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Development and adjustment of adopted adolescents : longitudinal and concurrent factors

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Chapter 1

General Introduction

Research on adopted children and adoptive families has two important aims. First, adoption-research is carried out in the interest of people involved in adoption, to improve the assistance and resources for the families involved. The number of international adoptions has increased substantially over the last few decades. Today, international adoption involves over a hundred countries, whether as states of origin, as receiving states, or both (Selman, 1998). The number of international adoptions has risen, worldwide, to more than 32,000 a year and will probably increase further (Selman, 2000). Because adoption involves a lot of countries, a lot of societies, and a lot of families, it is important to investigate the development of the adopted children and the possible risk and protective factors.

Research shows that although the majority of adopted children and adolescents are well adjusted (e.g., Andresen, 1992), a minority has serious adjustment or learning problems, in higher rates than their non-adopted peers (for meta-analyses, see Bimmel, Juffer, Van IJzendoorn, & Bakermans-Kranenburg, 2003 (Chapter 2); Juffer & Van IJzendoorn, 2005; Van IJzendoorn, Juffer, & Klein Poelhuis, 2005). In a meta-analysis of 62 studies on the cognitive development of adopted children ($N = 17,767$ adopted children), Van IJzendoorn, Juffer, and Klein Poelhuis (2005) found that adopted children did not differ from their non-adopted environmental peers or siblings in IQ, but their school performance and language abilities lagged behind. In addition, more adopted children developed learning problems. In a meta-analysis of 64 studies on behavior problems and 34 studies on mental health referrals of adopted children ($N = 25,281$ adopted children), Juffer and Van IJzendoorn (2005) showed that adopted children presented more behaviour problems, and were overrepresented in mental health settings. Finally, in a meta-analysis of 10 studies, Bimmel et al. (2003; Chapter 2) showed that internationally adopted adolescents exhibited more behavior problems than did non-adopted adolescents, with the difference revealed in externalizing but not in internalizing behavior problems. The meta-analyses showed that the majority of adopted children are well adjusted, although a relatively large minority of adopted children are referred to mental health services or have behavior problems in the clinical range compared with non-adopted children. As a result, there is an increasing urge for specific knowledge and tools to support the families involved. Prospective, longitudinal research is needed to examine the development of adopted children, the origins of problems, and the possible risk and protective factors.

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Second, research on adopted children and adoptive families is carried out not only in the interest of those involved in adoption, but also in the interest of families with birth children in a more general sense. In families with biologically related parents and children, the associations between parent-child variables (for example, mother-child attachment) and parent variables (for example, maternal sensitive responsiveness) on the one hand and child variables (for example, the child's temperament) on the other hand, may always be affected by the genetic link between child and parent, instead of parenting influences. For example, a major disadvantage of previous studies on the influence of parenting on children's development is the confounding of parenting effects and genetic similarities (Rowe, 1993a, 1993b). Studies with adopted children make it possible to examine the unique contributions of parenting variables to children's development excluding of the influence of genetic similarities. Behavior genetic research indicates a widening gap between parents and their adopted adolescent, with a decreasing correlation between characteristics of the adopted children and their adoptive parents and an increasing correlation between characteristics of the adopted children and their birth parents (Plomin, Fulker, Corley, & DeFries, 1997). Studies on adopted adolescents allow for more conclusive evidence of child-rearing or social-interactive influences on the development of adolescents, independent of shared genetic factors between children and parents (Rowe, 1993a).

To date, only a few studies followed nationally (e.g., Fergusson, Lynskey, Horwood, 1995; Hodges & Tizard, 1989a, Hodges & Tizard, 1989b; Hoopes, 1982; O'Connor, Jenkins, Hewitt, DeFries, & Plomin, 2001; Plomin et al., 1997; Simon, 1996) or internationally (e.g., Croft, O' Connor, Keaveney, Groothues, Rutter, et al., 2001; Groza & Ryan, 2002; Rutter & O'Connor, 2004; Tieman, van der Ende, & Verhulst, 2005; Verhulst & Versluis-den Bieman, 1995) adopted children over a prolonged period of time. The findings of these longitudinal studies are inconclusive and diverse and the results should be interpreted with caution. First, considerable heterogeneity exists within the studies. For example, the children were adopted from several different countries and cultures, they have moved to different countries, and the ages on arrival were divergent (Westhues & Cohen, 1997). This may limit the accuracy of the conclusions. Secondly, most longitudinal studies on adopted children did not include very early adopted children or did not start at an early age of the adopted children. Therefore the confounding factors of prolonged or extreme deprivations before the adoption may also exert an influence on the development of the children. Also, prolonged physical and psychological suffering before the adoption may affect later adopted children more than children adopted at a very young age. In their meta-analyses, Juffer and Van IJzendoorn (2005) and Van IJzendoorn, Juffer, and Klein Poelhuis (2005) found that an abusive or otherwise deprived background before the adoption was associated with more behavior problems and less favorable school achievement.

Shorter pre-adoption time may imply shorter exposure to risk factors such as malnutrition, neglect or abuse (Van IJzendoorn et al., 2005). Moreover, assessments of the early development of the adopted children are often not available. For example, Verhulst and Versluis-den Bieman (1995) and Croft et al. (2001) included very early adopted children as well as later adopted children, but their longitudinal studies started when the children were, respectively, 10 and 4 years of age. Thirdly, the majority of the adoption studies reported almost exclusively on adopted children's behavior or cognitive problems and not on other aspects of their development, nor on the correlates of the development or, perhaps most importantly, on the influence of earlier factors (such as infant attachment) on later development. Fourthly, the longitudinal adoption studies mentioned before did not use a variety of extensive measurements, like observations, nor did they use multiple sources of information, like teachers, classmates, and the children themselves. Parent-reported questionnaires are often the preferred way of collecting the data. However, parent-reported behavior problems may be influenced by a greater tendency of adoptive parents to observe and indicate problematic child behavior (Miller, Fan, Grotevant et al., 2000; Slap, Goodman, & Huang, 2001; Warren, 1992). Fifthly, the studies often include only two times of measurement, the time-intervals are short and relatively high (selective) attrition is found (for an example of high attrition, see Groza & Ryan, 2002; Tieman, Van der Ende, & Verhulst, 2005). As a result of these shortcomings, there is an urge for more research in this domain.

The present prospective study is the first to examine the longitudinal development of children adopted internationally at a very early age, i.e., before the age of six months. All children were followed from infancy, so several indices of the child's early development and relationships were available to study the etiology and course of the adopted children's adjustment. The adopted children's development was examined from a broad longitudinal perspective with multiple indicators and with assessments in multiple contexts. Multiple methods of data-collecting were used (observations, questionnaires, interviews, Q-sorts, and socio-metric data), different times of measurement (infancy, middle childhood, and adolescence), and multiple sources of information (children themselves, parents, teachers, classmates).

Early childhood

In the first study of the present sample, starting at 6 months of age, an intervention was implemented and early attachment and competence were examined in 160 children, adopted from Sri Lanka, South-Korea and Colombia (Juffer, 1993; Juffer, Bakermans-Kranenburg, & Van IJzendoorn, 2005; Juffer, Hoksbergen, Riksen-Walraven, & Kohnstamm, 1997; Juffer & Rosenboom, 1997; Juffer, Rosenboom, Hoksbergen, Riksen-Walraven, & Kohnstamm, 1997). All children were placed before the age of 6 months in adoptive families without birth children or in adoptive families with birth children. Two intervention

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programs were tested in early childhood: (a) a personal book with suggestions and advice on how to parent a child in a sensitive way, and (b) the same personal book, combined with three home-based sessions offering video feedback. The control group did not receive intervention. Based on attachment theory (Bowlby, 1973, 1980), the intervention aimed at promoting maternal sensitive responsiveness, secure infant-mother attachment relationships, and infant exploratory competence. The intensive intervention program, the personal book combined with video feedback, resulted in enhanced maternal sensitive responsiveness in families with and without birth children (Juffer, 1993; Juffer et al., 2005; Juffer, Hoksbergen, et al., 1997). Children of mothers who received this intervention were less likely to be classified as disorganized attached at the age of 12 months and received lower scores on the rating scale for disorganization than children in the control group (Juffer et al., 2005). With respect to secure/insecure infant-mother attachment and infant competence, this intervention showed positive short-term effects in adoptive families *without* birth children (Juffer, 1993; Juffer, Hoksbergen, et al., 1997), but not in adoptive families *with* birth children (Juffer, Rosenboom, et al., 1997). In the least intensive intervention program, the personal book, the children showed lower disorganization ratings compared to the control group, but no effect on the number of infants with disorganized attachment classifications was found (Juffer et al., 2005), nor on secure/insecure infant-mother attachment, maternal sensitive responsiveness, and infant competence (Juffer, 1993; Juffer, Hoksbergen, et al., 1997; Juffer, Rosenboom, et al., 1997). It was concluded that the short-term preventive intervention program with video feedback lowered the rate of disorganized attachment and enhanced maternal sensitive responsiveness. The effectiveness of the intervention documented the importance of parenting in the development of infant attachment disorganization (Juffer et al., 2005).

The groups who did not receive intervention, a control group ($n = 60$) and a post-test-only group ($n = 20$), were selected to assess the infant-mother attachment relationship and the adoptive mother's sensitive responsiveness (Juffer, 1993; Juffer & Rosenboom, 1997). The results revealed 74% secure attachment relationships, a percentage comparable to that of normative studies. There were no differences regarding the child's country of origin, or the presence or absence of birth children. The adoptive mother's sensitivity was comparable to the sensitivity of nonadoptive mothers. These outcomes may be partly explained by the fact that these infants were placed for adoption at a rather young age, with relatively favorable circumstances prior to the placement. This may well indicate that adoption placement *per se*, without the cumulative effects of understimulation and lack of personal affection that older placed children often experience in institutions, does not inevitably lead to a disturbed parent-infant relationship (Juffer, 1993; Juffer & Rosenboom, 1997).

Middle childhood

At age 7, a follow-up study of the same children plus 30 adopted children recruited at this age was completed (Juffer, Stams, & Van IJzendoorn, 2004; Stams, 1998; Stams, Juffer, Rispens, & Hoksbergen, 2000; Stams, Juffer, Rispens, & Hoksbergen, 2001; Stams, Juffer, Van IJzendoorn, & Hoksbergen, 2001; Stams, Juffer, & van IJzendoorn, 2002). The results showed that despite their timely placement and normal development in early childhood (Juffer & Rosenboom, 1997) relatively many adoptive parents reported behavior problems at age 7, especially in boys (Stams, 1998; Stams et al., 2000; Stams, Juffer, Rispens et al., 2001). Notably, 30% of the adopted children had serious internalizing and/or externalizing behavior problems, which is much larger than the 10% found in normative groups. It was suggested that these results could be explained by the operation of multiple risk factors before and after adoption placement, e.g., the child's genetic disposition, prenatal and pre-adoption care, or the child's cognitive understanding of adoption in middle childhood. In addition, maternal sensitive responsiveness in adoptive families declined in the transition from early to middle childhood. In contrast to reported behavior in the home setting, the children's behavioral and socio-emotional development at school was rather favorable. Their academic achievement and intelligence were in the normal range or above-average. In particular Korean children had high IQ's: 31% of these children obtained an intelligence score above 120. It was suggested that adoptive parents seem to offer their children sufficient or even more than average cognitive stimulation. Furthermore, adopted girls scored higher in optimal ego-control, social competence, and peer group popularity than non-adopted girls from the general population: 30% of the adopted girls were rated as popular by their classmates, which compares favorably to the 13% found in the general school population (Stams, 1998; Stams et al., 2000; Stams, Juffer, Rispens, et al., 2001).

In the follow-up study at age 7, the longitudinal effects of the early attachment-based intervention on the children's social development, personality development, and incidence of behavior problems at age 7 were examined (Stams, 1998; Stams, Juffer, Van IJzendoorn, et al., 2001). In families *with* birth children, positive longitudinal effects of the intervention were found upon ego-resiliency/control in girls and internalizing problem behavior in both boys and girls at age 7. Despite positive short-term effects of the intervention found in families *without* birth children in infancy, enduring intervention effects in these families could not be traced at age 7 (Stams, 1998; Stams, Juffer, Van IJzendoorn et al., 2001).

Furthermore, longitudinal results of the study at age 7 showed that girls were better adjusted than boys, except in the domain of cognitive development, and that easy temperament in early childhood was associated with higher levels of social, cognitive, and personality development, and less behavior problems at age 7 (Stams, 1998; Stams et al., 2002). Higher quality of

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early child-mother relationships, in terms of attachment security and maternal sensitivity, uniquely predicted better social and cognitive development. The combination of attachment disorganization and difficult temperament predicted less optimal ego-control and lower levels of cognitive development. The children who encountered more than two risk factors, such as difficult temperament *and* stressful life events, showed relatively lower levels of overall adjustment (a composite variable of social development, ego-resiliency and optimal ego-control, cognitive development, and externalizing and internalizing behavior problems) at age 7. In contrast, the presence of two or more protective factors, such as secure attachment relationships *and* higher levels of maternal sensitivity, predicted favorable overall adjustment at age 7. It is concluded that even in adopted children who are biologically unrelated to their adoptive parents, early mother-infant interactions and attachment relationships predict later socio-emotional and cognitive development, beyond infant temperament and gender (Stams, 1998; Stams et al., 2002).

Finally, results on the correlates of behavior problems of the adopted children at age 7 showed that: (1) resilient children were almost free of behavior problems, (2) overcontrolling children showed predominantly internalizing behavior problems at school and at home, (3) undercontrolling children showed high rates of externalizing behavior problems at school and at home, and an elevated rate of comorbidity (Juffer et al., 2004). Adopted children identified by peer report as controversial or rejected had significant higher externalizing problem scores than popular, average or neglected adopted children. Although the adopted children did not experience much (racial) discrimination, the children who wished to be white (46%) presented more mother-reported behavior problems (Juffer et al., 2004).

Adolescence

In the present study, described in this dissertation, the adopted adolescents' problem behavior and socio-emotional competence at age 14 were assessed, and the influence of early, middle childhood and concurrent factors were examined. The second chapter reviews the (behavioral) development of internationally adopted adolescents and the third and fourth chapter describe correlates and longitudinal influences on the development of the adopted adolescents. More specifically, the outline of this dissertation is as follows. In Chapter 2 the prevalence of problem behaviors in samples of adolescents who were adopted from a foreign country as infants or young children is examined and the domains in which these problems are manifested are explored. The empirical studies on this topic are summarized in a narrative review and a quantitative meta-analysis. In Chapter 3, resting heart rate and heart rate variability, and their reactivity to a stressful situation are examined in adopted adolescents with aggressive, delinquent, or internalizing behavior problems and adopted adolescents without behavior problems ($N = 151$). This study is the first

to assess these associations in adopted children, who are raised by their biologically unrelated adoptive parents. In Chapter 4, the continuity of the adopted children's social development is investigated and the relative influence of early, middle childhood, and concurrent factors on social development in adolescence is examined ($N = 120$). The emphasis is on maternal sensitivity and infant attachment security, attachment disorganization, and temperament as predictors in early childhood, and maternal sensitivity, child temperament and social development as predictors in middle childhood. Chapter 5 presents a summary and a discussion of the results. The limitations of the study and implications for future research are outlined.

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