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**Parenting intervention and the caregiving environment.
Cumulative risk and process evaluation**

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Chapter 1

General introduction

In recent years it has become more acknowledged that many parents struggle to cope with externalizing child behaviors. These behaviors are very common in preschool children (Achenbach & Rescorla, 2000; Koot & Verhulst, 1991). For instance, in the Dutch general population of 2- and 3-year-old children, the prevalence is 78% for disobedience, 69% for angry moods, and 53% for temper tantrums (Koot & Verhulst, 1991). Even though externalizing behaviors in the preschool period are to a certain extent normative, many parents find it difficult to manage their ‘externalizing’ preschooler. That the need for parenting support is high in the Netherlands, is illustrated by the popularity of television programs about parenting interventions broadcasted regularly, such as ‘Schatjes’, or ‘Eerste Hulp bij Opvoeden’.

The nature of the parent-child interaction may be one of the most relevant factors in the etiology of externalizing problems. Negative parent-child interactions, in particular insensitivity and negative discipline, have been shown to predict child externalizing problems (see e.g., Campbell, 1995; Rothbaum & Weisz, 1994). Because more distal influences from peers and school are less pronounced in early childhood, parenting most profoundly affects (less) optimal development of young children (Aguilar, Sroufe, Egeland, & Carlson, 2000).

Parenting and child development take place within the broader context of the *caregiving environment*. This environment encompasses various elements that directly or indirectly shape parenting and child development, ranging from characteristics of the parents, like marital discord, to the culture the family lives in. The elements within this caregiving environment influence each other directly and indirectly. For instance, parenting directly affects child development, whereas parental characteristics and environmental factors directly affect parenting, which in turn influences child development. Parenting support or education aimed at enhancing parenting or reducing child problem behaviors is therefore also dependent on the characteristics of the caregiving environment in which the intervention is carried out. Parental characteristics that affect parenting may also influence the extent of parental change as a result of intervention efforts.

In this thesis, we focus on parental characteristics as central features in the caregiving environment. We investigate how these parental characteristics affect child externalizing problems and change in parenting after participation in a parenting intervention. In addition, we take a closer look at the processes involved in implementing a parenting intervention aimed at enhancing positive parenting.

Parenting and externalizing problems: sensitivity and discipline

A negative parent-child relationship in the preschool years has been documented to predict child externalizing problems (see e.g., Campbell, 1995; Rothbaum & Weisz, 1994). Parenting appears to be a key factor in the development of externalizing problems in the child. Parenting practices that have been associated with externalizing problems are sensitive responsiveness and discipline strategies. These aspects of parenting are

central features in two theoretical frameworks: attachment theory and social learning theory. Both theories describe how parenting contributes to the development of externalizing problems and address the importance of parental adjustment to child behaviors.

According to *attachment theory* (Bowlby, 1969), all infants are predisposed to become attached to their primary caregiver(s). Attachment behaviors such as crying are used to gain and maintain proximity to the caregiver, who can offer comfort, protection, and support, and are especially shown in situations of stress, illness, or fatigue. Also, the child uses the attachment figure as a secure base when exploring the environment. The degree to which the caregiver is *sensitive and responsive* to the child's needs determines the quality of the attachment relationship (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969). A sensitive responsive parent accurately perceives and interprets the child's attachment signals, and responds to these signals adequately and promptly (Ainsworth, Bell, & Stayton, 1974). Sensitive parenting fosters a secure attachment relationship, which is associated with positive child development (e.g., Sroufe, Egeland, Carlson, & Collins, 2005). In contrast, insecure attachment, fostered by insensitive and unresponsive parenting, is related to negative child development including child externalizing problems (e.g., Belsky, Woodworth, & Crnic, 1996; Greenberg, 1999; Greenberg, Speltz, DeKleyen, & Endriga, 1991; Shaw, Owens, Giovanelli, & Winslow, 2001). These results suggest that promoting parental sensitivity may be an effective way to decrease child problem behavior.

Another theory explaining how parenting practices and child problem behavior are associated is *social learning theory* (Bandura, 1977). In this framework, reinforcement processes determine whether the occurrence of behaviors will persist over time, increase, decrease, or fade away. Behaviors persist when reinforced, whereas behaviors that do not have the desired effect will diminish. Based on this principle, Patterson formulated the *coercion theory* (Patterson, 1971, 1982). According to coercion theory, the combination of overreactive discipline strategies and reinforcement of coercive child behaviors may set the stage for the development of child antisocial behavior. Specifically, coercion theory states that child externalizing problems are more likely to emerge when a child is reinforced for responding with negative behavior to parental requests or demands. The child is trying to 'coerce' the parent into terminating the undesired request, and repeated attempts to obtain child compliance are met with increasingly difficult behavior. If this process ultimately leads to the withdrawal of the parent's request, the child's aversive behaviors are negatively reinforced (i.e., rewarded by termination of the undesirable stimulus). Ultimately, the child's coercive behavior is likely to generalize to other social settings such as school (Patterson, Reid, & Dishion, 1992). Other parenting processes that Patterson describes as potential precursors of child externalizing problems include a failure to provide positive reinforcement for prosocial and compliant behaviors. Several interventions were successful in increasing the use of reinforcement of positive child behavior and the use of positive discipline strategies (e.g., Patterson, 1982; Snyder, Cramer, Afrank,

& Patterson, 2005), suggesting that it is possible to change these maladaptive parenting practices through interventions.

In sum, attachment theory is based on psychodynamic principles, while coercion theory provides a classic social learning perspective. Further, attachment theory emphasizes the role of parenting behaviors that are relevant to all aspects of daily life (i.e., sensitivity and responsiveness), while coercion theory focuses specifically on parent and child behaviors in discipline situations. The two theories also focus on different developmental periods: attachment theory is mainly concerned with early childhood, whereas coercion theory is based mostly on research with school-aged children and adolescents. Despite their differences, some of the principles of the two theories can be combined. For instance, the opposite of coercive discipline is sensitive discipline, giving warmth and being responsive, while setting limits and explaining why compliance with these limits is warranted. Because coercive parenting can be considered as behavior not adequately adjusted to the behavior of the child, coercive parenting can be regarded as insensitive parenting. Both attachment theory and coercion theory underline that insensitive parenting may lead to child problem behavior. For interventions aimed at child problem behaviors such as externalizing problems it appears crucial to enhance parental sensitivity as well as the use of effective discipline strategies. The intervention conducted for the present thesis made an effort to integrate intervention strategies following from both theories.

The caregiving environment: perspectives on contextual family risk

Bronfenbrenner (1979) proposed an *ecological model* to describe the context of the caregiving environment. According to his perspective, a variety of factors affect child development, ranging from parenting, that directly influences the child, to community and economic factors that have an indirect influence on child development. Factors that contribute at multiple levels of the child's environment are likely to interact, and can be arranged according to their proximity to the child (Bronfenbrenner, 1979; Sameroff, 1995). Closest to the child are characteristics of the child itself, like child temperament and IQ. At the next level, the parent-child relationship is of particular importance to child development, because in the first four years of life the family constitutes the most essential part of the caregiving environment (Aguilar et al., 2000; Sameroff & Emde, 1989). Further away from the child are characteristics of the parent or family, which may directly or indirectly affect child development. For instance, the presence of parental psychopathology, lack of social support, and marital discord have been demonstrated to be risk factors for the development of externalizing problems (e.g., Koeske & Koeske, 1990; Reid & Crisafulli, 1990; Smith, Landry, & Swank, 2005). Another element within the caregiving environment is parents' access to community-based family resources, such as day care, health practitioners or recreational facilities (e.g., Olds et al., 2002). Finally, the culture in which a child is reared, including values and practices related to childrearing, affects both child development and parenting. When characteristics of the caregiving environment increase the likelihood of negative developmental outcomes, they can be viewed as risk factors.

Other investigators proposed similar perspectives on child development and parenting. For instance, Sameroff (Sameroff & Fiese, 2000) formulated the *transactional model*, based on the ecological perspective by Bronfenbrenner (1979). In this model he also acknowledges the importance of contextual factors on both child development and parenting. He emphasizes that “in the vast majority of cases, behavioral or developmental disturbances are the result of combined factors that are more strongly associated with the environment than with any intrinsic characteristics of the affected individuals” (Sameroff & Fiese, 2000, p. 136), hereby emphasizing the importance of parenting and contextual risk on child development. According to Sameroff, developmental outcomes cannot be described without analyzing the effects of the environment on the child. Whereas the ecological model underlines the interaction between elements within or between different levels of the environment, the transactional model extends the ecological model by emphasizing that child development is a result of a bidirectional, reciprocal interaction between the child and his or her environment. Children are viewed as active participants in their experiences provided by the environment (Sameroff & Fiese, 2000). The ecological model and the transactional model place the development of the child at a central position. They emphasize the complexity of development and the large number of environmental influences and potential risk factors on child development. In addition, Rutter (1979) described the effects of several risk factors on child outcome, including family conflict, maternal psychopathology, and social class. He found that greater family adversity was associated with greater risk for negative child development.

That parenting is also partly dependent on environmental influences was proposed by Belsky (1984). In his model of *the determinants of parenting*, he emphasizes parenting and the interaction between parent and child as the most central features for child development. According to Belsky, particularly relevant for creating different styles of parenting are the personal characteristics of the parent as well as social-contextual influences such as the marital relationship. For instance, whether a mother is satisfied with her marital relationship determines her parenting style: unhappy mothers tend to be more authoritarian and less authoritative with their children (Cowan & Cowan, 2000). From Belsky’s perspective “characteristics of the parent are likely to be most important because they exert both a direct influence on the parent’s parenting, as well as an indirect influence via their impact on marital relations, network relations, and occupational experiences” (Woodworth, Belsky, & Crnic, 1996, p. 681).

Overall, the different models share the assumption that child development and parenting emerge within a complex interplay of contextual family characteristics. In this thesis we focus on how contextual family risk is related to parenting and child development.

Cumulative contextual family risk

The different models describing the caregiving ecology agree that not a single factor but the combination of various factors is damaging or facilitating for children (Sameroff

& Fiese, 2000). According to the cumulative risk hypothesis, not any particular array of risk factors, but the number of risk factors is relevant for a person's development (Rutter, 1979; Sameroff, Seifer, Baldwin, & Baldwin, 1993). One of the first to demonstrate the effects of cumulative risk was Rutter (1979). In samples of children with many psychosocial problems, he showed that it is the number, rather than the nature of the risk factors that best predicts developmental outcome. Thus far, several studies investigated the role of cumulative risk in child development (e.g., Sameroff et al., 1993). However, some studies showed that cumulative risk is related to externalizing problems, but not stronger than some of the single risk factors (e.g., Atzaba-Poria, Pike, & Deater-Deckard, 2004). Others showed no significant increase in externalizing problems as the number of risks increased (e.g., Shaw & Emery, 1988). Most of these studies were conducted in middle childhood or adolescence. Few studies however, focused on development in *early* childhood. This is remarkable because it is mainly the 'early-onset' group of children with externalizing behaviors that shows the least favorable prognosis with respect to future antisocial outcomes (Moffitt, Caspi, Dickson, Silva, & Stanton, 1996). This thesis therefore focuses on early child development.

Not only are a limited number of studies available in the literature on cumulative risk in early childhood, cumulative risk has also hardly been investigated in relation to parenting or parental change after participation in intervention (Reyno & McGrath, 2006). It is surprising that so little empirical evidence exists regarding the association between cumulative risk and parenting, while most (preventive) interventions aim at changing parenting in order to decrease child problem behaviors. The ecological models have shown that different aspects of the parent and of the environment are associated with how a parent copes with the child's behavior. The context in which parenting is embedded is also the context for (preventive) interventions. That is, when a parent experiences several risks, for instance marital discord, lack of social support, and depression, these risks may not only interfere with parenting (e.g., Smith et al., 2005), but also with the ability to change parenting by means of the intervention. The parent may be less involved in and committed to treatment because of preoccupation with her own problems (Kazdin & Wassell, 1999). On the other hand, families experiencing more risk may have more to gain from intervention efforts than families with fewer risks (e.g., Beauchaine, Webster-Stratton, & Reid, 2005). The current thesis investigates whether cumulative contextual risk is related to early childhood externalizing problems and to parental change after participating in a parenting intervention program.

First-time parenting and intervention effectiveness

A family factor that may also be of importance when attempting to change parenting through an intervention program is whether a parent is parenting for the first time. The transition to parenthood brings enormous changes to the parents and their relationship, altering their daily lives substantially. The presence of a child, impacts parents' career perspectives, household task division, the marital relationship, and contacts with family

and friends (Zinn & Eitzen, 2005). For instance, in the first two years of the child's life, social networks and social support decrease after the birth of a child, but the frequency of contact with family members increases (Bost, Cox, Burchinal, & Payne, 2002). The birth of a first child also puts pressure on the marital relationship (e.g., Cowan & Cowan, 2000). When partners become parents, the parental role competes with the partnership. This may result in less intimate relationships, less emotional support between partners, discussions concerning parenting, and a decline in marital satisfaction (e.g., Cox & Paley, 1997). In addition, parents of first-borns are at greater risk for depression, because of these challenges of the transition to parenthood (e.g., Cowan & Cowan, 2002). Parents suffering from depression provide a negative and rejective home environment to their child, which negatively affects child development (e.g., Heinicke, 1995). These studies suggest that primiparas (i.e., mothers parenting for the first-time) may be at risk for negative parenting practices and ultimately child maladjustment, because factors constituting the caregiving environment, like social support or depression, may negatively affect their developing parenting behaviors.

Further, several studies have shown that first-born children are treated differently by their parents than later-born children (for an overview, see Furman & Lanthier, 2002). For instance, they receive more attention and mothers are more responsive (Belsky, Gilstrap, & Rovine, 1984; Belsky, Taylor, & Rovine, 1984). They are also less controlling, intrusive and inconsistent with their first-borns. In addition, parenting several children may be more difficult than parenting one child, because the other child or children need attention as well (Furman & Lanthier, 2002). Studies on cumulative risk, for instance, often take family size into account, positioning families with more than four children at risk for negative child development or maladaptive parenting (e.g., Gerard & Buehler, 2004). These examples show that parenting differs depending on birth order and family size, suggesting that particularly mothers with more than one child (i.e., multiparas) might be more in need for intervention, because later-born children experience less positive parenting than first-borns.

In sum, primiparas may be at risk for negative parenting and child maladjustment because of the transitions they go through when becoming parents, whereas multiparas may be at risk because of the demands upon parenting when more than one child is present and the differences they show in parenting towards first-borns versus later-borns. It remains unclear for which parents interventions aimed at positive parenting are more effective. It is surprising to note that there is so little empirical knowledge about the best timing of an intervention. That is, it has often been merely assumed that first-time mothers (primiparas) may be more open for advice and more willing to adjust their parenting behaviors than mothers with more children (multiparas). The latter group already has parenting experiences with another child, and may show more rigid parenting behaviors. It may be harder to change these behaviors than just to develop first-time parenting. The current thesis examines the differences in intervention effectiveness in primiparas versus multiparas.

Process evaluation

In addition to the presence of cumulative risk or whether first-time parents or parents with more children are involved, the intervention *process* constitutes part of the context that may influence the effectiveness of a parenting intervention. Process characteristics such as level of maternal involvement have hardly been investigated. This is a notable omission, since understanding the processes that make an intervention successful or not can be used to adjust or improve the intervention program. Participants almost always differ in their environmental context or personal characteristics, which affect the outcomes of an intervention. In addition, delivery of the intervention may also vary, in number of sessions or through differences between interveners. No intervention therefore will be able to affect all participants in the same way (Korfmacher, Kitzman, & Olds, 1998). In a process evaluation, differences in service delivery and other characteristics of the processes involved in implementing an intervention are investigated in relation to program effectiveness. A process evaluation may reveal additional information, which can be used to further adjust the intervention program.

A process evaluation of the Memphis New Mothers Study (Korfmacher et al., 1998) showed that the outcomes of their intervention were predicted by the relationship between intervener and parent, the focus on parenting in the sessions, and the number of sessions received by the parent. Although the program was extensively described in a protocol, the interveners were flexible in their execution of the protocol, depending on the particular needs of the family. Although it is always necessary to adjust the program to the particular family to a certain extent, too much variation makes it difficult to compare intervention effectiveness for different families. Therefore, investigating program implementation, also known as program fidelity, is an important aspect of evaluating the intervention process.

An important process element of the intervention is the relationship between intervener and parent (Martin, Garske, & Davis, 2000). Although mostly studied in therapeutic relationships, this relationship, or alliance, can make an intervention succeed or fail. The better the relationship, the more the parent will be able or willing to adjust his or her parenting. Other process elements described in process evaluations are whether an intervention is correctly implemented and the level of maternal involvement. In addition, father involvement in the intervention may be important (Bakermans-Kranenburg, Van IJzendoorn, & Juffer, 2003). Father presence during the intervention may stimulate parents to practice tips together and to stimulate each other in adjusting parenting practices. Whether elements like these are associated with the outcomes of an early childhood parenting intervention aimed at parenting is examined in the present thesis.

In sum, child behaviors, parenting and interventions are not uniform, but differ with varying characteristics of the caregiving environment and of processes concerning the implementation of intervention. Single risk factors, like marital discord or first-

time parenting, the presence of multiple risk factors, as well as process elements like the intervener-parent alliance or father involvement may affect child development, parenting and intervention effectiveness. These characteristics have to be taken into account when investigating the effects of an intervention.

Context of the present thesis

The three studies presented in this thesis were performed within the context of the Dutch SCRIPT study (Screening and Intervention of Problem behavior in Toddlerhood). This study aims at the early detection and intervention of externalizing problems in early childhood, with the purpose of preventing antisocial behaviors and its many consequences in childhood and adolescence (Mesman et al., in press; Van IJzendoorn & Juffer, 2000; Van Zeijl, Stolk, & Alink, 2005). The study investigates the effectiveness of an early intervention program (Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline: VIPP-SD) aimed at reducing externalizing problems in 1- to 3-year-old children by enhancing parental sensitivity and adequate discipline strategies. It consists of a screening phase in a general population sample and a randomized case-control intervention phase in a selected subsample of children with high levels of externalizing behaviors. To obtain a sample of 1-, 2- and 3-year-old children showing externalizing problems, a general population screening was conducted using the Child Behavior Checklist for children aged 1½-5 years (CBCL/1½-5; Achenbach & Rescorla, 2000). Children with scores above the 75th percentile on the CBCL syndrome Externalizing Problems were selected and invited for a pretest in the laboratory. After the pretest, families were randomly assigned to either an intervention or a control group. Approximately one and two years after the pretest, families from both the intervention and control group visited the laboratory for posttests (see Figure 1.1). The SCRIPT study was specifically designed on the basis of current knowledge regarding early externalizing problems and intervention studies.

The general aims of the SCRIPT study are (a) to test the effectiveness of the intervention on parental sensitivity and discipline; (b) to test whether the enhancement of parental sensitivity and discipline abilities leads to a decrease in child externalizing behaviors and an increase in empathic concern; (c) to investigate whether earlier preventive interventions are more effective than interventions at preschool age; and (d) to study the development of externalizing problems from age 12 to 60 months.

Focus and outline of the present thesis

Within the context of the SCRIPT study, the following questions were addressed:

- (1) How are single and cumulative parent and family risk factors related to externalizing problems in preschoolers?
- (2) Is cumulative parent and family risk related to intervention effectiveness, and is the intervention more effective for primiparas as compared to multiparas?

- (3) Which characteristics of the processes involved in implementing the VIPP-SD intervention are related to intervention effectiveness?

The outline of the present thesis is as follows. *Chapter 2* focuses on the association between single and cumulative risk factors with child externalizing problems. The study presented in *Chapter 3* explores how cumulative risk and first-time parenting are related to parental outcomes and child outcomes after participation in the VIPP-SD. Next, *Chapter 4* describes a process evaluation of the VIPP-SD program to investigate which process characteristics affect intervention effectiveness. Finally, *Chapter 5* summarizes and discusses the main findings of this thesis. Limitations and implications for future research are outlined.

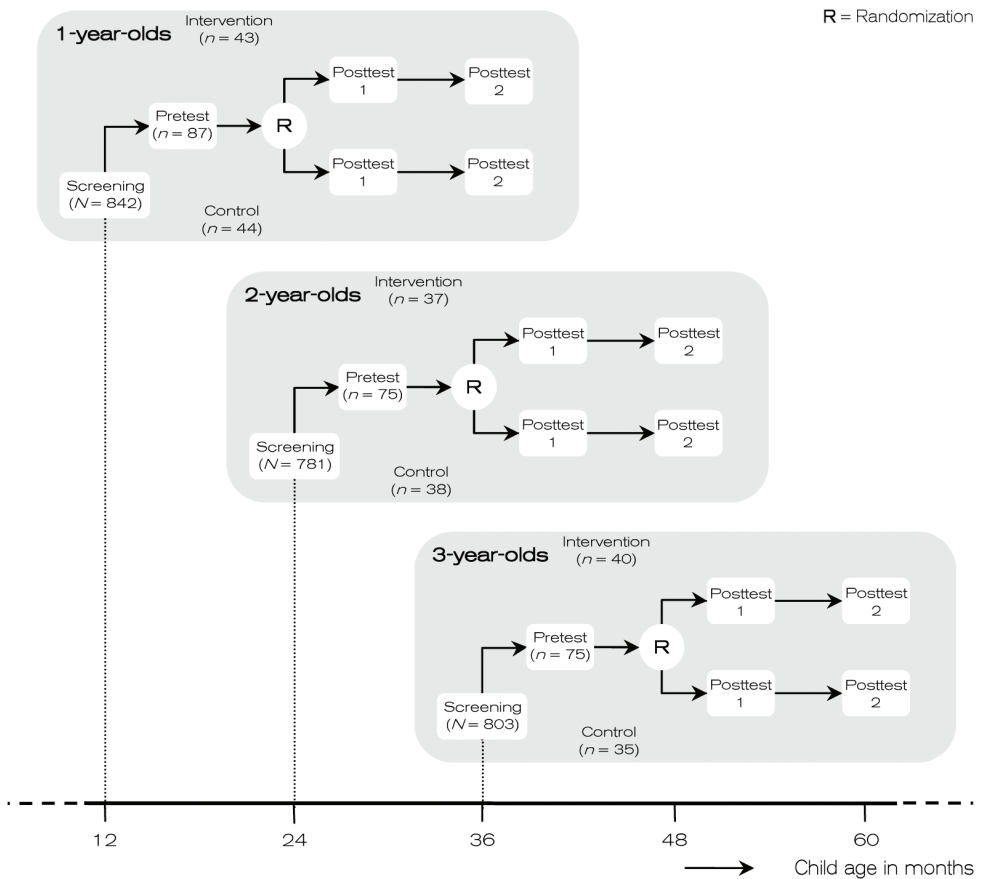


Figure 1.1 Design of the SCRIPT study (see Van IJzendoorn & Juffer, 2002)

