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Running Headline: PARENTING STYLES AND SOCIOEMOTIONAL DEVELOPMENT

**Children's Social Withdrawal Moderates the Associations Between  
Parenting Styles and the Children's Socioemotional Development**

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**Abstract**

**Background:** Social withdrawal in early childhood is a risk factor for later socioemotional difficulties. This study examined the joint effects of children's social withdrawal and mothers' and fathers' parenting styles on children's socioemotional development. Based on diatheses-stress, vantage sensitivity, and differential susceptibility models, socially withdrawn children were assumed to be more prone to parental influences than others. **Methods:** Teachers rated 314 children on prosocial skills, and internalizing and externalizing behaviors at three points in time between grades 1–3. Mothers (n = 279) and fathers (n = 182) filled in questionnaires measuring their affection, and their behavioral and psychological control at the same points in time. Teacher reports on children's level of social withdrawal were obtained at the end of kindergarten. **Results:** Panel analysis showed that particularly those children who showed signs of social withdrawal were vulnerable to the negative effects of low maternal affection in terms of externalizing behavior. Moreover, among these children, mothers' and fathers' psychological control predicted high levels of internalizing problem but, at the same time, mothers' psychological control predicted also a high level of prosocial behavior and low levels of externalizing problem. **Conclusions:** The results supported the diathesis–stress model more than the differential susceptibility model. For example, socially withdrawn children were found to be particularly vulnerable to the negative effects of low maternal affection. Although maternal psychological control had positive effects on the prosocial skills of socially withdrawn children, and reduced the amount of externalizing problems, it was at the same time associated with an increase in their internalizing problems. In this way, socially withdrawn children seem to be at risk of pleasing their mothers at the cost of their own well-being. **Keywords:** Parenting styles, socioemotional development, social withdrawal, prosocial skills, problem behavior, diathesis–stress model, differential susceptibility model.

Children's Social Withdrawal Moderates the Associations Between  
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## **Introduction**

A consistent display of solitary behavior when encountering familiar or unfamiliar peers across situations and over time, that is social withdrawal (Rubin & Coplan, 2004), has been shown to increase the risk of socioemotional difficulties later in life (Rubin, Coplan, & Bowker, 2009). One protective factor that may reduce the likelihood that these at-risk children develop a maladaptive developmental trajectory is a favorable parenting style (Degnan & Fox, 2007; Rubin et al., 2009). However, although it has been suggested that socially withdrawn and inhibited children benefit from a different kind of parenting than other children (Gallagher, 2002), and that temperamentally vulnerable children are more influenced by parental socialization than others (Belsky & Pluess, 2009), little is known about the possible joint effects of social withdrawal and parenting styles on children's developmental outcomes. Consequently, the present study examines how parenting styles are associated with a child's socio-emotional development in different ways, depending on the child's level of social withdrawal.

## ***Social Withdrawal and Socioemotional Development***

Behavioral inhibition, shyness, isolation, passivity, social disinterest, unsociability, and social reticence are some of the different terms that have been used in previous literature to refer to socially withdrawn behavior (for a review, see Rubin et al., 2009). Although all of these terms refer to withdrawal, the underlying explanations for them are different. For example, whereas the solitary-passive (cf., unsociability, social disinterest) form of social withdrawal describes children who are disinterested in social interaction and who prefer to play alone, solitaryactive (cf., actively isolated, rejected) children

withdraw from social interaction because peers do not allow these children to interact with them (Coplan, Rubin, Fox, Calkins, & Stewart, 1994; Harrist, Zaia, Bates, Dodge, & Pettit, 1997). Reticence (cf., anxiety-type of solitude, passive anxiety), in turn, describes children who avoid interaction with peers due to their own fearfulness of social interaction (Harrist et al., 1997). Reticence is also thought to be an indicator of temperamental shyness (Coplan et al., 1994), conceptualized as wariness and anxiety in the face of social novelty or evaluation (Rubin et al., 2009), or in social contexts overall (Coplan et al., 2009). Another concept closely related to shyness is that of behavioral inhibition, which refers to a biologically rooted wariness of novel people, places and things (Fox, Henderson, Marshall, Nichols, & Ghera, 2005). In the present study, the focus is on overall withdrawn behavior rather than on any of the specific types of it.

Children showing social withdrawal (particularly reticence) have been found to be less prosocial (Hastings, Rubin, & DeRose, 2005) and less skilled in solving interpersonal problems (Rubin, Burgess, & Hastings, 2002) than other children. There is also a higher risk of them to evidence internalizing problem behaviors, that is to show symptoms of depression or anxiety (Rubin et al., 2009). The limited amount of research that exist on the role of social withdrawal or related constructs in developing externalized problem behavior has yielded somewhat inconsistent results (Pine, Cohen, Cohen, & Brook, 2000; Vitaro, Brendgen, & Tremblay, 2002; Williams et al., 2009).

### ***Parenting Styles and Socioemotional Development***

Family forms an important context for children's socioemotional development (Hart, Newell, & Olsen, 2003). One of the most often investigated aspects regarding family is parenting styles. The three parenting style dimensions—affection or warmth; behavioral control; and psychological control—have each been shown to be associated with children's socioemotional development. For example, warm, responsive and

supportive parenting promotes the development of children's emotion regulation and social skills (Hart et al., 2003). Also parental behavioral control (e.g. setting limits, showing consistency in discipline, and demanding maturity) predicts adaptive child development and low levels of externalizing problem behavior (Barber, 1996; Hart et al., 2003). A high level of psychological control has, in turn, been shown to lead to internalizing problems, such as depression, anxiety and internalized distress (Barber, 1996).

Research on parenting of socially withdrawn children has shown that parents of such children have a tendency to use an over solicitous style of parenting characterized by high affection combined with overcontrolling or overprotective behaviors (Rubin, Hastings, Stewart, Henderson, & Chen, 1997). Children's early shyness has also been linked to parents' later lack of encouragement for their children's independence (Rubin, Nelson, Hastings, & Asendorph, 1999). This kind of intrusive parenting has been shown to lead to an even higher level of social withdrawal later on in childhood (Degnan, Calkins, Keane, & Hill-Soderlund, 2008; Rubin et al., 2002).

### ***The joint effects of social withdrawal and parenting styles***

According to the child–environment model of adaptation (Nigg, 2006), various characteristics in children determine what kind of environmental support is most beneficial for them and the kind of environmental risks they might be particularly vulnerable to. It has also been suggested that, depending on particular characteristics, certain children are generally more susceptible than others to parental socialization (Belsky & Pluess, 2009). Three alternative models have been used to explain the differential effects of environment on individuals. The diathesis–stress model posits that due to some endogenous characteristic of ‘vulnerability’, some individuals are more vulnerable than others to the adverse effects of exposure to negative experiences (Belsky & Pluess, 2009; Nigg, 2006). The differential susceptibility model (Belsky & Pluess, 2009) goes one step further by suggesting that individuals who are the most vulnerable to

negative environmental impacts also gain the most from positive experiences and environments. According to the vantage sensitivity model, in turn, some individuals are more sensitive than others to environmental advantages, in particular (Pluess & Belsky, 2013).

One child characteristic that has been shown to make children particularly susceptible to parental influence is temperamental fearfulness or negative reactivity to novelty (Belsky & Pluess, 2009; Gallagher, 2002). After infancy, this temperamental characteristic often manifests itself as social withdrawal and inhibited behavior (Degnan & Fox, 2007). It can therefore be assumed that social withdrawal in later childhood is linked to the child being more vulnerable to parental influences (Gallagher, 2002). Following this line of thought further, Williams et al. (2009) found that mothers' permissive parenting (e.g. ignoring misbehavior) was associated with children's internalizing problems at the age of 4, but only among those children who were behaviorally inhibited. In another study, Russell, Hart, Robinson, and Olsen (2003) found that, with 4–5-year-old children, authoritarian parenting (i.e. a high level of parental control combined with low affection) was negatively associated with the children's social behavior among unsociable children, but not among those that were more sociable. In the study by Hastings et al. (2005), authoritative and authoritarian parenting were differently associated with girls' prosocial behavior, depending on the girls' level of behavioral inhibition: temperamentally inhibited girls were more prosocial at the age of 4 if their mothers were more authoritarian, but less prosocial if their mothers were authoritative (high levels of affection and behavioral control), whereas the opposite pattern was found for less inhibited girls. Overall, although a lot is known about the role of social withdrawal, on the one hand, and the role of parenting styles, on the other, only few studies have thus far been conducted on their joint effects on children's socioemotional development.

## **Aims**

This study examined whether children's social withdrawal in combination with mothers' and fathers'

parenting styles would show joint effects on the children's socioemotional development. Parental affection and behavioral control were assumed to be positively associated with children's prosocial skills and negatively with their externalizing and internalizing behaviors (Hart et al., 2003). Parental psychological control, in turn, was assumed to be negatively associated with prosocial behavior and positively with different forms of problem behavior (Barber, 1996). Our overall assumption was that these associations would be stronger among children showing socially withdrawn behavior than among other children. In addition to this, we set three alternative sub-hypotheses: (a) socially withdrawn children are more vulnerable than others to the negative effects of parenting, as suggested by the diathesis–stress model; (b) socially withdrawn children are more sensitive than others to the positive effects of parenting, as suggested by the vantage sensitivity model; (c) socially withdrawn children are more sensitive to both the negative and positive effects of parenting than others, as suggested by the differential susceptibility model (Belsky & Pluess, 2009; Pluess & Belsky, 2013).

The present study was carried out during the children's transition to elementary school. This developmental period is an important period for examining social withdrawal and its consequences, as children begin to spend more time with peers and the demands for social interaction increase (Coplan & Arbeau, 2008).

## **Methods**

### ***Participants and procedure***

A total of 378 children (182 girls, 196 boys) were selected for our study from a larger sample of about 2000 children who were participating in the First Steps study (Ahonen et al., 2007). This study followed up a community sample of children from kindergarten to elementary school, with data being simultaneously gathered from both parents and teachers throughout 2006–2011. Parental consent was



requested and received for all the children involved. The target sample was determined by randomly selecting a small number of students from each grade 1 classroom. Typically, three children were selected from each classroom ( $M = 2.53$ ,  $SD = 0.84$ ), but this number could vary from one to six (relative to the size of the class). The reason for creating a subsample was to minimize teachers' workloads. Comparisons between the random target sample ( $N = 378$ ) and the larger sample ( $N = 2000$ ) revealed that any difference between them was not statistically significant ( $p < .05$ ) either in terms of the children's levels of achievement, parental well-being, parental education, or gender distribution. Information on both the children's levels of social withdrawal and their socioemotional development was available for 314 of the 378 children in the target sample (154 girls, 160 boys). Information on parenting styles was available for 279 of the mothers and for 182 fathers of the children. Consequently, these sample numbers were reflected in the final analysis.

The vast majority of children in the sample (76%) came from nuclear families, 12% were from single-parent families, and 12% from blended families. A total of 25% of the children's mothers had a Master's degree or higher, 37% had a Bachelor's or vocational college degree, 31% had secondary education, and 7% had no degree beyond comprehensive school. The sample was fairly representative of the level of education among the general population in Finland (Statistics Finland, 2007).

Children's prosocial skills and their levels of internalizing and externalizing problem behavior were rated by their school teacher once every year for 3 years: in grade 1 (April, 2008), grade 2 (April, 2009), and grade 3 (April, 2010). Children's social withdrawal was rated at the end of the kindergarten by their kindergarten teachers. Parents or legal guardians were asked to complete parental questionnaires at home concerning their parenting styles, independently, and without conferring. Mothers and fathers filled in these questionnaires at the same three points in time as the school teachers filled in their questionnaires concerning the children.

At the beginning of the study, the children were in kindergarten and were 6 years old or turning seven within the next 4 months ( $M = 73.96$  months,  $SD = 3.35$  months). They came from schools that were situated in three medium-sized towns and in one more rural area. Two of them were in Central Finland, one in Western Finland, and one in Eastern Finland. A total of 236 teachers of kindergarten, 136 of grade 1, 133 of grade 2, and 136 of grade 3 participated in the study. The teachers differed from kindergarten to grade 1 but between grades 1 and 2 they were usually the same teacher (68% of cases). Between grades 2 and 3 however, they again usually changed (75% of cases).

### **Measures**

*Social withdrawal.* The children's social withdrawal was evaluated by their kindergarten teachers, using three items. Two of the items (The child is withdrawn from other children; The child avoids working in a group with other children) were drawn from the Children's Short Social Withdrawal Scale (see Kiuru et al., 2012), and were rated on a 5-point scale (1 = never; to 5 = very often). The third item (Enthusiastically participates in group activities) was drawn from Multisource Assessment of Children's Social Competence (MASCS; Junttila, Voeten, Kaukiainen, & Vauras, 2006), and was rated on a 4-point scale (1 = never; to 4 = very frequently). The score for social withdrawal was constructed by first reversing the positively worded item (third item), and subsequently converting all three items to the same scale (0 = never; to 4 = very often/very frequently). The last step was to then calculate the mean across all four items. The Cronbach's  $\alpha$  for the total score was .70.

*Internalizing and externalizing problem behavior and prosocial skills.* During grades 1–3, teachers were asked to rate each child on a 3-point rating scale (1 = does not apply, 2 = applies partly, 3 = certainly applies) using the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). Three SDQ subscales – measuring externalizing problem behavior (Conduct Problems subscale, five items; e.g. Often has temper tantrums), internalizing problem behavior (Emotional Symptoms subscale, five items; e.g. Is often

unhappy, down-hearted or fearful), and prosocial skills (five items; e.g. Is considerate of other people's feelings) – were utilized. Mean scores for these subscales were calculated at each of the three time points. The Cronbach's  $\alpha$  at each time point ranged from .77 to .81 for externalizing problems, and from .73 to .75 for internalizing problems, but remained static at .85 for prosocial skills.

*Mothers' and fathers' parenting styles.* Mothers' and fathers' parenting styles were measured using a revised Finnish version (Aunola & Nurmi, 2004) of Block's Child-Rearing Practices Report (CRPR; Roberts, Block, & Block, 1984) that included 19 items measured on a 5-point scale (1 = does not fit me at all; 5 = fits me very well). Mean scores were then calculated for different parenting style dimensions at each of the three time points. The affection dimension (10 items, e.g. I often show my child that I love him/her) measured parental warmth and responsiveness. The behavioral control dimension (five items, e.g. My child should learn that we have rules in our family) measured demandingness, limit setting, and maturity demands. The psychological control dimension (four items, e.g. I believe my child should be aware of how much I have done for him/her) measured parental attitudes appealing to guilt and expressing disappointment. The Cronbach's  $\alpha$  reliability for each of the three parenting style dimensions at different measurement points ranged from .84 to .85 for mothers' affection, and from .82 to .84 for fathers' affection; from .62 to .71 for mothers' behavioral control, and from .72 to .76 for fathers' behavioral control; from .69 to .76 for mothers' psychological control, and from .72 to .83 for fathers' psychological control.

### ***Analytical Strategy***

The analyses were conducted using panel data regression techniques (Gujarati, 2003), which combines a time-series with cross-sectional analyses. Panel analysis also enables taking into account any variation

between individuals regarding their typical levels. In this study, we took account the 273 cross-sections (in this case, individuals) and three time points (i.e. grade 1, grade 2, grade 3) when examining our research questions, that is how children's social withdrawal in kindergarten and their parents' parenting styles during grades 1–3 predict the children's internalizing and externalizing problem behaviors and prosocial skills during the first 3 years of elementary school. The analyses were carried out separately for mothers' and fathers' parenting styles, and separately for each socioemotional outcome variable. The models included the main effects of children's social withdrawal and the three parenting style dimensions as well as all interaction terms between social withdrawal and parenting styles, as independent variables. In all of the models, sociodemographic characteristics including the child's gender, parents' education, family's socioeconomic status, and the parental status (single parent or nonsingle parent) were controlled for. The analyses were performed using Gretl software (Gnu Regression, Econometrics, and Time Series Library, Ver. 1.9.4; see Lucchetti, 2011). The parameters of the models were estimated using the GLS (generalized least squares) technique. A more detailed description of the panel analyses that were conducted is provided as online supporting information. In this study, the interest was on the joint effect of children's social withdrawal and parenting styles on children's socio-emotional development. To examine these joint effects the interaction terms (Social withdrawal  $\times$  Affection; Social withdrawal  $\times$  Behavioral control; and Social withdrawal  $\times$  Psychological control) found to be statistically significant ( $p < .05$ , two-tailed test) were first interpreted using Aiken and West's (1991) procedure. In this procedure, simple slopes for parenting style variables in the prediction of children's socioemotional development were calculated and presented using standardized scores separately for children who showed either low (1 SD) or high (+1 SD) levels of social withdrawal. Then, in order to explicitly test the competing models, regions of significance (RoS) analyses were carried out using the procedure suggested by Roisman et al. (2012). In these analyses, the statistical significance of the simple slopes pertaining to children who

showed low or high levels of social withdrawal, as well as RoS (see also Preacher, Curran, & Bauer, 2006), were calculated first. In the present study, RoS-z indicates the range of values of social withdrawal (z) in which the parenting style variable (x) and socioemotional development variable (y) are significantly associated. In turn, RoS-x indicates the specific values of the parenting style variable (x) below which and above which the regression lines for the children showing high and low social withdrawal (z) differ significantly in terms of socioemotional development variable (y). RoS-x values provide a basis for making conclusions regarding the extent to which the results support the competing three theories. This is done by inspecting whether the association between the social withdrawal and socioemotional development is significant only at low (diathesis–stress), only at high (vantage sensitivity), or both at low and high (differential susceptibility) values of specific parental variable. If RoS-x is within the bounds of -2 to +2, then the result provides support for the differential susceptibility model (Roisman et al., 2012). Next, PoI indices were calculated. PoI values are, unlike p values, robust against sample size. According to Roisman et al. (2012), PoI values between around .40 and .60 represent an interaction effect highly consistent with the differential susceptibility model, whereas values close to zero provide evidence for the diathesis–stress model, and values near 1.00 for the counter-intuitive diathesis–stress model, that is vantage sensitivity. It should be noted, however, that the interpretation of the PoI value depends on whether the x variable (in this case for parenting) is scaled from a negative to positive range or vice versa. For example, if the x variable represents more of a negative than positive environmental effect (e.g. psychological control), then PoI values close to zero will support the vantage sensitivity model while those near 1.00 support the diathesis– stress model.

## Results

Table 1 shows the means and standard deviations of the observed variables separately at different measurement points. The Tables S1 and S2 show correlations between the variables across the measurement points, and the results of the panel analyses, respectively. Meanwhile, Table 2 shows the regions of significance, PoI indices and crossover points for the interaction terms that were found to be statistically significant.

### ***The joint effects of social withdrawal and mothers' parenting styles***

Four statistically significant ( $p < .05$ ) interactions were found between social withdrawal and parenting when predicting children's socioemotional development from their mothers' style of parenting (Table S2). First, the results showed that children's social withdrawal and maternal affection had a joint impact on children's externalizing problems. Among children with a relatively high level of social withdrawal, mothers' affection negatively predicted children's externalizing problem behavior ( $b = .20$ ,  $p < .001$ ; Figure 1). In comparison, among children with a low level of social withdrawal, the mothers' affection had no impact on externalizing behavior ( $b = .02$ ,  $p = .71$ ). The regions of significance and the PoI value (Figure 1; Table 2) suggest that this pattern of results supports the diathesis–stress model: the children who showed high levels of social withdrawal were particularly vulnerable to the negative effects of low maternal affection.

The results showed further that the impact of mothers' psychological control on their children's prosocial behavior and externalizing and internalizing problems were dependent on the level of the children's social withdrawal (see Table S2 and Figures 1 and 2). The results for internalizing problem behavior showed that mothers' psychological control predicted greater internalizing problems among children who showed a relatively high level of social withdrawal ( $b = .15$ ,  $p < .05$ ) but not among those with a low level of social withdrawal ( $b = .01$ ,  $p = .82$ ). The regions of significance (Figure 1, Table 2), as

well as the PoI again support the diathesis–stress model: the children who showed high levels of social withdrawal were particularly vulnerable to the negative effects of maternal psychological control.

However, the results for prosocial skills and externalizing problem behavior (Figure 2, Table 2) were unexpected. Among children with a relatively high level of social withdrawal, mothers' psychological control predicted greater prosocial skills ( $b = .16, p < .05$ ) and less externalizing problems ( $b = .12, p < .01$ ). Among children with a low level of social withdrawal (Figure 2), in turn, mothers' psychological control had no impact on either their children's prosocial skills ( $b = .05, p = 0.44$ ) or externalizing problems ( $b = .05, p = .27$ ). Again these results, according to the regions of significance and the PoI indices, support the diathesis–stress model (but in an unexpected way): the children with a high level of social withdrawal were particularly vulnerable to the negative effects of low maternal psychological control.

### ***The joint effects of social withdrawal and fathers' parenting styles***

Two statistically significant ( $p < .05$ ) interactions were found between social withdrawal and parenting when predicting children's socioemotional development from their fathers' style of parenting (Table S2). As with mothers, fathers' psychological control (see Figure 3) predicted greater internalizing problem behavior among children with a high level of social withdrawal ( $b = .18, p < 0.05$ ). In turn, among children with a low level of social withdrawal, the fathers' psychological control predicted less internalizing problems ( $b = .29, p < .001$ ). The results concerning the regions of significance (see Figure 1, Table 2) and the PoI index were consistent with the diathesis–stress model: the children who showed high levels of social withdrawal were particularly vulnerable to the negative effects of paternal psychological control. However, the fact that the slope was significant in the other direction among nonwithdrawn children supports the vantage sensitivity model: the children who showed low levels of

social withdrawal were more susceptible to the positive effects of paternal psychological control. Overall, the patterns found in these results are consistent with the child-environment model, as paternal psychological control had a differential effect on children's internalizing problems, depending on the level of social withdrawal.

Second, among children with a relatively high level of social withdrawal ( $b = .14, p < .10$ ), fathers' behavioral control was marginally negatively associated with the children's internalizing problems. In turn, among children with a low level of social withdrawal ( $b = .14, p < .10$ ), fathers' behavioral control was marginally positively associated with the children's internalizing problems. The results concerning the regions of significance (see Figure 1, Table 2) and the PoI index were consistent with the diathesis-stress model: the children with a high level of social withdrawal were vulnerable to the negative effects of low paternal behavioral control. However, the result that the slope was marginally significant in the opposite direction among nonwithdrawn children supports the vantage sensitivity model: the children with a low level of social withdrawal were more susceptible to the positive effects of low paternal behavioral control. Overall, as with the psychological control results, the patterns found are consistent with the child-environment model, that is paternal behavioral control had a differential effect on children's internalizing problems, depending on their level of social withdrawal.

### ***Effects of parenting styles unaffected by the level of children's social withdrawal***

The results showed further that there were some main effects of parenting styles on children's socioemotional development that were not dependent on the level of children's social withdrawal (see Table S2). First, both mothers' and fathers' affection was positively associated with children's prosocial skills. Second, mothers' behavioral control was associated negatively with children's prosocial skills and positively with their externalizing behavior.



## Discussion

This study aimed to examine the joint effects of children's social withdrawal and the parenting styles of both their mothers and fathers on their socioemotional development during the first years of elementary school. The results revealed that children showing a relatively high level of social withdrawal were more vulnerable than other children to the negative effects of low maternal affection with respect to externalizing problem behavior. Moreover, although maternal psychological control had positive effect on socially withdrawn children in terms of increased prosocial skills and decreased externalizing problems, these positive changes associated with psychological control did not come without a cost: while the visible behavior of children evidencing social withdrawal behavior improved, their internalizing problem behavior increased.

The aim of this study was to examine the extent to which the associations of mothers' and fathers' parenting styles with children's socioemotional development are different depending on the level of children's social withdrawal. The results showed, first, that a lack of maternal affection was linked to an increase in externalizing behavior, but only among the more socially withdrawn children. This result is in accordance with the diathesis-stress model by suggesting that children with a high level of social withdrawal behavior are more vulnerable to the negative impacts of low maternal affection than are other children. One possible mechanism that might explain this result is that since children who are anxious and withdrawn are often rejected by their peers (Booth, Rose-Krasnor, McKinnon, & Rubin, 1994), maternal support and warmth forms an important alternative source of emotional support for them. Another explanation is that, since a warm and positive parent-child relationship is characterized by better parent-child communication and more usage of problem-focused coping styles and social support (Ranson & Urichuk, 2008), this kind of mothering provides the emotional support that socially withdrawn children

need. In addition, it helps them to learn more adaptive ways of communicating their emotions than simply externalizing their problems.

The results of this study showed further that parents' psychological control played a significant role particularly in the socioemotional development of children showing signs of social withdrawal. This finding was partly expected and consistent with our hypotheses: the higher the level of maternal and paternal psychological control, the higher the level of internalizing problem behavior among children with a relatively high level of social withdrawal. Consistent with the diathesis–stress model (Belsky & Pluess, 2009), the results of the present study suggest that children who show signs of social withdrawal are more vulnerable to the negative effects of psychological control than are other children when it comes to internalizing problems.

However, the results of this study also indicated that among the more socially withdrawn children, maternal psychological control predicted higher levels of prosocial skills and lower levels of externalizing behavior problems. Among the less socially withdrawn children, maternal psychological control was found to have no effect. These unexpected results suggest that maternal psychological control may also have positive consequences for the more socially withdrawn children. Previously, Russell et al. (2003) found that authoritarian mothering characterized by negative maternal control predicted a reduction in externalizing problem behavior over time among behaviorally inhibited children (see also Gallagher, 2002).

The results of this study suggest, however, that although psychological control may have some positive consequences, it is, at the same time, detrimental to children showing socially withdrawn behavior, because it increases their internalizing problem behavior and distress. One explanation for this result is that socially withdrawn children are generally more susceptible to maternal messages than other children (which would correspond with the differential susceptibility model), and thus are more motivated

to please their mothers. As a consequence, they develop more adaptive behaviors in reaction to maternal psychological control. However, because they do so at the cost of their own autonomy (and maybe try to be more sociable than they otherwise would be), they suffer a certain amount of psychological distress that may increase their anxiety and fearfulness in social situations. This kind of phenomenon may reflect a lack of ‘committed compliance’ (Kochanska & Aksan, 1995), or an ‘introjected regulation of behavior’ (Ryan & Deci, 2000). It has been suggested that this kind of regulation could be possibly motivated by children’s desire to receive social approval (Assor, Roth, & Deci, 2004) and maintain their self-esteem (Deci, Ryan, & Williams, 1996), which may cause internal tension and pressure over time (Ryan & Deci, 2000). Given that socially withdrawn children are already at a greater risk of internalizing their problems as it is, the compounding influence of parental psychological control is not just a cost, but could in fact become main driver in a developmental cascade (Masten & Cicchetti, 2010). Also, as children get older, their internalizing and externalizing scores tend to diverge (Gilliom & Shaw, 2004), so one might expect them to show the opposite effect over time.

Another result among the more socially withdrawn children was that paternal behavioral control had positive consequences, whereas permissive fathering (i.e. a lack of control) was associated with greater internalizing problems. Among the less socially withdrawn children, the result was the opposite. These results partly correspond with the findings in research by Williams et al. (2009), in which permissive mothering was associated with greater internalizing behaviors among inhibited children but not among noninhibited children. They went on to suggest that fearful and inhibited children may benefit from more parental control since it could provide the structure these children need to interact in social situations.

There were several limitations to this study that must be taken into account. First, the level of social withdrawal was only measured at kindergarten. This was because we assumed it to be a stable, innately temperament-related characteristic. However, it is possible that some changes to this characteristic take

place over time (Booth-Laforce & Oxford, 2008). Second, the percentage of fathers in the sample was relatively small compared to that of mothers, which decreased the statistical power of some of the analyses concerning fathers. Thirdly, although highly reliable, the scale used to measure social withdrawal was relatively small and also it was not possible to distinguish between the various subtypes of social withdrawal, e.g. solitary-passive, solitary-active, or anxious. Fourthly, one might question whether the social lives of children should be assessed by teachers and/or parents or whether it would be better to also consider the peer group as one of the informants (De Los Reyes, Thomas, Goodman, & Kundey, 2013). Another option would be to use behavioral observations or self-reports of outcome behavior and/or social withdrawal. Finally, due to the small size of the sample, it was not possible to examine the effect of three-way interactions on children's socioemotional development (e.g. gender/social withdrawal/ affection; or social withdrawal/affection/psychological control).

## Conclusion

Overall, the results of this study suggest that children showing signs of social withdrawal, in particular, are vulnerable to the negative effects of a lack of maternal affection. Although maternal psychological control was found to be associated with a high level of prosocial skill and low level of externalizing problems among these children, it was nonetheless also related to a high level of internalizing problems. These results suggest that socially withdrawn children may be at risk of pleasing their mothers at the cost of their own well-being.

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Table 1. Means (*M*) and Standard Deviations (*SD*) of Study Variables at Different Measurement Points

	Time 1 (7 years)		Time 2 (8 years)		Time 3 (9 years)		Time 1,2,3	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Prosocial <sup>a</sup>	2.20	0.53	2.21	0.53	2.15	0.51	2.19	0.52
Internalizing <sup>a</sup>	1.29	0.38	1.26	0.36	1.27	0.36	1.27	0.37
Externalizing <sup>a</sup>	1.47	0.45	1.46	0.47	1.45	0.47	1.46	0.46
Mothers' Affection <sup>b</sup>	4.27	0.45	4.27	0.46	4.28	0.45	4.27	0.45
Mothers' Behavioral control <sup>b</sup>	3.77	0.47	3.78	0.52	3.76	0.52	3.77	0.50
Mothers' Psychological control <sup>b</sup>	2.59	0.65	2.58	0.69	2.56	0.71	2.57	0.68
Fathers' Affection <sup>b</sup>	4.07	0.45	4.07	0.43	4.04	0.45	4.06	0.44
Fathers' Behavioral control <sup>b</sup>	3.72	0.53	3.70	0.51	3.64	0.55	3.69	0.52
Fathers' Psychological control <sup>b</sup>	2.70	0.69	2.76	0.72	2.78	0.78	2.74	0.73
Social withdrawal <sup>c,d</sup>	0.73	0.72						

<sup>a</sup>Children's prosocial, internalizing and externalizing behavior were measured using Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997).

<sup>b</sup>Parental affection, behavioral control and psychological control were measured using Finnish version (Aunola & Nurmi, 2004) of CRPR (Roberts et al., 1984).

<sup>c</sup>Social withdrawal was measured in kindergarten when the children were 6 year old.

<sup>d</sup>Social withdrawal was measured using the Children's Short Social Withdrawal Scale (two items, see Kiuru et al., 2012), and MASCS (one item, Junttila et al., 2006).



Table 4. *Regression Estimates, Regions of Significance (RoS), and Proportion of Interaction Index (PoI) for Statistically Significant ( $p < .05$ ) Social Withdrawal X Parenting Style Variable Interactions*

Outcome	Regression Estimates				RoS Z		Differential Susceptibility/Diatheses-Stress Indices			
							RoS X		PoI	Crossover
	b <sub>0</sub>	b <sub>1</sub>	b <sub>2</sub>	b <sub>3</sub>	Lower Bound	Higher Bound	Lower Bound	Higher Bound		
<i>Mothers</i>										
Prosocial skills	.00	.06 <sup>1</sup>	-.36	.10	-3.95	0.34	1.64	21.31	.07	3.45
Internalizing behaviors	-.01	.07 <sup>1</sup>	.28	.08	0.33	7.72	-1.33	35.12	.93	3.46
Externalizing behaviors	-.02	-.04 <sup>1</sup>	.22	-.08	-2.21	0.37	0.96	10.49	.02	2.60
Externalizing behaviors	-.02	-.11 <sup>2</sup>	.22	-.09	-26.73	-0.42	0.81	52.51	.01	2.37
<i>Fathers</i>										
Internalizing behaviors	-.09	-.05 <sup>1</sup>	.26	.23	-0.25	0.84	-2.44	-0.44	.93	-1.13
Internalizing behaviors	-.09	-.00 <sup>3</sup>	.26	-.14	-1.87	1.87	0.65	21.02	.00	1.91

*Note.*  $b_0$  = intercept,  $b_1$  = main effect of parenting style variable X: <sup>1</sup> Psychological control, <sup>2</sup> affection, <sup>3</sup> behavioral control,  $b_2$  = main effect of moderator variable social withdrawal Z,  $b_3$  = interaction effect between moderator social withdrawal variable Z and parenting style variable X; RoS, regions of significance (see visualization of these regions in Figures 1-3), Ros Z refers to the RoS with respect to temperament and Ros X refers to RoS with respect to parenting; PoI, proportion of interaction; Cross-over represents the value of parenting variable (X) at which the regression lines intersect.

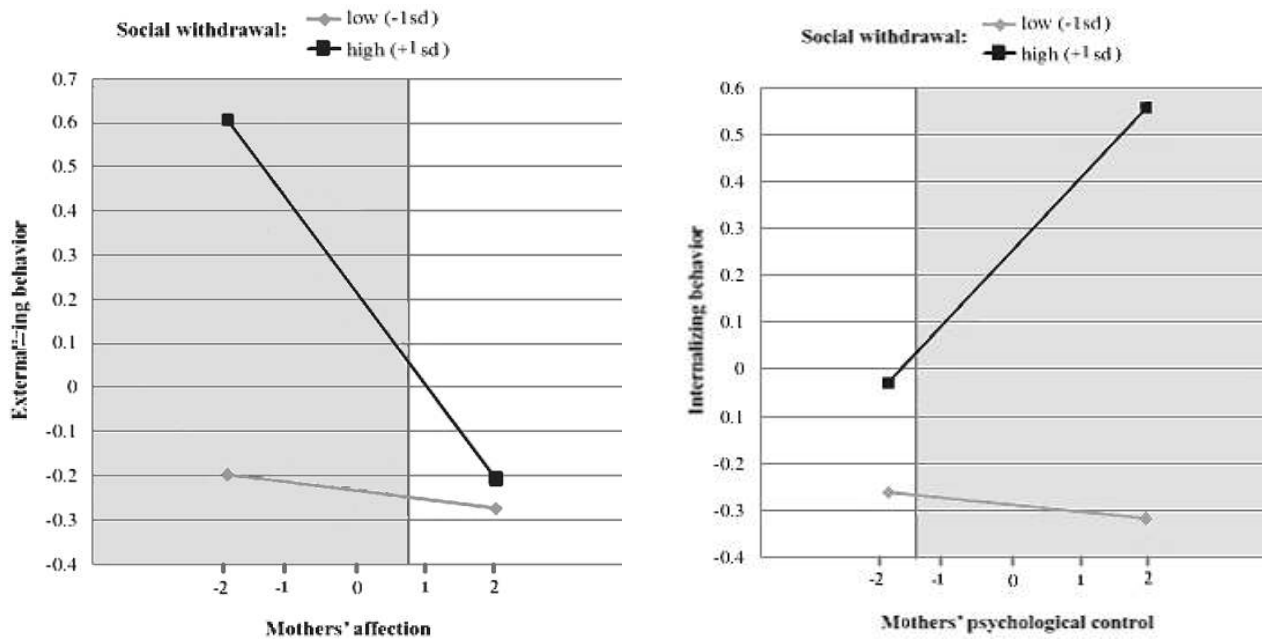
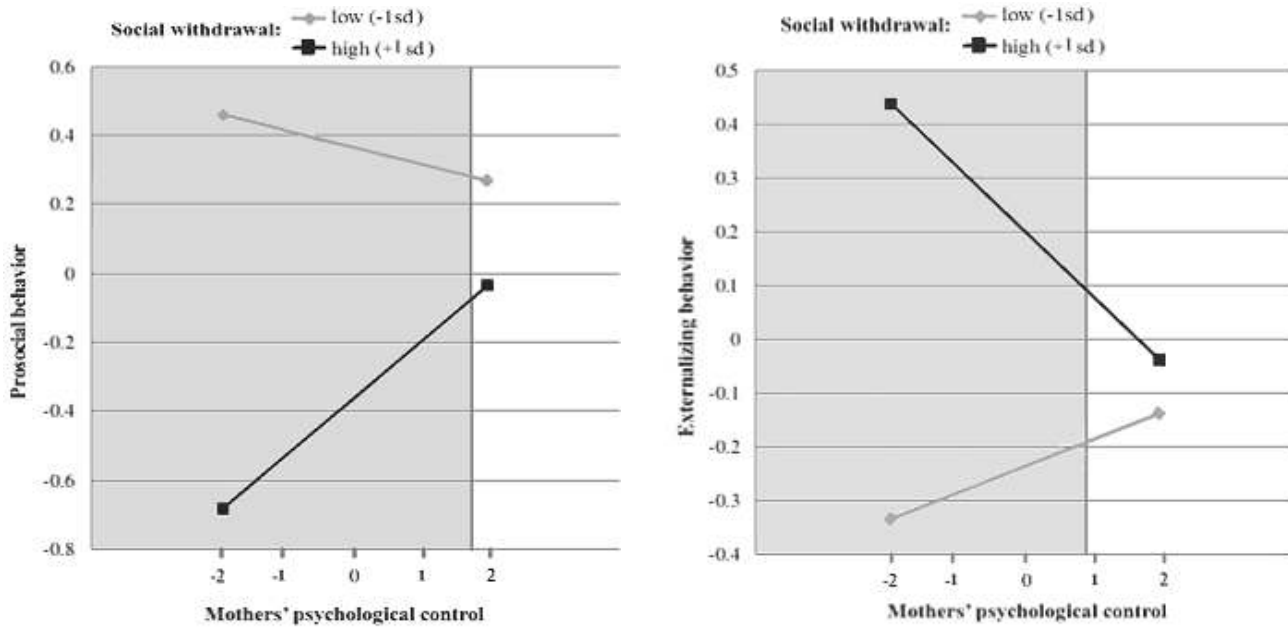


Figure 1. The role of mothers' affection (left graph) and psychological control (right graph) in relation to their children's externalizing and internalizing problem behavior, respectively, regarding children showing a relatively high level of social withdrawal (+1SD, high) and children showing no signs of social withdrawal (-1SD, low). Grey shaded areas denote regions where the two lines statistically significantly differ.



*Figure 2.* The role of mothers' psychological control in relation to their children's prosocial behavior (left graph) and externalizing behavior (right graph), regarding children showing a relatively high level of social withdrawal (+1SD, high) and children showing no signs of social withdrawal (-1SD, low). Grey shaded areas denote regions where the two lines statistically significantly differ.

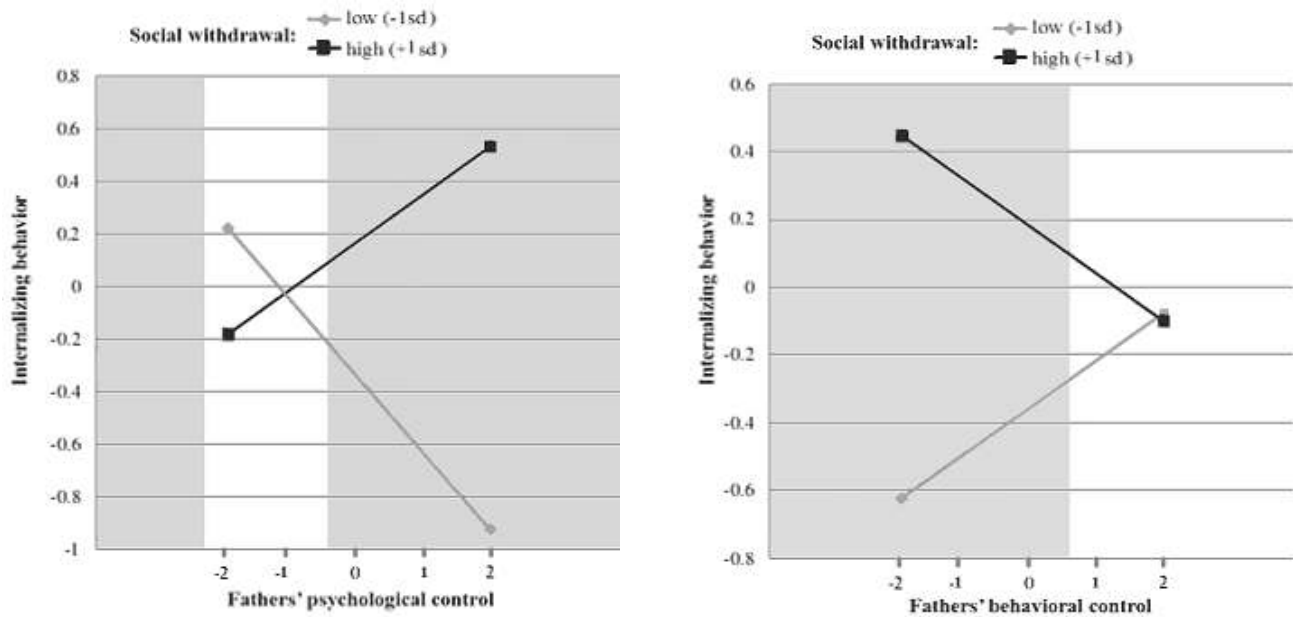


Figure 3. The role of fathers' psychological (left graph) and behavioral control (right graph) in relation to their children's internalizing problem behavior, regarding children showing a relatively high level of social withdrawal (+1SD, high) and children showing no signs of social withdrawal (-1SD, low). Gray shaded areas denote regions where the two lines statistically significantly differ.