

Being Mum's Confidant, a Boon or Bane? Examining Gender Differences in the Association of Maternal Disclosure with Adolescents' Depressive Feelings

Anna Lichtwarck-Aschoff · Catrin Finkenauer ·
Haske van de Vorst · Rutger C. M. E. Engels

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Abstract This article reports on a longitudinal study investigating gender differences in the association between maternal disclosure and adolescents' depressive symptoms. Little research has examined the relationship of parental disclosure to adolescents' depressive symptoms and research on sex differences is particularly lacking. In a sample of 428 families with a mean age of 13.36 (52% female) of the target adolescents, maternal and children's disclosure and depressive symptoms were assessed twice with an interval of 4 years. Controlling for the quality of the parent-child relationship and levels of maternal depressive symptoms, the analyses revealed an interaction effect for child's gender, moderating the effect of maternal disclosure on adolescents' depressive symptoms. Higher levels of maternal disclosure were accompanied by lower levels of depressive symptoms in girls and higher levels of depressive symptoms in boys. Gender differences in socialization, communication, individuation and social networks might explain why daughters and sons are differently affected by maternal disclosure.

Keywords Maternal disclosure · Parent-child relationship · Adolescence · Depressive symptoms · Gender differences · Longitudinal design

Introduction

Researchers and laypeople alike agree that disclosure is good for people. Ample empirical studies provide support for this assumption, showing that people who disclose their deepest thoughts and feelings to intimate confidants are happier, have higher self-esteem, and suffer from fewer physical health problems than people who keep these thoughts to themselves (e.g., Pennebaker 1989). Disclosure pertains to private and intimate information about the self that people share with others, including feelings, dispositions, events in the past, and plans for the future (Derlega and Grzelak 1979). It occurs when the target is supportive, accepting, and can be trusted (Chelune 1979) and leads to greater liking for the disclosing person (see Collins and Miller 1994 for a meta-analysis). These effects of disclosure have been well established for disclosure among adults (e.g., Green et al. 2006), siblings (Howe et al. 1995), friends (Levesque et al. 2002) and adolescent disclosure to parents (Finkenauer et al. 2004; Buhrmester and Prager 1995; Stattin and Kerr 2000). Thus, it is well established in the literature that within these relationship contexts, disclosure has a beneficial effect on the relationship and personal well-being.

In sharp contrast to the considerable body of literature that describes adolescent disclosure to their parents and disclosure processes among adults, we know very little about the effects of parent-to-child disclosure on children's psychosocial well-being (e.g., depressive symptoms). Given that disclosure is an essential part of family

A. Lichtwarck-Aschoff (✉) · H. van de Vorst ·
R. C. M. E. Engels
Behavioural Science Institute, Radboud University Nijmegen,
Montessorilaan 3, 6525 HR Nijmegen, The Netherlands
e-mail: A.Lichtwarck-Aschoff@pwo.ru.nl

H. van de Vorst
e-mail: h.vandervorst@pwo.ru.nl

R. C. M. E. Engels
e-mail: R.Engels@bsi.ru.nl

C. Finkenauer
Clinical Child and Family Studies, VU University Amsterdam,
van der Boechorststraat 1, 1081 BT Amsterdam,
The Netherlands
e-mail: C.Finkenauer@psy.vu.nl

interaction (e.g., Finkenauer et al. 2004; Norrell 1984), investigating parents' disclosure to their children seems essential in enhancing our understanding of the effects of disclosure in families. Therefore, the present study aims to explore the longitudinal effect of maternal disclosure on adolescents' well-being (i.e., depressive feelings). Furthermore, it investigates whether the relationship between maternal disclosure and levels of depressive symptoms differs for boys and for girls. Because the literature reveals that mothers disclose more frequently to their children (e.g., Dolgin 1996; Dolgin and Berndt 1997; Finkenauer et al. 2004) than fathers, we will limit our investigation to the examination of disclosure in mother–adolescent relationships.

Maternal Disclosure to Children

Maternal disclosure may have either positive or negative effects on adolescents' well-being (i.e., depressive feelings), depending on the kind of information being disclosed. Research on maternal disclosure of stressful information, such as financial concerns (e.g., Lehman and Koerner 2002), maternal HIV infection (for reviews see Hawk 2007; Wiener et al. 2007), or mothers' negative feelings about their divorce and ex-husband (e.g., Afifi et al. 2007; Koerner et al. 2004) consistently showed that children who are exposed to stressful disclosure from their mothers experience more internalizing (e.g., anxiety, depressive symptoms) and externalizing problems (e.g., aggression). By disclosing stressful information to their children, parents may appeal to them for support and help which for some adolescents may feel overwhelming as they do not know how to provide this support to their parents and may not be able to cope with these responsibilities. This reversal of roles, also named parentification, is a relationship dynamic in which the parent turns to the child for nurturance, assistance and emotional support (see Kerig 2005 for a more detailed explanation).

In contrast, research on maternal disclosure of general information suggests that mothers' disclosure may have positive effects on children's well-being. Late adolescents report that through parental disclosure they learn more about their parents and reach a new relationship plateau (Miller and Stubblefield 1993). A study on spiritual disclosure between older adolescents and their mothers found that greater maternal disclosure, as reported by adolescents, was associated with greater relationship satisfaction, less verbal aggression, and more constructive conflict resolution in the mother–adolescent relationship (Brelsford and Mahoney 2008). Moreover, spiritual disclosure was related to general disclosure, indicating that mothers and adolescent children who openly discussed religious and spiritual topics also disclosed more general information to each other.

Maternal disclosure of general information may facilitate the development of more equal and symmetrical parent–child relations, which is an important developmental task in adolescence (Grotevant and Cooper 1986; Youniss and Smollar 1985). Furthermore, by disclosing information to their children, mothers may stimulate their children to disclose more information to them which, in turn, should benefit children's well-being (Finkenauer et al. 2002). Finally, by disclosing information to their children, mothers may increase feelings of closeness and trust necessary to maintain close relations with their children (Collins and Miller 1994; Miller and Stubblefield 1993). Our study examined maternal disclosure of general information, rather than stressful information. Based on theories and findings about changes in family relations during adolescence we expect that maternal disclosure to children should predict lower levels of depressive symptoms.

Maternal Disclosure and Adolescent Sex

Due to gender specific communication patterns and socialization practices, the beneficial effect of maternal disclosure may be moderated by adolescent sex. Mother–daughter relationships are closer and more intimate than mother–son relationships (e.g., Surrey 1991). Girls more often feel the need to be in close contact with their mothers and to share thoughts, feelings, and experiences with her (Geuzaine et al. 2000). Daughters, as compared to sons, are more used to verbal interactions and disclosure with their mothers (Papini et al. 1990). From an early age, mothers demonstrate higher amounts of verbal interactions and more socio-emotional speech with daughters than with sons (Leaper et al. 1998). Girls' close relationships are typically centered on communication whereas boys' close relationships are typically centered on activities (Furman and Buhrmester 1992). Consequently, maternal disclosure may be more appropriate and prevalent in relationships between mothers and daughters than mothers and sons. Indeed, research by Dolgin (1996) shows that mothers disclose more intimate information to their daughters than their sons. This, however, may make daughters more susceptible to psychosocial problems than sons (e.g., Koerner et al. 2000) because daughters are closer to their mothers than sons, and therefore might identify with their mothers more and internalize their mothers' stress more (e.g., Afifi et al. 2007). This may lead to more anxiety and worries in daughters due to their mothers' disclosures (Koerner et al. 2004).

Adolescent boys, on the other hand, may not feel comfortable having intimate conversations with their mothers as it does not match with the traditional masculine sex role. Low gender typicality during adolescence is related to reduced self-esteem and internalizing problems (Yunger

et al. 2004; Smith and Leaper 2005). Moreover, adolescent boys' individuation process from parents is more turbulent and ambivalent compared to girls, with boys having lower levels of emotional autonomy (Beyers and Goossens 1999) and higher levels of parental idealization and engulfment anxiety, the fear of over control and emotional intrusion by parents (Levpušček 2006). Relatedness or closeness at the cost of autonomy has been shown to be related to later internalizing problems (e.g., Hodges et al. 1999). Thus, with boys having more problems to individuate from parents, high levels of maternal disclosure might even further complicate their individuation process and increase their level of depressive symptoms.

The second aim of the present study is to explore gender differences in the association between maternal disclosure and adolescent depressive symptoms. Due to the mixed picture in the literature concerning gender differences in responding to maternal disclosure, we do not have a priori hypotheses concerning the direction of the associations. Based on gender specific communication patterns and socialization practices we expect that the association of maternal disclosure and adolescent depressive symptoms is moderated by the gender of the target adolescent.

The Present Research

The aim of the present study is to test whether maternal disclosure of general information is related to depressive feelings among adolescent boys and girls. We used data from a longitudinal study among mothers and their early-adolescent child. Analyses focus on cross-sectional and longitudinal (4-years interval) associations.

Our study adds to the literature on the relationship of parent-to-child disclosure to adolescent well-being (i.e., depressive symptoms) by focusing on boys as well as girls, and by using data both concurrently and over an extended period of time, allowing examination of the long-term associations with adolescent depressive symptoms. Furthermore, and importantly, we considered two factors that may potentially confound the link between disclosure and depressive symptoms. The literature shows that disclosure and relationship quality are mutually transformative (Derlega et al. 1993): Disclosure is higher in relationships in which partners are satisfied with and care about each other. Consequently, we control in analyses for the general quality of the parent–child relationship to prevent that associations between maternal disclosure and adolescent depressive symptoms can simply be explained by low relationship quality. Further, the literature shows links between parental dysphoria and young children's depressive symptoms (Cummings et al. 2005; Shelton and Harold 2008). To assess whether disclosure accounts for unique

variance in adolescents' depressive feelings, we therefore controlled for maternal depressive symptoms.

Method

Participants and Procedure

Mothers and their 13–15 year old adolescents were part of an ongoing longitudinal study called Family and Health (Harakeh et al. 2005; Van Der Vorst et al. 2005). The aim of the Family and Health study was to examine different socialization processes underlying various health behaviors during adolescence. The sample of the Family and Health study consisted of both parents and two adolescent children. The sample included 428 families at Time 1 and 329 families 4 years later. Almost all participants (95%) were of Dutch origin. The current study focused on mothers and the younger adolescents, because we only had disclosure data on these family members. The mean age of the younger adolescents was 13.36 years ($SD = .50$; range 13–15 years). About 48% of them were male (47.7%). Mothers' mean age was 43.82 years ($SD = 3.57$; range 35–56 years).

In 2002, we approached 20 municipalities in the Netherlands to retrieve the addresses of families with at least two children between 13 and 16 years old. In a following step, we sent a letter to approximately 5,000 Dutch families asking whether they wanted to participate in our longitudinal study. A total of 885 families agreed to participate by returning the enclosed response form. These families were then contacted by telephone to establish whether they fulfilled all the inclusion criteria, that is, the parents had to be married or living together, and the siblings and their parents had to be biologically related. Families with members who had physical or mental disabilities, or who had twins, were excluded from the study. We also selected families on the basis of the adolescents' education level (one-third special or low education, one-third intermediate general education, one-third preparatory college and university education). After selecting the eligible families, the sample of 885 families who initially had agreed to participate was further reduced to the sample of 428 families. Over the 4 year period we lost 99 families due to attrition. All four family members separately filled out an extensive questionnaire at home in the presence of a trained interviewer. This procedure was followed at both measurement occasions. The questionnaire took about 2 h to complete. Each family received 30 euros after all family members completed the questionnaire. At the end of the project five checks of 1,000 euros were raffled between the families who participated in all waves of the study. The study received ethical approval from the medical ethical committee (CCMO Arnhem-Nijmegen).

Measures

Adolescents' Depressive Feelings

Adolescents rated their depressive feelings on the Kandel Depression Scale (Kandel and Davies 1986). Respondents rated how often they experienced negative feelings in the past 12 months such as “having not much hope for the future,” “feeling nervous and tensed,” and “worrying too much about problems.” Responses on 6 items were given on a 5 point scale ranging from *never* (1) to *always* (5). The higher the score, the stronger the depressive feelings. The internal consistency of the scale was high: $\alpha = .77$ (T1) and $\alpha = .85$ (T2). The Kandel Depression Scale is extensively employed in adolescent surveys (see review on depression measures by Compas et al. 1993). Previous studies have shown sufficient internal reliability, test–retest reliability and stability over moderate periods of time (Kendall et al. 1989; for Dutch data see Otten et al. 2009). We are interested in the level of depressive symptoms rather than the existence of a major depressive disorder (see also Otten et al. 2009; Roekel et al. in press). This study concerns a community sample in which it can be expected that about 11% of the adolescents will show elevated levels of depressive symptoms (Otten et al. 2009).

Maternal's Depressive Feelings

In order to assess mothers' depressive feelings an adapted version of the Kandel Depression Scale was used (see also Roekel et al. in press). The same items and scale as for the adolescents were used. The internal consistency of the scale was high: $\alpha = .81$ (T1).

Disclosure

To assess adolescents' disclosure and maternal disclosure, we used an adjusted version of the Self-Disclosure Index (SDI, Miller et al. 1983; Engels et al. 2006). The adjusted SDI consists of 10 items assessing general self-disclosure in the parent–child relationship (see Finkenauer et al. 2004 for details on construction of the instrument). Adolescents reported on both their own disclosure to their mothers and their mothers' disclosure to them. Mothers completed the same items as the adolescents. Respondents had to answer on a 5-point scale, ranging from *not right at all* (1) to *absolutely right* (5). Examples of items based on adolescents' perception were: “My mother talks with me about her intimate friendships and relationships” (Maternal disclosure), and “I share my most intimate feelings with my mother” (Adolescent disclosure). The internal consistency of the scale based on adolescents' perception was high: $\alpha = .81$ (Maternal disclosure T1), $\alpha = .89$ (Adolescent

disclosure T1). Examples of items based on mothers' perception were: “I talk with my child about my intimate friendships and relationships” (Maternal disclosure), and “My child shares his/her most intimate feelings with me” (Adolescent disclosure). The internal consistency of the scale based on mothers' perception was high: $\alpha = .88$ (Maternal disclosure T1), $\alpha = .92$ (Adolescent disclosure T1). Concurrent validity has been shown in a sample of early adolescents revealing effects of adolescent disclosure on self-esteem and depression, independent from adolescent secrecy and lying (Engels et al. 2006). Exploratory factor analyses (principal component analysis with varimax rotation) revealed one factor for both scales from the perspective of both the adolescents and the mothers. Factor loadings ranged between .40 and .84, and the explained variance ranged between 37 and 58%. Thus, the scale does not only have high internal consistency estimates but also just one underlying factor. Scores on disclosure items were averaged, with higher scores indicating more disclosure.

Quality of the Relationship

Parts of the Inventory of Parent and Peer Attachment (IPPA; Armsden and Greenberg 1987) were used to measure the adolescent perception of the quality of the relationship between mothers and adolescents (Leondari and Kiosseoglou 2002). The scale is based on the theoretical assumptions of the attachment theory (Bowlby 1982), concerning the affective-cognitive dimensions of trust in the accessibility and responsiveness of attachment figures (Lyddon et al. 1993). It should be noted that the IPPA does not allow the classification of attachment styles: the scale is an indication of the relative degree of perceived security between parents and adolescents (Engels et al. 2001). The scale contains of 12 items, for example: “My mother respects my feelings.” Response categories ranged from *never* (1) to *always* (6). Empirical research on the psychometric properties showed high internal consistencies (e.g., Armsden and Greenberg 1987; Nada Raja et al. 1991). Furthermore, a high 3-week test–retest reliability has been reported and the scale appears to possess convergent validity (Armsden and Greenberg 1987). Only adolescents' reports on the quality of the relationship with their mothers were assessed. The internal consistency was high, namely $\alpha = .78$.

Strategy of Analyses

First, descriptive analyses were conducted on baseline measures (T1) of maternal disclosure, adolescents' disclosure, the quality of the relationship between mothers and adolescents, and maternal depressive feelings. Descriptive statistics were computed for adolescents' depressive feelings at both baseline and follow-up (T2) and for boys and

girls separately. Second, we calculated the correlations between all model variables. Third, to answer our research questions about the associations between maternal disclosure and child disclosure, and adolescents’ depressive feelings, concurrently and prospectively, we conducted multiple regression analyses. After controlling for sex, age, (as epidemiological research reveals strong age effects on adolescent depression; Kessler et al. 2001) maternal depressive feelings (T1), and quality of parent–child relationship (T1), we tested associations between disclosure and adolescents’ depressive feelings at baseline and 4 years later. In a final step, we included the interaction terms between sex and maternal and adolescent disclosure in the models.

Results

Descriptive Analyses

T tests showed that children generally disclose more information to their mothers than vice versa. Comparison of maternal and child reports at T1 reveals that mothers had higher scores on their own and on child disclosure, than children had. Mothers did not disclose more information to their son than to their daughter. Girls, however, disclosed more to their mother than boys did, according to both mother and child (Table 1).

Boys and girls differed on depressive feelings. Girls reported more depressive feelings ($M = 2.61$, $SD = .67$ (T1), $M = 2.43$, $SD = .70$ (T2)) than boys ($M = 2.34$, $SD = .66$ (T1), $M = 2.16$, $SD = .69$ (T2)) ($t(305) = 3.47$, $p < .001$ for T1 and $t(305) = 3.28$, $p < .001$ for T2). Generally, adolescents reported higher depressive mood at baseline measurement than at follow-up ($p < .001$).

Table 1 Descriptive statistics for disclosure between mother and child at T1

| | Mother report | | Child report | |
|---------------------|---------------|-----------|--------------|-----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| <i>Total sample</i> | | | | |
| Child disclosure | 3.68 | .62 | 3.34 | .68*** |
| Maternal disclosure | 3.27 | .54 | 3.06 | .54*** |
| <i>Girls</i> | | | | |
| Child disclosure | 3.76a | .62 | 3.41a | .74*** |
| Maternal disclosure | 3.29 | .54 | 3.11 | .58*** |
| <i>Boys</i> | | | | |
| Child disclosure | 3.60a | .62 | 3.26a | .62*** |
| Maternal disclosure | 3.24 | .53 | 3.01 | .48*** |

The significance tests refer to differences between mother and child reports (horizontal comparisons). *a* significant differences between boys and girls, $p < .05$

* $p < .05$, ** $p < .01$, *** $p < .001$

Correlations

Pearson correlations were computed between model variables (Table 2). Depressive feelings of the mother at T1 were related to child depressive feelings at follow-up but not at baseline. Further, quality of the parent–child relationship at T1 was positively related to maternal (child report) as well as child disclosure (both reports), negatively related to maternal depressive symptoms, and negatively to child’s depressive feelings at both waves. Reports of child disclosure at baseline were moderately related ($r = .46$, $p < .001$), but reports on maternal disclosure at baseline were marginally related ($r = .15$, $p < .05$). When children think that mothers disclosed information frequently, they were also more likely to do so (according to themselves, but also to mothers). Maternal disclosure (maternal report) at baseline was related to enhanced depressive feelings of child at follow-up, and child disclosure (child report) at baseline was related to lower depressive feelings of child at baseline (child reports) and follow-up (maternal report).

Because maternal and child reports on their own disclosure are only marginally related, implying that parents and their offspring have sometimes different views on maternal disclosure, and in light of the fact that we consider child perceptions of maternal disclosure most essential for their own depressive feelings (see Engels et al. 2001), we conduct our main analyses exclusive with child reports.

Multiple Regression Analyses

Cross-sectional Analyses

After including control variables in the equation—of which sex (female) and lower quality of parent–child relationship were associated with depressive feelings in children—neither child nor maternal disclosure were related to child’s depressive feelings (Table 3). However, the interaction term between maternal disclosure and gender appeared to be significant. Plotting the interaction showed that girls had lower levels of depressive feelings when mothers were high on disclosure than low on disclosure, while for boys, maternal disclosure did not affect the level of depressive feelings (Fig. 1). Note that the two groups of low versus high levels of maternal disclosure were computed by using the median split.

Longitudinal Analyses

Child’s depressive feelings at baseline were predicting depressive feelings 4 years later. Again, interaction terms were computed to assess whether child and maternal

Table 2 Correlations between model variables

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|------|-------|--------|---------|---------|---------|---------|----------|---------|
| 1. Gender | 1 | .022 | .015 | .068 | .082 | .108 | .048 | .136* | .195*** | .186*** |
| 2. Age | | 1 | -.059 | .001 | -.021 | .009 | .016 | -.040 | .054 | .000 |
| 3. Quality of relationship T1 | | | 1 | -.143* | .415*** | .652*** | .053 | .329*** | -.246*** | -.130* |
| 4. Maternal depressive feelings T1 | | | | 1 | .004 | -.058 | -.160** | -.029 | .081 | .128* |
| 5. Disclosure mother (child report) T1 | | | | | 1 | .592*** | .146* | .251*** | -.087 | -.034 |
| 6. Disclosure child (child report) T1 | | | | | | 1 | .072 | .460*** | -.117* | -.033 |
| 7. Disclosure mother (mother report) T1 | | | | | | | 1 | .512*** | .110 | .130* |
| 8. Disclosure child (mother report) T1 | | | | | | | | 1 | -.007 | .132* |
| 9. Child's depressive feelings T1 | | | | | | | | | 1 | .383*** |
| 10. Child's depressive feelings T2 | | | | | | | | | | 1 |

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3 Multiple regression analyses predicting child feelings of depressive mood

| | Cross-sectional B | Longitudinal (4 years) B |
|---------------------------------|-------------------|--------------------------|
| <i>Step 1</i> | | |
| Sex | .15*** | .11* |
| Age | .06 | -.02 |
| Child's depressive feelings T1 | | .35*** |
| Maternal depressive feelings T1 | .04 | .08 |
| Quality relationship T1 | -.27*** | -.04 |
| <i>Step 2</i> | | |
| Child disclosure T1 | .09 | .07 |
| Maternal disclosure T1 | -.04 | -.02 |
| <i>Step 3</i> | | |
| Child disclosure T1*Sex | .03 | .09 |
| Maternal disclosure T1*Sex | -.11* | -.17** |

N = 428 for cross-sectional analyses, N = 301 for 4-year follow-up analyses

* $p < .05$, ** $p < .01$, *** $p < .001$

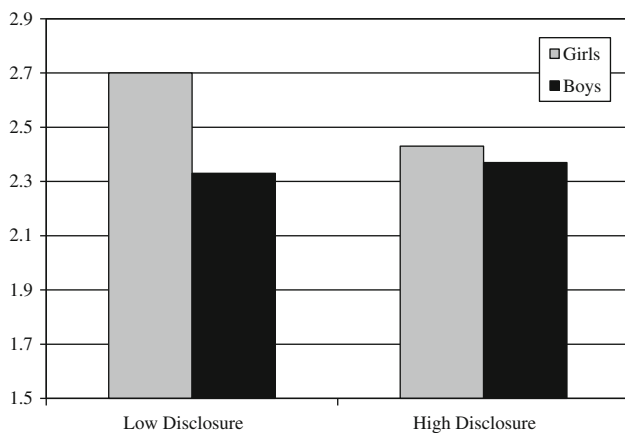


Fig. 1 Plotted interaction between maternal disclosure at T1 and child's depressive feelings at T1: cross-sectional analysis

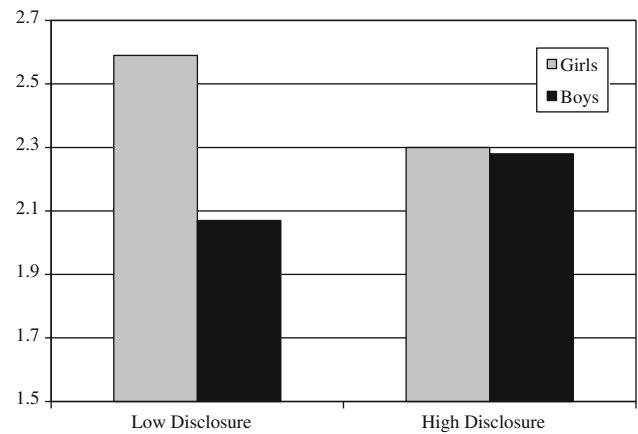


Fig. 2 Plotted interaction between maternal disclosure at T1 and child's depressive feelings 4 years later: longitudinal analysis

disclosure had differential associations with depressive feelings over time for girls and boys. It appeared that concerning their own disclosure, boys' and girls' disclosure had no differential associations with depressive feelings

over time (Table 3). Nevertheless, maternal disclosure, according to children themselves, was differently related to changes in child depressive feelings over time ($B = -.18$, $p < .01$). Plotting the analyses (Fig. 2) showed that higher

maternal disclosure was related to *higher* levels of depressive feelings in boys and *lower* levels of depressive feelings in girls.

Additional analyses revealed that also when omitting control variables quality of mother–child relationship and maternal depressive symptoms, the interaction terms remained significant. Checks were done for outliers as well, and after omitting one outlier (boy with extreme scores on depressive symptoms at follow-up) the interaction term remained significant.

Discussion

The aim of the present study was to extend previous work on disclosure in families by investigating the associations between maternal disclosure and depressive feelings among adolescent boys and girls. Consistent with previous work, we found that children disclosed more to their mothers than vice versa (Finkenauer et al. 2004), girls disclosed more to their mothers than boys (Dolgin 1996), and mothers disclosed equally to their daughters and sons (Miller and Stubblefield 1993). Further, the quality of the parent–child relationship was positively related to maternal as well as children’s disclosure. Thus, the more both mothers and children disclose to each other, the more positive they perceive their relationship (Finkenauer et al. 2004). As compared to their children, mothers reported higher levels of their own and their children’s disclosure (see also Dolgin and Berndt 1997; Van der Vorst et al. 2005). Accordingly, we found only marginal to moderate associations between maternal and children’s reports on disclosure. The low consistency in child and mother report on disclosure resembles the findings from studies on behavioral and emotional problems where associations between child and parent report are generally weak and decrease even more during adolescence (Achenbach et al. 1987; Kramer et al. 2004). The fact that the similarity between disclosure ratings of different persons reported by the same informant was considerably higher is probably due to the fact that the same person has its own unique perspective on the quality of the relationship which is expressed in more equal ratings within the same person (Engels et al. 2001). We have chosen to focus on the child’s perceptions of maternal disclosure because adolescent perceptions of the disclosure have been shown to be a stronger predictor for adolescents’ well-being (Afifi et al. 2007). Our aim was to focus on gender differences but future research should investigate more closely the magnitude, reasons for and consequences of this discrepancy in maternal and children reports.

The central questions of this study were how maternal disclosure affects adolescents’ levels of depressive feelings and whether that association would be different for boys

and girls. Controlling for the quality of the parent–child relationship and levels of maternal depressive feelings, both congruently and longitudinally, the analyses revealed an interaction effect for the child’s gender, moderating the association of maternal disclosure on adolescents’ depressive feelings. Higher levels of maternal disclosure were accompanied by lower levels of depressive feelings in girls and by higher levels of depressive feelings in boys. Why are adolescent boys differently affected by mothers’ disclosure than girls?

The higher intimacy level in mother–daughter dyads (e.g., Surrey 1991), and girls’ need to be close to their mothers (Geuzaine et al. 2000), might make girls feel more comfortable with their mother’s disclosure. Additionally, mothers’ socialization efforts differ according to their child’s gender. Also we did not find any differences in the level of maternal disclosure towards boys and girls, mothers may verbally interact more with their daughters from an early age on and may use more socio-emotional speech with their daughters than with their sons (Leaper et al. 1998). Hence, maternal disclosure in mother–daughter dyads might function as a vehicle for relationship growth and may help to increase intimacy and trust (Miller and Stubblefield 1993). For girls, maternal disclosure may intensify and deepen their relationship with their mothers (Altman and Taylor 1973), which, in turn, may lead to a decrease in girls’ depressive symptoms (Baumeister and Leary 1995).

For adolescent boys, in contrast, our findings yield that higher levels of maternal disclosure are related to higher levels of depressive feelings over time. As outlined above, socialization practices and communication patterns are gender specific. In general, boys’ close relationships center less on communication (Furman and Buhrmester 1992). Within the family, boys are less close and intimate with their mothers (Geuzaine et al. 2000; Surrey 1991) and boys disclose less to their mothers than girls (Finkenauer et al. 2004; Papini et al. 1990). Additionally, adolescent boys may not feel comfortable having intimate conversations with their mothers because it does not fit traditional masculine gender roles (Lombardo and Berzonsky 1980). Research on individual differences in masculine gender role socialization has identified rigid adherence to masculine gender roles as a risk factor for the development of depressive symptoms in men (Good and Wood 1995; Shepard 2002; Syzdek and Addis 2010). According to the gender intensification hypothesis (Galambos et al. 1990), the pressure to conform to gender specific roles increases dramatically during adolescence. For adolescent boys especially, it becomes much more important what peers think, value, and judge (Overbeek et al. *in press*; Steinberg and Silverberg 1986; Steinberg and Monahan 2007). This pressure to conform to gender roles may lead to rigid

adherence to masculine gender roles, which poses a risk for boys to accelerate in depressive symptoms, especially during this developmental period.

Taken together, gender differences in socialization, communication, and social networks suggest that boys might not be well equipped to handle too much maternal disclosure. Adding to this, males in general seem to use less coping behavior when faced with stressful experiences than females (Wilson et al. 2005; for a review see Tamres et al. 2002). Adolescent girls have higher levels of social support seeking and problem-solving, boys in contrast have higher levels of avoidant coping (Eschenbeck et al. 2007), in particular in social stressor situations. Accordingly, the combination of feeling more overwhelmed by their mother's disclosure and being less well equipped to cope with these experiences might explain why higher levels of maternal disclosure are associated with higher levels of depressive feelings in boys but not in girls. These explanations are speculative and future research should aim to pit different explanations against each other.

It should be noted that this study presents an important extension to the literature in that it focuses on gender differences in the prediction of depressive feelings. It is well documented in the literature that women are twice as likely to suffer from depressive symptoms, and that this gender gap starts to emerge during early adolescence. However, previous work on gender differences in rates and development of depression has focused almost exclusively on trying to explain the higher prevalence of depression in females (see Addis 2008 for similar argument). It has not simultaneously increased our understanding of etiological and risk factors for the development of depressive symptoms in boys. This study's results highlight the importance of focusing on factors contributing to the exacerbation of depressive symptoms in boys. The more so because recent evidence suggests that the gender gap is narrowing (Stoolmiller et al. 2005).

Limitations and Future Questions

This study contributes to the literature on disclosure by investigating gender differences in the relationship between maternal disclosure and children's depressive feelings. At the same time, there are several limitations in the present study. First, the type of information mothers disclose and the way in which they disclose the information to their children might explain the mixed findings in the literature on the association between maternal disclosure and children's depressive feelings, with some reporting positive effects (Brelsford and Mahoney 2008) and some reporting negative effects (e.g., Afifi et al. 2007; Lehman and Koerner 2002). Maternal disclosure of stressful information might more easily burden the children who are not

able to deal with the awkward information (Miller and Stubblefield 1993). In future research, it would be important to investigate more closely the sort of information that mothers disclose.

Second, our study did not focus on the paternal disclosure of fathers. We did not include assessments of disclosure by fathers to children in the questionnaires. It thereby remains unclear whether paternal disclosure has effects that parallel those of maternal disclosure. Moreover, it would be interesting to investigate how sons feel towards their father when maternal disclosure is high. Geuzaine et al. (2000), for instance, found that for boys emotional dependence towards one parent was associated with conflictual dependence towards the other one. Future research should include paternal disclosure in order to get a full picture of the role of parental disclosure in family relations and functioning, and adolescents' well-being.

Third, as our study constitutes a sample of two-parent relatively well-functioning primarily Caucasian families, we can not generalize to all categories of families. Especially in divorced families, maternal disclosure may impact differently on adolescents' depressive feelings. In a cross-sectional study by Koerner et al. (2000) maternal disclosure towards daughters following the mother's divorce revealed that maternal disclosure was associated with daughters' psychological distress. Future research should investigate the longitudinal association between maternal disclosure and adolescents' well-being in different family compositions as maternal disclosure in divorced families may involve violation of typical intergenerational intimacy boundaries, which may lead to higher levels of depressive symptoms also in girls.

Fourth, due to the low age range in our sample, we were unable to examine whether the effects of maternal disclosure vary across age groups. Specifically, it is possible that mothers disclose more information to their children as they become older (e.g., Armistead et al. 2001; Bauman et al. 2002). Also, mothers might disclose differently as children become older, and changes in magnitude and kind of disclosure might alter the association with depressive feelings. Moreover, previous research shows that maternal disclosure of general information has beneficial effects for older adolescents (Miller and Stubblefield 1993; Brelsford and Mahoney 2008). Gender differences in response to maternal disclosure might diminish over the years but may be more pronounced during middle adolescence. Future studies are needed to answer these questions.

Finally, although the longitudinal design of the study presents a major strength of the study, we lack knowledge on additional processes during this long time interval that may contribute to the development or desistence of depressive symptoms. The role of stress and negative life-events especially should be included in future research as it

is known that these factors are associated with the onset of depressive feelings (e.g., Burton et al. 2004) and that coping with stress and negative life events differs between boys and girls (Tamres et al. 2002). Also social support and in particular peer support should be investigated because it impacts on the development and course of depressive symptoms either directly (e.g., Burton et al. 2004) or via a buffering effect (e.g., DuBois et al. 1992). Peer processes are of crucial importance during adolescence and because boys and girls differ in their construction of social networks peer processes are likely to impact differently on the association between maternal disclosure and depressive symptoms. Thus, future research should incorporate stress and the coping strategies and capacities with these negative life-events to investigate how maternal disclosure contributes to or interacts with those factors in the prediction of adolescents' depressive symptoms.

In sum, this study revealed new insights into the association between maternal disclosure and children's well-being (i.e., depressive feelings), and represents a first important step in understanding gender differences in this relationship. Our study illustrates that certain family dynamics have different effects on adolescent boys and girls (Hay et al. 2000) and hereby draws our attention to the importance of studying boys' and girls' world of experience separately (Vandeleur et al. 2007). Notably, our findings suggest that maternal disclosure during middle adolescence to sons may be more problematic than maternal disclosure to daughters.

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References

- Achenbach, T., McConaughy, S., & Howell, C. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, 101(2), 213–232.
- Addis, M. E. (2008). Gender and depression in men. *Clinical Psychology: Science and Practice*, 15(3), 153–168.
- Afifi, T. D., Afifi, W. A., & Coho, A. (2007). Adolescents' anxiety and physiological reactions to their parents' negative disclosures about the other parent in divorced and non-divorced families. Manuscript submitted for publication.
- Afifi, T. D., McManus, T., Hutchinson, S., & Baker, B. (2007b). Parental divorce disclosures, the factors that prompt them, and their impact on parents' and adolescents' well-being. *Communication Monographs*, 74, 78–103.
- Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships*. New York: Holt, Rinehart & Winston.
- Armistead, L., Tannenbaum, L., Forehand, R., Morse, E., & Morse, P. (2001). Disclosing HIV status: Are mothers telling their children? *Journal of Pediatric Psychology*, 26, 11–20.
- Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16, 427–454.
- Bauman, L. J., Camacho, S., Silver, E. J., Hudis, J., & Draimin, B. (2002). Behavioral problems in school-aged children of mothers with HIV/AIDS. *Clinical Child Psychology and Psychiatry*, 7, 39–54.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497–529.
- Beyers, W., & Goossens, L. (1999). Emotional autonomy, psychosocial adjustment and parenting: interactions, moderating and mediating effects. *Journal of Adolescence*, 22, 753–769.
- Bowlby, J. (1982). *Attachment and loss, Vol. 1*. New York: Basic books publishers.
- Brelsford, G. M., & Mahoney, A. (2008). Spiritual disclosure between older adolescents and their mothers. *Journal of Family Psychology*, 22, 62–70.
- Buhrmester, D., & Prager, K. (1995). Patterns and functions of self-disclosure during childhood and adolescence. In K. J. Rotenberg (Ed.), *Disclosure processes in children and adolescents* (pp. 10–56). New York: Cambridge University Press.
- Burton, E., Stice, E., & Seely, J. R. (2004). A prospective test of the stress-buffering model of depression in adolescent girls: No support once again. *Journal of Consulting Clinical Psychology*, 72, 689–697.
- Chelune, G. J. (1979). *Self-disclosure: Origins, patterns, and implications of openness in interpersonal relationships*. San Francisco: Jossey-Bass.
- Collins, N., & Miller, L. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin*, 116, 457–475.
- Compas, B. E., Ey, S., & Grant, K. E. (1993). Taxonomy, assessment, and diagnosis of attachment: A review of measures of current self-report measures. *Journal of Counseling and Development*, 71, 390–395.
- Cummings, E. M., Keller, P. S., & Davies, P. T. (2005). Towards a family process model of maternal and paternal depressive symptoms: Exploring multiple relations with child and family functioning. *Journal of Child Psychology and Psychiatry*, 46, 479–489.
- Derlega, V., & Grzelak, J. (1979). Appropriateness of self-disclosure. In G. J. Chelune (Ed.), *Self-disclosure: Origins, patterns, and implications of openness in interpersonal relationships*. San Francisco: Jossey-Bass Pub.
- Derlega, V. J., Metts, S., Petronio, S., & Margulis, S. T. (1993). *Self-disclosure*. London: Sage.
- Dolgin, K. G. (1996). Parents' disclosure of their own concerns to their adolescent children. *Personal Relationships*, 3, 159–169.
- Dolgin, K. G., & Berndt, N. (1997). Adolescents' perceptions of their parents' disclosure to them. *Journal of Adolescence*, 20, 431–441.
- DuBois, D. L., Felner, R., Brand, S., Adan, A., & Evans, E. (1992). A prospective study of life stress, social support, and adaptation in early adolescence. *Child Development*, 63, 542–557.
- Engels, R. C. M. E., Finkenauer, C., Meeus, W., & Deković, M. (2001). Parental attachment and adolescents' emotional adjustment: The role of interpersonal tasks and social competence. *Journal of Counseling Psychology*, 48, 428–439.

- Engels, R. C. M. E., Finkenauer, C., & Van Kooten, D. C. (2006). Lying behavior, family functioning and adjustment in early adolescence. *Journal of Youth and Adolescence*, *35*, 949–958.
- Eschenbeck, H., Kohlmann, C., & Lohaus, A. (2007). Gender differences in coping strategies in children and adolescents. *Journal of Individual Differences*, *28*, 18–26.
- Finkenauer, C., Engels, R. C. M. E., Branje, S., & Meeus, W. (2004). Disclosure and relationship satisfaction in families. *Journal of Marriage and Family*, *66*, 195–209.
- Finkenauer, C., Engels, R. C. M. E., & Meeus, W. (2002). Keeping secrets from parents: Advantages and disadvantages of secrecy in adolescence. *Journal of Youth and Adolescence*, *31*, 123–136.
- Furman, W., & Buhrmester, D. (1992). Age and sex differences in perceptions of depression during adolescence. *Psychological Bulletin*, *114*, 323–344.
- Galambos, N. L., Almeida, D. M., & Petersen, A. C. (1990). Masculinity, femininity, and sex role attitudes in early adolescence: Exploring gender intensification. *Child Development*, *61*, 1905–1914.
- Geuzaine, C., Debry, M., & Liesens, V. (2000). Separation from parents in late adolescents: The same for boys and girls? *Journal of Youth and Adolescence*, *29*, 79–91.
- Good, G. E., & Wood, P. K. (1995). Male gender role conflict, depression, and help seeking: Do college men face double jeopardy? *Journal of Counseling & Development*, *74*(1), 70–75.
- Green, K., Derlega, V. J., & Mathews, A. (2006). Self-disclosure in personal relationships. In A. Vangelisti & D. Perlman (Eds.), *Cambridge handbook of personal relationships* (pp. 409–427). Cambridge, England: Cambridge University Press.
- Grotevant, H. D., & Cooper, C. R. (1986). Individuation in family relationships: A perspective in individual differences in the development of identity and role-taking skill in adolescence. *Human Development*, *29*, 82–100.
- Harakeh, Z., Scholte, R. H. J., De Vries, H., & Engels, R. M. C. E. (2005). Parental rules and communication: Their association with adolescent smoking. *Addiction*, *100*, 862–870.
- Hawk, S. T. (2007). Disclosures of maternal HIV infection to seronegative children: A literature review. *Journal of Social and Personal Relationships*, *24*, 657–673.
- Hay, I., Ashman, A. F., & Ballinger, M. (2000). Investigating the factors that influence the formation of adolescents' emotional stability and general self-concept. In H. Marsh & R. Craven (Eds.), *Self-concept theory, research and practice: Advances from the new millennium* (pp. 263–270). Sydney: University of Western Sydney.
- Hodges, E. V. E., Finnegan, R. A., & Perry, D. G. (1999). Skewed autonomy-relatedness in preadolescent's conceptions of their relationships with mother, father, and best friend. *Developmental Psychology*, *35*, 737–748.
- Howe, N., Aquan-Assee, J., & Bukowski, W. M. (1995). Self-disclosure and the sibling relationship: What did Romulus tell Remus? In K. J. Rotenberg (Ed.), *Disclosure processes in children and adolescents*. Cambridge, UK: Cambridge University Press.
- Kandel, D. B., & Davies, M. (1986). Adult sequelae of adolescent depressive symptoms. *Archives of General Psychiatry*, *43*, 255–262.
- Kendall, P. C., Cantwell, D. P., & Kazdin, A. E. (1989). Depression in children and adolescents: Assessment issues and recommendations. *Cognitive Therapy and Research*, *13*, 109–146.
- Kerig, P. K. (2005). Revisiting the construct of boundary dissolution: A multidimensional perspective. In P. K. Kerig (Ed.), *Implication of parent-child boundary dissolution for developmental psychopathology* (pp. 5–43). New York: Haworth Press.
- Kessler, R. C., Avenevoli, S., & Merikangas, K. R. (2001). Mood disorders in children and adolescents: An epidemiologic perspective. *Biological Psychiatry*, *49*, 1002–1014.
- Koerner, S. S., Jacobs, S. L., & Raymond, M. (2000). When mothers turn to their adolescent daughters: Prediction daughter's vulnerability to negative adjustment outcomes. *Family Relations*, *49*, 301–309.
- Koerner, S. S., Wallace, S., Lehman, S. J., Lee, S.-A., & Escalante, K. A. (2004). Sensitive mother-to-adolescent disclosures after divorce: Is the experience of sons different from that of daughters? *Journal of Family Psychology*, *18*, 46–57.
- Kramer, T., Phillips, S., Hargis, M., Miller, T., Burns, B., & Robbins, J. (2004). Disagreement between parent and adolescent reports of functional impairment. *Journal of Child Psychology and Psychiatry*, *45*(2), 248–259.
- Leaper, C., Anderson, K. J., & Sanders, P. (1998). Moderators of gender effects on parents' talk to their children: a meta-analysis. *Developmental Psychology*, *34*, 3–27.
- Lehman, S. J., & Koerner, S. S. (2002). Family financial hardship and adolescents girls' adjustment: The role of maternal disclosure of financial concerns. *Merrill-Palmer Quarterly*, *48*, 1–24.
- Leondari, A., & Kiosseoglou, G. (2002). Parental, psychological control and attachment in late adolescents and young adults. *Psychological Reports*, *90*, 1015–1030.
- Levesque, M. J., Steciuk, M., & Ledley, C. (2002). Self-disclosure patterns among acquainted individuals: Disclosers, confidants, unique relationships and gender. *Social Behavior and Personality: An International Journal*, *30*, 579–592.
- Levušček, M. P. (2006). Adolescent individuation in relation to parents and friends: Age and gender differences. *European Journal of Developmental Psychology*, *3*, 238–264.
- Lombardo, J. P., & Berzonsky, L. O. (1980). Sex-role stereotyping and patterns of self-disclosure. *Sex Roles*, *7*, 403–411.
- Lyddon, W. L., Bradford, E., & Nelson, J. P. (1993). Assessing adolescent and adult networks of personal relationships. *Child Development*, *63*, 103–115.
- Miller, L. C., Berg, J. H., & Archer, R. L. (1983). Openers: Individuals who elicit intimate self-disclosure. *Journal of Personality and Social Psychology*, *44*, 1234–1244.
- Miller, J. B., & Stubblefield, A. (1993). Parental disclosure from the perspective of late adolescents. *Journal of Adolescence*, *16*, 439–455.
- Nada Raja, S., McGee, R., & Stanton, W. R. (1991). Perceived attachments to parents and peers and psychological well-being in adolescence. *Journal of Youth and Adolescence*, *21*, 471–485.
- Norrell, J. E. (1984). Self-disclosure: Implications for the study of parent-adolescent interaction. *Journal of Youth and Adolescence*, *13*, 163–178.
- Otten, R., Van de Ven, M. O. M., Engels, R. C. M. E., & Van den Eijnden, R. J. J. M. (2009). Depressive mood and smoking onset: A comparison of adolescents with and without asthma. *Psychology and Health*, *24*, 287–300.
- Overbeek, G. J., Bot, S., Meeus, W., Knibbe, R. A., Sentse, M., & Engels, R. C. M. E. (in press). Where it's at? A longitudinal observation study of contextual limitations in peer group effects. *Journal of Research on Adolescence*.
- Papini, D., Farmer, F., Clark, S., Micka, J., & Barnett, J. (1990). Early adolescent age and gender differences in patterns of emotional self-disclosure to parents and friends. *Adolescence*, *25*, 959–976.
- Pennebaker, J. W. (1989). Confession, inhibition, and disease. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 22, pp. 211–244). New York: Academic Press.
- Shelton, K. H., & Harold, G. T. (2008). Interparental conflict, negative parenting and children's adjustment: Bridging links between parents' psychological symptoms and children's psychological symptoms. *Journal of Family Psychology*, *22*, 712–724.
- Shepard, D. S. (2002). A negative state of mind: Patterns of depressive symptoms among men with high gender role conflict. *Psychology of Men & Masculinity*, *3*(1), 3–8.

- Smith, T. E., & Leaper, C. (2005). Self-perceived gender typicality and the peer context during adolescence. *Journal of Research on Adolescence, 16*, 91–103.
- Stattin, H., & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development, 71*, 1072–1085.
- Steinberg, L., & Monahan, K. C. (2007). Age differences in resistance to peer influence. *Developmental Psychology, 43*, 1531–1543.
- Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescence. *Child Development, 57*, 841–852.
- Stoolmiller, M., Kim, H. K., & Capaldi, D. M. (2005). The course of depressive symptoms in men from early adolescence to young adulthood: Identifying latent trajectories and early predictors. *Journal of Abnormal Psychology, 114*, 331–345.
- Surrey, J. L. (1991). The “self-in-relation”: A theory of women’s development. In J. V. Jordan, A. G. Kaplan, J. B. Miller, I. P. Stiver, & J. L. Surrey (Eds.), *Women’s growth in connection* (pp. 51–66). New York: Guilford Press.
- Syzdek, M. R., & Addis, M. E. (2010). Adherence to masculine norms and attributional processes predict depressive symptoms in recently unemployed men. *Cognitive Therapy and Research, 34*, 533–543.
- Tamres, L. K., Janicki, D., & Helgeson, V. S. (2002). Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. *Personality & Social Psychology Review, 6*, 2–30.
- Van Der Vorst, H., Engels, R. C. M. E., Meeus, W., Deković, M., & Van Leeuwe, J. (2005). The role of alcohol-specific socialization in adolescents’ drinking behaviour. *Addiction, 100*, 1464–1476.
- Van Roekel, E., Engels, R., Verhagen, M., Goossens, L., & Scholte, R. (in press). Parental depressive feelings, parental support, and the serotonin transporter gene as predictors of adolescent depressive feelings: A latent growth curve analysis. *Journal of Youth and Adolescence*.
- Vandeleur, C. L., Perrez, M., & Schoebi, D. (2007). Associations between measures of emotion and familial dynamics in normative families with adolescents. *Swiss Journal of Psychology—Zeitschrift für Psychologie—Revue Suisse de Psychologie, 66*, 5–16.
- Wiener, L., Mellins, C. A., Marhefka, S. L., & Battles, H. (2007). Disclosure of an HIV diagnosis to children: Lessons from history, current research, and future directions. *Journal of Developmental and Behavioral Pediatrics, 28*, 155–166.
- Wilson, G. S., Pritchard, M. E., & Revalee, B. (2005). Individual differences in adolescent health symptoms: The effects of gender and coping. *Journal of Adolescence, 28*, 369–379.
- Youniss, J., & Smollar, J. (1985). *Adolescent relations with mothers, fathers, and friends*. Chicago: University of Chicago Press.
- Yunger, J. L., Carver, P. R., & Perry, D. G. (2004). Does gender identity influence children’s psychological well-being? *Developmental Psychology, 40*, 572–582.

Author Biographies

Anna Lichtwarck-Aschoff is assistant professor in Developmental Psychopathology at the Behavioural Science Institute of the Radboud University Nijmegen. She received her doctorate in developmental psychology 2008 from the University of Groningen, the Netherlands. Her research focuses on parent–child and mother–daughter real-time interactions in relation to both internalizing and externalizing problem behavior and the effectiveness of treatment programs.

Catrin Finkenauer is associate professor in the department of Clinical Child and Family Studies at the VU University Amsterdam. She received her doctorate in social and clinical psychology in 1998 from the University of Louvain, Belgium. The central focus of her research is people’s evaluations of their relationships (e.g., friends, intimate partners, families) and how relationship partners make judgments about each other.

Haske van der Vorst is assistant professor in Developmental Psychopathology at the Behavioural Science Institute of the Radboud University Nijmegen. She received her doctorate in pedagogy in 2007 from the University of Nijmegen, the Netherlands. The main focus of her work is on relationship between parental behaviors and socialization and adolescent’s alcohol use.

Rutger Engels is professor in Developmental Psychopathology at the Behavioural Science Institute of the Radboud University Nijmegen. He received his doctorate in medical sociology in 1998 from the University of Maastricht, the Netherlands. The main focus of his research is on understanding the development of psychopathology in children and adolescents by investigating the interplay between social-environmental factors and individual characteristics.