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Second-generation Turkish immigrant families in the Netherlands : parenting and toddler behavior problems

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Chapter 4

Parenting and toddler aggression in second-generation immigrant families: The moderating role of child temperament

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Abstract

This study investigated the influence of parenting practices in the prediction of child physical aggression in second-generation Turkish immigrant families. In addition, the moderating role of child temperament was examined, more specifically, we tested whether it was supportive of a dual-risk model or a differential susceptibility model. In this short-term longitudinal study 94 mothers and their 2-year-old toddlers were included. Observational data were obtained for mothers' positive parenting and authoritarian discipline, and maternal reports for child temperament and physical aggression. All measures were repeated at 3 years of the child's age. Child temperament at age 2 years was a significant predictor of child aggression one year later. We found no main effects of positive parenting nor of authoritarian discipline for the prediction of child aggression. However, we found support for the generalizability of the dual-risk hypothesis to immigrant families: toddlers with difficult temperaments were more adversely affected by a lack of positive parenting than other children, but did not benefit more from high levels of positive parenting than toddlers with more easy temperaments. We found no interaction effects with child temperament for authoritarian discipline. These findings provide an empirical basis for the development of culturally sensitive intervention programs aimed at reducing child behavior problems in immigrant families.

Introduction

Aggressive behaviors such as biting, hitting, and kicking can be quite common in toddlerhood. Individual differences in the rates of toddler aggression have been shown to be predicted by child difficult temperament, negative parenting, and lack of positive parenting (e.g., Eisenberg et al., 2005; Sanson, Hemphill, & Smart, 2004). Moreover, when children with a difficult temperament are raised in an adverse rearing environment they are even more at risk of developing behavior problems (e.g., Belsky, Hsieh, & Crnic, 1998; Van Zeijl et al., 2007). However, little is known about the antecedents of aggression among immigrant children, despite the fact that there are more than 200 million estimated international migrants in the world (IOM, 2008). Testing the generalizability of the results found in Western samples to immigrant families is essential to the development of culturally sensitive interventions. Therefore, we investigated the influence of child temperament, positive parenting, and authoritarian discipline on child physical aggression in second-generation Turkish immigrant families living in the Netherlands. In addition, we examined the moderating role of child temperament in the association between parenting behaviors and child physical aggression.

Numerous studies have shown that variations in parental sensitivity and control are important factors in explaining the frequency and stability of aggressive behaviors (e.g., Campbell, 1997; Shaw, Bell, & Gilliom, 2000). Sensitivity refers to accurately perceiving and interpreting the child's signals, and responding to these signals adequately and promptly (Ainsworth, Bell, & Stayton, 1974). Parental control refers to how rules and limits are imposed on the child (Coie & Dodge, 1998). Regarding parental control, a distinction is generally made between authoritarian control (e.g., demanding, physical interference, lack of child involvement) and authoritative control (e.g., explaining, clear communication, discussion) (Baumrind, 1966). Sensitive and authoritative parenting (positive parenting) have been found to positively influence many facets of child development, such as a secure attachment, compliance, and lower levels of hyperactivity and (physical) aggression (e.g., Cheah, Leung, Tahseen, & Schultz, 2009; Côté, Vaillancourt, LeBlanc, Nagin, & Tremblay, 2006; De Wolff & Van IJzendoorn, 1997).

Several processes can account for the influence of insensitive and unresponsive maternal care on child aggressive and disruptive behaviors. In the context of sensitive and responsive parenting, children who are securely attached to their parents do not want to lose parental affection and thus want to comply with their parents' rules and bids (Ainsworth et al., 1974), whereas children experiencing less responsive care may be less securely attached and therefore less motivated to comply to parental requests and thus show more aggressive behaviors (e.g.,

Kochanska, Barry, Aksan, & Boldt, 2008). Moreover, lower levels of maternal sensitivity and stimulation are associated with child affect dysregulation which in turn is associated with behavior problems (NICHD, 2004). Finally, according to Pettit and Bates (1989), positive parenting can predict lower levels of problem behavior because children experiencing positive parental involvement are probably more often positively occupied and thus have a lower need for attracting attention in a negative manner.

Although there is a general consensus about the positive effects of parental sensitivity and warmth on child outcomes in various ethnic and immigrant groups (e.g., Huntsinger & Jose, 2009; Tamis-LeMonda, Briggs, McClowry, & Snow, 2009), there is more controversy about the effects of parental (authoritarian) control on child development. Studies conducted among middle-class Western families have shown adverse effects of authoritarian control on child development (e.g., Alink et al., 2009; Shaw, Keenan, & Vondra, 1994), but these effects have not always been confirmed in cross-cultural studies. For example, maternal physical discipline was associated with externalizing child behaviors in European American groups, but not in African American groups (e.g., Deater-Deckard, Bates, Dodge, & Pettit, 1996; Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004). However, other studies conducted among various ethnic and immigrant groups did report results that were comparable to those found in Western cultures, showing that authoritarian or harsh control have negative effects on child development (e.g., Iruka, 2009; McLoyd & Smith, 2002). These negative effects were also found among Turkish immigrant families living in the Netherlands in which strict control in parenting was associated with more behavior problems in both Turkish immigrant and Dutch native adolescents (Wissink, Dekovic, & Meijer, 2006).

Early difficult child temperament (e.g., negative emotionality, low effortful control) has been found to predict externalizing behaviors (such as aggression) at school-age (e.g., Caspi, Henry, McGee, Moffitt, & Silva, 1995; Joussemet, et al., 2008). Children with difficult temperaments are more at risk to develop behavior problems because they have more difficulties in regulating their emotions, managing their impulses, and engage more often in novel and dangerous situations (for a review see Frick & Morris, 2004). Associations between child negative emotionality and behavior problems were also found across various nations and races (Caspi et al., 1994) and in (Turkish) immigrant groups (De Boo & Kolk, 2007). In addition to the main effects of negative parenting, lack of positive parenting, and difficult temperament on child aggression, it is essential to examine child temperament as a moderator (Belsky, 1997).

According to Belsky, Bakermans-Kranenburg, and Van IJzendoorn (2007) different types of parenting-by-temperament interactions can explain child outcomes. These include dual-risk

moderation and differential susceptibility moderation. Regarding child aggression, the dual-risk moderation hypothesis states that the co-occurrence of child difficult temperament and a poor-quality rearing-environment can put children at increased risk for aggressive behaviors as they experience two risk conditions. In the dual risk model, children with difficult temperaments do not benefit more from *positive* child-rearing environments than children with easier temperaments. Several studies have found evidence for this dual risk hypothesis regarding temperament and parenting, in relation to child aggression (e.g., Deater-Deckard & Dodge, 1997; Rubin, Hastings, Chen, Stewart, & McNichol, 1998).

According to the differential susceptibility moderation hypothesis, temperamentally difficult children are more sensitive to environmental conditions such as parenting. In addition to being more susceptible to negative child-rearing environments, they also benefit more from positive child-rearing environments. Highly reactive children have indeed been found to be more susceptible to *both* negative influences of unsupportive parenting and positive influences of supportive parenting (e.g., Klein Velderman, Bakermans-Kranenburg, Juffer, & Van IJzendoorn, 2006; Van Zeijl et al., 2007). Thus, to distinguish between dual risk and differential susceptibility in the study of temperament-by-parenting interactions, both negative and positive parenting needs to be examined.

For the development of adequate interventions to prevent aggressive behaviors of immigrant children, we need to know more about the antecedents of child aggressive behaviors within immigrant families. To provide knowledge about these issues for child mental health services, the Turkish immigrant group is an important group to investigate as the Turkish group is the largest immigrant group in the Netherlands and in Europe (CBS, 2008; Crul, 2008). Because the growth of the number of Turkish inhabitants is mostly due to the increase of the second-generation population, we focus on children and their second-generation Turkish mothers born in the Netherlands with at least one of their parents born in Turkey.

In the current study, we aim to answer the following questions:

1. Do child temperament, maternal positive parenting, and authoritarian discipline predict the level of child physical aggression in second-generation Turkish immigrant families?
2. Does difficult temperament moderate the association between parenting behaviors and toddler aggression in these families? If so, does the moderation support the dual risk or the differential susceptibility hypothesis?

Based on the literature, we hypothesize that difficult child temperament, lower levels of positive parenting, and higher levels of authoritarian discipline predict higher levels of child physical aggression. With regard to parenting-by-temperament moderation, we expect to find

support for the differential susceptibility hypothesis, based on the results of the Van Zeijl et al. (2007) study in Dutch families.

Method

Participants and procedure

Second-generation Turkish immigrant mothers of 2-year-old children were recruited from the municipal registers of several cities and towns in the western and middle region of the Netherlands. Only second-generation Turkish mothers born in the Netherlands (with at least one of their parents born in Turkey) with a 2-year-old child (age 22 - 31 months) were selected to ensure the homogeneity of the sample and to control for confounding effects of ethnicity and migration. We sent an introduction letter and a brochure in which we informed the parents that the main researcher or a research assistant would come by to ask for their participation in this study. All correspondence was in the Turkish and the Dutch language. In total, 384 families were reached of whom 149 (39%) mothers filled out questionnaires on child behavior problems and also participated in a video-taped 1-hour home visit during which mothers and children performed several tasks. One-hundred and fifty-four parents did not want to participate. Because we do not have information on non-respondents they cannot be compared to the participating group on background variables. Eight families were excluded from the group due to serious medical condition in child or mother, physical or mental disability in child or mother, lack of fluency in both the Turkish and Dutch language, and interfering factors during a home-visit which made coding impossible. One year after the home-visit, we contacted the mothers for a second home-visit (Time 2). One-hundred and twenty-eight mothers (91%) and their children participated in this second visit. For 94 of these families we had a complete dataset. The children had a mean age of 24.88 months ($SD = 1.65$) at Time 1 and 37.23 months ($SD = 2.05$) at Time 2. Forty-nine percent of the sample consisted of boys. Most children were reared in two-parent families (94%), with mothers who had a mean education of $M = 2.98$ ($SD = 0.72$) on a scale of 1 to 5 (1 *primary education* to 5 *Master's degree*). The mothers had a mean age of 27.18 years ($SD = 3.07$). The majority of the children had no siblings (65%), 31% had one sibling, and 4% had two or more siblings.

Measures

Mother-rated physical aggression

The Physical Aggression Scale for Early Childhood (PASEC; Alink et al., 2006) was completed by mothers at Time 1 and Time 2. The questionnaire consisted of 11 items concerning physical aggression, including behaviors such as hitting, biting, and destroying things. Mothers were asked whether their child had shown these behaviors during the past 2 months. The items were scored on a 3-point Likert scale (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true). A physical aggression score was computed by summing the item scores (potential score range = 0 - 22). Internal consistencies of the total physical aggression score were computed for both Time 1 and Time 2. Cronbach's alphas were .85 for Time 1 and .82 for Time 2.

Difficult temperament

Child temperament (as perceived by the mother) was measured with the Infant Characteristics Questionnaire (ICQ; Bates, Freeland, & Lounsbury, 1979). The ICQ was translated into Dutch and found reliable by Kohnstamm (1984). In the study of Van Zeijl and colleagues (2006) a one-component analysis was carried out to derive an overall difficultness factor for different age groups. For 2-year-olds the difficultness factor consisted of 18 items. The questionnaire contained items describing concrete behaviors in well-defined situations (e.g., How easy or difficult is it to calm or soothe your child when he /she is upset?). The items were rated on a 5-point scale, ranging from 0 *not true* to 4 *true*. Internal consistency (Cronbach's alpha) for this scale was .64. Scale scores were computed by averaging item scores.

Maternal sensitivity

The mother's sensitive responsiveness to her child was observed during a series of problem-solving tasks during Time 1 and Time 2 sessions. Mother and child were asked to solve tasks that were somewhat too difficult considering the age of the child. Dyads were given three problem-solving tasks at Time 1 and two tasks at Time 2 consisting of a construction task (at Time 1 and 2), a jigsaw puzzle (at Time 1 and 2), and a sorting task (only at Time 1) for 5 minutes per task. Mothers were instructed to help their children in the way they would normally do. The observations were rated with the Erickson scales to measure mothers' *Supportive presence* and *Intrusiveness* (Egeland, Erickson, Moon, Hiester, & Korfmacher, 1990; Erickson, Sroufe, & Egeland, 1985). *Supportive presence* refers to the mother's expression of emotional support and positive regard by encouraging, giving support and confidence, reassuring and acknowledging the child's accomplishments on the tasks. Supportive presence was coded on a 7-point scale ranging

from 1 (completely failing to be supportive) to 7 (skillfully providing support). *Intrusiveness* refers to the mother's lack of respect of the child's autonomy when exploring or in problem solving situations, by interfering with the child's needs, desires, interests, or behaviors. Intrusiveness was also coded on a 7-point scale, ranging from 1 (not intrusive) to 7 (highly intrusive). Scale scores were computed by averaging the scores for the separate tasks.

The scales for Time 1 were coded by the first author and a PhD colleague, who were first trained by the second author (the expert) to code tapes from the Dutch sample ($n = 20$). The intraclass correlations (single rater, absolute agreement) for intercoder reliability between the three pairs of coders ranged from .68 to .92 ($M = 0.78$). Then, 20 tapes from the Turkish sample were translated and transcribed in Dutch by the first author (who speaks the Dutch and the Turkish language fluently) for the reliability check of coding the Turkish sample ($n = 20$). The intraclass correlations (single rater, absolute agreement) for the Turkish sample were .71 for supportive presence and .76 for intrusiveness. The scales for Time 2 were coded by a native Turkish student with a Bachelor's degree in Psychology who spoke both the Turkish and the Dutch language fluently. She was also trained by the expert and coded tapes of the Turkish reliability sample ($n = 20$). The intraclass correlations (single rater, absolute agreement) were .71 for supportive presence and .74 for intrusiveness.

Maternal discipline

Specific maternal discipline strategies were observed during a four-minute clean-up task. After playing with attractive toys, the mother was asked to instruct her child to clean up the toys. The mother was allowed to help her child with three toys. Coding procedures were based on Kuczynski, Kochanska, Radke-Yarrow, and Girnius-Brown (1987) and Van der Mark, Van IJzendoorn, and Bakermans-Kranenburg (2002). Maternal *authoritative control* (positive feedback, positive atmosphere, induction and understanding) and *authoritarian control* (commanding and physical interference) were observed. *Positive feedback* and creating a *positive atmosphere* involved giving compliments and making positive remarks when the child was cleaning up, and responding to what the child said (e.g., which toy wants to sleep in the basket?). *Induction* was coded when mothers explained why their child should not play further (even when this is not the real reason); when mothers showed interest or were considerate of their child's emotions when cleaning up the toys *understanding* was coded. Considering the authoritarian control strategies, *commanding* was coded when mothers gave their child instructions to clean up in an authoritarian manner. When the mother used physical force to constrain the child from playing with the toys or to make the child clean up the toys, we coded this as *physical*

interference. The number of times the mother had used a specific category was divided by the time of the episode and standardized to three minutes (see Alink et al., 2008).

All five coders (students with a Bachelor's degree) spoke the Turkish and the Dutch language fluently and were blind to other data concerning the participants. First, a Dutch set was coded for intercoder reliability. Coders had a mean intraclass correlation (single rater, absolute agreement) with the expert of .80 for authoritative control (range = .71 - .91, $n = 25$) and .76 for authoritarian control (range = .71 - .86, $n = 25$). Then, the coders observed a Turkish set; the mean intraclass correlations (single rater, absolute agreement) for intercoder reliability (for all separate pairs of coders) were .84 (range = .74 - .97, $n = 20$) for authoritative control and .88 (range = .75 - .94, $n = 20$) for authoritarian control.

Positive parenting

We computed an overall positive parenting variable by standardizing and then adding supportive presence and authoritative control and subtracting intrusiveness. Using model fitting, these scales were found to fit a single dimension (for a full description of this model, see Yaman, Mesman, Bakermans-Kranenburg, Van IJzendoorn, & Linting, 2009). We did not include authoritarian control in the overall positive parenting variable as this scale did not fit the model.

Data Analyses

Zero to two outliers ($|z| > 3.29$) were identified on each of the variables (Tabachnick & Fidell, 2001). Outliers were winsorized (i.e., “moved in close to the good data”, Hampel, Ronchetti, & Rousseeuw, 1986) by replacement of the outlying scores with the next highest value in the distribution.

Results

Preliminary analyses

First, we investigated if maternal education and number of siblings were associated with Time 1 and Time 2 child physical aggression, Time 1 and Time 2 positive parenting, and Time 1 and Time 2 authoritarian discipline. Maternal education was significantly correlated with Time 1 child physical aggression $r(94) = -.32, p < .01$. Number of siblings was significantly associated

with Time 1 child physical aggression $r(94) = .24, p < .05$ as well as with Time 1 positive parenting $r(94) = .23, p < .05$. Therefore, in our analyses we used maternal education and number of siblings as covariates. Table 4.1 shows the means and standard deviations for child temperament at Time 1, physical aggression at Time 1 and Time 2, observed maternal authoritarian and positive parenting at Time 1 and Time 2.

Table 4.1

Parenting and child behaviors at time 1 and time 2 (N = 94)

	Time 1		Time 2	
	Mean	(SD)	Mean	(SD)
Positive parenting ^a	-0.01	(2.30)	0.04	(1.96)
Authoritarian discipline	5.68	(4.92)	4.34	(4.06)
Child physical aggression	3.76	(3.97)	3.15	(2.94)
Child temperament	1.57	(0.47)	-	-

Note: ^a Positive parenting is the sum of the standardized scores for supportive presence and authoritative discipline, minus the standardized score for intrusiveness.

Parenting, child physical aggression, and temperament

Correlations between Time 1 and Time 2 child physical aggression, temperament, positive parenting, and authoritarian discipline are presented in Table 4.2. Positive parenting was stable over time. The correlation between Time 1 and Time 2 authoritarian discipline was not significant. Child aggression was stable over time and child temperament at Time 1 was associated with child aggression at Time 1 and Time 2. No other associations were found between child temperament, child aggression, positive parenting, and authoritarian discipline at either time of assessment.

Table 4.2

Pearson correlations among parenting and child behaviors at time 1 and time 2 (N = 94)

		Time 1				Time 2	
		1.	2.	3.	4.	1.	2.
Time 1	1. Positive parenting ^a	-					
	2. Authoritarian discipline	-.37**	-				
	3. Child physical aggression	.02	-.01	-			

	4. Child temperament	-.10	.08	.20*	-		
Time 2	1. Positive parenting ^a	.36**	-.05	.05	.09	-	
	2. Authoritarian discipline	-.03	.11	-.18	.11	-.08	-
	3. Child physical aggression	-.08	.18	.55**	.37**	-.04	-.04

Note: ^a Positive parenting is the sum of the standardized scores for supportive presence and authoritative discipline, minus the standardized score for intrusiveness. * $p < .05$; ** $p < .01$

Multivariate analyses predicting child physical aggression

Before performing linear regression analyses and computing interaction terms, the predictors were centered in order to reduce possible multicollinearity between the independent variables and the interaction term, and to facilitate the interpretation of the interaction effect (Cohen, Cohen, West, & Aiken, 2003). We performed a linear regression analysis to test the moderating effect of child temperament at Time 1 on the association between the Time 1 positive parenting and Time 2 aggression. In the first step, we controlled for maternal education and number of siblings, Time 1 physical aggression and Time 2 positive parenting. In step 2, we entered the main effects of Time 1 positive parenting and child temperament, and in step 3 we entered the interaction term between Time 1 positive parenting and temperament (Table 4.3).

Child physical aggression and temperament at Time 1 showed a main effect in the prediction of child physical aggression at Time 2. Adding the interaction term significantly improved the model, $R^2_{\text{change}} = .03$, $F_{\text{change}}(1, 85) = 4.27$, $p < .05$. The interpretation of the interaction effect can be inferred from the plotted regression lines for children with a difficult and an easy temperament (see Figure 4.1). A median split was applied to Time 1 child temperament. The lines in Figure 4.1 were plotted using predictor values of ± 1 standard deviation (positive parenting at Time 1) as recommended by Aiken and West (1991). In order to correct for child aggression at Time 1, maternal education, and the number of siblings, we used residual scores for child aggression at Time 2. In the difficult temperament group, less positive parenting at Time 1 predicted more physical aggression at Time 2 (see Figure 4.1). The results are indicative of a double risk model, in which children with difficult temperaments who also have mothers with lower levels of positive parenting show high levels of aggressive behaviors. It should be noted that less positive parenting led to the lowest aggression in the easy temperament group.

Table 4.3

Regression analysis testing child temperament as a moderator on the association between time 1 positive parenting and time 2 child physical aggression (N = 94)

	<i>B</i>	<i>SE</i>	β	<i>t</i> -value	<i>R</i> ²
Step 1 ^a					0.33**
Education mother	-0.12	0.39	-0.03	-0.31	
Number of siblings	-0.50	0.45	-0.10	-1.11	
Time 1 Child physical aggression	0.38	0.07	0.51	5.43**	
Time 2 Positive parenting	-0.12	0.14	-0.08	-0.88	
Step 2					0.39*
Time 1 Positive parenting	0.02	0.12	0.02	0.18	
Time 1 Child temperament	1.88	0.59	0.30	3.20**	
Step 3					0.42*
Positive parenting Time 1 x Child temperament	-0.48	0.23	-0.18	-2.07*	

Note: ^aThe statistics are derived from the final block of the regression model. * $p < .05$; ** $p < .01$

We also investigated the moderating effect of Time 1 child temperament on the association between Time 1 authoritarian discipline (not a component of the positive parenting composite) and Time 2 child aggression. Time 1 child physical aggression ($\beta = .52, p < .01$) and temperament ($\beta = .23, p < .05$) were significant predictors of Time 2 child physical aggression. We found no main effects of authoritarian discipline (T2 authoritarian discipline $\beta = .01, p = .88$, T1 authoritarian discipline $\beta = .15, p = .08$). Adding the interaction term did not significantly improve the model, $R^2_{\text{change}} = .00, F_{\text{change}}(1, 85) = 0.22, p = .64$.

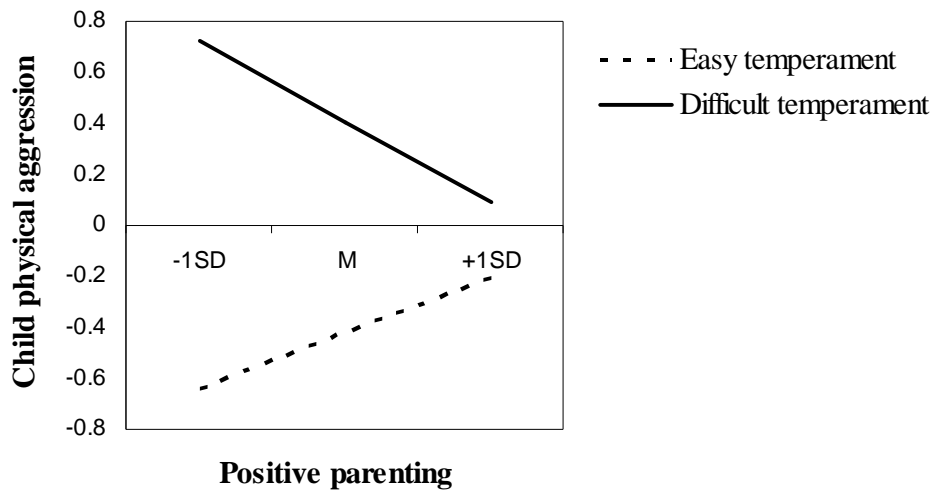


Figure 4.1

Positive parenting at time 1 predicting child physical aggression at time 2 for children with difficult and easy temperaments

Discussion

Our study shows that child temperament at age 2 years (Time 1) is a significant predictor of child aggression one year later (Time 2). Lower levels of Time 1 positive parenting predicted elevated Time 2 child aggression, but only in the group of children with a difficult temperament. However, children with difficult temperaments did not benefit more from higher levels of positive parenting, indicating that the dual risk model is applicable and not the differential susceptibility model. Less positive parenting predicted low levels of Time 2 aggression in the easy temperament group. No interaction effects were found for authoritarian discipline.

As expected, we found that Time 1 child difficult temperament predicted Time 2 child aggression. This is consistent with previous findings in several countries and immigrant groups, showing that difficult child temperament predicts behavior problems at a later age (Caspi et al., 1994, 1995; De Boo & Kolk, 2007). Contrary to our expectations, no main effects of parenting on child physical aggression were found. As suggested by Rothbaum and Weisz' (1994) meta-analytic findings, the association between the quality of parenting and child externalizing behaviors may be less strong for toddlers and preschoolers than for older children. Externalizing behaviors may be more strongly associated with the quality of caregiving when these problem

behaviors are connected with feelings of hostility and the intention to hurt others, as opposed to autonomy seeking in toddlerhood. However, the absence of main effects may also suggest that some children are more vulnerable to the effects of parenting than others. Indeed, we found a significant interaction effect between positive parenting and difficult child temperament in the prediction of child physical aggression. Thus, lower levels of positive parenting (risk 1) were related to higher levels of physical aggression, but only for children with difficult temperaments (risk 2). Because children with difficult temperaments did not benefit more from higher levels of positive parenting than children with easier temperaments, these findings point to a dual-risk model, rather than a differential susceptibility model. Similar interaction effects were also found in previous studies that focused on the influence of positive parenting behaviors such as maternal sensitivity on the development of child externalizing behaviors (e.g., Karreman, Van Tuijl, Van Aken, & Deković, 2009; Van Aken et al., 2007), however these studies did not test both the dual risk model and the differential susceptibility model.

As we found support for the dual risk model, interventions aimed at second-generation Turkish immigrant families should especially focus on temperamentally vulnerable children who also experience a lack of positive parenting. Increasing positive parenting through intervention for parents of children with difficult temperaments may thus decrease the risk for aggressive outcomes, but because we did not find evidence for differential susceptibility, this should not be expected to lead to even better outcomes compared to those for children with easy temperaments. In the easy temperament group less positive parenting led to lower aggression. We speculate that this unexpected finding might be a suppression effect: children with an easy temperament might suppress their feelings of distress and anger when their parents are punitive and crush any sign of protest in their mostly easy-going children. In this group of families with children with an easy temperament interventions enhancing positive parenting might lead to more aggression later on, as children may feel free to openly communicate their feelings of anger and distress to their non-punitive parent. Of course, this speculative interpretation should be tested in experimental research.

We did not find main effects of authoritarian discipline on child aggression, nor did we find a moderating effect of child temperament in the relation between authoritarian discipline and child physical aggression. These findings may be due to the fact that no distinction was made between obedience-demanding and punishment-oriented aspects of authoritarian discipline in the Turkish context that may influence child behaviors in a different manner. Obedience-demanding parenting (i.e., immediate compliance without explanation) has been found to have a positive influence on the prosocial behavior of Turkish immigrant children, whereas punishment-oriented

discipline tended to have negative effects (Yağmurlu & Sanson, 2008). Thus, obedience-demanding parenting behaviors are not necessarily unfavorable to child development in Turkish immigrant families, as obedience is highly valued and may be perceived as normative in the Turkish culture. In our study authoritarian discipline consisted of commanding (e.g., saying no, repeating the command) and physical interference (e.g., taking away forbidden toys, preventing the child to touch them). These discipline behaviors seem to reflect primarily obedience-demanding behaviors and may therefore not have had an adverse effect on child behaviors in our sample.

To our knowledge, this is the first study to examine the moderating role of child temperament in the association between observed parenting practices of second-generation Turkish immigrant mothers and the aggressive behaviors of their toddlers. However, there are some limitations to this study. First, although we observed mothers' parenting behaviors, we used mother-reports to measure both child temperament and physical aggression, so some shared method variance for these variables can not be excluded. Nevertheless, we found only modest associations between the two constructs, which suggest that they were sufficiently differentiated. We also tested for associations between the two measures across time, and not at the same point in time, thus preventing the association between predictor and outcome to be inflated by current mood or temporary response biases. Second, it was quite surprising that authoritarian discipline was not stable over time. However, our results do confirm the idea that disciplinary techniques, such as power assertion, are flexible and dependent on the child's misbehavior, and that discipline techniques are varied according to the situation instead of reflecting an invariant discipline approach on the mother's part (Grusec & Kuczynski, 1980). Finally, as our study was a short-term longitudinal study, we do not know if temperamentally difficult children reared by mothers with low levels of positive parenting behaviors will continue to show aggressive behaviors into middle-childhood and adolescence or that they experience the beneficial effects of a supportive rearing environment only at a later age.

In conclusion, this study provides empirical evidence for the generalizability of the dual-risk hypothesis to second-generation immigrant families: toddlers with difficult temperaments are more adversely affected by a lack of positive parenting than other children, but do not benefit more from high levels of positive parenting. We recommend that future studies also employ observational methods of child temperament and aggression, and make a distinction between various culturally relevant components of authoritarian parenting. Our findings imply that in order to reduce child behavior problems in second-generation Turkish immigrant families, it is important to design interventions that focus on immigrant families who struggle with the

challenges of the disruptive behaviors of their temperamentally difficult toddlers. These interventions should particularly aim at enhancing maternal sensitivity and authoritative control in these families.