less severe forms of harsh parenting evolve into the more severe ones (Carey, 1994; Fontes, 2005; Straus & Field, 2003). This pattern may start very early in life as an increased need for autonomy and growing resistance to parental control occurs during late infancy and toddlerhood, increasing the likelihood of angry and negatively controlling discipline tactics by parents who do not have sufficient alternative strategies (Aber, Belsky, Slade, & Crnic, 1999; Kim, Pears, Fisher, Connelly, & Landsverk, 2010). Thus, prevention efforts aimed at decreasing the risk for such negative cycles may be best conducted in early childhood. Indeed, a recent attachment-based intervention conducted with maltreating families was proven to be effective in promoting maternal sensitivity, children's attachment, and behavioral outcomes at ages 1 to 5 years (Moss et al., 2011).

Based on insights from both attachment theory and coercion theory, the Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline (VIPP-SD; Juffer, Bakermans-Kranenburg, & van IJzendoorn, 2008) aims to improve parental sensitivity and to encourage parents' use of sensitive, nonharsh child-management techniques. Using the video-feedback method, education, and repeated practice, the two parenting skills "control" and "sensitive responsiveness" are intensively trained in dyadic parent-child sessions (Juffer et al., 2008). The VIPP-SD has been proven effective in enhancing parental sensitivity and child developmental outcomes in several randomized control trials in a range of samples (e.g., adoptive families, children at risk for externalizing problems, children suffering from dermatitis, insecurely attached mothers with temperamentally reactive infants, mothers with postnatal eating disorders) (Juffer et al., 2008), but it has not yet been tested in severely deprived families at risk of maltreatment nor as a tool to specifically reduce harsh discipline. There

also has been some evidence that the VIPP-SD is most effective in families experiencing more daily hassles and more marital discord, suggesting that the program may be particularly helpful for families experiencing more stress in their daily lives (Van Zeijl et al., 2006), which holds promise for the use of this intervention in highly deprived families.

In the present study, we use a randomized control pre- and posttest designed to test the effectiveness of the VIPP-SD in a sample of severely deprived mothers of 1- to 4-year-old children screened for their problematic caregiving environment. Based on its proven effectiveness in other samples and on the relevance of the intervention components for harsh parenting in deprived families, our first hypothesis was that the VIPP-SD would be effective in decreasing maternal harsh parenting. In addition to this main effect, our second hypothesis was that intervention effects on maternal harsh discipline would be stronger in families with high levels of parenting stress than those in other families.

METHODS

Sample Selection

Staff members of social and health service agencies in the Northern region of Portugal, who predominantly work with low-income families, were asked to fill in a Portuguese short version (PRF; Pereira, Negrão, Soares, Almeida, & Machado, 2009) of the Family Risks and Strengths Profile (Rodríguez, Camacho, Rodrigo, Martín, & Máiquez, 2006) for families with 1- to 4-year-old children when there were concerns about the quality of the child's caregiving environment. The PRF includes 62 items about family sociodemographic characteristics and family exposure to risk factors in seven risk clusters (economic conditions, housing conditions, mother and father risk status, family relations quality, parenting quality, pregnancy, child problems) and one protective cluster (social support system). For eligibility, the families had to meet the following criteria at the time of the PRF: exhibiting at least 1 item of the 23 risk items related to family relations quality or parenting quality (e.g., negligence regarding child's health/emotional/cognitive needs, coercive discipline practices, lack of parental flexibility/self-control/self-competence, domestic violence).

To ensure a homogeneous sample, only Portuguese children living with their biological mother as the primary caregiver were eligible for the intervention study. Ethnic minorities and severe medical conditions for both mother and child (serious physical impairment, intellectual deficit, and/or history of psychosis) were excluded because they would probably require adaptations to the standardized VIPP-SD protocol that we used. Families receiving formal parenting training also were excluded. As shown in Figure 1, this selection resulted in the exclusion of 24 cases, leaving a target selection sample of 132 mothers and their 1- to 4-year-old children who showed an average of 10.81 ($SD = 5.72$) risk items on the PRF total score and an average of 4.85 ($SD = 3.69$) risk items on the two eligibility clusters of the PRF. Five mothers were not reachable, and 35 mothers declined to participate at

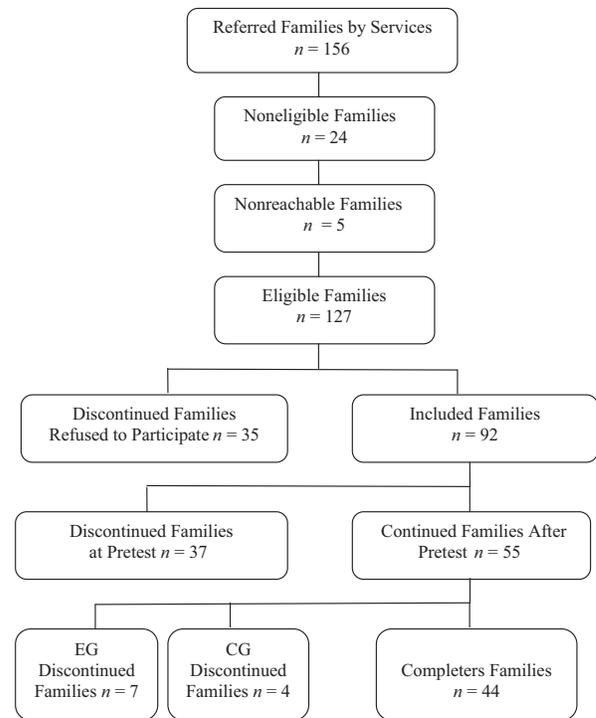


FIGURE 1. Flowchart of the study's progress.

the first telephone contact. Ninety-two mothers (70%) agreed to participate in the study, but 32 mothers discontinued participation after the first pretest session, and 5 mothers did so after the second pretest session. In the intervention phase, 7 mothers from the experimental group (4 mothers immediately after the first intervention session) and 4 mothers from the control group discontinued participation. In line with other high-risk sample studies, the reasons for dropping out are related to (a) mothers' general disinterest; (b) obstruction against mother and child participation from other family members; (c) increased stress levels (e.g., state funds cut off, need to return to work, severe clinical conditions, or psychopathological symptoms of other family members); and (d) family crisis (e.g., divorce/separation, involvement in child protection services, incarceration).

The final sample for the intervention study consisted of 44 children and their mothers. The majority of the children were boys (52.3%) and had siblings (81.8%). Mean age of the children at the pretest was 28.80 ($SD = 10.53$, range = 12–48) months, and the mean ages of mothers and fathers were 29.89 ($SD = 6.15$, range = 18–46) and 33.14 ($SD = 7.30$, range = 22–53) years, respectively. Sociodemographic characteristics of the families confirmed the highly deprived and high-risk nature of this sample: family educational attainment was low (i.e., 70.4% of mothers and 86.4% of fathers did not complete the Portuguese mandatory educational level: 9 school years), many parents were unemployed (70.5% for mothers, 50% for fathers), received welfare assistance (79.5% of families), and lived in poor housing conditions (77.3%). In addition, the home-visitors' experiences point toward a pattern of

multiple problems in the majority of these families, including insufficient access to food, medication, and transportation; traumatic maternal childhood experiences; unstable and violent couple relationships; and mental health problems in the children's fathers and other close family members of the mother. There were no significant differences between all targeted families who dropped out of the study and the ones who remained regarding child age and gender, maternal age and educational level, presence of siblings, family status and welfare assistance, and total number of risk indicators in the two eligibility clusters criteria, all p s > .21.

For the current study, only those families for whom complete data were available on all variables of interest were included. This resulted in the exclusion of 1 family since it was not possible to code the pretest maternal harsh discipline standardized observations due to procedural problems, leaving a sample of 43 dyads. Mean age of children at the pretest was 28.44 ($SD = 10.38$, range = 12–48) months. Mean age of mothers at the pretest was 29.86 ($SD = 6.22$, range = 18–46) years.

This study was approved by the Portuguese National Commission for Data Protection, a Portuguese independent organization that supervises the respect and commitment to the human rights established by the Constitution and the law in the area of personal data protection.

Procedure

Considering the severely disadvantaged nature of this sample, particularly the reduced mobility and accessibility of at-risk families, participating families were visited at home to enhance their retention in the study. Participants were assessed at baseline in two pretest sessions planned within 2 weeks of each other. The first pretest visit started with the presentation and explanation of the research procedures and the signing of the informed consent form. The mothers then were asked to fill in a set of questionnaires. The second pretest visit encompassed the videotaping of several mother–child interaction tasks (1 hr). After pretest conclusion, two of the authors generated the randomization sequence (using a standardized table) stratified by child's age group, gender, and temperament according to the Portuguese clinical cutoff scores of the Difficult Temperament subscale from the Infant Characteristics Questionnaire by Bates, Freeland, and Lounsbury (1979) (Carneiro et al., 2013; Veríssimo & Dias, 2012). The families were then randomly assigned to either the intervention group ($n = 22$) or the control group ($n = 22$).

Families in the intervention group received six home visits whereas families in the control group received six telephone calls. Approximately 1 month after the last home visit/telephone call, families from both groups completed the posttest that included the same procedures and assessments as the pretest. Mean age of the children at the posttest was 35.27 ($SD = 10.70$, range = 18–54) months. The intervention was delivered by four interveners, three of who completed the 1-week training at Leiden University, including a supervised trajectory with a pilot family, and one who was trained in Portugal by the first two authors.

Intervention Program

Mothers in the experimental group received the VIPP-SD (Juffer et al., 2008). The VIPP-SD is a home-based, short-term intervention that aims to enhance parental sensitivity and positive discipline using a video-feedback technique. Individual feedback on parenting regarding several themes of sensitivity and discipline as well as on general child development were provided using a standardized protocol of six home visits that defines the contents, tips, and exercises for mother and child. Before the feedback preparation of the first intervention session, the intervener develops a mother–child interaction profile (derived from the pretest videotape), which allows the intervener to emphasize some aspects more than others based on the specific needs of each mother–child dyad within the boundaries of the protocol. This profile is evaluated and reformulated every time the intervener prepares the feedback for each intervention session.

During each intervention session, mothers and children are first videotaped in standardized situations (e.g., reading a book together, cleaning up), followed by the feedback presentation of the videos taped in the previous session (to prevent filming mother–child interaction immediately after giving the video feedback). This feedback is prepared in advance by the intervener, who selected specific moments in the video to comment on each of the sessions' main issues. Interveners reinforce positive mother–child interactions and effective parenting strategies in a pleasant atmosphere, and explicitly involve mothers as experts on their own child, inviting them to talk about their child's behavior.

The first four intervention sessions were scheduled at 2-week intervals and examined the following specific contents: (a) the difference between attachment and exploration behavior, distraction and induction as disciplinary strategies; (b) “speaking for the child” as a method of promoting mother's perceptions of child cues and communication, positive reinforcement as a disciplinary strategy; (c) “chain of sensitivity” as a way of describing the sensitivity cycle: child signal–mother recognition–mother interpretation–mother response–child response, sensitive time-out as a disciplinary strategy; and (d) the importance of sharing emotions, empathy, and understanding of the child as disciplinary strategies. The two booster sessions were 1 month apart and reviewed the most important themes and tips for each dyad. Fathers were invited to participate in these two final sessions to facilitate generalization of the newly acquired parenting skills to other family members, but only 2 of them participated. At the end of the last session, all mothers received a booklet summarizing the central subjects discussed during the intervention. The VIPP-SD intervention program was delivered by a group of four interveners, all female with a master's degree in psychology, who were extensively trained in the intervention protocol and also were familiar with the theory from which the intervention was derived.

Control Condition

Parallel to the intervention group, the control group mothers received six telephone calls at the same time intervals as the VIPP-SD

sessions. Each telephone session addressed a standard topic regarding general child development (language, play, sleep, feeding, relations, and, for the last phone call, an overview of all previous topics). Several questions were posed to the mothers, and they were encouraged to talk about the development of their own child without receiving any feedback or tips from the researcher. The mothers who requested explicit advice or detailed information were recommended to consult their general practitioner and/or their health service agency.

Measures

Harsh discipline. Maternal discipline was measured at pre- and posttest using standardized observations throughout two episodes: a clean-up task and a don't-touch task. In the clean-up task, instructions specified that mother could help and support the child as she would normally do, although the child should clean up as much as possible. The clean-up task ended when all the toys were put in the box or after a maximum of 4 min. For the don't-touch task, the mothers were presented with a box full of interesting toys. They were told to remove all the toys from the box and to put them in front of the child, not allowing the child to touch them. After 2 min, the child was allowed to play only with the least attractive toy (a simple stuffed animal). The task ended after another 2 min.

Standardized procedures for coding the discipline rating scales were used to measure different aspects of harsh discipline (adapted from Verschuere, Dossche, Marcoen, Mahieu, & Bakermans-Kranenburg, 2006), including physical and verbal harsh discipline (as used by Joosen et al., 2012), and psychological control, each rated on a scale of 1 (*not present*) to 5 (*much frequent/continuous*). **Harsh physical discipline** was coded when mothers showed unnecessary physical force (e.g., slapping, grabbing/holding the face of the child, pulling an arm too hard, grabbing toys from the child) that led to a clear physical impact on the child (e.g., body movement, facial/verbal expression of shock or discomfort). **Harsh verbal discipline** referred to the way that the mother addressed the child by showing irritation and anger in her tone of voice (e.g., impatient/irritated/unfriendly voice, screaming). **Psychological control** reflected the harshness of the content (rather than tone) of maternal statements. Criteria included the extent to which the mother made the child feel guilty, ashamed, or responsible for mishaps and/or the mother showed (a) disregard for what the child was saying/feeling, (b) withholding of affection, and/or (c) inconsistent emotional behavior (changing between warmth and attacking the child). The average intraclass correlation (single rater, absolute agreement) for intercoder reliability (for all separate pairs of four coders, three of which with a master's degree and one with a PhD in psychology) was .80, range = .70–.91, $n = 24$. Pre- and posttest observations were independently coded by different coders who were unaware of experimental condition and other data concerning the participants. For the current study, we computed a total harsh discipline score by standardizing and summing the three subscales scores for the clean-up and the don't touch tasks.

Parenting stress. Mothers filled in the Daily Hassles Questionnaire (Kanner, Coyne, Schaffer, & Lazarus, 1981) at pre- and posttest. The Parenting Stress subscale consists of nine items rated on a scale of 0 (*no hassle*) to 4 (*big hassle*). Example items are "child demands being entertained or played with," "constantly having to keep an eye on what the child is doing," and "plans changing because of the child's needs." The internal consistency score (Cronbach's α) for the Parenting Stress subscale was .75 for the pretest and .70 for the posttest.

RESULTS

Three outliers were found in the harsh discipline variables (one in the pretest and two in the posttest) and one for the pretest parenting stress variable. The outlying variables were included in the data set as recommended by Keppel and Wickens (2004). They were winsorized by adding the difference between the two next highest values and adding this difference to the next highest value (with a $|z| > 3.29$) to bring them closer to the rest of the distribution (Tabachnik & Fidell, 2001), after which they were no longer outliers. Random assignment to the control and intervention groups was checked by performing t tests and chi-square tests for demographic and pretest variables of interest. As shown in Table 1, there were no differences between the control and intervention groups regarding maternal age, maternal education, child age, child gender, and family structure, p s = .52–.88, nor for the pretest variables of harsh discipline, $p = .26$, and parenting stress, $p = .27$.

To assess intervention effects, we conducted repeated multivariate analysis of variance for the harsh discipline and parenting stress outcomes, with experimental condition as a between-subjects factor and time as a within-subject factor. The multivariate Experimental Condition \times Time interaction effect was not significant, $F(2, 40) = .63, p = .54$.

We then tested pretest parenting stress (dichotomized using a median split) as a potential moderator of an intervention effect on harsh discipline (see Table 2). The three-way interaction Experimental Condition \times Time \times Parenting Stress was significant, $F(1, 39) = 5.84, p < .05$, partial $\eta^2 = .13$. As shown in Figure 2, harsh discipline decreased in the intervention group, but not in the control group, only under conditions of higher parenting stress. We also tested whether the four groups in Figure 2 differed on pretest harsh discipline, but this was not the case, $F(3, 39) = .98, p = .41$.

DISCUSSION

The results of this study showed that the VIPP-SD is effective in decreasing maternal harsh discipline in severely deprived families screened for their problematic caregiving environment, but only under conditions of self-perceived parenting stress. Our finding replicates previous studies that have established powerful intervention outcomes for those who experience higher stress levels (e.g., Brinkborg, Michanek, Hesser, & Berglund, 2011; Van Zeijl et al., 2006), and extends findings to economically deprived

TABLE 1. Pretest Comparisons on Sociodemographics, Harsh Discipline, and Parenting Stress

	Control Group (n = 22) M (SD)	Intervention Group (n = 21) M (SD)	F	t	p
Child Age (months)	27.59 (11.15)	29.33 (9.71)	.83	-.55	.59
Mother Age (years)	29.32 (6.66)	30.43 (5.82)	.24	-.58	.57
Maternal Education	1.05 (.72)	1.10 (1.18)	7.59	-.17	.87
Siblings	1.23 (.92)	1.76 (1.09)	.85	-1.74	.09
Welfare Assistance	.82 (.40)	.76 (.44)	.79	.44	.66
Total Risk Indicators	11.55 (7.73)	12.14 (5.16)	6.72	-.30	.77
Eligibility Risk Indicators	5.00 (4.63)	6.00 (3.46)	3.46	-.80	.43
Harsh Discipline (z score)	-.41 (2.08)	.34 (2.22)	62	-1.15	.26
Parenting Stress	7.23 (5.71)	5.52 (4.08)	1.40	1.13	.27
	n (%)	n (%)	χ^2		
Child Gender			.02		.88
Boy	11 (25.58%)	11 (25.58%)			
Girl	11 (25.58%)	10 (23.26%)			
Family Structure					
Married/In Relationship	15 (34.88%)	13 (30.23%)	.19		.67
Single-Parenthood	6 (13.95%)	4 (9.30%)	.41		.52

TABLE 2. Pretest Descriptive Statistics for Harsh Discipline and Parenting Stress Dichotomized Groups

	Control Group (n = 22)		Intervention Group (n = 21)	
	n	M (SD)	n	M (SD)
Harsh Discipline (z score)				
Low Parenting Stress	11	-.21 (2.09)	12	-.15 (1.37)
High Parenting Stress	11	-.61 (2.16)	9	.99 (2.99)
Parenting Stress				
Low Parenting Stress	11	3.01 (1.83)	12	2.58 (1.73)
High Parenting Stress	11	11.45 (5.09)	9	9.44 (2.70)

families. Since mothers who face multiple difficulties are likely to perceive their greater need of support, they tend to be more open to intervention efforts (Channa, Stams, Van der Laan, & Asscher, 2011) and seem to be more likely to show quick improvements (Beauchaine, Webster-Stratton, & Reid, 2005). In our study, the stress moderator of the intervention effect was specific to stress about parenting. Mothers who report and are aware of difficulties in their parenting role may have been more willing to employ the newly attained skills and to recognize the impact of their discipline behaviors, leading to diminished harsh discipline.

Several aspects of the VIPP-SD may explain its success with highly stressed mothers. First, the VIPP-SD focuses on and reinforces positive parent-child interactions and parental emotional communication (Juffer et al., 2008). Mothers experiencing higher parenting stress may be particularly sensitive to this positive approach, given that in their daily lives they rarely experience positive interactions with their children. Second, the VIPP-SD includes concrete alternatives and practice opportunities for nonharsh and

sensitive child behavior management skills. Third, the VIPP-SD includes a developmental perspective that provides parents with guidelines about the abilities and needs of young children (Juffer et al., 2008), which may help parents to read the child's needs more accurately and decrease their unrealistic and biased expectations. Finally, the VIPP-SD is home-based and emphasizes an individual delivery component, both of which are consistent with previous research suggesting that these aspects are important in decreasing parental behaviors that may lead to child abuse (Lundahl et al., 2006). Home visiting can reduce barriers to treatment engagement, eradicating some economic and practical constraints that often detain parents from receiving support from formal services. Most important, it creates a unique opportunity to involve socially isolated and overwhelmed mothers (Ammerman et al., 2006) through the establishment of a proximal and supportive relationship (Juffer et al., 2008) from which parents start to change their attitudes, child-rearing behaviors, and actual harsh or abusive parenting (Lundahl et al., 2006).

A central feature of the VIPP-SD is its relatively brief duration of six intervention sessions. Meta-analytic evidence has shown that shorter attachment-based interventions are actually more effective than are longer ones (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003), but for high-risk families, it is likely to be that follow-up visits can increase gains (Tolan, Gorman-Smith, Henry, & Schoeny, 2009) in the longer term (Braukhaus, Hahlweg, Kroeger, Groth, & Fehm-Wolfsdorf, 2003). Continued care seems to contribute not only to treatment-impact sustainability but also to initial treatment-impact improvement (Bundy, McWhirter, & McWhirter, 2011). For severely deprived families with higher stress levels, a follow-up program embedded in care as usual may be necessary to consolidate the effects of the VIPP-SD. This issue also may be important in light of the lack of change in

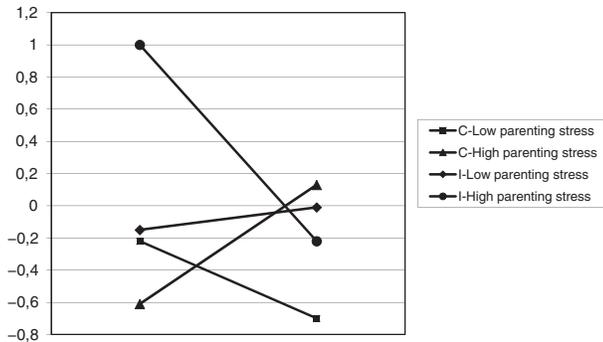


FIGURE 2. Intervention effectiveness on harsh disciplin moderated by parenting stress.

mothers reporting lower levels of parenting stress, even though they also were from economically deprived backgrounds. Given these severely stressful circumstances, it is likely that all mothers experience parenting stress, but that only those who are aware of these difficulties and report on them can benefit in the short-term. For mothers unaware of their parenting difficulties, supplementary training and continued opportunities of practice within a positive and supportive relational setting following the VIPP-SD intervention provides them with more time to examine and change their behaviors and beliefs, which may then also increase intervention outcomes in this group.

The current study has several strengths, including the randomized control pre-/posttest design, the use of standardized observational measures, and the sample of mothers at substantial risk for child maltreatment. This study adds to the existing literature by showing that the VIPP-SD can reduce harsh parenting in these families. These results are encouraging and are consistent with meta-analytic evidence that improvements in child-management skills may reduce and/or prevent child maltreatment (Lundahl et al., 2006). Moreover, and considering the literature revealing parenting stress as a notable determinant of child abuse (Chan, 1994; Dopke & Milner, 2000; Whipple & Webster-Stratton, 1991), the moderating effect of parenting stress seems to be very promising to child-maltreatment prevention. Nevertheless, additional research with larger samples is needed to validate the generalizability of these findings and to determine whether the VIPP-SD can be embedded in child welfare services.

A number of limitations should be addressed when interpreting our results. First, recruitment difficulties have led to a small and potentially selective sample. A sample size of 128 families (64 in the experimental group, 64 in the control group) would have been sufficient to detect a statistically important difference for the interaction between the experimental condition and time, using an F test with a medium effect size, a power of .80, and a significance level of 5%. The recruitment based on the referrals by professionals was restricted by the fact that they were overloaded by the high number of families they need to assist and were found to be rather unwilling to invest in a study that went beyond their duties. In addition, mothers showed disinterest and/or resistance,

mistrust, fears of losing power over their lives, and tiredness of being multi-assisted, undermining their willingness to participate in the study. They also were frequently overwhelmed with concerns about meeting their primary needs (e.g., food, rent, transportation, medication), preventing them from participating in the study. A second limitation is the considerable dropout rate, even though it was similar to those in other high-risk sample studies (e.g., Duggan et al., 2000; Snow, Frey, & Kern, 2002). Dropouts appeared to be related to stressful life circumstances such as divorce/separation, involvement in child protection services, and/or severe medical clinical or psychiatric disorders. However, program retention after the pretest (80%) also was identical to that of other studies with high-risk samples (e.g., Morrow et al., 2010; Moss et al., 2011). In addition, whereas other intervention studies generally allow for parents to miss some sessions, in our study, all mothers completed the full set of intervention sessions (all control group mothers also completed all scheduled telephone calls.) Third, father participation was very low in this study, as compared to other studies on fathers' attendance (Stolk et al., 2008), which may be linked to the fact that socially disadvantaged fathers are more likely to withdraw from child-rearing duties (Carlson & Magnuson, 2011). Nevertheless, meta-analytic findings have demonstrated that paternal involvement is not particularly necessary for mothers' progress (Bakermans-Kranenburg et al., 2003). Given the less supportive and more conflicting interparental relationships of deprived families, we propose that the full program delivered with only mothers potentially led to increased intervention gains, as it reduced possible paternal interferences and additional sources of marital discord. It will be an interesting challenge for future research to specifically test the effectiveness of the VIPP-SD with fathers. Finally, the lack of a main intervention effect on maternal harsh discipline, the possibility that our results may be due to regression to the mean, and the absence of a longer term follow-up interval may be further reasons for caution in interpreting the results of this study. Parenting and child development after program completion should be considered to look for possible sleeper effects, confirm maintenance of changes over time, and detect potential reduced rates of actual child maltreatment. In fact, some evidence has suggested that maternal gains after parent training decline to baseline level at longer term follow-up assessments (e.g., Wahler, 1980). It is thus essential for future research to replicate our results to be able to conclusively show the effects of VIPP-SD on harsh discipline.

In conclusion, the VIPP-SD is not only a useful program for the enrichment of positive parent-child interactions but also for the reduction of harsh and potentially maltreating parenting practices. Effects were found only for mothers experiencing higher levels of parenting stress at the onset of the intervention, underscoring the program's ability to change parenting behaviors in those families who seem most at risk for harsh parent-child interactions. Given the context of poverty in our families, the present results must be considered especially relevant since they gather evidence for a "less is more" approach even for high-risk samples. These findings emphasize the importance and feasibility of early brief preventive

home-based interventions. This is not only important for the Portuguese context but also for other countries with a similar lack of tradition in using evidence-based parenting-intervention programs in public service.

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