Positive parenting in ethnic minority families. Challenges and outcomes

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Challenges and outcomes

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Challenges and outcomes

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1

General introduction

General introduction

Positive parenting is a broad construct including sensitivity, scaffolding, and respect for the child's autonomy. Sensitivity is the most widely used term in research on positive parenting and refers to the ability to perceive and interpret a child's signals and to respond to those signals in a prompt and appropriate way (Ainsworth, Bell, & Stayton, 1974). It is one of the most important parenting components for young children, since it has been found to predict children's secure attachment across cultures (Bakermans-Kranenburg, Van IJzendoorn, & Juffer, 2003; De Wolff & Van IJzendoorn, 1997; Vereijken, Riksen-Walraven, & Kondo-Ikemura, 1997), as well as positive cognitive development, social behavior, and emotion regulation (e.g., Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2012). Most studies on (sensitive) parenting have been conducted in Western middle-class samples. Ethnic minority parents have been found to behave less sensitively than majority parents, but this difference may be largely explained by socioeconomic factors (Mesman, Van IJzendoorn, et al., 2012). This is in line with the Family Stress and Family Investment Models that posit that economic pressures results in lower quality parenting and in turn adverse child development (Conger & Donnellan, 2007). However, some studies have corrected for variability in socioeconomic status and still found (attenuated) differences in positive parenting behavior between minority and majority parents (e.g., Berlin, Brady-Smith, & Brooks-Gunn, 2002; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, & Linting, 2010). These findings raise several questions about the antecedents of positive parenting in ethnic minority families, as well as its role in predicting child outcomes. The overall goal of the current dissertation is to uncover predictors and outcomes of positive parenting in ethnic minority families.

Universal applicability of maternal sensitivity

According to Mary Ainsworth four components of sensitivity can be distinguished, namely (1) parent's awareness of child's signals, (2) the accuracy of the interpretation of these signals, and (3) the promptness, and (4) the appropriateness of their response to these signals (Ainsworth et al., 1974). Most studies on sensitive parenting have been conducted among middle-class European and North-American families, however, Ainsworth's sensitivity construct was inspired in part by her observations in the non-Western context of Uganda (Ainsworth, 1967). In addition, her observational scale to assess sensitivity has also been used in countries outside Europe and North America (e.g., True, Pisani, & Oumar, 2001; Yovsi, Kartner, Keller, & Lohaus, 2009). Nevertheless, research on parental sensitivity in a non-Western context is rare. Studies comparing maternal sen-

sitivity across cultures show that ethnic minority families have been found to be less sensitive towards their children than majority parents (e.g., Barnett, Shanahan, Deng, Haskett, & Cox, 2010; Pungello, Iruka, Dotterer, Mills-Koonce, & Reznick, 2009; Van IJzendoorn, 1990). Cultural and personal differences in ideas about parenting are often viewed as possible explanations for observed differences in behavior (Harwood, Schoelmerich, Schulze, & Gonzales, 1999; Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000). Parents from different cultures have been found to have different beliefs about for example strictness and the extent to which children should be encouraged to think independently or should respect authority (Bornstein, Putnick, & Lansford, 2011). In addition, when parents for example express the belief that they value harsh discipline practices, they may also put their beliefs into practice and endorse more harsh discipline responses (Pinderhughes et al., 2000).

Although there is reason to assume that maternal sensitivity is a universally relevant construct (Mesman, Oster, & Camras, 2012; Mesman, Van IJzendoorn, et al., 2012), research to date has not provided clear conclusions about the extent to which cultural and socioeconomic *beliefs* about sensitive parenting are similar. In addition, if different cultures do have convergent beliefs about sensitivity, why then do some studies report mean-level differences in sensitive behavior between cultures? Given the generally lower socioeconomic status (SES) of ethnic minority families compared to majority families (e.g., Barnett et al., 2010; Skinner, MacKenzie, Haggerty, Hill, & Roberson, 2011), and the fact that lower SES relates to less optimal parenting (e.g., Barnett et al., 2010), socioeconomic factors may be important in explaining differences in sensitive parenting between ethnic groups (Mesman, Van IJzendoorn, et al., 2012). The potential mechanisms underlying the association between socioeconomic status and positive parenting are described in the Family Stress Model and the Family Investment Model (Conger & Donnellan, 2007).

Family Stress Model and Family Investment Model

The Family Stress Model (FSM) and Family Investment Model (FIM; Conger & Donnellan, 2007) provide explanations for the relation between SES and child development by proposing family stress (FSM) and family investment processes (FIM) as results of low SES, which lead to unfavorable child outcomes. The FSM proposes that stressors such as socioeconomic strains lead to psychological distress (e.g., depression and family dysfunction), which in turn leads to less positive parenting (e.g., less sensitivity, lack of warmth and support) and adverse child development. There is evidence for the FSM in both majority and minority groups (e.g., Belsky, Schlomer, & Ellis, 2012; Conger et al., 2002; Parke et al., 2004). In addition to general stressors, which can be experienced by

both minority and majority families, ethnic minority parents may also experience stressors that are more directly related to their immigrant history, such as acculturation stress.

When people of different cultures come into contact, they undergo an acculturation process in which cognitions (e.g., cultural identity) and behaviors (e.g., ways of speaking, dressing and eating) of individuals may change due to intercultural contact. Acculturation stress is a reaction to events that occur during the process of acculturation, such as discomfort with unfamiliar norms and conflicting acculturation strategies within a family (Berry, 2006; Leidy, Guerra, & Toro, 2010). Economic stress has been found to be positively related to acculturation stress (Stein, Gonzalez, & Huq, 2012; White, Roosa, Weaver, & Nair, 2009). Only few studies have examined minority-specific stressors in relation to parenting practices and most of these studies focused on adolescents and did not include observed parenting practices. To our knowledge there is no study testing the unique contribution of acculturation stress above general psychological distress in relation to observed positive parenting in ethnic minority families with young children.

The FIM proposes that families experiencing economic hardship are less able to make significant investments in the development of their children, since they have to invest more in immidiate family needs, compared to families with greater economic resources (e.g., Linver, Brooks-Gunn, & Kohen, 2002). These investments in children's development include several domains, such as parental stimulation of learning through support and tutoring. Parental investments are in turn related to positive child development (Conger, Conger, & Martin, 2010). There is evidence for the FIM in both majority and minority groups (e.g., Crosnoe, Mistry, & Elder, 2002; Melby, Conger, Fang, Wickrama, & Conger, 2008), however, research among minorities is limited and only performed in the United States.

Family stress and investment in relation to child development

In the FSM and FIM literature two main types of child outcomes can be distinguished, namely behavioral and cognitive outcomes. Behavioral outcomes include internalizing and externalizing problem behaviors and temperamental effortful control. Cognitive outcomes include school performance and language ability. In young children, family stress processes have been found to be better predictors of behavioral outcomes, whereas parental investments are better predictors of cognitive outcomes (Linver et al., 2002; Yeung, Linver, & Brooks-Gunn, 2002). Investigating the FSM and FIM in ethnic minority families is important, because we have little knowledge about within-group variation regarding socioeconomic status, parenting, and investments in these families (Cabrera et al., 2013). To our knowledge, there are no studies testing both the FSM and FIM that

included a behavioral as well as cognitive outcome in (ethnic minority) adolescents. In addition, some child outcomes can be considered to cut across the behavioral and cognitive domains because they refer to cognitive abilities that are shown on the behavioral level. An example of such a cognitive-behavioral outcome is frustration-induced inhibitory control.

Frustration-induced inhibitory control can be seen as a 'hot' executive function (EF; Huijbregts, Warren, Sonneville, & Swaab-Barneveld, 2008). EF refers to cognitive self-regulatory processes that we use in planning, problem solving and goal-directed action via inhibitory control, cognitive flexibility, and working memory (Zelazo & Carlson, 2012). Inhibitory control is considered to be used in all tasks requiring EF and has a hot and cool variant (Huijbregts et al., 2008). When inhibitory control operates in a motivationally or emotionally significant situation, it is classified as a hot EF process, whereas in a neutral context it is classified as cool EF (Zelazo & Carlson, 2012). Early adolescence may be a particularly relevant period to study factors, such as socioeconomic context and parenting, that contribute to the development of hot EF (Zelazo & Carlson, 2012). Since very few studies have tested the relation between parenting and hot EF in adolescence, more studies are needed to investigate whether (observed) parenting relates to hot EF in adolescence and whether family stress or family investment processes play a role. Children's self-regulation may serve as a protective factor for an adverse development due to lower socioeconomic status (Lengua, Bush, Long, Kovacs, & Trancik, 2008). Thus, investigating factors that contribute to self-regulation processes (e.g., hot EF) of children in minority families may be particularly important, because they are at risk for an adverse development due to their lower socioeconomic background.

Ethnic minorities in the Netherlands

In the current dissertation, two different samples have been studied; one sample consisted of a socioeconomically diverse Dutch majority group and two Dutch minority groups (Turkish and Moroccan) and one sample that consisted of Turkish ethnic minority families in the Netherlands with young and adolescent children. The first sample, included in the first empirical study presented in this dissertation, is part of a larger international project investigating maternal beliefs about sensitivity across the globe. The empirical data of the second sample, included in the second and third empirical papers in this dissertation, are drawn from the Dutch part of the SIMCUR (Social Integration of Migrant Children: Uncovering Family and School Factors Promoting Resilience) project that was carried out in three European countries; the Netherlands, Germany and Norway. This project uses a longitudinal two-cohort design with three waves: before, during and after

the transition to primary or secondary school.

The Turks and Moroccans represent the two largest ethnic minority groups in the Netherlands and their population in the Netherlands is still increasing, which is mostly due to the increase of the second and third generation (Distelbrink & Hooghiemstra, 2005). The Turkish and Moroccan immigrants first came to the Netherlands, mostly from rural areas of the lowest socioeconomic regions of their countries of origin, as invited guest workers around the 1960s. They intended to return to their countries of origin, but many stayed in the Netherlands. Both the Turkish and the Moroccan minority groups in the Netherlands are overrepresented in the lower socio-economic classes (CBS, 2012). In terms of culture, Turks and Moroccans have a collectivistic background in which child-rearing goals such as obedience are considered more desirable than in the individualistic Dutch culture (Phalet & Schönpflug, 2001). First- and second-generation immigrants identify themselves more with their own ethnic culture than with the culture of the host society (Phinney, Horenezyk, Liebkind, & Vedder, 2001), have a different religious background (mostly Islamic) than the majority (mostly Christian or non-religious; De Graaf, Kalmijn, Kraaykamp, & Monden, 2011; SCP, 2006), have limited contact with members of the host society, prefer to marry within their own ethnic group, and maintain their own ethnic language (Crul & Doomernik, 2003; SCP, 2009, 2011). In the Netherlands, the Turkish minority group, compared to the Moroccan minority group, remains more traditional in their norms and values (Crul & Doomernik, 2003; Phalet & Schönpflug, 2001). In addition, there is evidence for diverging acculturation preferences between the Dutch majority and the Turkish minority (Arends-Tóth & Van de Vijver, 2003).

The few studies on Turkish minority families with young children in the Netherlands have shown that Turkish mothers behave less sensitively than Dutch mothers (Leseman & Van den Boom, 1999; Yaman et al., 2010), but it is important to note that this difference was partially explained by socioeconomic status and maternal age (Yaman et al., 2010). To our knowledge, there are no observational studies on parenting behavior among Moroccan families or on parenting in Turkish families with adolescents in the Netherlands. A study using adolescent-reported parenting and child-outcomes showed that a negative parent-child relationship was related to more adolescent behavior problems (Wissink, Dekovic, & Meijer, 2006). Turkish minority adolescents have been found to show more internalizing behavior problems compared to Dutch majority and Moroccan minority adolescents (both adolescent-reported as well as parent-reported), and Turkish minority parents report more externalizing behavior problems compared to Moroccan minority parents (Stevens et al., 2003). No group differences in adolescent-reported externalizing behavior problems have been found (Stevens et al., 2003; Wissink,

Dekovic, Yagmur, Stams, & de Haan, 2008). Turkish and Moroccan minority adolescents have a lower school attainment compared to Dutch majority adolescents (CBS, 2012).

Aim of the dissertation

The overall aim of the current dissertation is to uncover predictors and outcomes of positive parenting in ethnic minority families. This dissertation contributes to the existing literature by aiming to provide some clear answers to questions regarding similarities and differences in *beliefs* about sensitive parenting across different cultures and regarding the role of culture-specific stressors in addition to general stressors in the prediction of positive parenting in ethnic minority families. In addition, our studies also contribute to the literature because of including observational measures of parenting with families with young children as well as adolescents. Studies using observational measures to assess parent-child interactions are limited for ethnic minorities and families with adolescents. Studies on positive parenting in ethnic minority families are relevant, because positive parenting is an important predictor of child and adolescent development in both majority and minority groups (e.g., Conger et al., 2002; Mesman, Van IJzendoorn, et al., 2012). In order to effectively promote positive parenting and, ultimately, positive child development in ethnic minority families, it is important to understand which factors contribute to positive parenting in these families so that culturally sensitive intervention and prevention programs can be designed. The following hypotheses are tested:

1. Beliefs about an ideal sensitive mother are very similar across different cultural and socioeconomic groups.
2. Both maternal psychological distress and maternal acculturation stress mediate the relation between family SES and maternal positive parenting in ethnic minority families with young children.
3. Family stress processes play a role in ethnic minority adolescent behavioral problems, whereas family investment processes play a role in adolescent cognitive development.

Before reporting on the empirical studies, an introduction to the maternal sensitivity construct is provided in the form of a systematic literature review of commonly used instruments to assess parental sensitivity in Chapter 2. In Chapter 3, similarities and differences in maternal beliefs about sensitivity are investigated in different cultural and socioeconomic groups in the Netherlands. The main focus in Chapter 4 is testing a minority Family Stress Model in which a stressor specific to ethnic minority status (i.e., ac-

culturation stress) is included in Turkish ethnic minority families with young children. In Chapter 5, the Family Stress and Family Investment Models are tested with a behavioral, cognitive-behavioral, and cognitive outcome in Turkish ethnic minority families with adolescents. Chapters 2 and 3 exclusively focus on a particular component of positive parenting, namely sensitivity, whereas in Chapters 4 and 5 a broader parenting construct (i.e., positive parenting) is studied. Finally, in Chapter 6 the main findings of these studies are integrated and discussed. In addition, limitations, suggestions for further research, and theoretical and practical implications are addressed.

2

Mary Ainsworth's legacy: A systematic review of observational instruments measuring parental sensitivity

Judi Mesman & Rosanneke A. G. Emmen (2013).
Attachment and Human Development, 15, 485-506.

Abstract

Since Mary Ainsworth's formulation of the Sensitivity-Insensitivity to Infant Signals and Communications observational scale (Ainsworth, Bell, & Stayton, 1974), new instruments have been developed to observe parental sensitivity. In this paper, we provide an overview of eight commonly used observational instruments to measure parental sensitivity. Their similarities and differences in comparison to the original Ainsworth sensitivity construct and its applications will be discussed. Consistent with the search criteria, each of the instruments clearly includes the key elements of Ainsworth's definition of sensitivity. Notable deviations from the original scale are the use of composite scales rather than a single global scale and the related inclusion of new elements, and specifically the inclusion of positive affect as an indicator of sensitivity. Further, most of the instruments have a wider scope than Ainsworth's sensitivity scale in terms of target age groups and the assessment of sensitivity in fathers. We discuss the interpretation of the sensitivity construct depending on variations in how the construct is defined in different observational instruments, and advances in the application of the construct.

Keywords: maternal sensitivity, observation, instruments, positive affect, review.

Introduction

The introduction of the maternal sensitivity construct has proven to be one of Mary Ainsworth's most valuable contributions to the field of parenting and child development. The Sensitivity-Insensitivity to Infant Signals and Communications scale is part of the Maternal Care scales. These scales are clearly grounded in attachment theory and were designed to assess the quality of maternal behavior tailored to a specific infant and to explain individual differences in attachment quality (Ainsworth, Bell, & Stayton, 1971; Ainsworth, Blehar, & Waters, 1978). To this day the original Ainsworth sensitivity observation scale (Ainsworth, Bell, & Stayton, 1974), is still used in empirical studies (e.g., Fearon et al., 2006; Gonzalez, Jenkins, Steiner, & Fleming, 2012; Spangler, Johann, Ronai, & Zimmerman, 2009).

In addition, a number of new observation instruments have been designed to measure parental sensitivity. These newer instruments vary in their formulation of the sensitivity construct (Seifer, Schiller, Sameroff, Resnick, & Riordan, 1996), with some being very similar to the original construct, and others including new elements or leaving out certain aspects. They also vary in their focus in terms of target age group and observational setting. The choice for one instrument over another when designing an observational study of sensitivity may be based on several theoretical and practical considerations. However, to date there is a lack of systematic comparisons between measures that may inform researchers about each instrument's qualities, and their representation of the sensitivity construct. In this systematic review, we provide an overview of observational instruments that are used to measure parental sensitivity, and analyze them in terms of their relation to the original Ainsworth sensitivity construct, and practical aspects of their application. We focus on the sensitivity scale rather than the total set of Ainsworth's Maternal Care scales, as Ainsworth herself identified the sensitivity construct as pivotal to secure attachment development (Ainsworth et al., 1978). The other scales were developed primarily to differentiate between mothers of babies classified as avoidant and ambivalent in the Strange Situation (Ainsworth et al., 1971). In addition, the sensitivity construct and its label have been far more dominant in the empirical attachment literature than the auxiliary scales.

Mary Ainsworth's definition of sensitivity is a parent's ability to (1) notice child signals, (2) interpret these signals correctly, and (3) respond to these signals promptly and appropriately (Ainsworth et al., 1974). These components of parental behavior refer to universally relevant aspects of caregiving, including proximity to the child (necessary for protection and meeting basic needs), contingent responding (promoting social de-

velopment), and appropriateness of parental interventions based on the child's responses rather than on a fixed list of specific parenting behaviors (Mesman, Oster, & Camras, 2012; Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2012). To provide a clear representation of Ainsworth's Sensitivity-Insensitivity to Infant Signals and Communications scale, the descriptions of the two extreme scores (9 = highly sensitive, and 1 = highly insensitive) are shown below (Ainsworth et al., 1974, pages 131-133).

9. Highly sensitive. *This mother is exquisitely attuned to B's signals; and responds to them promptly and appropriately. She is able to see things from B's point of view; her perceptions of his signals and communications are not distorted by her own needs and defenses. She "reads" B's signals and communications skillfully, and knows what the meaning is of even his subtle, minimal, and understated cues. She nearly always gives B what he indicates that he wants, although perhaps not invariably so. When she feels that it is best not to comply with his demands--for example, when he is too excited, over-imperious, or wants something he should not have-- she is tactful in acknowledging his communication and in offering an acceptable alternative. She has "well-rounded" interactions with B, so that the transaction is smoothly completed and both she and B feel satisfied. Finally, she makes her responses temporally contingent upon B's signals and communications.*

1. Highly insensitive. *The extremely insensitive mother seems geared almost exclusively to her own wishes, moods, and activity. That is M's interventions and initiations of interaction are prompted or shaped largely by signals within herself; if they mesh with B's signals, this is often no more than coincidence. This is not to say that M never responds to B's signals; for sometimes she does if the signals are intense enough, prolonged enough, or often enough repeated. The delay in response is in itself insensitive Furthermore, since there is usually a disparity between one's own wishes and activity and B's signals, M who is geared largely to her own signals routinely ignores or distorts the meaning of behavior. Thus, when M responds to B's signals, her response is inappropriate in kind or fragmented and incomplete.*

These descriptions of highly sensitive and highly insensitive parents illustrate the key role of appropriate responding, and the child-centered definition of appropriateness (i.e., does it make the child content?) in Ainsworth's conceptualization of sensitivity. It is also interesting to note the absence of any references to parental positive affect or warmth in the descriptions of the scores (although warmth is mentioned briefly in the introduction to the scale descriptions), whereas several more recent approaches to parent-child interactions explicitly emphasize the importance of positive affect and warmth in conceptualizations of sensitivity in the score descriptions (e.g., Biringen, 2012). In Ainsworth's Maternal Care scales, positive affect and warmth are represented most clearly in a

different scale: the Acceptance vs Rejection scale, which she introduces as follows: "*This scale deals with the balance between the mother's positive and negative feelings about her baby*". Thus, the constructs of sensitivity and positive affect are part of the Maternal Care scales, but are rated as separate constructs.

Regarding theoretical background, Ainsworth's sensitivity scale was developed within the attachment framework and aimed at explaining individual differences in Strange Situation attachment classification (Ainsworth et al., 1971; Ainsworth et al., 1978). Ainsworth's Baltimore study showed that maternal sensitivity was indeed related to attachment security (Ainsworth et al., 1978), a finding that has been replicated in a meta-analysis based on 66 studies (De Wolff & Van IJzendoorn, 1997), and confirmed by a meta-analysis showing that improvements in parental sensitivity induced by parenting interventions improves child attachment quality (Bakermans-Kranenburg, Van IJzendoorn, & Juffer, 2003). More recent work on the sensitivity construct has moved beyond the attachment framework and examines relations with a large variety of parental and child characteristics such as maternal depression (e.g., Campbell, Matestic, Stauffenberg, Mohan, & Kirchner, 2007), and child cognitive outcomes (e.g., Bernier, Carlson, & Whipple, 2010).

Regarding the observational setting, Ainsworth based her coding of maternal sensitivity in the Baltimore study on narrative accounts of naturalistic interactions during multiple home visits with five home visits lasting 4 hours each in the last quarter of the first year for each dyad (Ainsworth et al., 1978), and in subsequent studies it has generally been used to assess parent-infant interactions across the first year of life. In current-day research such intensive and naturalistic observations are rare and sensitivity is usually observed in time frames between 10 and 30 minutes (with some exceptions using longer observation periods, e.g., Grossman, Grossman, Spangler, Suess, & Unzner, 1985; Kochanska, Kim, Barry, & Philibert, 2011). As was common at the time, Ainsworth focused on mothers only, although her sensitivity scale has since been used with fathers (e.g., Grossman et al., 2002; Schoppe-Sullivan et al., 2006). In addition, adaptations of the sensitivity construct to father-specific interaction patterns have been designed (e.g., the Sensitive and Challenging Interactive Play Scale by Grossmann et al., 2002). Ainsworth's sensitivity construct seem to have been inspired in part by her observations in Uganda, and her scale has been used in non-Western countries since then (e.g., True, Pisani, & Oumar, 2001; Yovsi, Kärtner, Keller, & Lohaus, 2009). However, observational research on parental sensitivity in non-Western countries is still very rare.

The growing research interest in sensitivity beyond the original use of the Ainsworth scale in terms of theoretical orientation, child age, caregiver identity, and obser-

vational settings is likely to have been a driving factor in the development of new observation instruments to measure sensitivity in the past decades. In the present paper we aim to provide an account of the legacy of Ainsworth's sensitivity scale by reviewing currently-used global observational instruments assessing parental sensitivity (or sensitive responsiveness). To find these instruments, we conducted a systematic literature search. Given the fact that the original Ainsworth sensitivity scale is a global rating scale, and the conceptual differences between such scales and other approach such as behavior counts, event-based coding, or micro-level coding (Mesman, 2010), we decided to focus only on global rating scales. We examine these instruments in light of the original Ainsworth sensitivity scale, its behavioral descriptors, and its applications in terms of target population and setting.

Method

We conducted a systematic literature search for papers reporting on studies using observational instruments of parental sensitivity in Web of Science. The following keywords were used: Topic=((“maternal sensitiv*” OR ”maternal responsive*” OR “paternal sensitiv*” OR ”paternal responsive*” OR “mother* sensitiv*” OR ”mother* responsive*” OR “father* sensitiv*” OR ”father* responsive*” OR “parent* sensitiv*” OR ”parent* responsive*” OR “sensitive parenting”) AND (child* OR infan* OR adolescen* OR toddler OR preschooler OR baby OR babies)). The use of ‘Topic’ as the search field means that the titles, abstracts, author keywords, and Web of Science keywords (KeyWords Plus) were searched.

In addition, we filtered on categories by excluding those that are obviously unrelated to our field (e.g., agriculture). We further selected only papers published in the English language. This search yielded 1014 publications (December 7th, 2012). Each of these publications was screened to find out whether they indeed included global observational instruments of parental sensitivity or sensitive responsiveness (and not just responsiveness in terms of frequency of responses) and a literature reference or specific name for the scale. This led to a set of no less than 50 observation instruments. For the purpose of selecting instruments to discuss in the current review, we selected the eight instruments that were used in the highest number of publications (all in more than 10) within our search results. These eight instruments were coded regarding several characteristics, based on the coding manuals, the method sections of papers in our search results, their reference lists, but also other sources of information such as the authors of the scales.

To correctly indentify instrument characteristics, we also conducted additional literature searches to uncover studies using the instruments for specific purposes and in specific populations relevant to our review. We coded: (1) availability of the instrument; (2) age range for which the instrument is applicable; (3) the observational settings in which the instrument is used; (4) whether the scale has been used in non-Western countries; (5) whether the scale has been used to code father sensitivity; (6) the inclusion of a single sensitivity scale versus a composite sensitivity scale; (7) the inclusion of positive affect or warmth in the definition of sensitivity; (8) the link with attachment quality.

On a cautionary note we would like to emphasize that the aim of the current review is to provide an account of observational measures that researchers have used to assess sensitivity. The guiding principle is the use of the term sensitivity (or responsiveness including sensitivity elements and not just response frequency) in empirical papers reporting on the instrument. This also means that instruments that do include a sensitivity(-like) or responsiveness(-like) construct but are not described as such by the researchers reporting on the instrument are not included in this review.

Results

Table 1 shows the characteristics of the eight selected instrument for observing parental sensitivity and sensitive responsiveness developed after Ainsworth's original scale. The characteristics of these instruments can be summarized as follows: five are freely available without cost or mandatory training, the target age ranges vary substantially, free play is the most-often used observational setting, all eight have been used for coding maternal as well as paternal sensitivity, six have been applied in non-Western countries, three include a single sensitivity scale (rather than a composite of separate subscales), seven included positive affect as a criterion or indicator for sensitivity, and seven have been found to relate to child attachment quality. We will now discuss each of the instruments in some more detail, in alphabetical order. The provided information is based on the instruments' coding manuals, supplementary information materials, and the method sections of papers reporting on the instruments. We describe the characteristics summarized in Table 1 for each instrument (in alphabetical order). We also discuss the theoretical background of the instrument, specifically whether it is grounded in attachment theory as Ainsworth's scale was, and we summarize empirical studies using the instrument in relation to attachment constructs.

Table 1. *The Ainsworth sensitivity scale and eight commonly-used newer observation instruments measuring parental sensitivity and their characteristics*

Instrument name	Freely available[1]	Age range[2]	Observation setting[3]	Fathers[4]	Non-Western cultures[5]	Single global rating[6]	Positive affect[7]	Link with attachment[8]
Ainsworth sensitivity scale (Ainsworth et al., 1974)	**Yes**	**Infancy**	**N; P; F; T; D**	**Yes**	**Yes**	**Yes**	-	**Yes**
CARE-Index (Crittenden, 2001)	No	Infancy - Preschool	P; FF	Yes	Yes	No	++	Yes
Coding Interactive Behavior (CIB; Feldman, 1998)	No	Infancy - Adolescence	P	Yes	Yes	No	++	No
Emotional Availability Scales (EA Scales; Biringen et al., 1998; Biringen, 2008)	No	Infancy - Adolescence	P; T; D	Yes	Yes	Yes/No*	++	Yes
Erickson scales (Erickson et al., 1985)	Yes	Toddler - Preschool	T	Yes	Yes	No	+	Yes
Global Ratings of Mother-Infant Interaction (Murray et al., 1996)	Yes	Infancy	P; FF	Yes	Yes	Yes	+	Yes
Maternal Behavior Q-sort (MBQS; Pederson & Moran, 1995)	Yes	Infancy - Preschool	Mix**	Yes	Yes	No	+	Yes
NICHD-SECCYD sensitivity scales (1999)	Yes	Infancy***	P	Yes	No	Yes	-	Yes
Parent-Child Early Relational Assessment (PCERA; Clark, 1985)	Yes	Infancy - Toddler	F; P; T	Yes	No	No	++	Yes

Note. We have done our best to uncover all relevant information about the instruments in the table. However, we can not guarantee that nothing was missed.
[1] No if the instrument is only made available when attending an official training.
[2] Age range as reported in the manual (if mentioned) combined with the ages found in the papers in our search results.
[3] Observational setting as found in the papers within our search results: N = Naturalistic; F = Feeding; P = Play (with or without toys); FF = Face-to-face interaction (with or without toys); T = Teaching task (e.g., puzzle, problem-solving); D = Demanding task (e.g., clean-up, no-touch, competing demands).
[4] Has the instrument's sensitivity scale been used with fathers.
[5] Has the instrument's sensitivity scale been used in a non-Western cultures.
[6] Does the instrument include a single global sensitivity rating? (No if a composite of several scales or items is used to derive a sensitivity or responsiveness scale).
[7] Is positive affect included in the definition of sensitivity? ++ = prominently included; + = minimally included; - not included.
[8] Is there evidence for a link between the instrument's sensitivity scale and child attachment security?
* In the 3rd edition a single global sensitivity rating is used, but in the 4th edition the sensitivity scale consists of seven subscales.
** The MBQS is coded during extensive home visits based on observations of parental behavior throughout the visit, often in the context of an interview, including naturalistic interactions, and sometimes specific play or teaching settings are added.
*** For older ages the Erickson scales are used in the NICHD-SECCYD.

The Child-Adult Relationship Experimental Index (CARE-Index)

The CARE-Index was first developed for scoring adult interactions with infants and was later adapted to fit interactions with toddlers up to age 36 months (Crittenden, 2001), and can even be used up to 70 months (Künster et al., 2010). The instrument is described as a screening tool and seems to be mostly used to code sensitivity in free play settings, although there does not seem to be any reason not to use it in other settings. As is common in this field the CARE-Index has been mostly used with mothers, but there are studies that have employed the instrument to rate father-child interactions (e.g., Kelley, Smidt, Green, Berndt, & Rogers, 1998). The CARE-Index is only made available to those who follow the training. The instrument does not have a single sensitivity scale. Instead, seven aspects of maternal interactive behavior are evaluated, including facial expression, vocal expression, position and body contact, expressions of affection, pacing of turns, control, and choice of activity. Scores on each of these aspects are then evaluated in terms of sensitivity, control, and unresponsiveness (on 0-2 scales), and for each of these three parenting constructs the seven items are summed (yielding scores 0-14). The CARE-Index information materials do not describe a specific theoretical framework, although they do briefly mention attachment, and on the scale authors' website, it is mentioned that the CARE-Index was developed under Mary Ainsworth's guidance, and in consultation with John Bowlby.

The CARE-Index scale descriptions clearly include salient aspects of Ainsworth's definitions of sensitivity relating to availability to meet the child's needs, contingent responsiveness, and appropriate timing and content of activities. Although not found explicitly in Ainsworth's descriptions, affection and warmth are coded as important aspects of sensitivity. The CARE-Index sensitivity scores have been found to predict attachment security in the U.S.A. as measured in the Strange Situation (e.g., Fuertes, Lopes-dos-Santos, Beeghly, & Tronick, 2009), and using a representational attachment measure (Goodman, Aber, Berlin, & Brooks-Gunn, 1998). It has also been found to predict attachment security in a study in Chile (Valenzuela et al., 1997). In addition, the sensitivity scale differentiated between mother with different attachment states of mind (Ward & Carlson, 1995), Finally, the scale can detect improvements in sensitivity following parenting intervention (e.g., Barlow et al., 2007).

Coding Interactive Behavior (CIB)

The observation instrument Coding Interactive Behavior (CIB; Feldman, 1998) consists of 22 scales measuring different aspects of adult-child interactions (rated on a scale from 1 – a little to 5 – a lot). There are versions of the CIB for newborns, infants, toddlers, pre-

schoolers, and adolescents, but we did not uncover the specific age-related changes made for each version. The instrument appears to have been used only in (face-to-face) free-play settings, except for parental sensitivity with 13-year-olds which was assessed during a conversation aimed at planning an enjoyable activity (Feldman, 2010). There is also a modified version specifically tailored to assessing sensitivity in feeding situations (Feldman, Keren, Gross-Rozval, & Tyano, 2004). In addition to being used for coding mother-child interactions, the CIB has also been used to code father-child interactions (e.g., Feldman & Eidelman, 2007) and caregiver-child interactions (e.g., Klein & Feldman, 2007). The CIB is only made available in the context of training. The instrument does not have a single sensitivity scale. A parental sensitivity construct is derived by combining scores on a selection of the 22 adult scales, generally including scales such as acknowledgement of child signals, positive affect, gaze, appropriate vocal quality, consistency of style, resourcefulness, and supportive presence. Several scales clearly refer to the most salient behaviors from Ainsworth's definition as they focus on noticing child signals and appropriate responding across different modalities of interaction. Warmth and positive affect are also explicitly part of the sensitivity construct, which is not the case in Ainsworth's sensitivity scale.

The CIB information materials mention attachment and the work of Mary Ainsworth, and some studies using the CIB sensitivity scale refer to salient aspects of attachment theory (e.g., Kim et al., 2011). The CIB sensitivity scale appears to be used mostly in relation to parental or child social-emotional risk (e.g., Feldman & Klein, 2003; Feldman et al., 2009; Keren, Feldman, & Tyano). Finally, the scale is able to detect improvements in maternal sensitivity following intervention (e.g., Feldman, Weller, Sirota, & Eidelman, 2003), and has also been used in a non-Western context in Palestinian families in Ramallah and the West Bank, revealing interesting culture-specific patterns of sensitivity and child outcomes (Feldman & Masalha, 2010).

Emotional Availability Scales (EA Scales)

The 3rd edition of the Emotional Availability scales (EA Scales; Biringen, Robinson, & Emde, 1998) has been widely used in studies on sensitivity. It has been applied to mothers as well as fathers (e.g., Atzaba-Poria et al., 2010; Lovas, 2005), generally in free-play settings. The 4th edition of the EA scales (Biringen, 2008) is still relatively new and studies using this edition are only just starting to be published (e.g., Flykt et al., 2012). According to the manual the newest edition can be applied to any adult caregiver interacting with children aged 0-14 years (with an infancy/early childhood version and a middle childhood/youth version), although the two versions are nearly identical. It is suggested that

the version for older children may be extended to older ages.

The EA sensitivity scale in the 3rd edition consists of a single 9-point rating scale, and a highly sensitive parent is described as follows: "*Emotional communication between parent and infant is for the most part positive, appropriate, and creative. The highly sensitive parent displays much genuine, authentic, and congruent interest, pleasure, and amusement with the infant*."(Biringen et al., 1998, p.257). It is clear from this description that the EA sensitivity scale is much broader than the original sensitivity scale and includes strong references to parental affect. This is consistent with the theoretical background of the EA scales (Biringen & Easterbrooks, 2012), which includes clear references to attachment theory, but also explicitly acknowledges the influence of frameworks emphasizing affective attunement (e.g., Emde & Easterbrooks, 1985).

In contrast to the 3rd edition, the 4th edition of the EA scales is not freely available, as it is only released to those who follow the EA training. The 4th edition does not have a single sensitivity scale, but instead includes seven subscales for coding sensitivity, of which the first two are the most salient (scored on a 1-7 scale) and the last five contributing less to the overall score (1-3 scale). The two main subscales are labeled 'Affect and Clarity of Perceptions' and 'Appropriate Responsiveness'. As in the 3rd edition, affect plays a far more important role than in Ainsworth's original sensitivity scale as evidenced by the following sentence from the manual: "*The key characteristic of the sensitivity construct, in our view, is affect*" (Biringen, 2008, p. 17, underlining by Biringen).

The 3rd edition of the EA sensitivity scale shows meaningful relations with child attachment security in risk samples in Western countries (Oppenheim, Koren-Karie, Dolev, & Yirmiya, 2012; Van IJzendoorn et al., 2007) and in a non-Western country (John, Morris, & Halliburton, 2012, in India). The sensitivity scale also relates to parental attachment state of mind (Aviezer, Sagi, Joels, & Ziv, 1999; Coppola, Cassibba, & Costantini, 2007; Edelstein et al., 2004), and has been shown the ability to detect changes in maternal sensitivity following intervention (e.g., Salomonsson & Sandell, 2011).

Erickson scales

The Erickson scales (Egeland et al., 1990; Erickson et al., 1985) are generally used to code interactions in teaching situations (e.g., making a puzzle that is too difficult for the child to solve on his/her own) with toddlers and preschoolers. The Erickson scales have also been used with fathers in the context of the NICHD-SECCYD study (see below; NICHD Early Childcare Research Network, 2000). Although the manual does not provide a theoretical framework, the first study to use these scales (Erickson et al., 1985) was clearly grounded in attachment theory. The scales include supportive presence, lack of respect

for autonomy (later labeled as intrusiveness), hostility, clarity of instruction, sensitivity and timing of instruction, and confidence. These scales are coded using scores 1 to 7, each with specific behavioral descriptions and without shorthand labels. The instrument does not actually include a scale with the label 'sensitivity', but several research groups have used composites of (a selection of) these scales to measure the construct of sensitivity (e.g., Alink et al., 2009; Bell & Belsky, 2008). Interestingly, the Erickson scales are also part of the observational battery in the NICHD study where they are also used to derive an overall sensitivity construct (see also the description of the NICHD sensitivity scales below). Various elements of the Erickson scales are indeed relevant to the sensitivity construct, such as the parent's ability to provide support when the child needs it, and tailoring support to the needs of the child in terms of timing and content. Positive regard is mentioned as an aspect of supportive presence, but is not prominent in the descriptions.

The sensitivity construct based on the Erickson scales has been found to be related to child attachment security in a U.S.A. sample (McElwain, Cox, Burchinal, & MacFie, 2003) and in a Japanese sample (Vereijken, Riksen-Walraven, & Kondo-Ikemura, 1997), and can detect improvements in maternal sensitivity as a result of intervention (e.g., Stams, Juffer, Van IJzendoorn, & Hoksbergen, 2001; Stolk et al., 2008).

Global Ratings of Mother-Infant Interaction

As the name suggest, the Global Ratings of Mother-Infant Interaction (Murray, Fiori-Cowley, Hooper, & Cooper, 1996) was specifically designed to assess maternal interactions with infants. The manual states that it is intended to measure interactions with 2- to 5-month old infants in a face-to-face setting. It has been applied to interactions during the Still-Face Paradigm (e.g., Grant, McMahon, Reilly, & Austin, 2010), but also to free play settings (e.g., Stein et al., 2012) and with older infants up to age 12 months in our search results (e.g., Hobson, Patrick, Crandell, García-Pérez, & Lee, 2005). Despite its name it has also been used to code father-infant interactions (Ramchandani et al., 2013). The manual does not provide a theoretical background, but the first study using the scales (Murray et al., 1996) also included the Strange Situation and found no relations between the scales and attachment security. The instrument includes a single specific sensitivity scale (scored 1 to 5) that can be seen as a summary of scales regarding warmth, acceptance, responsiveness, and non-demandingness that are scored first, but it is coded separately. The sensitivity scale description clearly reflects Ainsworth's original definition as it includes references to signal perception, empathy, and appropriate responsiveness. The developers of the scale also specifically mention taking the child's perspective as a guiding principle. Positive affect as reflected in the scale assessing warmth is also part of

the sensitivity construct in this instrument. However, the manual explicitly mentions that high maternal warmth without appropriate responsiveness can not lead to a very high sensitivity score.

The sensitivity construct derived from the Global Ratings of Mother-Infant Interaction is related meaningfully to infant attachment security in a South-African sample (Tomlinson, Cooper, & Murray, 2005), and has been found to detect improvement in sensitivity through intervention in mothers of very-low-birth-weight infants (Feeley et al., 2012).

Maternal Behavior Q-Sort (MBQS)

The MBQS (Pederson et al., 1990; Pederson & Moran, 1995; Pederson, Moran, & Bento, 1999) is a Q-set consisting of 90 cards with statements about maternal behaviors. The MBQS is not a regular global rating scale, but it was included here because it yields a global sensitivity score. The cards are sorted into 9 piles of 10 items each ranging from highly uncharacteristic to highly characteristic. A single sensitivity score is derived by correlating the scores for each mother's Q-sort with a criterion sort provided by experts describing the prototypically sensitive mother. The MBQS was originally designed for home observations of maternal interactions with infants, but has also been used with fathers (Colonnesi et al., 2013). The MBQS has also been used beyond infancy (e.g., Selcuk et al., 2010), and a preschool version of the instrument has been developed (Maternal Behavior for Preschoolers Q-Set; Posada, Kaloustian, Richmond, & Moreno, 2007).

The developers of the MBQS explicitly mention the work of Mary Ainsworth as a major source for the item descriptions (Pederson et al., 1990). The 90 items indeed include clear references to Mary Ainsworth's definition of sensitivity, with descriptions of signal perception (e.g., *'notices when baby smiles, vocalizes'*), and prompt and child-centered appropriate responding (e.g., *'responds accurately to signals of distress'*) with the aim of satisfying the child (e.g., *'interventions satisfy baby'*). There are also some references to positive affect (e.g., *'displays affection by touching, caressing'*), but only sporadically within the total set of 90 items, and thus unlikely to make the difference between ratings reflecting highly sensitive versus ratings reflecting insensitive.

The MBQS sensitivity score is highly correlated with the Ainsworth sensitivity scale (Behrens, Hart, & Parker, 2012), and shows associations with infant attachment quality in Western samples (Bailey et al., 2007; Behrens, Parker, & Haltigan, 2011; Kim & Kim, 2009; Pederson et al., 1990), and in a Colombian sample (Posada et al., 1999). It has also been found to relate meaningfully to maternal attachment state of mind (Bailey, Pederson, Moran, & Bento, 2007; Lindhiem, Bernard, & Dozier, 2011; Whipple, Bernier,

& Mageau, 2011). Finally, the MBQS sensitivity scale has been found to be sensitive to improvements in parenting quality following intervention (Moss et al., 2011).

NICHD-SECCYD sensitivity scales

In the National Institute of Child Health and Human Development study of Early Child Care and Youth Development (NICHD-SECCYD), several single scales are used to assess sensitivity. From infancy up to 24 months, two sensitivity scales are used: one for sensitivity to nondistress and one for sensitivity to distress, scored on a scale from 1 (not at all characteristic) to 4 or 5 (highly characteristic), and generally used in semi-structured free play settings (Owen, 1992). For older ages, slightly adapted versions of the Erickson scales are used to code parental behavior in free play and teaching tasks (also focusing more on teaching-related interactions), and a sensitivity construct is derived by combining the scales for supportive presence, respect for autonomy, and hostility (see discussion of Erickson scales above).

In this section we focus on the infancy scales that were specifically designed for the NICHD-SECCYD. In one of the scale documents, it is stated that the sensitivity to distress scale was adapted from Ainsworth et al. (1978), whereas the sensitivity to nondistress is based on work by Margaret Fish, who in turn acknowledges Ainsworth's work when introducing her measure (Fish, Stifter, & Belsky, 1991). Thus it appears that the attachment framework was used as a guiding principle for both infant sensitivity scales. Given the context of a large longitudinal study, these sensitivity scales have been widely used in research publications, and have been applied to both mothers and fathers (e.g., Barnett, Deng, Mills-Koonce, Willoughby, & Cox, 2008). In both of the sensitivity scales that are used up to 24 months the focus is on appropriate responsiveness judged on the basis of the effectiveness of parental responses. In the case of distress this means the child is soothed and in the case of nondistress that the child is engaged and content. These descriptions clearly reflect the main elements of Ainsworth's sensitivity scale. The scales do not include specific mention of parental positive affect as a main element of sensitivity. However, in some studies a composite sensitivity score is used that does include a specific rating of positive regard (e.g., Bradley & Corwyn, 2008; Hirsh-Pasek & Burchinal, 2006).

The NICHD sensitivity scales used for infants up to age 24 months have been found to relate to infant attachment quality (e.g., Bakermans-Kranenburg, Van IJzendoorn, & Kroonenberg, 2004; McElwain & Booth-LaForce, 2006; NICHD Early Child Care Research Network, 2006) and child separation anxiety (Dallaire, & Weinraub, 2005). Finally, the scale has been found to reveal improvements in maternal sensitivity towards preterm infants following a parenting intervention (Ravn, 2011).

Parent-Child Early Relational Assessment (PCERA)

The Parent-Child Early Relational Assessment (PCERA; Clark, 1985) is an observational rating scale with 65 items (scored 1-5) designed to comprehensively assess the amount, duration, and intensity of adaptive behavior in terms of social-emotional and task-related qualities. In the manual four coding situations are mentioned, including feeding, structured task, free play, and separation/reunion. Regarding target population, the scale title suggests applicability to both parents, and potentially a range of child ages. We were unable to find out the intended age range of the scales, but found almost exclusively papers reporting on mothers and infants up to 12 months and only one on toddlers with fathers (Eiden, Edwards, & Leonard, 2006). One of the items is labeled *'parent reads child's cues and responds sensitively and appropriately'*. The item title captures the scale's content well, in that the focus is clearly on signal perception and appropriate responsiveness. Similar to Ainsworth's scale descriptions, empathic awareness is specifically mentioned. In addition, some other items also refer to contingent responsiveness to specific child behaviors, thus also reflecting sensitivity. Positive affect is not a part of the sensitivity construct described in the sensitivity item. However, the studies that use the PCERA do not report on a single sensitivity scale, but all report on composite sensitive responsiveness scales that include other PCERA items that do clearly refer to positive affect (e.g., Brown, 2007; Bystrova et al., 2009; Scher, 2001). Thus, it seems that the sensitivity item is not used as a separate scale.

The manual does not provide a theoretical background, although in one paper Ainsworth's work is mentioned in the introduction of the section on the PCERA (Kivijarvi et al., 2001). The PCERA maternal sensitivity construct has been found to predict attachment security in infants born prematurely (Shah, Clements, & Poehlmann, 2011). The PCERA has been used to evaluate intervention effectiveness (e.g., Clark, Tluczek, & Brown, 2008), but we did not find any studies reporting on significant intervention effects on PCERA constructs labeled sensitivity. Finally, the PCERA sensitivity scale does not seem to have been used in non-Western countries.

Discussion

For this review we unearthed no less than 50 different observational instruments used to measure parental sensitivity in early childhood, showing the viability of Mary Ainsworth's formulation of this construct. The selected eight instruments that were used most often to measure sensitivity within our search results do show marked differences in the conceptualization of the construct and in their applications. Nonetheless, consistent

with the original aim of the sensitivity construct, for most instruments we found studies reporting on meaningful associations with child attachment security.

Interestingly, only three of the eight most-used instruments include a single global rating scale for sensitivity (EA Scales 3rd ed., Global Ratings of Mother-Infant Interaction, and NICHD-SECCYD sensitivity scales), whereas the others require the summing of several scales. This is in contrast to the original Ainsworth sensitivity scale that requires the observer to make one global assessment of sensitivity, rather than separately evaluate specific maternal behaviors that contribute to the sensitivity construct. In addition, the multi-aspect composites used in some instruments extend beyond Ainsworth's core elements. Some of these specific additions seem to reflect the extension to older ages in which other types of interactions are observed than in infancy and need to be rated on sensitivity as well (e.g., teaching behavior in the Erickson scales). In other cases, elements are split up into more specific pieces. For instance, in the CARE-Index each modality of interaction (e.g., facial, vocal, body) is rated separately regarding sensitivity. From a cross-cultural perspective this is an interesting approach, as there is evidence that the use of specific modalities in maternal interactions with infants may vary across cultures (e.g., Kärtner, Keller, & Yovsi, 2010). Specifying separate subscales per modality could thus provide interesting information about culture-specific patterns of sensitive responding.

Some have suggested that the use of a multi-aspect composite is actually a better approach because sensitivity is a complex construct (Seifer et al., 1996). However, studies on the components of sensitivity are surprisingly rare. In a study by Lohaus et al. (2001), independent ratings were obtained for overall sensitivity and each of the main elements of the sensitivity construct. The results showed high correlations between the overall rating of sensitivity and its elements: signal perception (r = .56), correct interpretation (r = .77), prompt reaction (r = .75), and appropriate reaction (r = .72). These findings could be taken to suggest that when it comes to the main components of sensitivity, coding separate scales is not really necessary, as they are also captured largely by one overall rating. However, high correlations do not mean that the elements can not contribute uniquely to specific aspects of child development. Assessing particular aspects of sensitive parent-child interactions separately may bring to light specific patterns and associations with child outcomes. In most cases however, the subscales are not used separately and are instead used as a part of the final total sensitivity score, including not only the original elements of sensitivity, but also other added elements. To enhance our understanding of the sensitivity construct it may be worthwhile to explore the independent contributions of each of its core and added elements, and to compare this to the contribution of composite constructs. This would require independent coding and sufficient intercoder

reliability for each subscale. Independent coding may be quite a challenge given the larger number of coders needed, and regarding reliability it is our experience that the reliability on the final aggregate score can be high even when reliabilities on separate subscales are insufficient. But if separate subscales are thought to reflect significantly different aspects of sensitivity, it may be worthwhile investing in solving these issues.

Another notable deviation from the original Ainsworth sensitivity scale is the inclusion of positive affect or warmth as a criterion or indicator for sensitivity in seven out of eight instruments reviewed. In some instruments this aspect is particularly salient (e.g., the EA Scales, the CARE-index), whereas in others it is a rather minor part of the scale descriptions (e.g., the MBQS, the Erickson scales). The terms positive affect and warmth usually refer to maternal smiling and positive tone of voice, and often also to physical affection like caressing. There is something to be said for including positive affect in the definition of sensitivity, as significant correlations between the two constructs have been observed. However, when rated independently these correlations are generally only moderate in size (e.g., .12 to .45 in Lohaus et al., 2004, .37 in Oppenheimer, Hankin, Jenness, Young, & Smolen, 2013, and .49 in Spinrad et al., 2012), especially compared to the correlations with the basic elements of sensitivity as described above. In addition, there is evidence that warmth and sensitive responsiveness show differential predictive associations with child outcomes. For instance, observed sensitivity was found to predict child regulation of negative affect and empathy towards distressed others, whereas warmth (a multi-method composite including observations) predicted child regulation of positive affect (Davidov & Grusec, 2006). In another study maternal sensitivity to distress predicted security of attachment whereas maternal affect (defined as social/affective interactions) did not (Del Carmen, Pedersen, Huffman, & Bryan, 1993), and both maternal sensitivity and positive regard (defined as demonstrations of affirmation, warmth, and affection toward the child) have been found to be independent predictors of child ADHD symptoms (Keown, 2012). In a related vein, it has been suggested that warmth and sensitive responsiveness belong to different motivational systems, with different evolutionary functions (MacDonald, 1992). However, to complicate matters, there is also evidence that attachment security is predicted by positive affect and several other aspects of parenting to the same extent as by sensitivity (De Wolff & Van IJzendoorn, 1997).

Supporting the idea that positive affect and prompt appropriate responding to infant signals to facilitate infant secure-base behavior are distinct, Ainsworth reported warmth and affection in all but two mothers in her Uganda study, which by her own interpretation ruled out warmth as a predictor of secure attachment patterns (Ainsworth, 1967). In a related vein, our own extensive experiences with coding parent-child interac-

tions in a variety of samples and observational settings reveal that in a subgroup of parents, high levels of positive affect are accompanied by extreme intrusiveness and lack of signal perception. These parents play with their children vigorously, with a lot of tickling, poking, and fun-making, while not noticing that their child is not enjoying the interaction. The parent's positive affect is genuine, in that she really does enjoy this type of play with her child, but it is not accompanied by sensitivity at all. This interaction pattern appears to have also been noted by Mary Ainsworth as shown in her description of a mother of an infant in the resistant attachment group (C1): "*She continually interrupted her daughter to train her, to show off her accomplishments, or merely because she herself felt like playing with the baby or showing her affection*." (Ainsworth et al., 1978, p. 238). Of course in the observational instruments which include positive affect this type of parent could never receive a top score on sensitivity because of the lack of appropriate responsiveness, but her sensitivity score is likely to be at least inflated because of the presence of high levels of positive affect. This particular interaction pattern would yield a relatively high sensitivity score if positive affect is included in the definition of sensitivity, thus obscuring the fact that the mother actually did not show appropriate responsiveness. Thus, Ainsworth certainly acknowledged the importance of positive affect and since it also relates to attachment security, it may be helpful to rate sensitivity and positive affect separately, consistent with the structure of the original Maternal Care scales. It then also becomes possible to examine both the unique and additive effects of each of these components on child outcomes.

Regarding the target age range of the children, the focus of the reviewed instruments is predominantly on early childhood, although there are some exceptions (EA Scales and CIB). Those studies that do assess sensitivity towards adolescents are generally conducted by researchers who also study early childhood parenting, often longitudinally (e.g., Feldman, 2010). The idea that the attachment framework is also relevant to adolescent as a developmental period in its own right was pointed out by Allen (2008) who suggests that the balance between exploration and attachment behaviors in infancy can be translated to the balance between autonomy and attachment processes in adolescence. In addition, indirect assessments of maternal sensitivity (i.e., concordance between maternal and adolescent reports on the adolescent's characteristics) have shown meaningful relations with adolescent attachment states of mind (Allen et al., 2003; Berger, Jodl, Allen, McElhaney, & Kuperminc, 2005).

There are very few studies reporting on directly observed sensitivity in adolescence in relation to adolescent development, but there is some evidence that such relations exist. For instance, observed maternal sensitivity in adolescence has been found to

predict adolescent social development (e.g., Jaffari-Bimmel et al., 2006), and higher levels of observed maternal support during a discussion task has been found to predict adolescent autonomy problems, and a greater susceptibility to the influence of peers regarding substance use (Allen, Chango, Szwedo, Schad, & Marston, 2011). One study also showed that a variety of risk factors increased adolescent allostatic load, but only for adolescents with mothers observed to show low levels of sensitive responsiveness (e.g., Evans, Kim, Ting, Tesher, & Shannis, 2007). Overall it seems that extending research on sensitivity to older ages and adapting observational instruments accordingly is a worthwhile endeavor.

The extension of the observation of sensitivity to fathers is a notable advance in the field of attachment research (Bretherton, 2010). All instruments reviewed in this paper have also been used with fathers and have shown meaningful associations between paternal sensitivity and a variety of other variables (e.g., Kelley et al., 1998; Lewis & Lamb, 2003; Lucassen et al., 2011; Shannon, Tamis-LeMonda, London, & Cabrera, 2002, Shannon, Tamis-LeMonda, & Cabrera 2006). However, it has been suggested that other aspects of father-child interactions may be more salient for child development, such as challenging and stimulating play (Grossmann, Grossmann, Kindler, & Zimmerman, 2008). In a recent meta-analysis this idea was not confirmed, as paternal sensitivity including stimulating play was not more strongly predictive of attachment security than paternal sensitivity alone (Lucassen et al., 2011). Nevertheless, studies with observations of father-child interactions are still scarce, and more research is needed to understand the role of paternal sensitivity and related behaviors in predicting child outcomes.

Another important issue regarding the observation targets is the fact that the vast majority of studies assessing parental sensitivity is conducted in Western ethnic majority samples, although a recent review has shown that sensitivity is relevant for child development in ethnic minority families as well (Mesman et al., 2012). As described in our review of the eight observation instruments, some have indeed been used in non-Western samples and have contributed to the notion that parental sensitivity is a universal phenomenon that can be successfully assessed using existing observational instruments. However, we still know relatively little about the nature of predictive relations between sensitivity and child outcomes outside the U.S.A. and Europe, and this area of research deserves our full attention in the future.

Going back to the staggering 50 new sensitivity observational instruments that we found, we wondered whether the field needs that many different instruments, each with their own minor and/or major variations on the original conceptualization of the sensitivity construct. At the very least our review results suggest that there is no need for the development of additional instruments to measure sensitivity, because there are al-

ready so many of them to choose from. Taking this point a bit further, it may be beneficial to the field if the set of instruments was more restricted and above all include only those with clearly-defined behavioral descriptions of its elements so that readers may know exactly what was measured. Conceptual clarity is of key importance for the interpretation of research results based on different observational instruments. In a related vein, it was surprising to find that most manuals do not provide a clear theoretical framework. The EA Scales and the MBQS are notable exceptions as their manuals include explicit theoretical backgrounds. This of course does not mean that the other scales are not grounded in theory. Most do seem to relate to attachment theory, given that seven out of eight have been found to predict attachment security, but it would be helpful to researchers trying to choose an observation instrument if the theoretical background of each instrument was explicitly described.

To promote conceptual clarity, the term sensitivity should not be used too lightly to retain a clear distinction between the original clearly defined and delineated construct and other more elaborate constructs. The instrument that comes closest to Ainsworth's sensitivity scale is the NICHD-SECCYD sensitivity scale as used up to age 24 months, since it consists of a single global rating scale that does not call for evaluating maternal warmth, positive affect or other added elements. The MBQS is also very close to Ainsworth's sensitivity construct, as the formulation of the items was explicitly guided by her work (Pederson et al., 1990). Instruments using broader conceptualizations can certainly be an asset to the field, but only when its elements are clearly defined. When there are many added elements, it may be advisable to not use the term sensitivity to describe the construct being measured.

There are some limitations to the current review. First, our literature search to find observational instruments measuring parental sensitivity did not uncover all relevant papers, as was shown by additional searches conducted to find more information about specific instruments or topics. Unfortunately it was not possible to perform a cited-reference search for most of the selected instruments, because the instrument manuals were generally unpublished manuscripts. We therefore had to rely on a search with keywords. Our extra searches revealed that some relevant papers only include terms such as 'parenting quality' or 'parent-child interactions' and were not captured by our search if the term sensitivity or responsiveness were not explicitly mentioned in the abstract or keywords of the papers, even though they were measured. Expanding our keywords to also capture such papers would have led to a much larger number of hits far too great to process within a reasonable time. However, our goal was not to find all existing papers on parental sensitivity, but to find observational measures assessing parental sensitiv-

ity. Although it may be that the total set of 50 instruments that we found represents an underestimation of the actual number, it is very unlikely that an expanded search would have led to a change in the set of eight most commonly used instruments that we discussed in more detail. Second, although we have done our best to adequately describe the eight selected instruments, it was sometimes surprisingly difficult to obtain information. Some coding manuals were hard to find and in some cases the instrument was used in many different ways, making it more difficult to provide a description that captures all its applications. We did attempt to contact the authors of each of the scales, but were not always successful. Nevertheless, anyone interested in a particular instrument is encouraged to contact the authors of the instrument to make sure that they receive all relevant information, independent of this review.

Although there are some limitations, this is the first systematic review of observational instruments assessing parental sensitivity, and the first attempt to analyze these instruments in relation to the original Ainsworth sensitivity construct. The number of observational instruments to measure sensitivity is very impressive and reflects the value of the construct. However, the interpretation of research results would be served by a more limited and clearly defined set of instruments. The eight observational instruments reviewed in detail all include the main elements from Ainsworth's sensitivity scale. Salient and common deviations from the original scale include the use of composite scales rather than a single global scale and the related inclusion of new elements, and specifically the inclusion of positive affect as an indicator of sensitivity. The variety of parental behaviors that constitute the sensitivity construct across instruments highlights the importance of conceptual clarity. The potential danger of adding elements to scales labeled as assessing sensitivity is that the measures will reflect overall good/positive parenting rather than sensitive responsiveness specifically. Indeed, there is evidence that separating the core sensitivity construct from additions such as warmth and positive affect is worthwhile, and even that distinguishing between the core elements of sensitivity might be helpful. Regarding the targets of observation, the extension of the assessment of sensitivity to older age groups, fathers, and non-parental caregivers has clearly been very valuable to the field and is likely to foster new studies in the future. Most instruments appear to be applicable to both Western and non-Western samples, which is encouraging for the field of cross-cultural studies on parenting and child development. In sum, the legacy of Mary Ainsworth's sensitivity construct and observational scale is truly impressive and her work will continue to inspire researchers across the globe for many decades to come.

3

Sensitive parenting as a cross-cultural ideal: Sensitivity beliefs of Dutch, Moroccan, and Turkish mothers in the Netherlands

Rosanneke A. G. Emmen, Maike Malda, Judi Mesman, Hatice Ekmekci, & Marinus H. van IJzendoorn (2012).
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Abstract

The primary goal of this study is to test the hypothesis that beliefs about the ideal sensitive mother are similar across Dutch, Moroccan, and Turkish mothers living in the Netherlands. A total of 75 mothers with at least one child between the ages of six months and six years described their views about the ideal sensitive mother using the Maternal Behavior Q-Sort (Pederson, Moran, & Bento, 1999). These views were highly similar within and across cultural and socio-economic groups. Nevertheless, family income fully mediated the relationship between ethnic background and sensitivity beliefs; income of minority mothers was lower which was in turn predictive of a lower sensitivity belief score. Our findings suggest that the main behavioral markers of sensitivity are valued by mothers from different cultural backgrounds. The role of socio-economic status in sensitivity beliefs is consistent with the Family Stress Model.

Keywords: maternal sensitivity, beliefs, culture, socio-economic status.

Introduction

Sensitive parenting refers to the ability to perceive and interpret a child's signals and to respond to those signals in a prompt and appropriate way (Ainsworth, Blehar, Waters, &Wall, 1978). Sensitive parenting predicts secure attachment across cultures (Van IJzendoorn & Sagi-Schwartz, 2008) as well as positive cognitive development, social behavior, and emotion regulation (e.g., Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2012). Ethnic minority parents have been found to behave less sensitively than majority parents, but this difference may be largely caused by socio-economic factors (Mesman, Van IJzendoorn, et al., 2012). Nevertheless, some studies have corrected for socio-economic status and still found differences in sensitive behavior between minority and majority parents (e.g., Spiker, Ferguson, & Brooks-Gunn, 1993; Van IJzendoorn, 1990; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, & Linting, 2010). Can these differences in behavior be explained by cultural differences in beliefs about sensitive parenting? There is reason to assume that maternal sensitivity is a universal construct viewed similarly by parents from different cultures and socio-economic groups (Mesman, Van IJzendoorn, et al., 2012). However, research to date has not provided clear conclusions about the extent to which cultural and socio-economic beliefs about sensitive parenting differ. The primary goal of our present study is to test the hypothesis that beliefs about the ideal sensitive mother are similar across groups of Dutch, Moroccan, and Turkish mothers from different socio-economic groups living in the Netherlands.

Parenting behaviors that reflect the norm in a Western middle-class population may not reflect the norm in other cultures and may have different meanings and applications across different ethnic groups (Lansford et al., 2005). How a parent perceives and interprets a child's signals and responds to them in an appropriate way may depend on parental ideas about what children need (Mesman, Van IJzendoorn, et al., 2012). Parents with collectivistic parenting goals have been reported to be more authoritarian, restricting unwanted behavior without explanation, whereas parents in individualistic cultures tend to be more authoritative, using discussion and explanations to guide child behavior (e.g., Harwood, Miller, & Irizarry, 1995; Ispa et al., 2004). Also, if parents value a certain parenting behavior, such as physical discipline, they are more likely to behave accordingly (Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000). Thus, different parenting goals and beliefs seem to be reflected in different parenting styles and behaviors across cultures. Can cross-cultural differences in sensitive parenting behaviors then also be explained by culturally divergent beliefs about sensitive parenting?

Although most studies on sensitive parenting have been conducted among mid-

dle-class European and American families, the concept of maternal sensitivity was actually developed in Africa. A study by Mary Ainsworth that was conducted in Uganda in the mid-1950s was the first to show the importance of the continuity and quality of mother–infant interaction in relation to attachment security (Ainsworth, 1967). Ainsworth's famous Baltimore study replicated her Uganda results in a Western culture (Ainsworth & Witting, 1969), showing the potentially universal applicability of the construct of maternal sensitivity. According to Ainsworth the four essential components of sensitivity are (1) parent's awareness of child's signals, (2) the accuracy of the interpretation of these signals, (3) the promptness, and (4) the appropriateness of the response to them. These elements will be discussed in terms of their potential cross-cultural applicability.

Parental awareness of a child's signals is dependent upon proximity and availability, which represent the most universally applicable aspects of sensitivity, because they are prerequisites for ensuring that an infant or child is safe and receives primary care (Keller, 2000). Underlying the process of an accurate interpretation are the parent's empathy for the child and freedom from distortion. The step from availability to responsiveness is especially marked by parental empathy for children's needs. Empathy is a universal human trait for which the neural basis was present early in human evolution (Hoffman, 1975). In addition, fostering positive infant emotions and sharing in these emotions is rewarding to parents, and motivates them to take care of their children and alleviate the children's distress. This makes parental empathy an important survival mechanism for the human species (Hrdy, 2009). The accuracy of parents' interpretation of the child's signals as well as the appropriateness of parental responses may be subject to cultural beliefs and customs (Bornstein et al., 1992; Harwood, Schölmerich, Ventura-Cook, Schulze, & Wilson, 1996; Keller & Otto, 2009). Cultural differences have been found in how caregivers respond to children's signals (Bornstein et al., 1992; Kärtner et al., 2008). For example, in response to infant signals, caregivers in independent socio-cultural contexts address the infant's sense of sight more often, whereas in interdependent contexts, the sense of touch is addressed more often (Kärtner et al., 2008). However, regardless of differences in the modality of the responses, the overall level of prompt responding (maternal contingency) is very similar across cultures (Kärtner, Keller, & Yovsi, 2010). Thus, availability and contingent responsiveness seem to be key elements of sensitive parenting across cultures. However, specific parenting behaviors (e.g., how exactly a mother responds) might differ between cultures.

Although there might be variations among cultures as to how parents interpret and respond to signals, and behave during parent–child interactions, their beliefs about the importance of the key elements (being available and responsive) may be similar

across cultures. The importance of sensitivity across cultures is also demonstrated by the fact that the associations between sensitivity and developmental outcomes, such as attachment quality and emotion regulation, appear to be the same across ethnic groups (e.g., Mesman, Van IJzendoorn, et al., 2012; Van IJzendoorn & Sagi-Schwartz, 2008). However, if different cultures have similar beliefs about sensitivity, why then did several studies report mean-level differences in sensitive behavior between cultures?

Socio-economic status is an important factor in explaining differences in sensitive parenting between and within ethnic groups (e.g., Bakermans-Kranenburg, Van IJzendoorn, & Kroonenberg, 2004; Bocknek, Brophy-Herb, & Banerjee, 2009; Yaman, Mesman, Van IJzendoorn, Bakermans- Kranenburg, et al., 2010). A possible explanation for the association between socioeconomic status and sensitivity can be found in the Family Stress Model (Conger & Donnellan, 2007). The model describes that stressors such as socio-economic strains lead to family stress (e.g., depression and family dysfunction), which in turn leads to non-optimal parenting (e.g., lack of warmth and support). In most countries there is substantial covariation between ethnic minority status and low socio-economic status, and they both predict lower parental sensitivity. In line with the Family Stress Model, the link between minority status and sensitivity disappears or becomes substantially smaller when socio-economic status is controlled for (Mesman, Van IJzendoorn, et al., 2012). This finding suggests that socio-economic status plays an important role in explaining sensitivity differences between minority and majority ethnic groups. However, there are several studies in which researchers correct for educational level and still find differences in sensitivity between ethnic groups (Spiker et al., 1993; Van IJzendoorn, 1990; Yaman, Mesman, Van IJzendoorn, Bakermans- Kranenburg, et al., 2010). There is some evidence to suggest that other stressors could also play a role.

In addition to socio-economic stress, minority families have been found to experience more other family stressors than majority families, such as higher rates of teenage motherhood, single parenthood, marital discord, and general daily stress (e.g., Platt, 2007; SCP, 2009; Yaman, Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2010). Family stressors in turn have been found to negatively influence parenting competence (e.g., Berlin, Brady-Smith, & Brooks-Gunn, 2002; Mistry, Biesanz, Chien, Howes, & Benner, 2008). Hence in addition to stress due to socio-economic disadvantage, stress due to family disadvantage needs to be taken into account when explaining lower parenting quality in ethnic minority families. It is important to note that the Family Stress Model suggests that stress is one of the most important factors in explaining inadequate parenting behavior, but there is as yet no reason to believe that parents in at-risk families hold different beliefs about sensitivity compared to parents in other families. Beliefs about the

importance and nature of sensitivity may be similar across groups, but stressful circumstances may make it far more challenging to behave according to those beliefs in daily life.

To test the hypothesis that different ethnic groups converge in their beliefs about sensitivity, the study focused on families with a Turkish and Moroccan background in the Netherlands. They represent the two largest ethnic minority groups in the Netherlands and their population in the Netherlands is still increasing, which is mostly due to the increase of the second generation (Distelbrink & Hooghiemstra, 2005). The Turkish and Moroccan immigrants first came to the Netherlands as invited guest workers around the 1960s. They intended to return to their countries of origin, but many stayed in the Netherlands. Both the Turkish and the Moroccan minority groups in the Netherlands are overrepresented in the lower socio-economic classes. In terms of culture, Turks and Moroccans have a collectivistic background in which parenting goals such as obedience are considered more desirable than in the individualistic Dutch culture (Harwood et al., 1996; Phalet & Schönpflug, 2001; Willemsen & Van de Vijver, 1997). First- and second-generation immigrants identify themselves more with their own ethnic culture than with that of the host society (Phinney, Horenczyk, Liebkind, & Vedder, 2001). About 30 to 40% of first-generation and 10 to 20% of second-generation Turkish and Moroccan immigrants are never in contact with members of the Dutch majority in their leisure time. Both groups are mostly in contact with persons with a similar ethnic background and Turkish and Moroccan ethnic minorities rarely marry Dutch majority group members, but generally marry within their own ethnic group (SCP, 2009, 2011). It is then not surprising that the Turks and Moroccans are generally viewed as culturally different from the Dutch majority group as judged by themselves as well as by the majority (Verkuyten, Hagendoorn, & Masson, 1996).

The few studies on Turkish minority families with young children in the Netherlands have shown that Turkish mothers behave less sensitively than Dutch mothers (Leseman & Van den Boom, 1999; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, et al., 2010). There are no observational studies on sensitivity among Moroccans in the Netherlands. By including two immigrant groups and three Dutch groups from three educational levels (low, middle, high), this study can provide not only a comparison of two different minority groups, but also compare these groups with native Dutch groups with different socio-economic backgrounds.

Our study's design was modeled after the widely cited study by Posada and colleagues (1995) in which mother's descriptions of an ideal child in terms of secure base behavior were compared across seven countries representing different sociocultural contexts using the Attachment Q-Set (Waters, 1987). For all countries, mothers' descriptions

of the ideal child were consistent with behavioral patterns that are considered as indicative of security by US experts. Despite socio-economic differences between the samples, mothers from each of the seven countries preferred children who see their mothers as a safe haven and who show a balance between exploration and proximity seeking.

Whereas Posada and colleagues investigated beliefs about the child's contribution to a secure attachment relationship (secure base behavior), our study aims to examine beliefs about the caregiver's contribution to this relationship (i.e., sensitive parenting). In addition, in the Posada et al. study mothers from different countries were included, whereas this study includes mothers from different ethnic groups within one country.

In line with the Posada et al. study, this study uses a Q-Sort method originally developed as an observational instrument, but utilized as a measure of parental beliefs about specific behaviors. Pederson and Moran (1995, 1996) developed the Maternal Behavior Q-Sort (MBQS), which is a home observation-based description of maternal behavior. The set provides descriptions of a mother's tendency to detect and recognize signals or situations that might require her response, and to respond promptly and appropriately (Pederson et al., 1990). The items of the MBQS are anchored in the descriptions of Mary Ainsworth and colleagues (Ainsworth et al., 1978). Maternal behavior measured with the MBQS has been associated with other measures of maternal sensitivity, such as the Ainsworth scales (Moran, Pederson, Pettit, & Krupka, 1992) and with attachment security (e.g., Baily, Moran, Pederson, & Bento, 2007; Van IJzendoorn, Vereijken, Bakermans-Kranenburg, & Riksen-Walraven, 2004). Given the universal nature of the key components of sensitivity and based on the findings by Posada et al. about the cross-cultural relevance of attachment-related child behavior, this study hypothesizes that the beliefs about an ideal sensitive mother are very similar across different cultural and socio-economic groups.

Method

Sample and procedure

A total of 75 mothers with at least one child between the ages of 6 months and 6 years participated. The sample consisted of five subsamples of 15 mothers: Moroccan immigrant, Turkish immigrant, Dutch low educational level (vocational school or lower), Dutch middle educational level (secondary school, middle vocational education) and Dutch high educational level (high vocational education, university or higher). To ensure the homogeneity of the immigrant sample and to make sure that all mothers followed at least some years of education in the Netherlands and were able to speak and read Dutch,

only second-generation immigrant mothers born in the Netherlands (both of their parents were born in their country of origin) or first generation immigrant mothers who migrated to the Netherlands before the age of 11 years were included. The Moroccan and Turkish mothers, as well as the Dutch high-educated mothers were recruited by giving verbal information and an information letter about the goal of the study to any potential participant within the authors' network. Dutch low and middle-educated mothers were recruited from a sample of a previous observational study on early childhood parenting conducted by our research team. In that study no measure or treatment was used that could have influenced participants' views of the ideal mother. Thirty-two of these Dutch mothers were informed about the present study and asked to participate, of whom 15 low-educated and 15 middle-educated mothers agreed. The number of children of participating mothers ranged from one to five, with an average of two children. The mother's average age was 32 years (*SD* = 4.97, *range* = 23-46). All mothers gave written consent and were visited at home by one of five trained students (undergraduate and graduate). The home visit was conducted in the Dutch language. All mothers indicated that their spoken Dutch language ability was fluent (n = 72) or sufficient (n = 3).

Measures

Maternal view of the ideal sensitive mother

The maternal views of the ideal sensitive mother were assessed using the Maternal Behavior Q-Sort (MBQS; Pederson et al., 1999). The MBQS consists of 90 cards with statements about maternal behaviors that the mothers sorted into 9 stacks from '*least descriptive*' (1) to '*most descriptive*' (9) of the ideal mother. Because the original items were designed to be evaluated by professionals rather than mothers, the behavioral descriptions were simplified for the present study to make them more understandable for (low educated) mothers. For example, the item *"Provides B with little opportunity to contribute to the interaction"* was simplified into *"Gives her child little opportunity to play along or to respond"*. The mothers were first asked to sort the cards into 3 stacks from '*do not fit the ideal mother at all*' to *'fit the ideal mother really well'*. The mothers were explicitly told that there are no correct or wrong answers and that it is not about their own parenting behavior, but about what the ideal mother should or should not do. Any question they had concerning the meaning of an item was answered according to the item explanations in the protocol. When the mothers distributed the cards across the three stacks, they were asked to sort each stack into 3 smaller stacks. After the mothers distributed all cards across 9 stacks, they were asked to evenly distribute the cards across the stacks until each stack consisted of 10 cards.

Sensitivity belief scores were derived by correlating the resulting profiles with the criterion sort provided by the authors of the MBQS (Pederson et al., 1999), because this is the standard criterion sort that has been used in previous research. Within the subgroups there were no mothers with outlying sensitivity belief scores. Within the Moroccan, Turkish and Dutch groups the *z*-scores of their 90-items MBQS sensitivity beliefs scores were all between -3.29 and 3.29.

Ten Dutch academic experts provided sorts of the ideal sensitive mother. These experts were all very familiar with attachment theory and research and each had extensive experience with coding parent-child interactions. The correlation between the composite sort of the experts (the average of the experts) and the criterion sort was .94 and their individual sensitivity scores were very high (M = .88, *range* .86-.90). In addition, we computed a Dutch criterion sort that showed to be very similar to the criterion sort provided by the Canadian authors of the MBQS (r = .93).

Religion in child rearing

The importance of religion in child rearing was measured with 4 self-developed items. The answer categories ranged from (1) '*totally disagree*' to (5) '*totally agree*'. An example of an item is *"I use my religion as a guideline for the parenting of my child"*. A total score was computed by summing item scores. The internal consistency of the scale was high (Cronbach's α = .94).

Educational level and family income

Educational level was measured on a scale from 1 to 5: *primary school* (1), *vocational school* (2), *secondary school/middle vocational education* (3), *high vocational education* (4) and *university or higher* (5). Annual gross family income was measured on a 7-point scale ranging from (1) '*no income*' to (7) '*50.000 euro or more*'.

Results

Similarities and differences between groups

Using analysis of variance we tested whether there were significant differences between groups in background variables and sensitivity belief score. For post hoc comparisons Games and Howell's test for unequal variance and sample size was used for religion in child rearing and LSD tests were used for the other variables (Table 1). Considering educational level, Turkish and Moroccan mothers were most similar to Dutch middle-educated

mothers. The mean educational level of Turkish and Moroccan mothers was higher than that of Dutch low-educated mothers and lower than that of Dutch high-educated mothers, $F(4,70) = 39.50$, $p < .001$. The family income of Turkish mothers was lower than that of all other groups and Dutch high-educated mothers had a higher family income than all other groups, $F(4,70) = 8.60$, $p < .001$. Moroccan mothers were younger than Dutch high-educated mothers. Turkish mothers and Dutch low-educated mothers were younger than Dutch middle-educated mothers and Dutch high-educated mothers, $F(4,70) = 6.40$, $p < .001$. The groups were similar in average number of children. Among religious mothers, Dutch high-educated mothers found religion less important in child rearing than Moroccan and Turkish mothers, $F(4,70) = 4.71$, $p < .01$. If non-religious mothers were included in analyses as well (score 0 on the religious child rearing scale), Moroccan and Turkish mothers were found to perceive religion more important in child rearing than Dutch low, middle and high-educated mothers, $F(4,70) = 11.33$, $p < .001$.

The mean sensitivity belief scores differed significantly between groups, $F(4,70) = 3.77$, $p < .01$. The views of Dutch high-educated mothers were significantly more similar to the MBQ criterion sort (provided by the authors of the MBQS) than those of Moroccan, Turkish, and Dutch middle-educated mothers. The views of Dutch low-educated mothers were significantly more similar to the MBQ criterion sort than the views of Moroccan mothers. When the total sample ($N = 75$) was split up into low ($n = 21$), middle ($n = 29$) and high-educated ($n = 25$) mothers, the mean sensitivity belief scores were also significantly different across groups, $F(2,72) = 6.02$, $p < .01$. High-educated mothers ($M = .77$, $SD = .04$, *range* = .71-.85) had views that were more similar to the views of the authors of the MBQS than low ($M = .72$, $SD = .10$, *range* = .41-.82) and middle-educated ($M = .71$, $SD = .04$, *range* = .61-.82) mothers. The higher the educational level of a group of mothers the smaller the range of sensitivity belief scores within the group. However, it is important to note that the mean sensitivity belief scores of all groups indicated a high similarity with the criterion sort.

Composite sorts of the ideal sensitive mother in the different groups

To test whether the mothers from the different groups define the ideal mother in a similar fashion, the fifteen sorts of each group and the ten sorts of the Dutch experts were averaged into a composite sort. Correlations were computed between the different composite sorts (Table 2). The correlations among mothers' composite sorts ranged from .95 to .98, indicating that the views of the ideal mother of the group as a whole were very similar across Moroccan, Turkish and Dutch low, middle, and high-educated mothers. The correlations between the composite sort of Dutch experts and mothers ranged from .86 to

Table 1. *Descriptives for Moroccan, Turkish, Dutch low-, Dutch middle-, and Dutch high-educated mothers*

	Moroccan	Turkish	Dutch low-	Dutch middle-	Dutch high-	*F*	*p*	*Post Hoc (LSD)*
Maternal educational level								
M (SD)	3.33 (0.82)	2.93 (0.88)	1.87 (0.35)	3.00 (0.00)	4.60 (0.51)	39.50	.000	Dl < M, T, Dm < Dh
Range	1-4	2-5	1-2	3	4-5			
Family income[a]								
M (SD)	4.92 (1.38)	3.92 (1.38)	4.84 (0.90)	5.13 (1.19)	6.47 (0.92)	8.60	.000	T < M, Dl, Dm < Dh
Range	2-7	2-7	3-6	3-7	4-7			
Maternal age								
M (SD)	32.20 (4.80)	29.80 (4.36)	29.20 (3.32)	34.20 (4.52)	35.93 (4.71)	6.40	.000	M < Dh; T, Dl < Dm, Dh
Range	23-40	23-39	25-35	26-41	28-46			
Number of children								
M (SD)	2.40 (1.06)	2.13 (0.74)	2.07 (0.26)	2.13 (0.35)	2.13 (0.83)	0.50	.738	
Range	1-5	1-3	2-3	2-3	1-4			
Religion in child rearing (whole sample)[b]								
M (SD)	17.00 (2.37)	18.17 (2.12)	6.93 (2.25)	8.20 (2.23)	5.07 (1.54)	11.33	.000	M, T > Dl, Dm, Dh[d]
Range	12-20	14-20	0-20	0-20	0-20			
Religion in child rearing (if religious)[c]								
M (SD)	17.00 (2.37)	18.17 (2.12)	14.86 (6.31)	15.38 (4.87)	10.86 (3.08)	4.71	.003	M, T > Dh[d]
Range	12-20	14-20	4-20	6-20	8-16			
Sensitivity belief score								
M (SD)	.70 (.09)	.71 (.07)	.75 (.04)	.72 (.03)	.78 (.05)	3.77	.008	Dh > M, T, Dm; Dl > M
Range	.41-.80	.51-.82	.67-.82	.67-.78	.71-.85			

[a] Moroccan $n = 12$, Turkish $n = 12$, Dutch low $n = 13$.
[b] Moroccan $n = 12$, Turkish $n = 12$, Dutch low $n = 15$, Dutch middle $n = 15$, Dutch high $n = 15$.
[c] Moroccan $n = 12$, Turkish $n = 12$, Dutch low $n = 7$, Dutch middle $n = 8$, Dutch high $n = 7$.
[d] Games and Howell post hoc comparison test for unequal sample size and variance.

.90, indicating that the experts' views of the ideal mother were also very similar to those of the Moroccan, Turkish and Dutch low, middle, and high-educated mothers. However, the correlations between the composite sorts of the different groups of mothers were significantly higher than the correlations between the composite sorts of mothers and the Dutch expert composite sort. Similar results were found if the total group was split up into low, middle, and high-educated mothers. Correlations among the composite sorts of low, middle, and high-educated mothers were all .98.

Table 2. *Pearson correlation coefficients among composite sorts*[a] *of the hypothetical ideal mother*

	Moroccan	Turkish	Dutch-L	Dutch-M	Dutch-H	Dutch experts
Moroccan						
Turkish	.97					
Dutch-L	.97	.96				
Dutch-M	.97	.96	.98			
Dutch-H	.96	.95	.97	.97		
Dutch experts	.88	.87	.88	.86	.90	

Note. Dutch-L = Dutch low-educated; Dutch-M = Dutch middle-educated; Dutch-H = Dutch high-educated.
[a] composite sort = the average sort per group.

Maternal view of the ideal sensitive mother within and across groups

We investigated whether mothers' views regarding maternal behavior of the ideal sensitive mother were more similar within than across groups. Correlations were computed between all pairs of mothers and Dutch experts' MBQS descriptions, both within and across subsamples. These correlations indicate the similarity between two profiles of the ideal mother. The correlations were converted into Fisher's *z*, averaged within and across samples and then converted back to correlations (see Posada et al., 1995). The within- and across-subsample means are presented in Table 3. The mean correlations of mothers' views of the ideal mother within groups (M = .77, *range* = .73-.81) were similar to the mean correlations across groups (M = .76, *range* = .73-.79). The same results were found if the total group of mothers was divided into three groups of low, middle, and high-educated mothers. If only the ethnic minority mothers were divided into three groups of low (n = 6), middle (n = 14) and high-educated (n = 10) mothers, the correlation ranges for the middle (M =.71, *range* = .54-.83) and high-educated (M =.81, *range* = .74-.87) ethnic minority mothers were smaller than the correlation range for the low-educated ethnic minority mothers (M =.65, *range* .28-.83).

The mean correlation within Dutch experts (M = .88, *range* = .80-.92) was some-

what higher than the mean correlations between experts and mothers (*M* = .73, *range* = .71-.77), but both indicated that the view about the ideal sensitive mother was highly similar both within Dutch experts and between Dutch experts and mothers.

Table 3. *Mean correlations among mother's and expert's 90-items Q-sort descriptions of the ideal mother both within (bold) and across groups*

	Moroccan	Turkish	Dutch-L	Dutch-M	Dutch-H	Dutch experts
Moroccan	**.73 (.24-.84)**					
Turkish	.73 (.28-.85)	**.74 (.48-.87)**				
Dutch-L	.76 (.30-.89)	.76 (.53-.89)	**.79 (.64-.90)**			
Dutch-M	.75 (.30-.88)	.75 (.52-.88)	.78 (.60-.89)	**.78 (.68-.86)**		
Dutch-H	.75 (.27-.90)	.75 (.53-.89)	.79 (.63-.90)	.78 (.60-.90)	**.81 (.70-.91)**	
Dutch experts	.71 (.31-.86)	.71 (.52-.87)	.74 (.62-.85)	.72 (.59-.85)	.77 (.63-.90)	**.88 (.80-.92)**

Note. Dutch-L = Dutch low-educated; Dutch-M = Dutch middle-educated; Dutch-H = Dutch high-educated.

Mothers' views of the ideal sensitive mother seemed highly similar both within and across different ethnic and socioeconomic groups. To test whether the same results hold for a short version of the MBQS, we followed the same procedure with the 25-item selection presented by Tarabulsy et al. (2009). The results indicated that the mean correlations of mothers' views of the ideal sensitive mother within groups (*M* = .82, *range* = .79-.84) were comparable to the mean correlations across groups (*M* = .81, *range* = .77-.84). Maternal views of the ideal mother were highly similar within and across groups for both the 25-item version and the 90-item version.

Differences across groups on item level

Although we found a high degree of similarity in maternal views of the ideal mother across groups, variability on item level may still be observed. Using analysis of variance we tested whether there were differences between the groups in how descriptive the mothers found each item for the ideal mother. Because of the large number of tests we chose a conservative significance level of $p < .01$. We found only six items that showed significant differences between groups. LSD tests were used for post hoc comparisons. The mean score on item 10 *"Speaks to her child directly and not just about her child"* was significantly lower for Turkish mothers than for mothers in all the other groups, indicating that the item was perceived as less descriptive for the ideal mother by the Turkish mothers, $F(4,70) = 5.16$, $p < .01$. Moroccan mothers scored significantly lower on item

14 *"Suddenly stops playing with her child to talk to a visitor"* than Dutch low, middle, and high-educated mothers and Turkish mothers scored lower than Dutch low and middle-educated mothers on this item, $F(4,70) = 5.34$, $p < .01$. On item 35 *"Finishes activities and games with her child properly so that her child is content"* the mean scores of the Turkish and Moroccan mothers were significantly higher than those of the Dutch low, middle, and high-educated mothers, $F(4,70) = 8.02$, $p < .001$. Turkish and Moroccan mothers scored significantly higher on item 63 *"Shows that she is aware of her child's distress but does not respond"* than Dutch low and high-educated mothers and Dutch middle-educated mothers scored higher than Dutch low-educated mothers on this item, $F(4,70) = 4.79$, $p < .01$. On item 70 *"Is so late in her responses, that it is not clear for the child what she is responding to",* the Moroccan mothers scored significantly higher than all the other groups, $F(4,70) = 4.42$, $p < .01$. The Dutch high-educated mothers scored higher than Turkish, Moroccan and Dutch middle-educated mothers on item 71 *"Joins in the focus of her child's attention"*, $F(4,70) = 3.72$, $p < .01$.

If the total group was divided into three groups of low, middle and high-educated mothers, only two items were found to be significantly different across groups. LSD tests were used for post hoc comparisons. Low-educated mothers found item 56 *"Has fixed ideas about how her child needs to be taken care of and always does these things the same way"* more important for the ideal mother than high-educated mothers, $F(2,72) = 5.70$, $p < .01$. High-educated mothers found item 71 *"Joins in the focus of her child's attention"* more important for the ideal mother than low and middle-educated mothers, $F(2,72) = 5.44$, $p < .01$.

Background variables and maternal views of the ideal mother

Although we found a high degree of similarity in maternal views of the ideal mother within and across groups, the sensitivity belief scores (the similarity between a mothers' profile and the criterion sort provided by the authors of the MBQS) were significantly different across groups, indicating that there was still a possibility for background variables to affect sensitivity belief scores. Table 4 presents bivariate correlations between background variables and sensitivity belief scores. Ethnic background was significantly correlated with sensitivity belief scores, $r(73) = -.31$, $p < .01$. When background variables (e.g., maternal education and family income) were not taken into account, ethnic minority mothers ($n = 30$) had lower sensitivity belief scores than Dutch mothers ($n = 45$). Maternal education and family income were also significantly correlated with sensitivity belief score. Higher educated mothers had a higher sensitivity belief score, $r(73) = .34$, $p < .01$. Higher income was associated with a higher sensitivity belief score, $r(65) = .35$,

$p < .01$. Maternal age and number of children were not associated with sensitivity belief score. Only the role of religion in child rearing among religious mothers was associated with sensitivity belief score. More religious mothers had lower sensitivity belief scores, $r(44) = -.29$, $p < .05$.

There were some significant correlations among background variables. Family income was significantly associated with ethnic background and maternal education. Minority mothers had lower family incomes, $r(65) = -.38$, $p < .01$, and higher educated mothers had higher family incomes, $r(65) = .51$, $p < .01$. Maternal age was significantly correlated with maternal education, family income and number of children, respectively, $r(73) = .32$, $p < .01$, $r(65) = .43$, $p < .01$, and $r(73) = .45$, $p < .01$. Religion in child rearing for the whole sample was correlated with ethnic background, $r(65) = .63$, $p < .01$. Minority mothers found religion more important in child rearing. For religious mothers only religion in child rearing was correlated with ethnic background, $r(44) = .45$, $p < .01$, and family income, $r(42) = -.35$, $p < .05$. More religious mothers were more often minority mothers and had lower family incomes.

Table 4. *Correlations between sensitivity belief score and background variables*

	1.	2.	3.	4.	5.	6.	7.	8.
1. Sensitivity belief score	-							
2. Ethnic background	-.31**	-						
3. Maternal educational level	.34**	-.01	-					
4. Family income[a]	.35**	-.38**	.51**	-				
5. Maternal age	.14	-.21	.32**	.43**	-			
6. Number of children	-.07	.11	-.02	.03	.45**	-		
7. Religion in child rearing (whole sample)[b]	-.13	.63**	-.10	-.22	-.04	.17	-	
8. Religion in child rearing (if religious)[c]	-.29*	.45**	-.26	-.35*	-.26	.06	-	-

[a] Ethnic minority $n = 24$, Dutch $n = 43$.
[b] Ethnic minority $n = 24$, Dutch $n = 45$.
[c] Ethnic minority $n = 24$, Dutch $n = 22$, for family income Dutch $n = 20$.
* $p < .05$. ** $p < .01$.

A hierarchical multiple regression analyses was conducted to test the contribution of maternal education and family income to sensitivity belief score independent of one another, to test whether ethnic background added a significant amount of variance to the prediction of sensitivity belief score above family income and maternal education, and whether there was an interaction effect between ethnic background and maternal educa-

tion and between ethnic background and family income. Family income and maternal education were centered, to reduce multicollinearity and to simplify the interpretation of the main effects. In the first step, maternal education and family income were entered, in the second step ethnic background was included, and in the third step the two interaction terms were added. There was a significant main effect of family income on sensitivity belief score, $\beta = .32$, $t(64) = 2.32$, $p < .05$. Corrected for family income, there was no effect of maternal education. Ethnic background did not add a significant amount of variance to the prediction of sensitivity belief score, $R^2_{change} = .03$, $F_{change}(1, 63) = 2.25$, $p > .05$. The interaction terms also did not add a significant amount of variance to the prediction of sensitivity belief score, $R^2_{change} = .01$, $F_{change}(2,61) = 0.30$, $p > .05$.

We tested whether family income was a significant mediator in the relation between ethnic background and sensitivity belief score (Table 5). There was a significant initial relation between ethnic background and sensitivity score of the ideal mother, $\beta = -.27$, $t(65) = -2.29$, $p < .05$. When income was included simultaneously with ethnic background in the second step of a hierarchical regression analysis, only family income was a significant predictor of sensitivity belief score, $\beta = .29$, $t(64) = 2.30$, $p < .05$. The relation was fully mediated by family income (Figure 1). A Sobel test (Sobel, 1982) confirmed that family income was a significant mediator in the relation between ethnic background and sensitivity score of the ideal mother ($z = -1.99$, $p < .05$).

Table 5. *Hierarchical multiple regression analysis testing family income as mediator in the relation between ethnic background and sensitivity belief score (N = 67)*

	B	*S.E.*	*β*	ΔR^2
Step 1				.07*
Ethnic background	-.03	.01	-.27*	
Step 2				.07*
Ethnic background	-.02	.01	-.16	
Family income	.01	.00	.29*	

* $p < .05$.

Since income was the main predictor of sensitivity belief score, we tested whether there were differences on the item level between mothers with a low ($n = 22$), middle ($n = 21$), and high ($n = 24$) income. We found only seven items that showed significant differences between groups ($p < .01$). Three of these seven items (items 10, 35, and 71) were already found to be significantly different across groups when the sample was divided into Moroccan, Turkish and Dutch low, middle, and high-educated mothers. The scores

on items 10 *"Speaks to her child directly and not just about her child"* and 49 *"Seeks contact with her child"* were significantly lower for mothers with a low income than for mothers with a middle and high income, respectively $F(2,64) = 6.94$, $p < .01$ and $F(2,64) = 5.08$, $p < .01$. Mothers with a low income found items 11 *"Speaks slowly and repeats the words if she talks to her child"* and 35 *"Finishes activities and games with her child properly so that her child is content"* more descriptive of the ideal mother than mothers with a middle and high income, respectively $F(2,64) = 5.63$, $p < .01$ and $F(2,64) = 6.86$, $p < .01$. Mothers with low and middle incomes scored significantly lower on items 71 *"Joins in the focus of her child's attention"* and 85 *"Suddenly interrupts things that she is doing with her child"* than mothers with high incomes, respectively $F(2,64) = 9.93$, $p < .001$ and $F(2,64) = 6.12$, $p < .01$. Mothers with a middle income scored higher than mothers with low and high incomes on item 78 *"Plays games together with her child"*, $F(2,64) = 5.19$, $p < .01$.

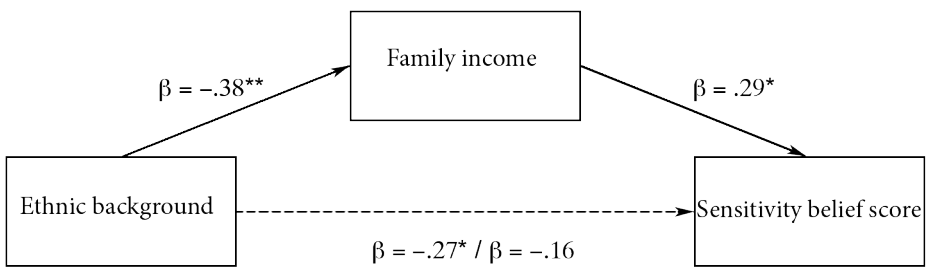

Figure 1. Family income fully mediates the relation between ethnic background and sensitivity belief score.

Discussion

Maternal views of the ideal sensitive mother were highly similar across cultural and socioeconomic groups. Few item level differences were found between the groups. Nevertheless, this study found that mothers' sensitivity beliefs were related to socioeconomic factors. The first evidence to support our hypothesis that the beliefs about an ideal sensitive mother are similar across different cultural *and* socioeconomic groups, was the average sensitivity scores of the ideal mother of Turkish, Moroccan, and Dutch low, middle, and high educated mothers. Although this study did find some differences between and within these groups, the mean sensitivity scores for descriptions of the ideal mother were high in each group, suggesting that across groups, mothers' views about sensitivity were consistent with behavioral patterns that are considered indicative of sensitivity by the au-

thors of the MBQS. Thus, the views about sensitive behavior across experts and mothers from different cultural and socioeconomic groups within the Netherlands are more similar than different. This is consistent with the finding by Posada and colleagues (1995) who reported that mothers' descriptions of the ideal child of different sociocultural groups were consistent with behavioral patterns that are considered as indicative of security by U.S. experts.

Other evidence to support our hypothesis was found in the correlations between composite sorts (average sorts) and in the within- and between-sample similarities among mothers' Q-sort descriptions. This study found high correlations between the composite sorts of the different groups. Also, consistent with our prediction, the similarity in descriptions of an ideal sensitive mother within groups was equal to the similarity in description between groups. This finding was the same when a short version of the MBQS by Tarabulsy and colleagues (2009) was used. By using the full and a short version of the MBQS, this study provided evidence for the (cultural) construct validity of both versions. Our findings suggest that, overall, the cultural and socioeconomic groups found the same behaviors important in the description of the ideal sensitive mother. This is in line with the conclusion of the recent literature review, which showed that it is unlikely that cultural factors are responsible for differences in sensitivity between minority and majority mothers (Mesman, Van IJzendoorn, et al., 2012).

It is also notable that the sensitivity profiles of Dutch experts were highly similar to the criterion sort provided by the authors of the MBQS, indicating that Dutch and Canadian experts define optimal sensitive parenting in the same way. Mothers' profiles were also similar to the Dutch experts' profiles, but the convergence within Dutch experts and within mothers was higher than the convergence between mothers and experts.

Responses on only 6 out of 90 items were significantly different between Moroccan, Turkish and Dutch low, middle, and high educated mothers. When the total group of mothers was divided into three groups of low, middle, and high-educated mothers, only 2 out of 90 items showed significantly different responses across groups. In addition, when the total group of mothers was divided into three income groups (low, middle, and high) only 7 out of 90 items were significantly different across groups. Thus, also on item level this study can conclude that the views of mothers on specific behavioral statements about sensitivity were very similar across different cultures and socioeconomic groups.

Although this study found only few differences on item level, there is evidence that there are cultural differences in the specific content or modality of parental responses (Fouts, Roopnarine, Lamb, & Evans, 2012; Kärtner et al., 2008). Our findings suggest that all participating mothers find it important to be responsive to a child's signals, but

the statements of the MBQS leave room for individual differences in the specific content of a mothers' behavior. For example, item 20 "*Responds well when her child is sad*" does not specify the specific content of mothers' response, but only that the child calms down in response to mothers' behavior. However, in Ainsworth's Maternal Sensitivity Scale (Ainsworth, Bell, & Stayton, 1974) is described that the appropriateness of the response should be mainly inferred from the outcome of mothers interventions. Thus, not the content of mother's response but the influence of mother's response on child's behavior is what is most important in maternal sensitivity. This means that parenting behaviors (and beliefs) may vary between persons in terms of the content of a response and that these differences do not necessarily mean that one response is less sensitive than another. The influence of the response on the behavior of the child is what is important in determining whether a response was appropriate (Mesman, Oster, & Camras, 2012).

Although this study found strong overlap between all mothers' and experts' views of the ideal mother, our final analyses revealed that the family income of minority mothers was lower which was in turn predictive of a lower sensitivity belief score. The relation between ethnic background (Dutch versus minority) and sensitivity belief scores was completely mediated by income and not by educational level. This illustrates the importance of including a variety of SES indicators in cross-cultural research. The fact that income is a significant mediator and a more important predictor than educational level seems to support the Family Stress Model (Conger & Donnellan, 2007) that proposes that economic strains lead to family stress, which in turn leads to less optimal parenting behavior (e.g., Berlin et al., 2002; Mistry et al., 2008). Contrary to our hypothesis, our findings suggest that economic strains do not only negatively affect sensitive *behavior*, they also negatively affects parenting *beliefs* about sensitivity. It may be that mothers from a lower socioeconomic background found it harder to separate ideal parenting from real parenting and relied more on their own parenting practices than on their beliefs about what an ideal mother would do, resulting in a view about the ideal mother that was less similar to that of experts. Another possibility is that lower educated mothers made sorting errors because of the complexity of the sorting task, which may also have resulted in views about the ideal mother that were less similar to those of experts. However, since this study found no outlying sensitivity belief scores within the groups, it is unlikely that mothers made many such errors. It is also possible that parents from lower socioeconomic backgrounds indeed have a less optimal view about an ideal mother, for example due to the stress that they experience. They might view their actual parenting behaviors as close to ideal under the present (stressful) circumstances. There is indeed evidence that parenting stress is related to parenting beliefs regarding the importance of sensitivity and

responsiveness (Respler-Herman, Mowder, Yasik, & Shamah, 2012).

To our knowledge, the relation between socioeconomic status, stress, beliefs about sensitivity and sensitive parenting has not yet been investigated. It would be interesting to test a mediating model in which economic strains affect stress and beliefs about sensitivity, which in turn affect sensitive behavior. The interaction of parenting beliefs and behaviors in the prediction of child development also deserves future investigation. For example, sensitive parenting has been found to be related to lower internalizing behavior problems only when mothers did not believe that spoiling a child was harmful (Barnett, Shanahan, Deng, Haskett, & Cox, 2010).

Several limitations of this study should be noted. First, a convenience sample was used and the sample size was small. Convenience sampling could imply a limited representation of the target population. The small sample size may have resulted in limited statistical power to detect interaction effects. For example, the combination of minority status and low socioeconomic status might have a double impact on parenting beliefs, just as they do on parenting practices (McLoyd, 1990; Weis & Toolis, 2008). In addition, the Turkish and Moroccan mothers were not selected on educational level. Since socioeconomic status is such an important factor in explaining between and within group differences, future research should distinguish different groups of socioeconomic status within the ethnic minority groups as well. It is also important to note that we compared different cultures and socioeconomic groups within one country. All minority mothers who were included in the present study were second-generation immigrants or first-generation immigrants who moved to the Netherlands before the age of 11. Minority members who immigrate at a younger age integrate more into the host society than immigrants who arrive at an older age (Martinovic, Tubergen, & Maas, 2009). Although the two minority groups and the Dutch group are viewed as culturally different from each other by themselves and by the other groups (Verkuyten et al., 1996), they have been living in the Netherlands for (almost) all of their lives. They may have maintained the family values and parenting practices of their heritage, but may also have adopted some values from the host society which might explain that their reported views are very similar to those of the majority group. Cross-country comparison of views about the ideal mother is necessary to investigate whether the views of Turkish and Moroccan mothers living in their countries of origin are just as similar to the views of Dutch mothers as the views of the two minority groups were. Furthermore, we only focused on mother's view of the ideal mother. Future research should include fathers as well.

Although the present study has some limitations and more research is necessary, it contributes to the argument that sensitive parenting is perceived as equally important

across groups that vary in cultural background. Our study did not reveal evidence that there are differences in sensitivity beliefs between ethnic groups within a country. Our results are informative for scientists as well as practitioners working with minority families by providing insight in the influence of cultural factors on maternal behavior. Our findings suggest that culture- specific measurement of maternal sensitivity is not required, at least not for cultural groups within the same country or context. This implies that the nature and focus of parenting interventions to promote sensitive parenting can be similar for minority and majority parents. In addition to (or as part of) such interventions, it seems important to try to reduce socioeconomic and other family stressors to improve sensitive parenting. Culture should not be considered as an explanatory factor in parenting behaviors without taking into account the broader socioeconomic context.

4

Socioeconomic status and parenting in ethnic minority families: Testing a minority Family Stress Model

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Abstract

According to the Family Stress Model (Conger & Donnellan, 2007), low socioeconomic status (SES) predicts less optimal parenting through family stress. Minority families generally come from lower SES backgrounds than majority families, and may experience additional stressors associated with their minority status such as acculturation stress. The primary goal of this study was to test a minority Family Stress Model with a general family stress pathway as well as a pathway specific for ethnic minority families. The sample consisted of 107 Turkish-Dutch mothers and their 5- to 6-year-old children and positive parenting was observed during a seven minute problem-solving task. In addition, mothers reported on their daily hassles, psychological distress, and acculturation stress. The relation between SES and positive parenting was partially mediated by both general maternal psychological stress and maternal acculturation stress. Our study contributes to the argument that stressors specific to minority status should be considered in addition to more general demographic and family stressors in understanding parenting behavior in ethnic minority families.

Keywords: positive parenting, psychological distress, acculturation stress, ethnic minority, socioeconomic status.

Introduction

The ability to correctly observe and interpret children's signals and to respond to those signals in a prompt and appropriate way, known as sensitive parenting, has been found to be lower in ethnic minority parents than majority parents (Fuligni et al., 2013; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, & Linting, 2010), but the link between minority status and parenting disappears or becomes substantially smaller when socioeconomic status is controlled for (Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2012). This is in line with the Family Stress Model (FSM; Conger & Donnellan, 2007) which posits that economic pressures increase parental stress, which in turn predicts lower quality parenting. However, in some studies differences in sensitive parenting behavior between minority and majority parents remain even after taking into account socioeconomic status (e.g., Berlin, Brady-Smith, & Brooks-Gunn, 2002; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, et al., 2010). It may be that ethnic minority families do not only experience heightened stress related to economic difficulties, but also experience stressors specific to their minority status (such as acculturation stress), which have also been found to negatively affect parenting quality (Leidy, Guerra, & Toro, 2010; Martinez, 2006). In the present study a minority Family Stress Model is tested, taking into account general family stress as well as stress that is specific to ethnic minority families in a sample of Turkish-Dutch mothers.

Across cultures, sensitive parenting in early childhood is among the most important predictors of a positive child development, namely cognitive ability, social behavior, and emotion regulation (Mesman et al., 2012). The broader construct of positive parenting includes constructs such as sensitivity, but also related parenting skills and characteristics such as scaffolding, respect for the child's autonomy, and positive affect. Higher SES has been found to be related to positive parenting, both in majority and minority groups (e.g., Bakermans-Kranenburg, Van IJzendoorn, & Kroonenberg, 2004; Berlin et al., 2002; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, et al., 2010). According to the FSM, stressors such as socioeconomic strains lead to psychological distress (e.g., depression and family dysfunction), which in turn leads to non-optimal parenting (e.g., lack of warmth and support). Several studies found support for this model (e.g., Belsky, Schlomer, & Ellis, 2012; Parke et al., 2004; White, Roosa, Weaver, & Nair, 2009). In most countries, ethnic minority families are overrepresented in the lower SES groups (Crul & Doomernik, 2003; Mesman et al., 2012), and in line with the FSM they have been found to experience more daily hassles and psychological distress than majority families (Stefanek, Strohmeier, Fandrem, & Spiel, 2012; Yaman, Mesman, Van IJzendoorn, & Bakermans-

Kranenburg, 2010). Daily hassles refer to the experience of stress related to daily life routines, such as house cleaning and maintenance, and unexpected minor events, such as being interrupted by unexpected company (Almeida, 2005; Kanner, Coyne, Schaefer, & Lazarus, 1981; Serido, Almeida, & Wethington, 2004). An individual's economic, social, and cognitive resources can make a person resilient or vulnerable to the experience of stress from daily hassles. For example, although higher educated individuals report more daily stressors, they have been found to react less strongly to daily stressors and experience these stressors as less severe than lower-educated individuals (Almeida, 2005; Grzywacz, Almeida, Neupert, & Ettner, 2004). Daily hassles are in turn positively related to psychological distress (e.g., Serido et al., 2004; Stefanek et al., 2012).

Factors and stressors other than SES, daily hassles, and psychological distress could also play a role in explaining differences in parenting behavior between minority and majority groups. Cultural differences in ideas about parenting are often viewed as possible explanations for observed differences in behavior between different cultural groups (Harwood, Schoelmerich, Schulze, & Gonzales, 1999; Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000). However, there is evidence to suggest that minority and majority families have highly similar views of the ideal sensitive mother (Emmen, Malda, Mesman, Ekmekci, & Van IJzendoorn, 2012). In addition, minority groups are very diverse in their cultural and religious background and lower average levels of sensitivity have been found in these diverse minority groups. It is thus unlikely that (only) cultural factors are responsible for the difference in parenting between minority and majority groups (Mesman et al., 2012). Rather than looking at culture as an explanatory variable in itself, it may be more helpful to examine contextual variables that are associated with ethnic minority status. In addition to general stressors, ethnic minority parents may experience stressors that are more directly related to their immigrant history, such as acculturation stress.

Acculturation is a process in which cognitions (e.g., cultural identity) and behaviors (e.g., ways of speaking, dressing and eating) of individuals may change due to intercultural contact. Berry's two-dimensional model of acculturation distinguishes the independent dimensions of maintaining one's heritage culture and having contact and participating in the dominant society (Berry, 2001, 2006). Acculturation stress is a reaction to events that occur during the process of acculturation, such as discomfort with unfamiliar norms, missing family members, and lack of social support (Leidy et al., 2010). Conflicting acculturation strategies between and within ethnic groups can also lead to acculturation stress. Acculturation preferences of majority and minority groups have been found to differ (Arends-Tóth & Van de Vijver, 2003; Piontkowski, Florack, Hoelker, &

Obdrzálek, 2000) and these differences can challenge individuals in their cultural norms, values, and behaviors, and thus in how they should live (Berry, 2006). Acculturation gaps between minority parents and children have also been identified (Kim, Chen, Li, Huang, & Moon, 2009; Martinez, 2006; Smokowski, Rose, & Bacallao, 2008). Children tend to be more engaged with the dominant society while the parent is more involved in the minority community, leading to differences in norms and behaviors between parent and child (García Coll & Pachter, 2002; Leidy et al., 2010). These differences can in turn lead to less optimal family functioning (Smokowski et al., 2008) and family (cultural) stress (Martinez, 2006).

Economic stress has been found to be positively related to acculturation stress (Stein, Gonzalez, & Huq, 2012; White et al., 2009). This association may be due to several mechanisms, such as a larger discrepancy between parental and child acculturation in lower SES ethnic minority families. Low-educated parents are less likely to participate in the broader society through work or other social networks (Conger & Donnellan, 2007), whereas children might get more acculturation opportunities in the school setting. Families from a lower SES background may also have fewer resources to deal with acculturation experiences (Berry, Kim, Minde, & Mok, 1987). In turn, acculturation stress has been found to be related to less positive parenting (Kim et al., 2009; Martinez, 2006). Only few studies have examined minority-specific stressors in relation to parenting practices and most of these studies focused on adolescents and did not include observed parenting practices. In one relevant study depressive symptoms mediated the relation between economic stress and parenting, but the role of acculturation stress (assessed by host language pressure) in the prediction of parenting showed inconsistent association patterns (White et al., 2009). In the current study the mediating role of both acculturation stress and general psychological distress in the relation between SES and observed positive parenting is examined in a Turkish-Dutch sample of young children and their mothers.

In the Netherlands, the Turkish represent the largest ethnic minority group and their population is still increasing, which is mostly due to the increase of the second generation (Distelbrink & Hooghiemstra, 2005). The Turkish first came to the Netherlands as invited guest workers around the 1960s. They intended to return to their country of origin, but many stayed in the Netherlands. The Turks have a collectivistic background in which values such as obedience and strong family ties are considered more desirable than in the individualistic Dutch culture (Phalet & Schönpflug, 2001). They have limited contact with members of the host society, prefer to marry within their own ethnic group and maintain their own ethnic language (Crul & Doomernik, 2003; SCP, 2009, 2011) and

these factors limit integration. In the Netherlands, the Turkish minority group, compared to the Moroccan minority group, remains more traditional in their norms and values (Crul & Doomernik, 2003). Acculturation stress has been found to occur in second-generation immigrants (e.g., Crockett et al., 2007), and there is evidence for diverging acculturation preferences between the Dutch majority and the Turkish minority (Arends-Tóth & Van de Vijver, 2003). Turkish minority mothers with young children in the Netherlands have been found to behave less sensitively than Dutch majority mothers (Leseman & Van den Boom, 1999; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, et al., 2010), although it is important to note that maternal age and education partially accounted for the difference in parenting between these groups (Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, et al., 2010).

In the present study positive parenting is defined as (1) the amount of positive affect and appropriate responsiveness of the mother towards the child (sensitivity), (2) the extent to which the mother provides helpful guidance and suggestions according to the needs of the child (structuring), and (3) the mother's ability to refrain from intrusions on the child's autonomy (nonintrusiveness). Across cultures, early parenting qualities belong to the most important predictors of positive child development, namely cognitive development, social behavior, and emotion regulation (Mesman et al., 2012). The experience of positive parenting during early childhood is also an important predictor of later child and adolescent development (Carlson, Sroufe, & Egeland, 2004; Jaffari-Bimmel, Juffer, Van IJzendoorn, Bakermans-Kranenburg, & Mooijaart, 2006). In addition, parenting experiences during early childhood affect children's own parenting qualities in adulthood (Belsky, Sligo, Jaffee, Woodward, & Silva, 2005). It is thus important to investigate which factors contribute to positive parenting in early childhood, especially in minority families since they have been found to be at risk for non-optimal parenting compared to majority families (e.g., Fuligni et al., 2013; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, et al., 2010). The present study tests the hypothesis that both maternal psychological distress and maternal acculturation stress mediate the relation between family SES and maternal positive parenting. In addition, it is hypothesized that the extent to which mothers experience daily stress mediates the relation between SES of the family and maternal psychological distress. The study is unique in its focus on both general psychological distress and acculturation stress, the focus on families with young children (rather than adolescents) and the use of observational measures of parenting (rather than self reports).

Method

Sample and procedure

The sample consisted of 107 Turkish minority mothers in the Netherlands and their 5- to 6-year-old children (M = 6.10, SD = 0.32). To ensure the homogeneity of the immigrant sample and to make sure that all mothers had at least some years of education in the Netherlands, only second-generation immigrant mothers born in the Netherlands (with at least one of their parents born in Turkey) and first generation immigrant mothers who migrated to the Netherlands before the age of 11 years were included. All children were in the 2nd year of Dutch primary school (which corresponds to the kindergarten year in the U.S.) at the time of the home visit. The mothers were recruited from municipal registers of several cities and towns in the western and middle region of the Netherlands. In total, 639 families were reached of whom 113 (18%) agreed to participate. Six (7%) of these 113 mothers were not included in the present study, because they did not give consent for the video-observation of mother-child interaction. A subgroup of mothers who did not want to participate (n = 151) provided some general information about their families by filling out a form. These families did not differ significantly from the participating families in age of father, mother, and child, child gender, country of birth of mother and father, mother's marital status, and family situation (*ps* .12 to .83).

All participating mothers gave written consent for their families' participation. Both parents first completed a questionnaire that they received by regular mail. Then, mother and child participated in a two-hour home visit by two trained (under)graduate students, which included another questionnaire for mother, an interview with mother, child testing, and videotaping mother-child interactions. The home visit was conducted in Dutch, but instruction cards for the video observation and the questionnaires for the parents were available in both Dutch and Turkish. Most mothers indicated that they understood Dutch very well (91%) and they evaluated their own spoken Dutch language ability as very good (92%). All questionnaires were available in both Dutch and Turkish language. Questionnaires for which no Dutch or Turkish versions were available, were translated from English into Dutch and Turkish and back-translated to ensure correct wording. Most mothers (91%) chose to complete the Dutch version of the questionnaire.

The children had a mean age of 6.10 years (SD = 0.32) at the time of the home visit. Forty-two percent of the sample consisted of boys. The mothers' average age was 33 years (SD = 4.19, *range* = 24-43). Thirty-one percent of the mothers were born in Turkey and migrated to the Netherlands at a mean age of 5.06 years (SD = 3.04). Most children lived in two-parent families with both their biological parents (92%). The majority of the

children had one sibling (60%), and 30% had two or more siblings. Fifty-seven percent of the children were firstborns.

Measures

Socioeconomic status (SES)

Family SES was based on gross annual family income and the highest completed educational level of both parents. Gross annual family income was measured on a 7-point scale ranging from (1) *no income* to (7) *50,000 euro or more*. Parents' highest completed educational level was measured on a 7-point scale from (1) *no qualification* to (7) *university level degree*. Because this study is part of a larger international study, the educational categories were recoded into the International Standard Classification of Education (ISCED; UNESCO, 2011). Factor analysis showed that gross annual family income and maternal and paternal education loaded on one single factor (loadings of respectively .80, .83, and .78). SES was computed as the mean of the standardized scores of income and educational level of both parents. For single mother families (8%), mother's educational level was counted twice.

Daily hassles

Thirteen items from the Daily Hassles questionnaire were used to assess the experience of hassles in daily life (Kanner et al., 1981). These 13 items were selected based on the outcome of a Principal Component Analyses (PCA) and reliability analyses in a Turkish-Dutch immigrant sample (Yaman, Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2010). Mothers were asked to rate the intensity of their hassles, such as house cleaning or maintenance, on a 5-point scale from (1) *no hassle* to (5) *big hassle*. If mothers indicated that they did not experience the hassle, the item was coded as 0. The average of 13 items was computed. The internal consistency of the scale was adequate (Cronbach's $\alpha = .79$).

Acculturation stress

Maternal acculturation stress was measured with six items from the Ingroup and Outgroup Acculturation Hassles Scale that was developed for the Youth, Culture, and Competence (YCC) study (Oppedal, 2006). In the development of the scale the items from two acculturation hassles scales (Lay & Nguyen, 1998; Vinokurov, Trickett, & Birman, 2002) were discussed in focus groups with immigrant and refugee mothers and secondary school students with different national origins, addressing problems associated with the acculturation process both within the cultural context of the majority society and within the heritage cultural context. The final version of the scale comprised of items

that most participants agreed occurred frequently, were stressful, and they themselves or somebody they were close to had experienced. Mothers were asked to rate how much of a burden the stated events had been during the last 12 months. Examples of items are *"You have been frustrated because you don't understand Dutch ways of thinking and behaving"*, *"Your child behaves too much like Dutch children and adolescents"*, and *"You miss friends and family living in Turkey"*. Answer categories ranged from (1) *not a burden* to (4) *very much a burden*. If mothers indicated they did not experience the event, the item was coded as 1. The six items loaded on a single factor and explained 42% of the total variance (factor loadings ranged from .37 to .80).The average of six items was computed. The internal consistency of the scale was adequate (Cronbach's α = .72).

Psychological distress

Maternal psychological distress was based on depressive symptoms and life dissatisfaction. Maternal depressive symptoms were measured using a Dutch translation of the 10-item short form of the Center for Epidemiologic Studies Depression Scale (CES-D; Andresen, Malmgren, Carter, & Patrick, 1994; Hanewald, 1987; Radloff, 1977). Mothers were asked to indicate for each statement (e.g., *"I felt depressed"*) how often they felt or behaved that way during the past week from (1) *rarely or none of the time (less than 1 day)* to (4) *all of the time (5-7 days)*. The total score consisted of the average of 10 items. The internal consistency of the scale was adequate (Cronbach's α = .78).

To measure maternal life dissatisfaction we used reversed scores of a Dutch translation of the Satisfaction With Life Scale (SWLS; Arrindell, Heesink, & Feij, 1999; Diener, Emmons, Larsen, & Griffin, 1985). The SWLS consists of five statements which are rated on a scale from (1) *strongly disagree* to (7) *strongly agree*. An example of a statement is *"In most ways my life is close to my ideal"*. The total score on life dissatisfaction consisted of the average of five items. The internal consistency of the scale was high (Cronbach's α = .94). Maternal depressive symptoms were positively related to maternal life dissatisfaction, $r(105) = .40$, $p < .001$. Maternal psychological distress was computed as the sum of the standardized scores of maternal depressive symptoms and maternal life dissatisfaction.

Positive parenting

The fourth edition of the Emotional Availability Scales (EA Scales; Biringen, 2008) was used to measure positive parenting of mothers towards their child during a seven minute problem-solving task. The mother and child were asked to use a set of wooden blocks to copy two different structures (a chair and a house) from example pictures. The two

structures were somewhat too difficult considering the age of the child. The mother was instructed to help her child as she would normally do. The adult dimensions Sensitivity, Structuring, and Nonintrusiveness were coded. Sensitivity reflects the amount of positive affect and appropriate responsiveness of the mother towards the child. Structuring measures the extent to which the mother provides helpful guidance and suggestions according to the needs of the child. Nonintrusiveness refers to the mother's ability to refrain from intrusions on the child's autonomy. Each dimension is divided into seven subscales, of which the first two subscales are coded on a 7-point Likert scale and the other subscales on a 3-point Likert scale. The third author, who is an experienced coder of parent-child interactions, completed the online training provided by Zeynep Biringen and then trained a team of coders. During this training, some subscales led to persistent interpretation problems resulting in adjustments to improve intercoder agreement. Three types of adjustments were made: (1) subjective criteria were removed, (2) scorings of some subscales were changed to make them more linear, and (3) overlap between the dimensions was removed to improve their independence. For example *'a healthy and secure connection'* on subscale 1 (Affect) of the Sensitivity dimension was removed (adjustment type 1). On the same subscale the difference in behavioral descriptions between scores 6 (bland, neutral affect most of the time) and 7 (balanced, genuine, congruent, relaxed, low-keyed, gentle, soft spoken OR animated in appropriate ways, clear enjoyment of child) was much larger than the differences between other scores on this subscale. The descriptions were changed so that score 6 refers to behavior that is the same as for score 7, but somewhat more neutral or less positive (adjustment type 2). An example of the third type of adjustment is that the criterion that a high score on Nonintrusiveness can only be given when the adult *"lets the child lead and follows the child"* was dropped. This criterion includes both nonintrusiveness (*"lets the child lead"*) and sensitivity (*"follows the child"*), and would not allow for the option to code a very passive parent as highly nonintrusive. The corresponding author can be contacted for more details about the adjustments that were made.

To investigate the factor structure of the EA Scales, a Principal Component Analysis (PCA) with promax (oblique) rotation was performed on all subscales, excluding four subscales with very little variance, and another two subscales because they measure child behavior instead of parental behavior. The PCA revealed three clear components, explaining 63.5% of the total variance. Component 1 (labeled as Sensitivity) consisted of four subscales (1, 2, 4, and 6) of the original Sensitivity dimension. Component 2 (labeled as Structuring) consisted of three subscales (1, 3, and 6) of the original Structuring dimension and subscale three of the original Sensitivity dimension. The last compo-

nent (labeled as Nonintrusiveness) consisted of the first six original Nonintrusiveness subscales. Cronbach's alphas of the new Sensitivity, Structuring and Nonintrusiveness scales were respectively .75, .79, and .79. Subscale 5 of the original sensitivity subscale was excluded because the factor loadings were below .35 on all three components and there was also little variation in scores on this subscale (91% of mothers had the highest score on this subscale). Positive parenting was computed as the mean of the standardized scores of the three EA dimensions. Factor analysis showed that Sensitivity, Structuring, and Nonintrusiveness loaded highly on one single factor (loadings of .88, .86, and .81 respectively).

A team of four coders (who did not visit the mother during data collection) rated the videotapes on the EA dimensions. All coders successfully completed a reliability set of 27 videotapes. For the original emotional availability dimensions the intraclass correlation coefficients (absolute agreement) ranged from .60 to .79 (M = .72) for Sensitivity, from .76 to .89 (M = .83) for Structuring, and from .64 to .90 (M = .75) for Nonintrusiveness. For the new scales the intraclass correlation coefficients ranged from .67 to .84 (M = .76) for Sensitivity, from .76 to .83 (M = .79) for Structuring, and from .64 to .89 (M = .75) for Nonintrusiveness.

Results

Preliminary analyses

Descriptive statistics of the main variables of the original dataset are presented in Table 1. Missing data were estimated with multiple (5-fold) imputations based on predictive mean matching. This procedure assumes that the missing data are missing at random (Van Buuren, 2012). The imputation model was based on background variables (child's gender and age and maternal age) and all the variables in the proposed Family Stress Model. The percentage of missing data for the final sample ranged from 0% (EA Scales) to 14% (Family income). All variables were inspected for possible outliers that were defined as values larger than 3.29 *SD* above or below the mean. There was one outlier on acculturation stress which was winsorized to be higher than the next highest value that was not yet an outlier (Tabachnick & Fidell, 2001). Acculturation stress and life dissatisfaction were positively skewed and were therefore transformed with a base-10 logarithmic and a square root transformation, respectively.

Table 1. *Descriptive statistics of SES, acculturation stress, psychological distress, and positive parenting*

	N	*Range*	*M*	*(SD)*
Family SES	91	-1.60 – 1.35	0.04	(0.81)
Family annual gross income	92	2 – 7	4.96	(1.60)
Mother's highest education	107	0 – 5	3.16	(1.24)
Father's highest education	102	0 – 5	3.22	(1.38)
Daily hassles	95	0 – 3.54	1.85	(0.60)
Acculturation stress	105	1 – 4	1.55	(0.57)
Psychological distress	89	-2.79 – 3.09	-0.06	(1.64)
Depressive symptoms	103	1 – 2.80	1.57	(0.42)
Life dissatisfaction	92	1 – 7	2.87	(1.55)
Positive parenting	107	-1.99 – 1.72	0.00	(0.85)
Sensitivity	107	8 – 20	14.62	(2.67)
Structuring	107	5 – 16	11.86	(2.63)
Nonintrusiveness	107	8 – 25	18.29	(3.63)

Table 2 presents the pooled bivariate correlations between the main variables of the five imputed datasets. Lower SES was related to more maternal acculturation stress, more maternal psychological distress, and less positive parenting. Family SES was not significantly related to daily hassles. More daily hassles were related to higher maternal psychological distress, but not to maternal acculturation stress and positive parenting. Higher maternal acculturation stress and higher maternal psychological distress were both significantly related to lower maternal positive parenting. There was no significant relation between maternal acculturation stress and maternal psychological distress.

Table 2. *Correlations between SES, acculturation stress, psychological distress, and positive parenting (pooled result of 5 imputed datasets)*

	1.	2.	3.	4.	5.
1. Family SES	-				
2. Daily hassles	.02	-			
3. Acculturation stress	-.21*	.06	-		
4. Psychological distress	-.22*	.30**	.00	-	
5. Positive Parenting	.33**	-.07	-.24*	-.29**	-

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

Testing the minority Family Stress Model

Structural equation modeling (SEM) with EQS 6.1 (Bentler, 2001) was used to test the minority Family Stress Model with a general family stress pathway (SES to daily hassles to maternal psychological distress to positive parenting) as well as a pathway specific for ethnic minority families (SES to maternal acculturation stress to positive parenting). The model is presented in Figure 1. Pooled *p*-values were calculated of path coefficients according to Rubin (1987). Standardized coefficients and fit-indices were averaged across imputed data sets. SEM analysis showed that the model fitted the data well (χ^2 (3) = 1.81, p = .63, NFI = .96, CFI = 1.00, RMSEA < .001). Both maternal acculturation stress and maternal psychological distress significantly mediated the relation between SES and positive parenting. The direct path from SES to maternal positive parenting was also significant.

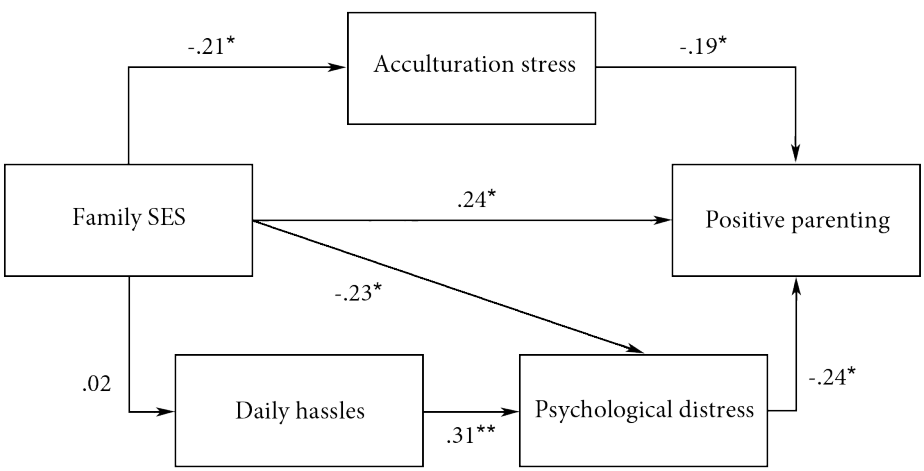

Figure 1. Minority Family Stress Model.
* p < .05. ** p < .01.

The path from daily hassles to psychological distress was significant. However, daily hassles did not mediate the relationship between family SES and psychological distress, since the path from family SES to daily hassles was not significant. Daily hassles was therefore dropped from the model to make the model more parsimonious. The new model also fitted the data well (χ^2 (1) = 0.34, p = .64, NFI = .99, CFI = 1.00, RMSEA < .001). Both maternal acculturation stress and maternal psychological distress significantly mediated the relation between SES and positive parenting. The direct path from SES to maternal positive parenting was also significant (Figure 2). Higher SES was related to more positive

parenting. In addition, higher SES was related to less acculturation stress and less psychological distress, which were in turn also related to more positive parenting. The total and specific indirect effects were bootstrapped using Preacher and Hayes (2008) macro package for SPSS. The bootstrap estimates were based on 5000 bootstrap samples. The results were comparable to the results in EQS and showed that the two specific indirect effects through acculturation stress and general psychological distress were significant and equal.

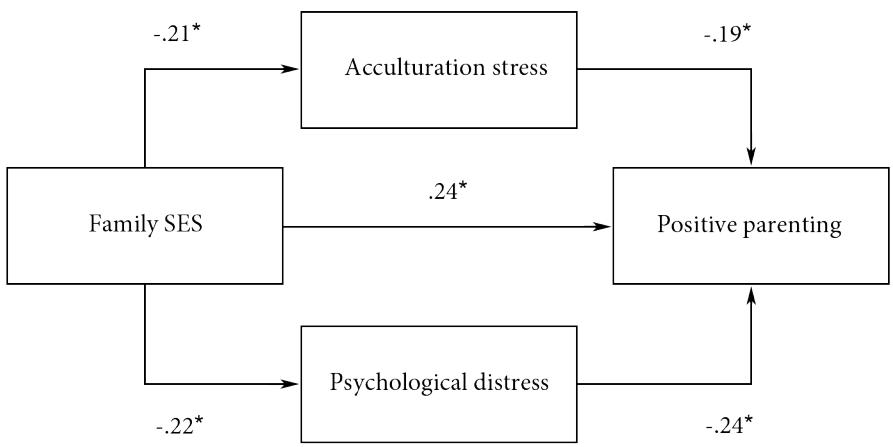

Figure 2. Final minority Family Stress Model (without daily hassles).
* $p < .05$.

Discussion

The present study tested a minority Family Stress Model with a general family stress pathway as well as a pathway specific for ethnic minority families. The relation between SES and positive parenting was partially mediated by both general psychological stress and acculturation stress.

In line with our hypothesis, lower SES was related to more psychological distress and more acculturation stress, which were both in turn related to less positive parenting. These findings support the general FSM that proposes that economic strains lead to family stress, which in turn leads to less optimal parenting behavior (Conger & Donnellan, 2007). Several other studies found support for the relations between SES, psychological distress, and parenting (e.g., Belsky et al., 2012; Parke et al., 2004; White et al., 2009) and for the relations between SES, acculturation stress, and parenting (Kim et al., 2009; Mar-

tinez, 2006; Stein et al., 2012; White et al., 2009). To the best of our knowledge, our study is the first to investigate the unique contribution of acculturation stress above general psychological stress in the prediction of observed positive parenting. In our study acculturation stress and general psychological distress only partially mediated the relation between SES and positive parenting. This suggests that there may be additional mediating and moderating effects or independent predictors of positive parenting, such as teenage motherhood, single parenthood, number of children, neighborhood quality, marital discord, social support, discrimination, and parenting beliefs (e.g., Berlin et al., 2002; Conger et al., 2002; Davis-Kean, 2005; McConnell, Breitkreuz, & Savage, 2011; Murry, Brown, Brody, Cutrona, & Simons, 2001; Pinderhughes et al., 2000). Future research is necessary to investigate the unique contribution and role of each predictor in addition to other predictors of positive parenting.

In line with previous research (e.g., Serido et al., 2004; Stefanek et al., 2012), daily hassles were positively related to psychological distress. However, in contrast to our hypothesis, SES was unrelated to daily hassles (measured as the extent to which a person experienced hassles as a burden). Previous research has shown that higher educated individuals report more daily stressors, but they experience these stressors as less severe than lower-educated individuals (Grzywacz et al., 2004). A possible explanation for the fact that the present study showed no relation between SES and daily hassles may be that the enduring stressors that our sample faces due to their ethnic background mask the systematic variation in daily hassles due to socioeconomic disadvantage (Grzywacz et al., 2004). Minorities may experience stressful life events, such as discrimination, overcrowding, and a poor neighborhood quality, which are related to the experience of daily hassles and depression (Banks, 2010; Grzywacz et al., 2004; Ornelas & Perreira, 2011), but were not assessed in the present study.

It is also notable that acculturation stress and general psychological stress were unrelated, suggesting that the general and minority family stress pathways are distinct. This finding is contrary to findings from previous research showing that more acculturation stress is related to more psychological stress (e.g., Crockett et al., 2007). In the present study, only second-generation immigrants and first-generation immigrants who immigrated before the age of 11 were included. Thus, all participants spent all or most of their lives in the Netherlands. The acculturation experiences in our sample may not have been stressful enough to be related to depressive symptoms. The mean score of acculturation stress indicated that the stress experienced was indeed relatively low. In addition, a recent study suggests that discrimination and not acculturation stress plays a central role in psychological distress (Stein, 2012).

Several limitations of this study should be noted. First, although a lot of effort was put in the recruitment of families, the response rate was low, which has resulted in a small sample size as is the case in virtually all studies of this type. The small sample size may have resulted in limited statistical power to detect significant effects for some associations between variables. In addition, although we found no significance difference in background variables between participating and non-participating families, the small sample size may have been subject to some self-selection. Higher nonresponse rates among ethnic minorities, especially families with low SES living in urbanized areas, in the Netherlands have been previously reported (Feskens, Hox, Lensvelt-Mulders, & Schmeets, 2007). The low response rate may have resulted in lower representativeness of the general Turkish population in the Netherlands. For example, 11% of the Turkish minority group in the Netherlands are highly educated (SCP, 2011), whereas in our sample 25% of the mothers are highly educated. The educational level of our sample is more comparable to the Dutch population in general than with the Turkish ethnic minority group. It is important to note that this overrepresentation of high-educated mothers in this type of research is very common regardless of ethnic group, and is often even higher than in the current study. We would like to think that our intensive recruitment efforts have kept this overrepresentation within reasonable bounds. Consistent with recommended recruitment practices in ethnic minority families (Yancey, Ortega, & Kumanyika, 2006), letters and brochures in both Dutch and Turkish language were sent and attempts were made to reach families through personal contact at three times on different times and days. In addition, it has to be noted that most studies in this area use convenience samples, for which nonresponse rates can generally not be estimated. Second, our measure of acculturation stress was used with a limited number of items (six items), and has not been formally validated yet. However, the meaningful relations of this measure with relevant family variables (SES and parenting) do give the measure some preliminary credibility. Future studies are needed to explore how our measure relates to more commonly-used measures of acculturation stress and to explore global and more specific forms of acculturation stress in relation to parenting behaviors. Third, due to the cross-sectional design of this study no firm conclusion about the direction of effects can be drawn. However, the general model does converge with findings from longitudinal studies (e.g., Belsky et al., 2012). Furthermore, the present study only focused on maternal behavior. Future research should include fathers as well, because the role of acculturation stress in positive parenting and child outcomes may differ between fathers and mothers. For instance, a study among Chinese American families showed that only the acculturation discrepancy between father and adolescent related to adolescent depressive symptoms through pa-

ternal parenting (Kim et al., 2009). Future research should also include ethnic majority mothers and children of a similar age and from a comparable socioeconomic background to be able to compare parenting behaviors and family stressors and their interrelations between ethnic minority and majority families.

Our results are informative for scientists as well as practitioners working with minority families by providing insight in the unique influence of cultural stressors in addition to general psychological distress on maternal parenting behavior. Our study also contributes to the literature because it includes families with young children (rather than adolescents) and observational measures of parenting (rather than self reports). Across cultures, positive parenting is one of the most important predictors of positive child development, such as cognitive development, social behavior, and emotion regulation (e.g., Leidy et al., 2010; Mesman et al., 2012). Parenting interventions in ethnic minority families may be more effective if they also aim at reducing general and minority-specific family stressors.

5

The Family Stress and Family Investment Models in ethnic minority preadolescents

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Abstract

The Family Stress Model (FSM) and the Family Investment Model (FIM) explain how socioeconomic status (SES) predicts child development through parenting. The goal of this study was to test family stress and investment pathways to cognitive and behavioral outcomes in ethnic minority preadolescents. The sample consisted of 72 Turkish minority mothers and their 11- to 13-year-old children. Parenting was assessed through adolescent reports and observations, and mothers reported on their stress levels, adolescent behavior problems and school attainment. Adolescent frustration inhibition was measured in a task situation. The relation between SES and adolescent behavior was mediated by maternal stress, whereas frustration inhibition was predicted by family investment processes. Our findings support both the FSM and FIM in ethnic minority preadolescents.

Keywords: positive parenting, Family Stress Model, Family Investment Model, ethnic minority, socioeconomic status.

Introduction

Adolescence is a period in which children may be particularly vulnerable for the development of positive as well as adverse outcomes (Masten, 2004). Socioeconomic status (SES), family stressors, and family processes are well-known contributors to child and adolescent development (Grant et al., 2006). Ethnic minority adolescents might be at increased risk for adverse development, since minority parents generally come from lower SES backgrounds (e.g., Skinner, MacKenzie, Haggerty, Hill, & Roberson, 2011), experience more stressors (e.g., Yaman, Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2010) and have been found to show less positive parenting practices compared to majority families (e.g., Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2012; Skinner et al., 2011). The Family Stress Model (FSM) and Family Investment Model (FIM; Conger & Donnellan, 2007) provide explanations for the relation between SES and child development by proposing family stress (FSM) and family investment processes (FIM) as results of low SES, which in turn negatively affect parenting behavior, leading to unfavorable child outcomes. Family stress processes are mostly related to behavioral outcomes, whereas family investment processes are mostly related to cognitive outcomes (e.g., Linver, Brooks-Gunn, & Kohen, 2002). However, these processes have rarely been tested in ethnic minority samples, and often rely only on questionnaire data. The primary goal of the present study was to test the Family Stress Model and Family Investment Model in ethnic minority families with preadolescents using both observed and adolescent-reported positive parenting in relation to cognitive and behavioral adolescent outcomes.

Children in the early adolescence period might be extra vulnerable to the development of adverse outcomes, such as psychopathology, due to the biological, psychological, and social changes that occur during this transitional period (Masten, 2004). Contextual and family factors also contribute to adolescent development (Grant et al., 2006; Masten, 2004; Steinberg & Morris, 2001). Across cultures, SES has been found to be related to positive (e.g., school success) and negative (e.g., problem behaviors) adolescent development (Conger et al., 2002; Crosnoe, Mistry, & Elder, 2002; Shek, 2008). Two possible explanations for the relation between SES and adolescent development are provided by the FSM and FIM (Conger & Donnellan, 2007). According to the FSM, stressors such as socioeconomic strains lead to family stress (e.g., maternal depression and family dysfunction), which in turn leads to non-optimal parenting (e.g., lack of warmth and support) and negative child development (Conger, Conger, & Martin, 2010). The second perspective, the Family Investment Model (FIM), proposes that SES is related to the investments parents make in their children's development. These investments include sev-

eral domains, such as parental stimulation of learning through support and tutoring. Parental investments are in turn related to positive child development (Conger et al., 2010).

In the FSM and FIM literature two main types of child outcomes can be distinguished, namely behavioral and cognitive outcomes. Behavioral outcomes include internalizing and externalizing problem behaviors and temperamental effortful control. Cognitive outcomes include school performance and language ability. In young children, family stress processes have been found to be better predictors of behavioral outcomes, whereas parental investments are better predictors of cognitive outcomes (Linver et al., 2002; Yeung, Linver, & Brooks-Gunn, 2002). In line with these findings, family stress processes have mostly been examined in relation to behavioral outcomes in studies with adolescent samples (e.g., Burt et al., 2005; Conger et al., 2002). For example, in African American families with preadolescents, low income and negative financial events have been found to be related to economic pressure, which in turn predicted parental depression. Parental depression was in turn related to more conflict between caregivers, which was related to less positive parenting leading to less positive child adjustment (i.e., persistence in difficult tasks, school behaviors, and positive affect) and more internalizing and externalizing behavior problems (Conger et al., 2002). Parental investment processes have mostly been studied in relation to cognitive outcomes in adolescents (Crosnoe et al., 2002; Melby, Conger, Fang, Wickrama, & Conger, 2008; Sohr-Preston et al., 2013). For example, in an ethnically diverse U.S. sample, economic disadvantage was found to be related to lower adolescent school enrollment through less optimistic parental ideas about adolescent educational chances and less proactive parenting to promote school enrollment (Crosnoe et al., 2002). To our knowledge, there are no studies testing both the FSM and FIM looking at behavioral as well as cognitive outcomes in adolescents. In addition, some child outcomes can be considered to cut across the behavioral and cognitive domains because they refer to cognitive abilities that are shown on the behavioral level. An example of such a cognitive-behavioral outcome is frustration-induced inhibitory control.

Frustration-induced inhibitory control can be seen as a 'hot' executive function (EF; Huijbregts, Warren, Sonneville, & Swaab-Barneveld, 2008). EF refers to cognitive self-regulatory processes that we use in planning, problem solving and goal-directed action via inhibitory control, cognitive flexibility, and working memory (Zelazo & Carlson, 2012). Inhibitory control is considered to be used in all tasks requiring EF and has a hot and cool variant (Huijbregts et al., 2008). When inhibitory control operates in a motivationally or emotionally significant situation, it is classified as a hot EF process, whereas in a neutral context it is classified as cool EF (Zelazo & Carlson, 2012). Thus, when cognitive

processes (i.e., EF) involve emotion, affect, or motivation, they are considered to be hot forms of EF. There are some studies that suggest that the development of hot EF lags behind compared to cool EF. Rapid improvements in cool EF have been observed in young children, whereas improvements in hot EF occur more gradually into the adolescence period (Hooper, Luciana, Conklin, & Yarger, 2004; Prencipe et al., 2011). Early adolescence, the transitional period into adolescence, may be a particularly relevant period to study socioeconomic context and parenting factors that contribute to the development of hot EF (Zelazo & Carlson, 2012). Very few studies tested the relation between parenting and hot EF in adolescence. Adolescent-reported parenting has been found to be positively related to adolescent-reported self-control (i.e., ability to control impulses, alter emotions and thoughts, and interrupt undesired behavioral tendencies and refrain from acting on them; Finkenauer, Engels, & Baumeister, 2005). More studies are needed to investigate whether (observed) parenting relates to hot EF in adolescence and whether family stress or family investment processes play a role.

Most studies on parenting behaviors towards adolescents use maternal- or adolescent-reported parenting and this is especially true for studies with ethnic minority families (McLoyd, Cauce, Takeuchi, & Wilson, 2000). However, observations are considered to be the gold standard for measuring interactions (McLoyd et al., 2000; Skinner et al., 2011), because they provide a more objective perspective on the parent-child relationship. Independence of measures might be extra important in the measurement of psychological stress and psychopathology, because it is plausible that psychopathology of the respondent (e.g., depressive symptoms) colors their reports about parenting and child behavior (Treutler & Epkins, 2003). There is indeed evidence for a significant role of shared method variance when the information about maternal depression, maternal parenting, and child outcome comes from the same informant (Burt et al., 2005), showing that independent informants are important.

Only very few studies used observational ratings of parent-child interactions in minority families. Studies that did include observational methods found that minority parents show less positive parenting towards their children compared to parents in majority families (e.g., Skinner et al., 2011). These findings are consistent with the FSM and FIM, as ethnic minority families are overrepresented in the lower SES groups (e.g., CBS, 2012; Skinner et al., 2011), and have been found to experience more family stress than majority families (Stefanek, Strohmeier, Fandrem, & Spiel, 2012; Yaman et al., 2010). In addition, their children have been found to show more psychopathology (Stevens et al., 2003) and lower school performance (e.g., CBS, 2012; Mandara, Varner, Greene, & Richman, 2009). There is some evidence for both the FSM (e.g., Benner & Kim, 2010; Conger

et al., 2002; Parke et al., 2004) and the FIM (e.g., Crosnoe et al., 2002) in minority groups in adolescence, but studies with minority samples are rare compared to those with majority samples and all have been performed in the U.S.

In the Netherlands, the Turkish represent the largest ethnic minority group and their population is still increasing, which is mostly due to the increase of the second generation (CBS, 2012). Turkish minority families have lower SES backgrounds compared to Dutch majority families (CBS, 2012). Turkish mothers with young children in the Netherlands have been found to behave less sensitively than Dutch majority mothers (Leseman & Van den Boom, 1999; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, et al., 2010), although it is important to note that maternal age and education partially accounted for the difference in parenting between these groups (Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, et al., 2010). To our knowledge, there is no study that measured observed parenting behaviors of Turkish minority mothers towards adolescents in the Netherlands. A study using adolescent-reported parenting and child-outcomes, found that a negative parent-child relationship was related to more adolescent behavior problems (Wissink, Dekovic, & Meijer, 2006). Turkish minority adolescents have been found to show more internalizing behavior problems compared to Dutch majority and Moroccan minority adolescents (both adolescent-reported as well as parent-reported) and Turkish minority parents report more externalizing behavior problems compared to Moroccan minority parents (Stevens et al., 2003). No group differences in adolescent-reported externalizing behavior problems have been found (Stevens et al., 2003; Wissink, Dekovic, Yagmur, Stams, & de Haan, 2008). Turkish minority adolescents have a lower school attainment compared to Dutch majority adolescents (CBS, 2012).

The present study will test both family stress and family investment pathways with behavioral (problem behavior) and cognitive (school attainment) outcomes in ethnic minority families. In addition, a cognitive-behavioral (frustration-induced inhibitory control) outcome is included. The present study is unique in its focus on both adolescent-reported and observed maternal parenting (rather than self-reports) with ethnic minority adolescents and in testing both the FSM and FIM from SES to child outcome in ethnic minority families. We expect that family stress processes play a role in adolescent behavioral problems, whereas family investment processes play a role in adolescent cognitive development.

Method

Sample and procedure

The sample consisted of 72 Turkish minority mothers in the Netherlands and their 11- to 13-year-old children. To ensure the homogeneity of the immigrant sample and to make sure that all mothers had at least some years of education in the Netherlands, only second-generation immigrant mothers born in the Netherlands (with at least one of their parents born in Turkey) and first-generation immigrant mothers who migrated to the Netherlands before the age of 11 were included. All children were in the 8th year of Dutch primary school (which corresponds to the 6th grade in the U.S.) at the time of the home visit. The mothers were recruited from municipal registers of several cities and towns in the western and middle region of the Netherlands. In total, 454 families were reached of whom 72 (16%) agreed to participate. A subgroup of mothers who did not want to participate (n = 116) provided some general information about their families by filling out a form. These families did not differ significantly from the participating families in age of father, mother, and child, child gender, country of birth of both parents, mother's marital status, and family situation (*ps* .33 to .97).

All participating mothers gave written consent for their families' participation. Both parents and the adolescents first completed a questionnaire that they received by regular mail. Then, mother and child participated in a two-hour home visit by two trained (under)graduate students, which included another questionnaire for mother, an interview with mother, child testing and questionnaire, and videotaping mother-child interactions. The home visit was conducted in Dutch, but instruction cards for the video observation and the questionnaires for the parents were available in both Dutch and Turkish. Most mothers indicated that they understood Dutch very well (86%) and evaluated their own spoken Dutch language ability as very good (85%). Questionnaires for which no Dutch or Turkish versions were available, were translated from English into Dutch and Turkish and back-translated to ensure correct wording. Most mothers (83%) chose to complete the Dutch version of the questionnaire. The children had a mean age of 12.35 years (SD = 0.44) at the time of the home visit. Forty-nine percent of the sample consisted of boys. The mothers' average age was 37 years (SD = 4.02, *range* = 30-46). Fifty-eight percent of the mothers were born in Turkey and migrated to the Netherlands at a mean age of 6.01 years (SD = 3.71). Most children lived in two-parent families with both their biological parents (85%). Most of the children had one sibling (49%), and 44% had two or more siblings. Fifty-six percent of the children were firstborns.

Measures

Socioeconomic status (SES)

Family SES was based on gross annual family income and the highest completed educational level of both parents. Gross annual family income was measured on a 7-point scale ranging from (1) *no income* to (7) *50,000 euro or more*. Parents' highest completed educational level was measured on a 7-point scale from (1) *no qualification* to (7) *university level degree*. Because this study is part of a larger international study, the educational categories were recoded into the International Standard Classification of Education (ISCED; UNESCO, 2011). Factor analysis showed that gross annual family income and maternal and paternal education loaded on one single factor and explained 59% of the total variance (loadings of respectively .78, .72, and .80). SES was computed as the mean of the standardized scores of income and educational level of both parents. For single mother families (n = 11), mother's educational level was counted twice to fill in the missing paternal educational level.

Maternal stress

Maternal stress was a composite measure including self-reports on daily hassles, depressive symptoms, life dissatisfaction, and acculturation stress. The experience of hassles in daily life was measured with thirteen items from the Daily Hassles questionnaire (Kanner, Coyne, Schaefer, & Lazarus, 1981). These 13 items were selected based on the outcome of a Principal Component Analyses (PCA) and reliability analyses in a Turkish-Dutch immigrant sample (Yaman et al., 2010). Mothers were asked to rate the intensity of their hassles, such as house cleaning or maintenance, on a 5-point scale from (1) *no hassle* to (5) *big hassle*. If mothers indicated that they did not experience the hassle, the item was coded as 0. The average of ratings on 13 items was computed. The internal consistency of the scale was good (Cronbach's alpha = .85).

Maternal depressive symptoms were measured using a Dutch translation of the 10-item short form of the Center for Epidemiologic Studies Depression Scale (CES-D; Andresen, Malmgren, Carter, & Patrick, 1994; Hanewald, 1987; Radloff, 1977). Mothers were asked to indicate for each statement (e.g., *"I felt depressed"*) how often they felt or behaved that way during the past week from (1) *rarely or none of the time (less than 1 day)* to (4) *all of the time (5-7 days)*. The total score consisted of the average of ratings on 10 items. The internal consistency of the scale was adequate (Cronbach's alpha = .77).

To measure maternal life dissatisfaction we used reversed scores of a Dutch translation of the Satisfaction With Life Scale (SWLS; Arrindell, Heesink, & Feij, 1999; Diener, Emmons, Larsen, & Griffin, 1985). The SWLS consists of five statements which

are rated on a scale from (1) *strongly disagree* to (7) *strongly agree*. An example of a statement is *"In most ways my life is close to my ideal"*. The total score on life dissatisfaction consisted of the average of ratings on five items. The internal consistency of the scale was good (Cronbach's alpha = .86).

Maternal acculturation stress was measured with six items from the Ingroup and Outgroup Acculturation Hassles Scale that was developed for the Youth, Culture, and Competence (YCC) study (Oppedal, 2006). In the development of the scale the items from two acculturation hassles scales (Lay & Nguyen, 1998; Vinokurov, Trickett, & Birman, 2002) were discussed in focus groups with immigrant and refugee mothers and secondary school students with different national origins, addressing problems associated with the acculturation process both within the cultural context of the majority society and within the heritage cultural context. The final version of the scale comprised of items that most participants agreed upon that they occurred frequently, were stressful, and they themselves or somebody they were close to had experienced. Mothers were asked to rate how much of a burden the stated events had been during the last 12 months. Examples of items are *"You have been frustrated because you don't understand Dutch ways of thinking and behaving"*, *"Your child behaves too much like Dutch children and adolescents"*, and *"You miss friends and family living in Turkey"*. Answer categories ranged from (1) *not a burden* to (4) *very much a burden*. If mothers indicated they did not experience the event, the item was coded as 1. The average of ratings on six items was computed. The internal consistency of the scale was adequate (Cronbach's alpha = .75). Maternal daily hassles, depressive symptoms, dissatisfaction with life, and acculturation stress loaded on a single factor and explained 47% of the total variance (factor loadings ranged from .56 to .76). Maternal stress was computed as the mean of the standardized scores of these four variables. The total internal consistency of the composite scale was good (Cronbach's alpha = .87).

Positive parenting (observed)

The fourth edition of the Emotional Availability Scales (EA Scales; Biringen, 2008) was used to measure positive parenting of mothers towards their child during a seven minute problem-solving task. The mother and child were asked to use a set of wooden blocks to copy two different structures (a bird and a dog) from example pictures. The two structures were somewhat too difficult considering the age of the child. The mother was instructed to help her child as she would normally do. The adult dimensions sensitivity, structuring, and nonintrusiveness were coded. Sensitivity reflects the amount of positive affect and appropriate responsiveness of the mother towards the child. Structuring measures the

extent to which the mother provides helpful guidance and suggestions according to the needs of the child. Nonintrusiveness refers to the mother's ability to refrain from intrusions on the child's autonomy. Each dimension is divided into seven subscales, of which the first two subscales are coded on a 7-point Likert scale and the other subscales on a 3-point Likert scale. The third author, who is an experienced coder of parent-child interactions, completed the online training provided by Zeynep Biringen and then trained a team of coders. During this training, some subscales led to persistent interpretation problems resulting in adjustments to improve intercoder agreement. Three types of adjustments were made: (1) subjective criteria were removed, (2) scorings of some subscales were changed to make them more linear, and (3) overlap between the dimensions was removed to improve their independence. The corresponding author can be contacted for more details about the adjustments that were made.

To investigate the factor structure of the EA Scales, a Principal Component Analysis (PCA) with promax (oblique) rotation was performed on all subscales from the original adult scales, excluding four subscales because of little variance (subscales 5 and 7 of sensitivity and subscales 4 and 5 of structuring), and another two subscales because they actually measure child behavior instead of parental behavior (subscale 2 of structuring and subscale 7 of nonintrusiveness). The PCA revealed three clear components, explaining 68.5% of the total variance. Component 1 (labeled as sensitivity) consisted of four subscales (1, 2, 4, and 6) of the original sensitivity dimension. Component 2 (labeled as structuring) consisted of four subscales (1, 3, 6, and 7) of the original structuring dimension and subscale 3 of the original sensitivity dimension. The last component (labeled as nonintrusiveness) consisted of the first six original nonintrusiveness subscales. Cronbach's alphas of the new sensitivity, structuring, and nonintrusiveness scales were .82, .83, and .83, respectively. Positive parenting was computed as the mean of the standardized scores of the three EA dimensions. Sensitivity was significantly related to structuring, $r(70) = .70$, $p < .001$, and nonintrusiveness, $r(70) = .28$, $p < .05$. Structuring and nonintrusiveness were unrelated, $r(70) = .19$, $p > .05$. Factor analysis showed that sensitivity, structuring, and nonintrusiveness loaded on one single factor and explained 62% of the total variance (loadings of .91, .88, and .51 respectively).

A team of four coders (who did not visit the mother during data collection) rated the videotapes on the EA dimensions. All coders successfully completed a reliability set of 27 videotapes. For the original emotional availability dimensions the intraclass correlation coefficients (absolute agreement) ranged from .74 to .85 ($M = .81$) for sensitivity, from .70 to .91 ($M = .82$) for structuring, and from .75 to .88 ($M = .81$) for nonintrusiveness. For the new scales the intraclass correlation coefficients ranged from .75 to .85 (M

= .79) for sensitivity, from .67 to .85 (M = .76) for structuring, and from .73 to .88 (M = .81) for nonintrusiveness.

Positive parenting (adolescent-reported)

Adolescent-reported maternal positive parenting was measured with the subscales rejection (reversed) and emotional warmth of the 24-item short form of the EMBU (Egna Minnen Beträffande Uppfostran; Aluja, Del Barrio, & García, 2006; Arrindell, Emmelkamp, Brilman, & Monsma, 1983). Both subscales were measured with eight items on a scale from (1) *never* to (4) *almost always*. An example of an item from the subscale rejection is *"My mother treated me in such a way that I felt ashamed"* and from the subscale emotional warmth *"I felt that warmth and tenderness existed between me and my mother"*. Rejection was reversed into the absence of rejection. The internal consistencies of the absence of rejection and emotional warmth were good (Cronbach's alphas of .80 en .83 respectively). Absence of rejection and emotional warmth were moderately correlated, $r(70) = .46$, $p < .001$. Positive parenting was computed as the mean of the standardized values of absence of rejection and emotional warmth. The internal consistency of positive parenting was good (Cronbach's alpha = .88).

Adolescent positive behavior (mother-reported)

Positive adolescent behavior was a composite variable consisting of measures of prosocial behavior, behavior problems (reversed), temperamental effortful control, and frustration (reversed). Prosocial behavior and behavior problems were measured with the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) that was completed by the mother. Mothers were asked to rate 24 items, a total of five subscales, on a scale from (0) *not true* to (2) *certainly true*. All subscales consisted of five items, except conduct problems which consisted of four items. According to the manual of the SDQ, the subscales emotional symptoms (e.g., *"Often unhappy, down-hearted or tearful"*), conduct problems (e.g., *"Often fights with other children or bullies them"*), hyperactivity/inattention (e.g., *"Easily distracted, concentration wanders"*), and peer problems (e.g., *"Rather solitary, tends to play alone"*) were used to compute a total difficulties score (behavior problems). Factor analysis showed that the four subscales loaded on one single factor (factor loadings ranged from .55 to .83). The total difficulties score was reversed into the absence of problem behaviors so that a higher score reflected fewer difficulties. The subscale prosocial behavior (e.g., *"Shares readily with other children, for example toys, food"*) was kept separately. The internal consistencies of the absence of problem behavior and prosocial behavior were adequate (Cronbach's alphas of respectively .73 and .67).

Adolescent's temperamental effortful control and frustration were measured by mothers' ratings on four subscales of the Early Adolescent Temperament Questionnaire-Revised (EATQ-R; Capaldi & Rothbart, 1992). The four subscales were measured with a total of 24 items measured on a scale from (1) *almost always untrue* to (5) *almost always true*. The subscales activation control (7 items), inhibitory control (5 items), and attentional focusing (6 items) were used to measure effortful control. The subscale activation control assessed the children's ability to perform an action despite an impulse to avoid it (e.g., "*Usually puts off working on a project until it is due*"). The inhibitory control subscale tapped into the children's capacity to suppress inappropriate responses (e.g., *"Has a hard time waiting his/her turn to speak when excited*"). The attentional focusing subscale measured children's capacity to sustain attention (e.g., "*When interrupted or distracted, forgets what s/he was about to say*"). Factor analysis showed that the scores of the three subscales loaded on one factor (loadings .79 - .89). The internal consistency of the three scales was high (Cronbach's alpha = .82). The subscale frustration (6 items) was kept separately and measured negative affect related to interruption of ongoing tasks or goal blocking (e.g., *"Gets irritated when s/he has to stop doing something s/he is enjoying"*). The total score on frustration was reversed into the absence of frustration so that a higher score reflected less frustration. The internal consistency of the absence of frustration subscale was adequate (Cronbach's alpha = .73).

Prosocial behavior, the absence of problem behavior, temperamental effortful control, and the absence of frustration loaded on a single factor and explained 56% of the total variance (factor loadings ranged from .62 to .84). Adolescent positive behavior was computed as the mean of the standardized scores of these four variables. The total internal consistency of the composite scale was good (Cronbach's alpha = .87).

Adolescent frustration inhibition

The Delay Frustration Task (DeFT; Bitsakou, Antrop, Wiersema, & Sonuga-Barke, 2006; Huijbregts et al., 2008) was used to measure adolescent frustration inhibition (i.e., frustration-induced inhibitory control). The DeFT is a task in which the adolescents were presented with simple math questions (only additions below 10) on a computer screen. For each question, four possible answers were provided on the screen and the adolescents were asked to select the correct answer by pressing one of four keys on the computer keyboard. The response keys were covered by stickers with the letters A, B, C, and D, corresponding to the answer options above the key on the screen. The next question was presented as soon as a response was recorded, but on 16 out of the total 55 trials there was a delay in the transition to the next question. There were 8 transitions with a short

delay (2-10 s) and 8 with a long delay (20 s). Before the task started, the children were told that the computer showed signs of malfunctioning and might show delays. They were also instructed to finish the task as soon as possible. The task started with 8 practice trials. During the long delay period the number of presses on either of the four response buttons was recorded as an index of the adolescent's frustration. This is based on the notion that the ability to refrain from constantly pressing the response key during a delay is indicative of frustration tolerance and inhibitory control. Scores were reversed so that a high score indicated more frustration inhibition.

Adolescent school attainment

During the interview, mothers were asked to report the track advice provided by the primary school that their children received for secondary school as well as the score their children obtained on the national achievement exam (CITO) that they take at the end of primary school. The advice for the secondary school is predominantly based on the score that children obtain on the CITO that assesses children's language, math performance, interpretation abilities (i.e., graphs, tables and maps), and world knowledge (i.e., geography, history, biology). In addition to this exam score, the primary school administration takes into account the parents' and child's ideas about which school track fits his or her interests and capacities (Luyten, Bosker, Dekkers, & Derks, 2003). Academically least promising children usually continue to lower vocational education (LWOO). Most of the children move on to one of the tracks within vocational education track (VMBO). The group that is evaluated higher than this group follows the track of higher or professional education (HAVO). Academically most promising students enter the track of advanced scientific education (VWO + gymnasium). For eighteen children, the advice was not known at the time of the home visit. Mothers of these children were contacted by telephone when children started secondary school to obtain the information about their children's track. Twelve of these mothers were reached. For another six children, the secondary school tracks were estimated based on their CITO scores, because these were highly correlated with their children's attainment in the secondary school education track, $r(50) = .83$, $p < .01$. The tracks of the secondary school education were rated on a 10-point scale from (1) *lower vocational (LWOO)* to (10) *advanced scientific education (VWO + gymnasium)*.

Analyses

Subscales were combined into a total score if at least half of the subscale scores (rounded down) were available. Missing data were estimated with multiple (10-fold) imputations

based on predictive mean matching. The imputation model was based on background variables (adolescent's gender and age and maternal age) and all the variables included in the present study. The percentage of missing data for the final sample ranged from 0% (Positive child behavior) to 15% (EA Scales). Based on pooled bivariate correlations it was decided whether a FSM or FIM should be tested with observed and child-reported positive parenting. Structural equation modeling (SEM) with EQS 6.2 (Bentler, 2001) was used to test the FSM and FIM. Pooled *p*-values were calculated for path coefficients according to Rubin (1987). Standardized coefficients and fit-indices were averaged across imputed data sets. Model fit was considered to be satisfactory when the chi-square statistic was not significant at $p < .05$, fit indices (NFI and CFI) were > .95, and RMSEA was < .10 (Schermelleh-Engel, Moosbrugger, & Müller, 2003).

Results

Preliminary analyses

Descriptive statistics of the main variables of the original dataset (before multiple imputation) are presented in Table 1. All variables were inspected for possible outliers that were defined as values larger than 3.29 *SD* above or below the mean. There were outliers on maternal emotional warmth (1 outlier) and rejection (2 outliers) and adolescent's frustration (2 outliers) which were winsorized to be higher or lower than the next highest or lowest value that was not yet an outlier (Tabach-

Table 1. *Descriptive statistics before multiple imputation*

	N	*Range*	*M*	*(SD)*
Family SES	69	-1.51 – 1.99	0.00	(0.74)
Maternal stress	71	-1.29 – 1.28	0.00	(0.68)
Maternal positive parenting O	61	-1.72 – 1.57	0.00	(0.78)
Sensitivity	61	7.00 – 20.00	13.79	(3.01)
Structuring	61	5.00 – 19.00	14.02	(3.13)
Nonintrusiveness	61	11.00 – 26.00	19.95	(3.85)
Maternal positive parenting A	68	-2.64 – 1.28	0.00	(0.85)
Adolescent positive behavior	72	-1.90 – 2.03	0.66	(0.79)
Adolescent frustration inhibition	69	0.13 – 30.75	25.99	(6.27)
Adolescent school attainment	70	1.00 – 10.00	5.64	(2.45)

Note. O = Observed; A = Adolescent-reported.

nick & Fidell, 2001). Maternal rejection and adolescent's frustration were skewed and were therefore transformed with a base-10 logarithmic transformation.

Table 2 presents the pooled bivariate correlations between the main variables of the ten imputed datasets. Significant relations are discussed. Lower SES was related to more stress, less observed positive parenting, less positive adolescent behavior, and lower school attainment. More maternal stress was related to less adolescent-reported positive parenting and less positive adolescent behavior. More observed positive parenting was related to more frustration inhibition and higher school attainment. More adolescent-reported positive parenting was related to more positive adolescent behavior. Positive adolescent behavior was significantly related to higher school attainment.

Table 2. *Correlations between SES, maternal stress, parenting, and adolescent behavior (pooled results of 10 imputed datasets)*

	1.	2.	3.	4.	5.	6.
1. Family SES	-					
2. Maternal stress	-.37**	-				
3. Maternal positive parenting O	.38**	-.07	-			
4. Maternal positive parenting A	.23	-.26*	.12	-		
5. Adolescent positive behavior	.26*	-.33**	.19	.45***	-	
6. Adolescent frustration inhibition	.16	-.10	.28*	.18	.13	-
7. Adolescent school attainment	.41***	-.09	.26*	.24	.36**	.13

Note. O = Observed; A = Adolescent-reported.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Testing the Family Stress Model

The bivariate correlations showed that maternal stress was only related to adolescent-reported parenting and not to observed parenting. Maternal stress and adolescent-reported parenting were only related to positive adolescent behavior and not to adolescent frustration and school attainment, thus we only tested the FSM with adolescent-reported parenting and adolescent behavior. SEM was used to test the Family Stress Model with adolescent-reported positive parenting and mother-reported positive adolescent behavior. The model is presented in Figure 1. SEM analysis showed that the model fitted the data well (χ^2 (1) = 1.74, p = .19, NFI = .95, CFI = .98, RMSEA = .010). Lower SES was related to more maternal stress, which was in turn related to less positive parenting (adolescent-reported). Less positive parenting was related to less positive adolescent behavior. The direct paths from SES and maternal stress to positive adolescent behavior were not

significant. When one or two of the nonsignificant direct paths were removed from the model, the model showed a poorer fit to the data.

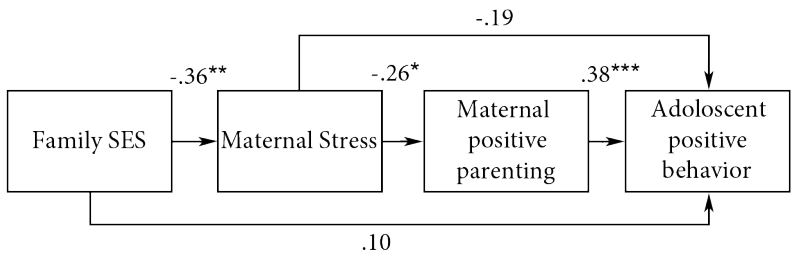

Figure 1. Family Stress Model with adolescent-reported positive parenting ($N = 72$).

Testing the Family Investment Model

The bivariate correlations showed that SES was only directly related to observed parenting and not to child-reported parenting. Observed positive parenting was only related to adolescent frustration inhibition and school attainment and not to positive adolescent behavior, thus we only tested the Family Investment Model with observed positive parenting and frustration inhibition and school attainment as outcome measures. Using SEM we tested whether there was an indirect effect of SES on adolescent frustration inhibition through observed positive parenting. The model fitted the data well (χ^2 (1) = 0.47, p = .62, NFI = .97, CFI = .99, RMSEA = .020). Lower SES was related to less positive parenting (observed), β = .38, p < .01, which was in turn related to less frustration inhibition of the adolescent, β = -.28, p < .05. We also tested whether the indirect effect of SES on frustration inhibition through positive parenting was specific for one of the three EA Scales. We modeled the relation between SES, the three parenting domains (sensitivity, structuring, and nonintrusiveness), and adolescent's frustration inhibition with covariances between the errors of the three subscales (Figure 2). The model fitted the data well (χ^2 (1) = 0.32, p = .67, NFI = 1.00, CFI = 1.00, RMSEA = .004). Lower SES was related to lower maternal sensitivity and structuring, but SES was unrelated to maternal nonintrusiveness. Lower maternal structuring was related to less frustration inhibition of the adolescent and maternal sensitivity and nonintrusiveness were unrelated to adolescent's frustration inhibition. There was only an indirect effect of SES on adolescent's frustration inhibition via maternal structuring. The total and specific indirect effects were bootstrapped using Preacher and Hayes (2008) macro package for SPSS. The bootstrap estimates were based on 5000 bootstrap samples. The results were comparable to the results in EQS and showed that only the specific indirect effect through structuring was significant.

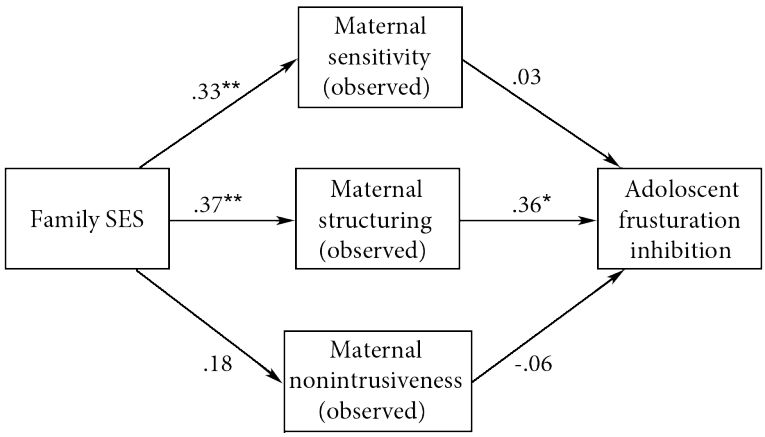

Figure 2. Family Investment Model with the three EA Scales separated ($N = 72$).

The FIM was also tested with school attainment as outcome. Multiple regression analyses were used, because SES was also directly related to school attainment and fit indices are not computed in a fully estimated model. Observed positive parenting did not mediate the relation between SES and school attainment, $\beta = .14$, $p > .05$. SES completely accounted for the effect of positive parenting on school attainment, $\beta = .40$, $p < .01$. Examining the subscales of positive parenting, none were significantly related to school attainment when SES was taken into account.

Discussion

The primary goal of this study was to test the Family Stress Model and the Family Investment Model with a behavioral, cognitive-behavioral, and cognitive outcome in ethnic minority preadolescents. Confirming the FSM, lower SES was related to more maternal stress, which was in turn related to less (adolescent-reported) positive parenting. Less positive parenting was in turn related to more behavior problems. Confirming the FIM, lower SES was related to less maternal structuring, which was in turn related to less frustration inhibition.

In line with our expectation, lower SES was related to more maternal psychological distress, which was in turn related to less positive parenting (adolescent-reported). Less positive parenting was in turn related to less positive adolescent behavior. These findings support the FSM that proposes that economic strains lead to family stress,

which in turn leads to less optimal parenting and negative child development (Conger et al., 2010). Several other studies found support for the relations between SES, maternal psychological distress, parenting, and adolescent problem behavior (e.g., Conger et al., 2002). For example, in African American families with preadolescents, low income and negative financial events have been found to be related to economic pressure, which predicted parental depression. Parental depression was in turn related to more conflict between caregivers, which was related to less positive parenting leading to less positive child adjustment and higher internalizing and externalizing behavior problems (Conger et al., 2002). Our results suggest that the FSM is also applicable to Turkish ethnic minority preadolescents in the Netherlands. To our knowledge, our study was the first to test the FSM in an ethnic minority sample in a European context.

Maternal stress did not play a role in adolescent frustration-induced inhibitory control. Instead, observed parenting quality was important in predicting adolescent frustration regulation. Lower SES was indirectly related to lower adolescent frustration inhibition via less positive parenting. Maternal structuring was the key component of positive parenting that predicted (higher) adolescent frustration inhibition, which is in line with the FIM that proposes that SES relates to parental investments, such as stimulation of learning, which are in turn related to positive cognitive child development (Conger et al., 2010). Our measure of maternal structuring refers to scaffolding, providing guidance, and making an effort to help the child achieve the goals of the task in a way that fits the child's needs. All of these elements represent forms of investment, as they require the parent to actively engage in the child's task behavior and to support and stimulate the child to complete the task. Such maternal support has indeed been found to foster child self-regulation in previous studies (Bernier, Carlson, & Whipple, 2010) and the current study shows that these family investment processes play a role in the relation between socieconomic status and ethnic minority hot EF development in adolescence.

In contrast to our hypothesis, positive parenting did not mediate the relation between SES and adolescent school attainment. SES completely accounted for the effect of positive parenting on school attainment. Previous studies did report a significant relation between positive parenting and school performance when SES was taken into account (e.g., Melby et al., 2008). It is likely that our observational measure of parent-child interactions did not capture more structural forms of parental investments such as a stimulating home learning environment, that might play a more important role in the relation between SES and school performance (Mandara et al., 2009). In the current study we only measured the dyadic part of the parental investment construct. It is also possible that other factors associated with minority status and SES, such as teachers'

prejudices, play a more dominant role in minority preadolescent school attainment than parental investments do. Teachers' expectations, which are generally lower for children from lower SES backgrounds and for minority children, have been found to predict lower school performance (McKown & Weinstein, 2002, 2008).

Another possible explanation may be that the problem-solving tasks did not require maternal guidance for some adolescents, thus did not provide an optimal measure of parenting quality. However, even if the adolescent is able to solve the task without guidance, the mother can still regulate the adolescent's motivation, affect, and emotions during the task, all of which are coded as part of the positive parenting construct. These elements of support are particularly important in fostering self-regulation and this is consistent with our finding that observed parenting during the problem-solving task was related to adolescent frustration inhibition.

To our knowledge, this is the first study testing both the FSM and FIM with a behavioral, cognitive behavioral, and cognitive outcome in minority preadolescents. Our findings provide support for both the FSM and FIM in ethnic minority preadolescents and suggest that family stress processes play a role in adolescent behavioral development, whereas family investment processes play a role in adolescent self-regulatory (hot EF) development. It is important to note that the FSM was only confirmed with adolescent-reported positive parenting, whereas the FIM was only confirmed with observed positive parenting. The two measures of parenting were not related to each other, which is consistent with other studies showing little or no convergence between observed and reported parenting (e.g., Sheeber & Sorensen, 1998). In our study, observed positive parenting refers to sensitive responsiveness, structuring guidance, and providing room for the child's initiative during a seven-minute task. The advantage of this approach is its objectivity, and a disadvantage is the very brief observation period, which may not be representative of all relevant dyadic interactions during daily life. Since maternal structuring was the key-component of observed parenting that was associated with adolescent frustration inhibition, it appears that this measure did capture mother's ability to structure a task and provide helpful guidance according to the needs of the adolescent, which is an important dimension of maternal cognitive stimulation and investment in daily life (e.g., when helping with homework). Our adolescent-reported measure of parenting refers to maternal warmth and (lack of) rejection. Although these dimensions show some overlap with the observed parenting constructs, they capture a less broad range of parenting. In addition, the adolescents' reports may be biased by response sets and mood. However, adolescent reports do capture a longer time period than observations and may be more representative of the adolescents' experiences in daily life. These more structural experi-

ences were indeed meaningfully related to maternal stress and able to predict adolescent behavior.

This study has several limitations. First, although a lot of effort was put in the recruitment of families, the response rate was low, which resulted in a rather small sample size as is the case in virtually all studies of this type. This may have resulted in limited statistical power to detect significant effects for some of the expected associations between variables. In addition, although we found no significance difference in background variables between participating and non-participating families, recruitment may have been subject to some self-selection. Higher nonresponse rates among ethnic minorities, especially families with low SES living in urbanized areas, in the Netherlands have been previously reported (Feskens, Hox, Lensvelt-Mulders, & Schmeets, 2007). The low response rate may have resulted in lower representativeness of the general Turkish population in the Netherlands. Most studies in this area use convenience samples, for which nonresponse rates can generally not be estimated. Second, due to the cross-sectional design of this study inferences about the direction of effects can not be made. However, our models do converge with findings from longitudinal studies (e.g., Linver et al., 2002; Sohr-Preston et al., 2013), suggesting that interpreting the directions consistent with the theoretical models is appropriate. Third, we only measured parenting behavior during a teaching task as a form of parental investment. Family investment is a much broader construct that for example also includes home literacy environment, doing educational activities together (e.g., visit a museum), and helping with homework. Future studies should include a more diverse and structural family investment construct.

In conclusion, our findings provide support for both the FSM and FIM in ethnic minority preadolescents and suggest that the negative effects of low SES on child adjustment are for a large part attributable to the detrimental effects of socioeconomic strains on parenting quality. The generally lower SES of ethnic minority families is a societal issue that is not easy to change. However, interventions aimed at promoting positive parenting may foster a supportive family environment for socioeconomic disadvantaged ethnic minority adolescents, which in turn may enhance their behavioral and self-regulatory competence.

6

General discussion

General discussion

The findings in the current dissertation provide support for the argument that maternal sensitivity is a cross-culturally applicable construct. When examining parenting behavior and child development in ethnic minority families, it is important to focus on explanatory factors inherent to minority status, such as lower socioeconomic status, higher general family stress, and acculturation stress, rather than on cultural characteristics alone. Chapter 2 provided an overview of commonly used observational instruments to measure sensitivity, showing the versatility and scientific importance of the construct. The results presented in Chapter 3 suggest that mothers of different cultural backgrounds and socioeconomic groups have a highly similar view on maternal sensitivity. In Chapter 4, the results showed that both acculturation stress and general psychological distress mediated the relation between SES and positive parenting in Turkish minority families with young children. The results of the empirical study presented in Chapter 5 suggested that family stress processes play a role in adolescent's behavioral outcomes, whereas family investment processes play a role in adolescent's cognitive-behavioral outcome in Turkish minority families. Below, these findings will be summarized and discussed in more detail, followed by a discussion on the studies' limitations, some suggestions for future research, and theoretical and practical implications of the results of this dissertation.

Maternal beliefs about sensitivity

In Chapter 3, maternal views of the ideal sensitive mother were found to be highly similar across groups with different cultural and socioeconomic backgrounds. The mean sensitivity scores for descriptions of the ideal mother were high in each group (Turkish minority, Moroccan minority, and Dutch low, middle, and high educated mothers), suggesting that across groups, mothers' views about sensitivity were consistent with behavioral patterns that are considered to be indicative of sensitivity by the authors of the MBQS. As discussed in Chapter 2, the MBQS is one of these most widely used instruments and is strongly linked to Ainsworth's sensitivity construct, as the formulation of the items was explicitly guided by her work (Pederson et al., 1990). The Ainsworth's Maternal Sensitivity Scale (Ainsworth, Bell, & Stayton, 1974) describes that the appropriateness of the response should be mainly inferred from the outcome of mothers' interventions. Thus, not the content of mother's response but the influence of mother's response on child's behavior is what is most important in maternal sensitivity. The statements of the MBQS indeed leave room for individual differences in the specific content of mother's behavior. For

example, item 62 from the MBQS "*Interprets cues correctly as evidenced by B's response*" refers to a mother accurately interpreting her child's signals and responding to that signal in an adequate way, which is shown by her child's satisfaction with her response. This means that although we found that mothers from different cultural backgrounds value the basic components of sensitivity, parenting behaviors (and beliefs) may vary between persons in terms of the chosen concrete response and that these differences do not necessarily mean that one response (e.g., picking up the child) is more sensitive than another (e.g., talking to the child). The influence of the response on the behavior of the child is what is important in determining whether a response was appropriate (Mesman, Oster, & Camras, 2012). There is indeed evidence that there are cultural differences in the specific content or modality of parental responses (Fouts, Roopnarine, Lamb, & Evans, 2012; Kärtner et al., 2008). Thus, from a cross-cultural perspective it could be interesting to specify separate sensitivity subscales per modality to investigate culture-specific patterns of sensitive responding.

Although we found strong convergence between maternal views on sensitive parenting across different cultural and socioeconomic groups, our analyses in Chapter 3 also revealed that socioeconomic factors were related to mothers' sensitivity beliefs. The relation between ethnic background (Dutch versus minority) and sensitivity belief scores was completely mediated by income. Family income of minority mothers was lower than that of majority mothers, which was in turn predictive of a lower sensitivity belief score. The fact that income was a significant mediator and a more important predictor than educational level seems to support the Family Stress Model, which proposes that economic strains lead to family stress, which in turn leads to less optimal parenting behavior (Conger & Donnellan, 2007). Our findings suggest that economic strains do not only negatively affect sensitive *behavior*, they also negatively affect parenting *beliefs* about sensitivity. Although we did not measure stress directly, it is plausible that parenting stress mediated this association. There is indeed some evidence that parenting stress is related to parenting beliefs regarding the importance of sensitivity and responsiveness (Respler-Herman, Mowder, Yasik, & Shamah, 2012).

Maternal positive parenting behavior

To try to explain within-group differences in positive parenting and examine the role of minority-specific stressors in the prediction of parenting behavior in ethnic minority families, we tested a minority Family Stress Model in Chapter 4. We found that the relation between socioeconomic status and maternal positive parenting was partially mediated by both general psychological distress and acculturation stress. Lower SES was

related to more psychological distress and more acculturation stress, which were both in turn related to less positive parenting. These findings support the general FSM that proposes that economic strains lead to family stress, which in turn leads to less optimal parenting behavior (Conger & Donnellan, 2007). Several other studies found support for the relations between SES, psychological distress, and parenting (e.g., Belsky, Schlomer, & Ellis, 2012; Parke et al., 2004; White, Roosa, Weaver, & Nair, 2009) and for the relations between SES, acculturation stress, and parenting (Kim, Chen, Li, Huang, & Moon, 2009; Martinez, 2006; Stein, Gonzalez, & Huq, 2012; White et al., 2009).

Acculturation stress and general psychological distress only partially mediated the relation between SES and positive parenting, which suggests that there may be additional mediating and moderating effects or independent predictors of positive parenting. For example, there is research that suggests that the relation between more maternal psychological distress and lower mother-child relationship quality is stronger for mothers who experience higher levels of racial discrimination (Murry, Brown, Brody, Cutrona, & Simons, 2001). There is also research that suggests that social support has an effect on parenting stress as well as parenting behaviors, and child development (McConnell, Breitkreuz, & Savage, 2011). Factors such as teenage motherhood, single parenthood, and marital discord may also play a role (Berlin, Brady-Smith, & Brooks-Gunn, 2002; Conger et al., 2002; McConnell et al., 2011). Future research is necessary to investigate the unique contribution and role of each predictor in addition to other predictors of positive parenting.

Although both sensitivity beliefs and behaviors seem to be predicted by similar factors (i.e., socioeconomic status and stress), research shows that they are unrelated (Ekmekci et al., 2013; Van Zeijl et al., 2006). A possible reason for this could be that overall all mothers value sensitivity, however, scores on observed positive parenting, including sensitivity, generally vary from low to high. Thus, although mothers generally find it important to observe and interpret children's signals and respond to those signals in a prompt and appropriate way, they may not always have the behavioral repertoire to do so or they are unable to implement their behavioral repertoire because of contextual constraints. A possible explanation for this may be that sensitivity is an aspect of parenting that is less concrete than other parenting aspects, such as discipline. As described earlier, sensitivity does not describe the content of behavior, but rather the influence of mother's behavior on child's behavior. In addition, although sensitivity encompasses planned behaviors, certain aspects of sensitivity refer to intuitive behaviors, such as smiling back when a child smiles, or imitating infant vocalizations (Mesman, 2010), rather than planned behaviors such as having strict discipline rules.

Family stress and investment processes in adolescence

There are very few studies on observed positive parenting in adolescence in relation to adolescent development, especially in ethnic minority families. The findings in Chapter 5 showed that the relation between SES and adolescent behavior was mediated by maternal stress and adolescent-reported parenting, whereas adolescent frustration inhibition was predicted by family investment processes (i.e., observed maternal structuring). Confirming the Family Stress Model, lower SES was related to more maternal stress, which was in turn related to less (adolescent-reported) positive parenting. Less positive parenting was in turn related to more behavior problems. In line with the Family Investment Model, lower SES was related to less maternal structuring, which was in turn related to less frustration inhibition.

It is important to note that in Chapter 4, maternal stress was related to observed positive parenting, whereas in Chapter 5 it was only related to adolescent-reported positive parenting. A possible explanation for this finding may be that parenting behaviors and contexts vary for children of different ages. A parent-child teaching context may be a better representation of parent-child interactions in daily life for young children (Chapter 4) than for adolescents (Chapter 5). Parents may more often need to structure tasks and situations for young children (e.g., having dinner and going to bed) than for adolescents. Thus, although we used the same observational context and measurement scales for both age groups, we may have observed different aspects of parenting, which may explain why we found different results. For adolescents, the self-reported measure of parenting may have captured a longer time period than the observations and thus may be more representative of the adolescents' experiences in daily life, which may explain why this measure was related to maternal stress.

The results in Chapter 5 also showed that positive parenting did not mediate the relation between SES and adolescent school attainment. SES completely accounted for the effect of positive parenting on school attainment. Previous studies did report a significant relation between positive parenting and school performance when SES was taken into account (e.g., Melby, Conger, Fang, Wickrama, & Conger, 2008). It is likely that our observational measure of parent-child interactions did not capture more structural forms of parental investments such as a stimulating home learning environment, that might play a more important role in the relation between SES and school performance (Mandara, Varner, Greene, & Richman, 2009). In the current study we only measured the dyadic part of the parental investment construct. It is also possible that other factors associated with minority status and SES, such as teachers' prejudices, play a more dominant role in minority preadolescent school attainment than parental investments do. Teachers'

expectations, which are generally lower for children from lower SES backgrounds and for minority children, have been found to predict lower school performance (McKown & Weinstein, 2002, 2008). In addition, child factors such as temperamental effortful control and self-efficacy may also play a role in the educational attainment of ethnic minority preadolescents (Yeniad et al., 2013).

Our findings provide support for both the FSM and FIM in ethnic minority preadolescents and suggest that family stress processes play a role in adolescent behavioral development, whereas family investment processes play a role in adolescent self-regulatory (hot EF) development. It seems that it is worth extending research on observed parenting from young children to adolescence and to adapt observational instruments and procedures accordingly.

Limitations and future directions

The sample sizes of the empirical studies were small. This may have resulted in limited statistical power to detect significant effects. In addition, in Chapters 4 and 5 recruitment may have been subject to some self-selection since the response rate was low, and in Chapter 3, a convenience sample was used. The convenience sampling, relatively low response rates, and as a consequence small sample sizes may have resulted in lower representativeness of the general study population. Our samples were indeed generally higher educated compared to the minority population in the Netherlands. However, it may also be considered an advantage because studies on middle class minority families are rare. More studies are needed to investigate within-group variation in education, income and related factors (Cabrera et al., 2013). Since socioeconomic status is such an important factor in explaining between- and within-group differences and there is a large overlap between minority status and low SES, future research may strive to recruit different groups of socioeconomic status within ethnic minority groups. In addition, most studies on ethnic minorities focus on the negative effects of economic hardship. More research is necessary focusing on positive development (Cabrera et al., 2013). The present study showed that a family environment in which children are raised in a sensitive, supportive, and positive way enhanced children's behavioral and self-regulatory competence. In order to find meaningful relations between observed positive parenting and adolescent behavioral development it may be useful to include an observational context that is more representative of daily parent-adolescent interactions, such as a discussion task (e.g., the Family Interaction Task; Allen et al., 2003; Beijersbergen, Bakermans-Kranenburg, Van IJzendoorn, & Juffer, 2008).

We only included Turkish ethnic minorities in our observational study. Minority

families with other cultural backgrounds should be included in observational studies as well. Preferably, future studies should also include a majority group that is comparable in socioeconomic background. In addition, it is important to note that the studies in the present dissertation only focused on maternal views and behaviors. Although all the instruments reviewed in Chapter 2 have been used with fathers, research on (observed) paternal positive parenting is scarce, especially in minority families. There is some evidence that paternal parenting differs between cultures. For example, research suggests that minority fathers show less warmth, but also exhibit more responsibility for child rearing than majority fathers (e.g., Hofferth, 2003). In terms of the FSM and FIM, paternal positive parenting and child development in ethnic minority families may be interesting to investigate, because paternal parenting also has been found to be influenced by economic, psychological, and cultural factors (Coley, 2001; Hofferth, 2003).

Implications for research and practice

Although the studies presented in this dissertation have some limitations and more research is necessary, they contribute to the distressingly small body of research on (observed) positive parenting in ethnic minority families. In addition, we provided an overview of commonly used observational instruments to asses maternal sensitivity and reviewed these instruments in terms of their similarity in conceptualization of the original sensitivity construct. This overview may be informative when choosing an observational measure and reporting or interpreting research results and shows that there are significant differences in how maternal sensitivity is conceptualized and measured. The term sensitivity should not be used too lightly to retain a clear distinction between the original sensitivity construct and other broader constructs such as positive parenting, that also include constructs such as scaffolding and warmth.

Our finding that sensitive parenting is perceived as equally important across professionals and mothers that vary in socioeconomic background, suggests that culture-specific measurement of maternal sensitivity is not required, at least not in terms of the conceptualization of the construct. This is in line with a recent study in Turkey that showed that the validity and reliability of a Turkish version of the PICCOLO (Parenting Interactions with Children: Checklist of Observations Linked to Outcomes), a measure of parent-child interactions developed in the United States (US), were equal to those found in the US. The PICCOLO measures aspects of parenting such as warmth, responsiveness, support, and cognitive stimulation (Bayoglu, Unal, Elibol, Karabulut, & Innocenti, 2013). Our results also suggest that the nature and focus of parenting interventions to promote sensitive parenting can be similar for minority and majority parents.

However, this does not mean that adaptations to make an intervention more culturally sensitive are not necessary. Cultures may differ in daily family routines (Spagnola & Fiese, 2007), factors that cause less positive parenting (i.e., culture-specific stressors), and ways of interpreting and implementing advice given in a context of an intervention (Plass, Timmermans, & van der Wal, 2006), which may be related to the effectiveness of an intervention. Thus although the focus and aim of an intervention may be similar across cultures (e.g., promoting sensitive parenting), certain strategies or contexts in the intervention may be necessary to be culturally adapted to achieve this goal. An example of an intervention that has proven to be effective in enhancing parental sensitive discipline in a Western sample and has been adapted to the child-rearing context of Turkish minority families is the VIPP-SD (Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline; Van Zeijl et al., 2006; Yagmur, Mesman, Malda, Bakermans-Kranenburg, & Ekmekci, 2013).

The culturally sensitive adaptation of the VIPP-SD, the VIPP-Turkish Minority (VIPP-TM), follows the general procedure of the VIPP-SD, but certain toys and materials used in the original VIPP-SD program were replaced, as they would be unfamiliar to Turkish minority families (e.g., mother's reading to the child was replaced by mother and child playing together with a tea set). In addition, all interveners had a Turkish background and were bilingual, which made it possible to them to adapt to the language that the mother preferred to speak (Turkish, Dutch, or a mix). The VIPP-TM has proven to be effective in enhancing maternal sensitivity and nonintrusiveness in Turkish minority families (Yagmur et al., 2013). In addition to (or as part of) such cultural sensitive interventions to promote positive parenting, it is important to try to reduce socioeconomic and other family stressors and to stimulate parents to invest more in their children in terms of time and attention.

In our studies, the broader construct of positive parenting was predicted by socioeconomic status and both general as well as culture-specific stressors. These results are informative for scientists as well as practitioners working with minority families by providing insight in the influence of cultural stressors on maternal behavior. We also found that SES relates to child development in ethnic minority families through family stress and investment processes. The generally lower SES of ethnic minority families is a societal issue that is not easy to change. However, interventions aimed at promoting positive parenting may foster a supportive family environment for socioeconomic disadvantaged ethnic minority adolescents, which in turn may enhance their behavioral and self-regulatory competence. Scientists as well as practitioners should be aware that culture should not be considered as an explanatory factor in parenting behaviors without

taking into account the broader socioeconomic context.

Implications for policy

Our results show that SES is an important factor that relates to family functioning and child development in ethnic minority families. The disadvantaged position of ethnic minorities in the lower socioeconomic classes is an issue in almost all Western countries. Children of ethnic minorities score lower on school performance tests (e.g., CBS, 2012; Mandara et al., 2009), are overrepresented in the lower educational tracks (e.g., CBS, 2012), and show higher drop-out rates (e.g., CBS, 2012; National Center for Education Statistics, 2013), which in turn will put their children at risk for an adverse development as well. However, there are improvements. In the Netherlands, second-generation immigrants have been found to be higher educated compared to first generation immigrants. Nevertheless, there is still an socioeconomic gap between later generation minorties and majority members (SCP, 2011).

Although lower SES is a societal issue that is not easy to change, interventions and policies (i.e., social safety net programs) may help to improve families' economic well-being. There is evidence from the U.S. that suggests that programs aimed at improving families' economic well-being, that do not directly target children, can positively affect children's development (Gassman-Pines & Hill, 2013), which is in line with the FSM and FIM that are investigated in this dissertation. For example, in the US refunding taxes to working people with low and middle incomes positively affects families' economic position, particularly reducing child poverty (Meyer, 2007; Simpson, Tiefenthaler, & Hyde, 2010), and has been found to relate to increases in children's well-being, such as higher birthweights (Hoynes, Page, & Stevens, 2012) and a higher performance on academic tasks (Dahl & Lochner, 2012). In addition, supplementing food to low-income families, which allows families to spend money on other household necessities, is related to fewer reports of abuse and neglects (Lee & Mackey-Bilaver, 2007).

In the Netherlands the effects of social security programs on family functioning and child development have not been investigated and deserve attention, especially because the recent economic crisis is forcing the government to make important decisions in cutting down expensives, including the budget for social security programs. It is important to investigate which programs promote family and child well-being. Examples of social security programs in the Netherlands are food banks, health care subsidy, refunding income tax to low-income working people, and subsidy for children from low-income families to participate in sports and social or cultural activities. Another example of a social security program in the Netherlands is child-care subsidy, which aims to in-

crease parental employment. Research shows that the subsidy only increased employment and the number of worked hours per week for middle- to high-educated woman (CPB, 2011). Particular effects for ethnic minority parents are unknown. In addition, it is unknown what the effect of child-care subsidy is on children's well-being. Research from the U.S. shows that child-care subsidies can have an adverse effect on the developmental outcomes of children (Hawkinson, Griffen, Dong, & Maynard, 2013; Herbst & Tekin, 2010, 2011), possibly due to increases in parenting stress and harsh parenting (Herbst & Tekin, 2012) or exposure to low-quality child-care (Gassman-Pines & Hill, 2013).

In the Netherlands, there are also special preschool education programs, funded by municipalities, directly aimed at improving child-rearing environment (e.g., parental investments and stimulating home environment) and child development particularly in families from lower socioeconomic backgrounds and ethnic minority families. Approximately 53% of at-risk children are reached by these programs (Jepma, Van der Vegt, & Kooiman, 2007). Some programs have been proven to be effective in improving children's development, but the effect is small and there are also studies that did not find a significant effect (Smit, Driessen, Van Kuijk, & De Wit, 2008). In addition, a longitudinal study found that there were no significant effects for the Moroccan and Turkish minority children in particular (Nap-Kolhoff et al., 2008). These findings stress the need for research comparing the effects of different social security programs in terms of their benefits for families and children in general (Gassman-Pines & Hill, 2013), but also for low-income and ethnic minority groups in particular. Policy makers should be aware of the long-term consequences of families' socioeconomic position on children's development.

Conclusions

Overall, the studies described in this thesis have shown that parenting beliefs and behaviors in ethnic minority families can only be understood in light of their socioeconomic background. Factors inherent to minority status, such as lower socioeconomic status, higher general family stress, and acculturation stress, should be considered in explaining parenting behaviors and investments that contribute to children's development. Our findings provide insight into the challenges that ethnic minority families may face, but also show the potential that positive parenting may have in fostering positive child development in these families. These findings suggest an important role for parenting interventions, as well as programs aimed at improving the socioeconomic position of ethnic minorities in order to enhance family functioning and child adjustment.

Nederlandse samenvatting (Summary in Dutch)

Nederlandse samenvatting (Summary in Dutch)

Positief ouderschap wordt gekenmerkt door verschillende aspecten, zoals positief omgaan met lastig gedrag van kinderen (positief disciplineren) en het respecteren van de autonomie van het kind. Sensitief ouderschap is een belangrijk onderdeel van positief ouderschap. Sensitiviteit verwijst naar de mate waarin ouders in staat zijn zich te verplaatsen in hun kind en tijdig en adequaat te reageren op de signalen van het kind, en speelt een belangrijke rol in de cognitieve, sociale en emotionele ontwikkeling van kinderen met verschillende culturele achtergronden (Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2012). Uit verschillende studies is gebleken dat ouders uit etnische minderheidsgroepen gemiddeld minder sensitief zijn naar hun kinderen dan ouders uit de etnische meerderheidsgroep (Barnett, Shanahan, Deng, Haskett, & Cox, 2010; Van IJzendoorn, 1990). Uit een literatuurreview van Mesman et al. (2012) blijkt dat verschillen in sensitiviteit tussen ouders met diverse culturele achtergronden deels te verklaren zijn door verschillen in sociaaleconomische status (SES). Opleidingsniveau, inkomen en beroep zijn indicatoren van SES. Er zijn echter onderzoeken die rekening hebben gehouden met aspecten van SES en nog steeds verschillen vinden in sensitief ouderschap tussen etnische minderheidsgroepen en de meerderheidsgroep (Berlin, Brady-Smith, & Brooks-Gunn, 2002; Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, & Linting, 2010). Deze bevindingen roepen verschillende vragen op over welke factoren zijn gerelateerd aan positief ouderschap in gezinnen uit minderheidsgroepen en ook over hoe positief ouderschap samenhangt met de ontwikkeling van kinderen in deze gezinnen. Zo is nog niet eerder onderzocht of ideeën over sensitief ouderschap universeel zijn of verschillen tussen culturele groepen, en of SES hierbij ook een rol speelt.

Het *Family Stress Model (FSM)* en het *Family Investment Model (FIM)* geven mogelijke verklaringen voor de relatie tussen een lage SES en een minder positieve ontwikkeling van kinderen (Conger, Conger, & Martin, 2010). In het Family Stress Model wordt beschreven dat economische moeilijkheden als gevolg van een lage SES kunnen leiden tot meer stress. Doordat de ouder teveel problemen en zorgen heeft (stress), is er minder oog voor de behoeften van het kind en wordt er minder positief opgevoed. Een minder positieve opvoeding is vervolgens gerelateerd aan een minder positieve ontwikkeling van het kind (Conger et al., 2010). Het Family Investment Model suggereert dat een lage SES ervoor zorgt dat een ouder minder mogelijkheden heeft om in het kind te investeren (Conger et al., 2010). Investeringen in het kind zijn bijvoorbeeld de financiële mogelijkheden om het kind naar bijles te sturen, maar ook zelf het kind helpen met huiswerk, een boek voorlezen of samen activiteiten ondernemen. Uit eerder onderzoek weten we dat een

hoge SES en de daarmee samenhangende investeringen van ouders in kinderen zijn gerelateerd aan bijvoorbeeld betere schoolprestaties (Crosnoe, Mistry, & Elder, 2002).

Etnische minderheidsgroepen behoren over het algemeen tot de lagere sociaaleconomische klassen, zij zijn lager opgeleid en hebben een lager inkomen (CBS, 2012). In overeenstemming met het Family Stress Model ervaren zij gemiddeld meer stress dan de meerderheidsgroep (Yaman, Mesman, Van IJzendoorn, & Bakermans-Kranenburg, 2010). Naast algemene psychische stress, die zowel etnische minderheden als personen uit de meerderheidsgroep kunnen ervaren, zouden minderheden ook stress kunnen ervaren die specifiek is voor hun minderheidsstatus, zoals acculturatiestress. Acculturatiestress is stress die kan ontstaan als gevolg van het leven in een andere (dominante) cultuur (Berry, 2006). Vormen van acculturatiestress zijn het missen van familie en vrienden in het land van herkomst, het niet begrijpen van de normen en waarden van de dominante cultuur, het gevoel hebben dat je wordt gedwongen om je aan te passen en het gevoel hebben dat je kind zich teveel gedraagt zoals de meerderheidsgroep. Het is onduidelijk of acculturatiestress bij etnische minderheden met jonge kinderen bijdraagt aan een minder positieve opvoeding.

Het proces beschreven in het Family Stress Model blijkt meestal samen te hangen met de ontwikkeling van het gedrag van kinderen, terwijl het proces beschreven in het Family Investment Model vooral samenhangt met de cognitieve ontwikkeling van kinderen (Linver, Brooks-Gunn, & Kohen, 2002). Er is echter weinig onderzoek gedaan naar het Family Stress Model en het Family Investment Model in minderheidsgroepen. Gezien de over het algemeen lage sociaaleconomische status van minderheidsgroepen, zouden deze twee modellen juist belangrijk kunnen zijn voor het verklaren van de mate van positief ouderschap en de ontwikkeling van kinderen in deze groepen.

De Turkse minderheidsgroep is de grootste etnische minderheidsgroep in Nederland. Gezinnen met een Turkse achtergrond hebben gemiddeld een lagere sociaaleconomische positie dan gezinnen met een Nederlandse achtergrond (CBS, 2012). Ouders met een Turkse achtergrond laten minder positief ouderschap zien dan ouders met een Nederlandse achtergrond (Yaman, Mesman, Van IJzendoorn, Bakermans-Kranenburg, et al., 2010) en kinderen met een Turkse achtergrond vertonen meer probleemgedrag dan kinderen met een Nederlandse achtergrond (Bengi-Arslan, Verhulst, van der Ende, & Erol, 1997; Stevens et al., 2003). Onderzoek in de Turkse minderheidsgroep is daarom zeer relevant voor de jeugdhulpverlening. Aangezien positief ouderschap een rol speelt bij een positieve ontwikkeling van kinderen en tieners, is het van belang om te weten wat Turkse ouders belangrijk vinden in de opvoeding van hun kinderen en welke factoren een rol spelen in de opvoeding van kinderen en tieners in gezinnen met een Turkse

achtergrond. Deze informatie kan bijdragen aan het ontwikkelen van cultuur-sensitieve opvoedinterventies die aansluiten bij de gezinssituaties van Turkse gezinnen in Nederland. In dit proefschrift staan daarom de volgende onderzoeksvragen centraal:

1. Hebben moeders met verschillende sociaaleconomische en culturele achtergronden in Nederland dezelfde ideeën over sensitief ouderschap?
2. Spelen psychische stress en acculturatiestress als gevolg van een lage sociaaleconomische status een rol in de voorspelling van positief ouderschap in Turkse gezinnen met jonge kinderen in Nederland?
3. Spelen stress en beperkte mogelijkheden van opvoeders als gevolg van een lage sociaaleconomische status een rol in de ontwikkeling van gedragsproblemen, zelfregulatie en schoolprestaties van jonge adolescenten met een Turkse achtergrond?

Ideeën over sensitief ouderschap

Om te onderzoeken of moeders en professionals met verschillende culturele achtergronden dezelfde ideeën hebben over sensitief ouderschap, zijn 75 moeders van Nederlandse, Turkse of Marokkaanse afkomst gevraagd om hun mening te geven over hoe een ideale moeder zich zou moeten gedragen. Zij hadden allemaal minimaal één kind in de leeftijd van 6 maanden tot 6 jaar. Tijdens een huisbezoek hebben wij de moeders 90 kaartjes voorgelegd met uitspraken zoals '*Als haar kind van streek is, snapt moeder waar dat door komt*' en *'Laat haar liefde voor haar kind zien door haar kind aan te raken of een knuffel te geven*'. De moeders werd gevraagd om deze kaarten te sorteren naar hoe goed zij de gedragingen vonden passen bij de ideale moeder.

Er bleek een grote overeenkomst te zijn tussen de ideeën van Nederlandse, Turkse en Marokkaanse moeders in Nederland. De hoge overeenstemming geeft aan dat moeders uit verschillende culturen en sociaaleconomische groepen dezelfde gedragingen belangrijk vinden voor een ideale moeder. Ook bleek hun idee over sensitief ouderschap een grote overeenstemming te vertonen met de zeer sensitieve moeder zoals beschreven door experts op het gebied van opvoeding en de ontwikkeling van kinderen. Moeders uit verschillende culturen verschillen dus nauwelijks in opvattingen over sensitiviteit in de opvoeding van jonge kinderen. De resultaten lieten ook zien dat inkomen van het gezin wel een rol speelde in de ideeën van moeders over sensitief ouderschap. Hoe lager het gezinsinkomen was, hoe minder de ideeën van moeders over de ideale moeder overeenstemden met het idee van experts over sensitief ouderschap. Dit suggereert dat stress als gevolg van minder financiële mogelijkheden niet alleen een rol speelt in opvoedgedrag,

maar ook in ideeën over opvoeding.

Stress en opvoeding in gezinnen met jonge kinderen met een Turkse achtergrond

In een tweede onderzoek is het *Family Stress Model* onderzocht met daarin zowel algemene psychische stress als acculturatiestress. In dit onderzoek werden in totaal 107 Turkse moeders van zowel de eerste generatie (maar voor hun 11de levensjaar naar Nederland verhuisd) als de tweede generatie, en hun 5 tot 6-jarige kinderen betrokken. Moeders werd gevraagd een vragenlijst in te vullen over zowel psychische stress als acculturatiestress. Tijdens een huisbezoek werd positief ouderschap van moeder geobserveerd tijdens het uitvoeren van een taak samen met haar kind. Vervolgens werden deze observaties gecodeerd met de Emotional Availability Scales (EA Scales; Biringen, 2008).

De resultaten lieten zien dat moeders die een lage SES hadden zowel meer psychische stress als meer acculturatiestress ervoeren. Beide vormen van stress waren vervolgens weer gerelateerd aan minder positief ouderschap. Een lage SES van het gezin was ook direct gerelateerd aan minder positief ouderschap. Deze bevindingen bevestigen het Family Stress Model en laten zien dat het belangrijk is om in dat model ook vormen van stress op te nemen die specifiek zijn voor mensen uit etnische minderheidsgroepen. SES en stress blijken belangrijke factoren te zijn in de mate van positief ouderschap in gezinnen met een Turkse achtergrond. In plaats van een focus op culturele verschillen in ideeën over opvoeding als verklaring voor minder positief ouderschap, dient vooral gekeken te worden naar factoren die samenhangen met een minderheidsstatus, zoals een lage SES, psychische stress en acculturatiestress.

SES en de ontwikkeling van tieners met een Turkse achtergrond

In het laatste onderzoek zijn het *Family Stress Model* en het *Family Investment Model* getest met verschillende kinduitkomsten, namelijk positief gedrag, zelfregulatie, en schoolprestaties van adolescenten. Er werden in totaal 72 Turkse tieners van 11 tot 12 jaar en hun moeders in het onderzoek betrokken. Er waren zowel eerste (maar voor hun 11de levensjaar naar Nederland verhuisd) als tweede generatie Turkse moeders. Iedere moeder werd gevraagd een vragenlijst in te vullen over stress (psychische stress en acculturatiestress) en het (positieve) gedrag en het huidige schoolniveau van haar tiener. Iedere tiener heeft een vragenlijst ingevuld over het opvoedgedrag van moeder en heeft daarnaast een computertaak uitgevoerd waarbij de zelfregulatie werd getest. Tijdens een huisbezoek werd positief ouderschap van moeder tevens geobserveerd tijdens het uitvoeren van een taak samen met haar kind. Vervolgens werd deze observatie gecodeerd met de Emotional Availability Scales (EA Scales; Biringen, 2008).

De resultaten lieten zien dat een lage SES gerelateerd was aan meer stress van moeder. Meer stress van moeder was weer gerelateerd aan minder positief ouderschap (gerapporteerd door de tiener) en minder positief ouderschap aan minder positief gedrag van de tiener. Deze resultaten bevestigen het *Family Stress Model*. Consistent met het *Family Investment Model* was een lage SES ook gerelateerd aan het bieden van minder structuur door moeder aan haar kind tijdens de geobserveerde taaksituatie. Het bieden van minder structuur was weer gerelateerd aan minder zelfregulatie van de tiener tijdens een computertaak. Een lage SES was direct gerelateerd aan een lager schoolniveau van het kind. De resultaten uit deze studie bevestigden zowel het *Family Stress Model* als het *Family Investment Model* en laten zien dat de negatieve gevolgen van een lage SES op de ontwikkeling van kinderen voor een deel door de opvoeding van ouders kan worden verklaard.

Conclusie

Opvoedideeën en opvoedgedragingen van ouders uit etnische minderheidsgroepen kunnen beter worden begrepen als wordt gekeken naar factoren die samenhangen met een minderheidsstatus, zoals een gemiddeld lagere SES, meer psychische stress en acculturatiestress. Dergelijke factoren moeten in ogenschouw worden genomen voor het in kaart brengen en begrijpen van de opvoedomgeving die bijdraagt aan de ontwikkeling van kinderen en tieners met een Turkse achtergrond in Nederland. Gezinnen met een minderheidsstatus worden veelal geconfronteerd met meer en andersoortige uitdagingen dan gezinnen uit de meerderheidsgroep. Deze uitdagingen kunnen ervoor zorgen dat het voor ouders soms moeilijker is om positief op te voeden. De resultaten van de studies beschreven in deze thesis laten zien hoe belangrijk het is om te investeren in het verbeteren van de sociaaleconomische positie van minderheidsgroepen en daarmee de samenhangende stressoren te verminderen. Daarnaast kunnen interventies gericht op het bevorderen van positief ouderschap bijdragen aan het verminderen van de negatieve consequenties van een lage SES op de ontwikkeling van een kind door het stimuleren van een sensitief en ondersteunend gezinsklimaat.

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Curriculum vitae

Rosanneke Emmen werd geboren op 30 september 1984 in Son en Breugel. In 2001 behaalde zij haar HAVO-diploma aan het Sint-Joriscollege te Eindhoven. In datzelfde jaar begon ze aan de opleiding Docent Dans aan de Rotterdamse Dansacademie, waar ze in 2005 afstudeerde. Vervolgens begon Rosanneke aan de opleiding Pedagogische Wetenschappen. Zij is in 2009 afgestudeerd bij de vakgroep Orthopedagogiek in het werkveld Jeugdzorg aan de Universiteit Utrecht. In haar laatste studiejaar liep zij stage bij Flexus-Jeugdplein te Rotterdam en behaalde tijdens die stage ook haar basisaantekening diagnostiek. Van 2009 tot en met 2013 werkte zij als promovenda op de afdeling Algemene en Gezinspedagogiek van de Universiteit Leiden, waar zij onderzoek deed naar positief ouderschap in gezinnen met een Turkse achtergrond in Nederland. De resultaten van haar onderzoek zijn beschreven in dit proefschrift. Naast haar werkzaamheden als promovenda heeft Rosanneke ook onderwijs gegeven. Daarnaast is zij getraind in het coderen van moeder-kind interacties met de Emotional Availability Scales en in het uitvoeren van de VIPP-SD (Video-feedback Intervention to promote Positive Parenting and Sensitive Discipline).

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