Attachment representations and characteristics of friendship relations during adolescence

Peter Zimmermann*

Department of Experimental Psychology, University of Regensburg, Regensburg 93040, Germany

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Abstract

Attachment theory proposes that experiences with the primary caregivers are an important basis for the development of close social relationships outside the parent–child relationship. This study examined the association between representations of attachment, as assessed with the Adult Attachment Interview (AAI), representations of friendship and peer relations, as assessed with an interview in a sample of 43 adolescents. Secure attachment representations were significantly related to interview-based assessments of close friendships, friendship concept, integration in a peer group, and emotion regulation within close friendships. Attachment experiences reported during the AAI, their integration, and their coherency were related to friendship quality and friendship concept. Results show the close associations between attachment representations and friendship relationships during adolescence. The associations between peer relations and attachment representations differed depending on whether an interview approach or a questionnaire approach was used.

Keywords: Friendship; Attachment; Adolescence; Emotion regulation

Introduction

One of the major developmental changes in friendship quality during adolescence is the growing importance of reciprocity, trust, and emotional closeness within these relationships (Selman, 1980; Youniss & Smollar, 1985). Compared with popularity,
friendship typically is characterized by the importance of affection, intimacy, reliable alliance, and instrumental and emotional support (Berndt, 2002; Bukowski & Hoza, 1989). During development from preadolescence to adolescence, intimacy and self-disclosure become defining features of a close or best friendship (Berndt, 2002; Bukowski, 1987). Empathy and consensual validation of opinions about oneself and current life experiences are salient characteristics of friendships at this age that promote the development of self-worth and more realistic interpretations of experiences (Bigelow, 1977; Youniss & Smollar, 1985).

Despite this normative developmental trend, there is empirical evidence that not all adolescents have friendships that are characterized by mutuality and trust. Adolescents differ in their degrees of self-disclosure and can also have friendships that are characterized by disengagement (Berndt & Hanna, 1995; Shulman, 1995). In addition, Keller and Wood (1989) found that the quality of the friendship concept (i.e., the expectations regarding a best friend and trust) develops with age but shows tremendous differences within each age group as well as interindividual differences during developmental change. Possible reasons for interindividual differences in friendship quality at a given age can be diverse (e.g., recent move to a different city, neighborhood characteristics), so that adolescents at test time have not yet been able to develop friendships at a level that would be age appropriate. The parent–adolescent relationship, with both direct and indirect influences, is another factor (Ladd, 1992). Parents directly structure and select their children’s peer contacts, and parents indirectly influence norms and beliefs about appropriate social behavior and the relationship models based on attachment experiences. Buhrmester and Furman (1990) suggested that friendships, with growing age, develop characteristics that formerly have been typical for the parent–child relationship. Differences in the quality of close friendships during adolescence, then, could be explained at least partly by differences of experiences in the parent–child relationships.

Attachment theory assumes that a child’s emotional bond with his or her parents is strongly predictive of other close relationships later in life (Bowlby, 1973; Waters & Cummings, 2000) if these relationships have similarity to aspects of an attachment relationship (Ainsworth, 1990). The salient characteristic of the attachment system is its security-regulating function. A child seeks emotional support from specific caregivers when he or she feels distressed and does not feel capable of autonomous emotion regulation. Attachment theory proposes that, based on experiences of effective or inefficient emotion regulation by the caregivers, a child develops internal working models of the self and of the caregivers (Bowlby, 1973; Bretherton & Munholland, 1999). The transfer of attachment to parents to other close relationships is based on this concept of internal working models (Bowlby, 1973; Sroufe & Fleeson, 1986). Internal working models influence information processing (e.g., perception, interpretation, expectations) as well as emotion and behavior regulation (e.g., proximity seeking, coping) (Zimmermann, 1999). There is empirical evidence that infant–child attachment patterns are associated with expectations toward friends (i.e., friendship concept) and interpretations of friends’ behavior and interaction patterns.

Insecure attachment organization has been associated with a more hostile interpretation of hypothetical conflict situations between peers during preschool (Suess,
Grossmann, & Sroufe, 1992) and with a more rigid and negative interpretation of hypothetical social rejection situations during adolescence (Zimmermann, 1999).

Elicker, Englund, and Sroufe (1992) found significant associations between infant–mother attachment and preadolescents’ friendship concepts (i.e., expectations of specific behaviors and rules within friendships).

Studies observing peer interactions showed that secure infant–mother attachment quality was significantly associated with social competence, low aggressiveness, and more cooperative friendships (Shulman, Elicker, & Sroufe, 1994; Sroufe, 1989; Suess et al., 1992). In a more recent meta-analysis, the average effect size of the influence of attachment on friendship from preschool to preadolescence was $r = .24$, whereas the mean effect size for studies assessing wider peer relations was lower at $r = .14$ (Schneider, Atkinson, & Tardif, 2001). Thus, there is empirical evidence of a significant association between attachment and especially close friendship quality during childhood.

Studies on attachment measures and friendship relations during preadolescence and adolescence have found that self-reported or parent-reported attachment security is related to friendship quality that is characterized by trust, closeness, and mutuality (Kerns, Klepac, & Cole, 1996; Lieberman, Doyle, & Markeiwicz, 1999; Shulman, 1995). The growth in the importance of trust and reciprocal self-disclosure during adolescence makes friendship more similar to relationships with attachment characteristics. Differences in attachment, therefore, might be more likely to be paralleled by differences in friendship quality at that age. There is substantial evidence that attachment is related to social competence during adolescence as well (Allen & Land, 1999). However, studies focusing on the relation between attachment and close friendships during adolescence are rare.

Self-reported attachment does not take into account the issue of idealization in the description of attachment relationships. This is considered by studies using the Adult Attachment Interview (AAI) (George, Kaplan, & Main, 1985), which assesses the state of mind regarding attachment (Main, 1991). Using the AAI, participants can be classified into one of four patterns that parallel the patterns of attachment quality during infancy (but are not identical to them). Individuals classified as “secure” or “free to evaluate” coherently report about their past attachment experiences independent of their quality. They show signs of integration of these experiences in their representations of their selves in relationships and value attachment relationships. Individuals with “dismissing” attachment representations show an incoherent discourse by idealizing their caregivers, insisting on being unable to recall attachment-related episodes, and/or dismissing the effect of nonsupportive experiences. Individuals classified as enmeshed or “preoccupied” with attachment show anger when talking about their attachment relationships. They have difficulties in separating past and current relationships with parents, often oscillate between positive and negative appraisals of attachment experiences, and/or show a passive discourse style. In addition to these three major patterns, participants can receive a classification as unresolved/disorganized based on lapses in monitoring of reasoning or discourse when reporting about loss or abuse (Hesse, 1999). Besides the classification, mega-items, assessing the formal discourse quality, validly reported attachment
experiences, and processing of attachment experiences (e.g., valuing of attachment) allow additional analyses (Kobak & Scerey, 1988; Zimmermann, 1999).

Kobak and Scerey (1988) reported that late adolescents with insecure attachment representations are more hostile (especially if classified as dismissing) and more anxious (especially if classified as preoccupied) than are adolescents with secure attachment representations, as characterized by their friends. Zimmermann, Gliwitzky, and Becker-Stoll (1996) replicated this finding for 16-year-olds. In addition, they found a higher concordance of self and friend descriptions by means of the California Adult Q-sort (Block, 1978) for adolescents with secure attachment representations. These adolescents present themselves to their friends as they experience themselves, so friends know each other quite well (Van Lieshout, van Aken, & van Seyen, 1990). Cooperation of friends when experiencing negative feelings also depends on adolescents’ attachment representations (Zimmermann, Maier, Winter, & Grossmann, 2001).

Because individuals with insecure attachment representations, especially with dismissing attachment organization, tend to idealize themselves and close relationships, it should be controlled in the assessment. This can be accomplished with an interview approach such as the AAI. Furman, Simon, Shaffer, and Bouchey (2001) used the AAI to assess working models of parents, friends, and romantic partners. The quality of attachment representation was significantly associated with the respective working model of friendship but not in all respects to working models of romantic relationships. Applying the basic principle of the AAI to the assessment of peer and romantic relationships helps to control for idealization. However, it leaves unanswered the question of whether the associations found may be explained methodologically as an overall concordance of coherence instead of the relationship characteristics. The AAI is not classified on the basis of reported experiences; rather, it is classified on the basis of the coherence or style of incoherence of individuals’ answers during the interview, even if the individuals experienced intense rejection (Hesse, 1999). If the same principle is applied to the assessment of the representation of other close relationships (e.g., friendships, romantic relationships), the associations between attachment security and security of other close relationships might reflect individuals’ ability to talk coherently about close relationships in general, even if the experienced relationship quality indeed was not supportive. However, attachment theory would suggest that there is a transfer of supportive experiences with parents to mutually supportive close relationships with peers or partners (Bowlby, 1973; Sroufe & Fleeson, 1986). Thus, the concept of coherence is important to control for idealization, but the theoretical assumptions that must be tested are whether relationship patterns are transferred from parent–child relationships to friendships.

The current study was designed to assess the associations between adolescents’ attachment representations and concurrent representations of adolescents’ friendship and peer relations and emotion regulation patterns. It was expected that adolescents with secure attachment representations would report closer friendships, a higher level of friendship concept, more integration in wider peer relations, and the ability to engage in cooperative conflict resolution with low rates of hostility and social anxiety. In addition, the assessment of peer relations by questionnaire might not reveal
such associations due to idealization of the dismissing group. Finally, the study attempted to test whether concordance between the AAI and friendship is based solely on the associations with the coherence of the AAI or is also found with the reported attachment experiences, the reported attachment behavior, and the processing of attachment experiences.

Method

Sample and procedure

In a follow-up of the Bielefeld Longitudinal Study (Grossmann, Grossmann, Huber, & Wartner, 1981), an ongoing study on attachment and socioemotional development, 44 adolescents (of the original 52 children) were visited at home. Because the assessment could not be fully completed for 1 participant, data analysis was reduced to 43 participants (21 girls and 22 boys). The assessment took place within 3 months of the participants’ 16th birthdays.

Two different researchers interviewed the adolescents in their homes independently, first with an interview on peer relations and then with the AAI (George et al., 1985). The interviews also were rated independently from separate transcripts by different raters, who were not the interviewers and who did not have any information about the domain-specific ratings. In addition, participants were given questionnaires and were asked to send them back to the university.

Measures

Adult Attachment Interview

The AAI (George et al., 1985) is a semistructured interview that focuses on attachment-relevant experiences during childhood such as being upset, hurt, separated, threatened, and rejected as well as experiencing loss. Other questions aim at understanding individuals’ integration of experiences with their caregivers into their views of their selves and the relationships with the caregivers. The AAI was designed to assess individuals’ state of mind with regard to attachment (Main, 1991).

The interviews were transcribed and rated using a German version of the AAI Q-sort (Kobak, 1993; Zimmermann, 1994) that consists of 100 items based on Main and Goldwyn’s (1985) scoring system. The items assess coherency of the transcript, representation of the relationships to the attachment figures, integration of experiences, valuing of attachment, and other aspects relevant to describe attachment representation patterns. The AAI Q-sort method has shown significant concordance with independent classifications following the Main and Goldwyn system, for example, 96% (Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993), 84% (Allen, Moore, Kuperminc, & Bell, 1998), and 80% (Zimmermann, Becker-Stoll, & Fremmer-Bombik, 1997).

Three independent coders, who were blind to other results of the study, rated the interviews. Two raters trained by Main and Hesse each scored half of the transcripts.
The third rater, reliably trained by the first rater, rated all interviews. The combined AAI Q-sort ratings were correlated with the provided expertly rated prototypes of the three main patterns of attachment representation. Composite reliability of the prototypic Q-sorts ranges from $r(100) = .92$ to $r(100) = .96$ (Kobak, 1993). Correlations with these prototypes represent participants’ similarity to the specific attachment representation prototypes and lead to continuous scores for secure, dismissing, and preoccupied attachment representations. In addition, the method offers a score for deactivation of attachment-relevant thoughts and feelings during the AAI. Each interview is checked for reliability regarding the concordance of the distribution of all 100 items (Kobak et al., 1993), a procedure that is very conservative compared with the rater agreement of the attachment classification of all interviews. Both ratings are combined to increase reliability, a procedure that is standard for Q-sort assessments (Block, 1978; Ozer, 1993). The average combined profile reliability was .78 (range = .61–.91, Spearman–Brown). This results in reliabilities at the dimensional score level of $r = .94$ for the secure dimension, $r = .93$ for the dismissing dimension, $r = .90$ for the preoccupied dimension, and $r = .93$ for the deactivation dimension.

Participants were also classified into the “secure vs. insecure” categorical variable based on the dimensional security score. A score equal to or greater than zero on the secure scale led to a classification of the attachment representation as secure, whereas a score of less than zero led to a classification as insecure. The insecure group was differentiated into two groups. The dismissing group was classified by higher scores on the dismissing dimension than on the preoccupied dimension, whereas the preoccupied group was classified by higher scores on the preoccupied dimension than on the dismissing dimension. This classification was replicated by a cluster analysis using the Ward method and was used similarly in another study (Zimmermann & Becker-Stoll, 2002). The classification resulted in a group of 21 individuals with secure attachment representations, 14 individuals with dismissing attachment representations, and 8 individuals with preoccupied attachment representations.

The single AAI Q-sort items can be aggregated to mega-items that assess specific aspects of the interview (Zimmermann, 1999). This offers the opportunity for particular analysis of the content, the formal quality, and the psychological processing apparent in the AAI. For this analysis, items are aggregated to mega-items regarding three major aspects of attachment representation. The content level is assessed by the validly reported attachment experiences of support by mother ($z = .90$), support by father ($z = .85$), and reported attachment behavior ($z = .86$). The reported attachment experiences with the caregivers were rated as supportive only if the general descriptions of the parents were validated by reported episodes during the AAI. The second aspect is the formal discourse quality operationalized as mega-items for coherency ($z = .95$) and attachment-relevant childhood memories ($z = .93$). The third aspect, the psychological processing of attachment experiences, was assessed by the mega-item integration of attachment experiences ($z = .89$) (i.e., the acceptance of possible negative experiences and a perspective as to why parents behaved in that way) and an overall attitude regarding valuing of attachment ($z = .92$). Each mega-item is rated on a 9-point scale.
Friendship and Peer Relations Interview

The Friendship and Peer Relations Interview (Zimmermann, 1992) is a semistructured interview developed to assess representations of peer relations. The interview takes approximately 45 min to complete and contains questions regarding experiences and expectations in close peer relations, wider peer relations, and emotion regulation in close and wider peer relations. The adolescents were first asked to name their friends and their best friends and to describe these relationships in more detail. The questions were based on Selman’s (1980) concept and several empirical results on adolescents’ peer relations and friendship reasoning (Buhrmester, 1990; Bukowski & Hoza, 1989; Keller & Wood, 1989). For each domain of the assessed representation of peer relations, the adolescents were asked specific questions (see Appendix). The interviews were transcribed, and participants’ answers were rated on the following rating scales based on criteria from studies on friendship relations during adolescence (Bukowski & Hoza, 1989; Keller & Wood, 1989; Selman, 1980; Youniss & Smollar, 1985). As with the AAI, general answers were prompted by questions for details or episodic memories for each aspect of the peer relations. Adolescents’ answers were rated as valid, and as representing a high score on the specific interview scale, only when the participants provided examples with their general statements. However, in contrast to the AAI or to rating systems adapted from the AAI (e.g., Furman et al., 2001), the transcripts were not rated overall as coherent vs. incoherent, and were not classified as secure vs. dismissing vs. preoccupied, so as to avoid shared method variance with the AAI based on classifying solely on the basis of coherence or a similar typology in both interviews.

The ratings are based on individuals’ answers to specific questions for each domain of the assessed peer relations (see the Appendix). Additional information for each domain, provided by the adolescents without specific questions during the course of the interview, was also included. Friendship quality regarding a best friend was rated on a 7-point scale, with a low score characterizing a friendship as having low contact frequency (i.e., mainly just spending leisure time together) and a high score reflecting reported reciprocal instrumental and emotional support, trust, and self-disclosure. Criteria include the frequency of contacts as well as reciprocity, emotional closeness, and support of the reported friendship. Friendship concept also was rated on a 7-point scale based on Selman’s (1980) criteria. It assessed expectations regarding close and best friendships and the meaning of confidence in such relationships, ranging from mainly sharing interests and a description of trust (low score) to expecting reciprocal emotional support and understanding (high score). Criteria include the reported expectations regarding the characteristics of a best friendship relation and trust as well as the development of friendships. Quality of romantic relationships was rated on a 5-point scale. It applied criteria similar to those for friendship quality, ranging from mainly sharing interests (low score) to experiencing reciprocal support, confidence, and self-disclosure (high score). The scales were applied only when the romantic relationship had lasted at least 3 months. As a consequence, only 16 adolescents reported such relationships. Peer integration was rated on a 9-point scale. It assessed the acceptance within larger groups of peers, ranging from having no steady friends (low score) to being included and accepted within several peer groups (high score).
the size of the peer network, the intensity and quality of the individual’s involvement in the peer group, and the possibility of self-disclosure in the group. Integration in school was rated on a 5-point scale, ranging from feeling lonely (i.e., having no friends) in school (low score) to being popular in school (high score). Criteria include the number of reported contacts and the felt peer acceptance in school. Cross-gender contacts assessed the amount of time spent, and the casualness of interactions, with peers of the opposite sex. It was rated on a 7-point scale ranging from no self-initiated contact or only reported failure to establish contact (low score) to regular contact and acceptance (high score). Criteria include frequency and quality of contact and disclosure of personal topics. Conflict resolution assessed the ability of close friends to manage conflicts and to cooperate regarding differences in opinion. The reported reactions were rated on a 7-point scale ranging from long-term interruptions of interaction or communication between friends (low score) to reciprocal striving for a solution or compromise (high score). Hostility was rated on a 7-point scale examining participants’ answers describing a best friend and the interactions with him or her. A low score was given when direct or indirect aggression was reported, and a high score was given when devaluing or attacking the friend (verbally or physically) was reported. Social anxiety was rated on a 7-point scale based on answers to questions about individual reactions when meeting new peers or being in unfamiliar situations, ranging from being able to make contact easily (low score) to avoiding talking to unknown people (high score). Interrater concordance for the scales of the peer relations interview was calculated on the basis of 15 transcripts from the sample and interviews from a pilot study. Interrater agreement was 87% for friendship quality, 93% for friendship concept, 80% for quality of romantic relationships, 80% for peer integration, 90% for integration in school, 87% for cross-gender contacts, 70% for conflict resolution, 87% for hostility, and 87% for social anxiety, with a mean interrater agreement of 86%.

Validity of the interview scales was tested by correlations with mega-items derived from descriptions of the adolescents’ personalities by their friends and parents using the California Adult Q-sort (Block, 1978). The three descriptions were combined, and mega-items were calculated for hostility, anxiety (Kobak & Scerey, 1988), and social isolation (e.g., is distrustful, tends to keep others distant, is accepted by others [reversed]). Social isolation in the Q-sort was negatively associated with friendship quality, $r(43) = -.42$, $p < .01$, friendship concept, $r(43) = -.37$, $p < .05$, peer integration, $r(43) = -.38$, $p < .05$, and school integration, $r(43) = -.34$, $p < .05$. No other correlations were significant. Hostility in the Q-sort was significantly associated with hostility in the peer relations interview, $r(43) = .44$, as well as with conflict resolution, $r(43) = -.47$, $p < .01$, friendship quality, $r(43) = -.31$, $p < .05$, and friendship concept, $r(43) = -.37$, $p < .05$. Anxiety in the Q-sort was significantly associated only with social anxiety, $r(43) = .40$, $p < .01$. Thus, the results show discriminant validity for these scales, with the exception of the cross-gender contacts scale, which did not show significant correlations with the California Adult Q-sort ratings.

**Offer Self-Image Questionnaire**

The participants were given the German version of the Offer Self-Image Questionnaire (Seiffge-Krenke, 1987), which assesses self-concept in five domains: general
self-confidence, achievement self-confidence, depressive self-concept, parent relations, and peer relations. For the current analysis, the peer relations scale was chosen as a standardized self-rating instrument for positive peer relations. The questionnaire has demonstrated adequate reliability and validity (Seiffge-Krenke, 1987, 1995).

Results

Preliminary analyses

Preliminary analyses investigated possible effects of gender on the attachment and peer relations scales and the interrelation between the peer interview and peer questionnaire measures. A series of t tests revealed that girls were rated as significantly more socially anxious, \( t(42) = 2.1, p < .05 \), in the Friendship and Peer Relations Interview and reported better peer relations in the Offer Self-Image Questionnaire, \( t(42) = 2.9, p < .01 \), as compared with boys. None of the other scales of the peer relations interview, and none of the scales of the AAI Q-sort, revealed a significant gender difference. Because only 16 participants reported romantic relationships that had lasted at least 3 months, this scale was omitted from further analysis.

Correlations were calculated to assess associations between the questionnaire measure for peer relations and the interview scales. Positive peer relations assessed with the Offer Self-Image Questionnaire were positively but moderately associated with most interview scales, friendship quality, \( r = .32, p < .05 \), friendship concept, \( r = .31, p < .05 \), and peer integration, \( r = .39, p < .05 \), and were negatively associated with hostility, \( r = -.45, p < .01 \). The correlations imply either that the questionnaire measure and the interview scales assess a similar concept or that there might be concordance for some, but not all, adolescents.

Zero-order correlations between quality of attachment representation and friendship quality

Table 1 presents the zero-order correlations between the attachment representation scores and the peer and friendship scores. For the close peer relations, the AAI Q-sort secure dimension was significantly positively associated with high friendship quality and a high friendship concept. Likewise, the dismissing and deactivation dimensions were negatively associated with these scales. However, the preoccupation dimension was not significantly correlated with the quality of close peer relations.

Peer integration and school integration, both of which assess the quality of wider peer relations, were significantly positively associated with the secure dimension and were significantly negatively associated with the dismissing, preoccupied, and deactivation dimensions. Moreover, deactivation of attachment-relevant thoughts and feelings was significantly related to a small amount of cross-gender contacts.

Security of the adolescents’ attachment representations was positively associated with cooperative conflict resolution and was negatively associated with hostility and social anxiety. Dismissing and preoccupied scores on the AAI were significantly
negatively associated with conflict resolution and were positively associated with hostility and social anxiety.

Based on these correlations, the associations of the friendship and peer scales with the dismissing and the preoccupied dimensions cannot be differentiated. To test for possible differences between the two insecure patterns of attachment representations, a multivariate analysis of variance (MANOVA) with the scales of the Friendship and Peer Relations Interview as dependent variables and the three attachment groups (secure vs. dismissing vs. preoccupied) as the independent variables was calculated. It revealed a significant multivariate effect, $F_{\text{Wilks}}(16, 64) = 1.95$, $p = .031$, effect size .327. Univariate analysis showed significant overall differences among the three attachment groups for all scales except cross-gender contacts. Post hoc analyses ($p < .05$, Duncan's) showed that the preoccupied group did not differ significantly from the dismissing group in any of the interview scales and did not differ significantly from the secure group for the friendship quality and friendship concept scales. For all other scales, both insecure groups differed significantly from the secure group.

**Differential associations between friendship measures for secure and insecure participants**

In contrast to the mainly significant associations between the AAI dimensions and the interview-based peer relations, there was no significant correlation between the

<table>
<thead>
<tr>
<th>Peer interview</th>
<th>AAI dimensions</th>
<th>Secure</th>
<th>Dismissing</th>
<th>Preoccupied</th>
<th>Deactivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close peer relations</td>
<td>Friendship quality</td>
<td>.40**</td>
<td>-.42**</td>
<td>-.21</td>
<td>-.39*</td>
</tr>
<tr>
<td></td>
<td>Friendship concept</td>
<td>.40**</td>
<td>-.44**</td>
<td>-.17</td>
<td>-.43**</td>
</tr>
<tr>
<td>Wider peer relations</td>
<td>Peer integration</td>
<td>.62***</td>
<td>-.61***</td>
<td>-.43**</td>
<td>-.47**</td>
</tr>
<tr>
<td></td>
<td>School integration</td>
<td>.44**</td>
<td>-.42**</td>
<td>-.32*</td>
<td>.32*</td>
</tr>
<tr>
<td></td>
<td>Cross-gender contact</td>
<td>.25</td>
<td>-.29</td>
<td>.01</td>
<td>-.35*</td>
</tr>
<tr>
<td>Emotion regulation</td>
<td>Conflict resolution</td>
<td>.50***</td>
<td>-.50***</td>
<td>-.36*</td>
<td>-.39**</td>
</tr>
<tr>
<td></td>
<td>Hostility</td>
<td>-.35*</td>
<td>.33*</td>
<td>.31*</td>
<td>.21</td>
</tr>
<tr>
<td></td>
<td>Social anxiety</td>
<td>-.52***</td>
<td>.46**</td>
<td>.52***</td>
<td>.26</td>
</tr>
<tr>
<td>Peer questionnaire</td>
<td>Peer relations</td>
<td>.14</td>
<td>-.15</td>
<td>-.03</td>
<td>-.14</td>
</tr>
</tbody>
</table>

*Note. AAI, Adult Attachment Interview. $N = 43$.  
**$p \leq .05$ (two-tailed).  
***$p \leq .01$ (two-tailed).  
****$p \leq .001$ (two-tailed).
AAI dimensions and the questionnaire-based peer relations. Because it was assumed that adolescents with insecure attachment organization tend to idealize their close peer relations and that this idealization cannot be controlled in questionnaire measures, the differential concordance of questionnaire and interviews scales was tested separately for secure and insecure participants for all scales in a further analysis. Participants were divided into two groups by median split of the self-concept peer scale, resulting in a group reporting poor peer relations \((n = 19)\) and a group reporting good peer relations \((n = 23)\). Because the group of adolescents with preoccupied attachment representations consisted of only 8 participants and did not differ significantly from the dismissing group, both insecure attachment representation groups were combined to form an insecure group. A \(2 \times 2\) MANOVA, with attachment security (secure vs. insecure) and questionnaire-based peer relations (poor vs. good) as dichotomized factors and with the interview scales as dependent variables, revealed a significant multivariate main effect for attachment representation, \(F(8, 31) = 3.4, p = .006\), and a significant multivariate main effect for questionnaire-based peer-relations, \(F(8, 31) = 3.8, p = .003\). There was no significant interaction effect. The relevant means are shown in Table 2. A series of \(2 \times 2\) analyses of variance (ANOVAs), with attachment security (secure vs. insecure) and questionnaire-based peer relations (poor vs. good) as dichotomized factors, were performed. In general, the analysis showed significant main effects of attachment representation for most scales of the Friendship and Peer Relations Interview. Adolescents with secure attachment representations had higher scores on friendship quality, \(F(1, 41) = 6.7, p < .05\), friendship concept, \(F(1, 41) = 4.8, p < .05\), peer integration, \(F(1, 41) = 26.0, p < .001\), integration in school, \(F(1, 41) = 12.6, p < .001\), conflict resolution, \(F(1, 41) = 6.8, p < .05\), hostility, \(F(1, 41) = 6.0, p < .05\), and social anxiety, \(F(1, 41) = 12.2, p < .001\). Thus, differences at the mean level support the correlation pattern. Follow-up analysis for

Table 2
Means (and standard deviations) of Friendship and Peer Relations Interview scales for secure and insecure attachment groups and questionnaire-based ratings of peer relations

<table>
<thead>
<tr>
<th>Peer interview</th>
<th>AAI</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Peer relations questionnaire</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good</td>
<td>Poor</td>
</tr>
<tr>
<td>Friendship quality</td>
<td>5.3 (1.3)</td>
<td>3.9 (0.8)</td>
<td>3.2 (1.5)</td>
</tr>
<tr>
<td>Friendship concept</td>
<td>5.1 (1.2)</td>
<td>4.0 (0.6)</td>
<td>3.7 (1.3)</td>
</tr>
<tr>
<td>Peer integration</td>
<td>6.9 (1.7)</td>
<td>5.9 (1.7)</td>
<td>4.1 (1.6)</td>
</tr>
<tr>
<td>Integration in school</td>
<td>3.9 (0.9)</td>
<td>3.5 (0.8)</td>
<td>2.4 (1.2)</td>
</tr>
<tr>
<td>Cross-gender contacts</td>
<td>3.9 (1.3)</td>
<td>2.7 (1.6)</td>
<td>2.6 (1.1)</td>
</tr>
<tr>
<td>Conflict resolution</td>
<td>4.8 (1.5)</td>
<td>4.0 (0.8)</td>
<td>3.5 (1.7)</td>
</tr>
<tr>
<td>Hostility</td>
<td>1.2 (0.6)</td>
<td>1.9 (1.4)</td>
<td>1.9 (1.1)</td>
</tr>
<tr>
<td>Social anxiety</td>
<td>3.8 (1.0)</td>
<td>3.3 (1.3)</td>
<td>5.2 (1.0)</td>
</tr>
</tbody>
</table>

*Note.* Standard deviations are in parentheses. AAI, Adult Attachment Interview.
the questionnaire-based assessment of peer relations revealed significant differences only for hostility, $F(1,41) = 5.8, p < .05$, and social anxiety, $F(1,41) = 4.1, p < .05$.

**Associations between Adult Attachment Interview scales and friendship measures**

Finally, it was tested whether the associations between attachment representations and the friendship and peer scales are based solely on the coherence of the AAI or whether the AAI scales (i.e., mega-items assessing reported experiences and processing of these experiences) are associated with peer relations as well. As shown in Table 3, friendship quality and friendship concept were positively associated with reported support by mother, reported attachment behavior, coherence, integration, and valuing of attachment. Thus, coherence of discourse, as well as specific experiences and their processing, is related to the representation of close friendship relations.

**Discussion**

Although most adolescents develop friendships and friendship concepts that include reciprocal trust and support, not all of them do so. One major aim of this study was to examine whether differences in friendship and peer relations were associated with attachment representations. Adolescents with secure attachment representations, in contrast to adolescents with dismissing attachment representations, reported emotionally close friendships and revealed an elaborated friendship concept. In addition, they reported being integrated in a larger peer group (even

<table>
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<td>Friendship quality</td>
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<td>Reported attachment experiences</td>
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<td>Support by mother</td>
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<td>Support by father</td>
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<td>.40***</td>
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*Note. AAI, Adult Attachment Interview.  
* $p \leq .10$ (two-tailed).  
** $p \leq .05$ (two-tailed).  
*** $p \leq .01$ (two-tailed).  
† $p \leq .001$ (two-tailed).
in school) and having appropriate abilities for emotion regulation during conflicts with their best friends, showed low hostility, and had low scores on social anxiety. The quality of close friendships was not significantly associated with a preoccupied state of mind regarding attachment. However, a preoccupied state of mind was significantly associated with low ability to regulate conflicts with a best friend cooperatively and with high scores in hostility and social anxiety. Significant positive correlations were found with integration in a larger peer group both in and outside school. These results replicate Kobak and Scerrie’s (1988) findings that a preoccupied state of mind is associated with more hostility and anxiety compared with adolescents with secure attachment representations but is associated with less hostility and more anxiety compared with adolescents with a dismissing state of mind regarding attachment. Adolescents with dismissing attachment representations do not value attachment or close relationships and describe themselves as emotionally independent. Thus, it is not surprising that their friendship concept is poorly elaborated compared with the normative developmental trend during adolescence. From an attachment theory perspective, these adolescents’ working models of close relationships are based on rejecting attachment experiences that lead them not to expect closeness, comfort, or emotional support within close relationships (Grossmann, Grossmann, & Zimmermann, 1999). Thus, their criterion for interpreting their friends’ behavior as a sign of trust is already satisfied quite early, for example, when these friends come to appointments on time. Given such internal working models, with low expectations regarding trust and emotional support in close relationships, it is no wonder that the actual friendships of adolescents with dismissing attachment representations are lower in quality.

Adolescents with preoccupied attachment representations oscillate between positive and angry negative evaluations of their attachment relationships. They do not generally devalue attachment, as is common for individuals with dismissing attachment representations. Nonetheless, they have difficulty in dealing with their easily activated anger in close relationships. They have expectations of closeness in relationships that are not clearly elaborated, leading to low to medium scores on the friendship concept scale. However, given the small number of adolescents with preoccupied attachment representations and the fact that they did not differ significantly from adolescents with dismissing attachment representations in this study, this cannot yet be generalized and instead must be replicated in a larger sample.

A closer look at the results of the associations between AAI mega-items and both friendship quality and friendship concept revealed that coherence and attachment experiences with one’s mother and the processing of attachment experiences are significantly associated with friendship quality and friendship concept. In particular, the associations among valuing of attachment, integration of earlier experiences, reported attachment behavior, and the friendship concept seem to be salient. Thus, not only the ability to talk coherently about attachment experiences but also the competence to evaluate relationship experiences and to think about explanations for experienced parental behavior may contribute to elaborated friendship reasoning on a high level of Selman’s (1980) friendship concept. In addition, experienced support
from one’s mother during childhood seems to influence the ability to accept and provide comfort and emotional support within close friendship relations. Finally, the fact that the rating scales of the Friendship and Peer Relations Interview were done independently by different raters, and are not based on using the same classification system as the AAI (secure vs. insecure) or the overall coherence of transcript as a criterion, underscores that the associations between the two interviews cannot be accounted for solely by shared method variance.

The missing associations between the self-reported peer relationships and the AAI might have two explanations. First, the tendency of individuals with insecure attachment representations, and specifically with dismissing attachment representations, to idealize themselves and their relationships (Crowell, Fraley, & Shaver, 1999; Kobak & Sceery, 1988) cannot be controlled in questionnaires. However, the two groups might also differ in their criterion of close or good social relationships. Individuals with insecure attachments might not differentiate between a close relationship and a less close relationship by the degree of reciprocal affection. Thus, it might well be the case that the differences may be attributed not to idealization but rather to the fact that the criterion of insecurely attached adolescents for having good peer relations can simply be satisfied at a lower level. Talking about emotions or personal experiences might not be a necessary part of individuals’ expectations regarding good peer relations, although this might be the normative trend for adolescence. A recent study using analogous scales for the assessment of peer relations seems to support this notion, where adolescents with insecure attachment representations do not evaluate their relationships with their reciprocal best friends using terms of affection, whereas adolescents with secure attachment representations do (Zimmermann, Mayer, & Winter, 2003).

Despite the fact that the results of this study are in line with expectations based on attachment theory, the small sample and the assessment of friendship representations solely on the basis of the participants’ evaluations, and not also on the basis of their friends’ evaluations, surely can be seen as limitations. In addition, questionnaires that assess specific aspects of friendship quality more directly might reveal clearer associations with attachment measures than did the one used in this study. Thus, the need to control for idealization in the appraisal of close relationships for individuals with insecure attachment representations could be tested more strictly.

The correlation design of the study does not permit inferences about causality because attachment representations can be influenced by other factors as well (Zimmermann & Becker-Stoll, 2002). In addition, attachment influences might be apparent mainly in close relationships and not in all peer relations or during all phases of acquaintance. Therefore, future research might include interviews about relationships with different friends or peers, with less favored peers, and/or with peers where no close relationships are established by the individuals (despite the intention to do so) and also include the duration of friendships as an important variable. This would help to clarify whether attachment security is relevant only in close relationships and not in all kinds of relationships. Thus, attachment organization might be seen as related to a basic competence for close relationships (e.g., friendship concept).
but not as the only influential factor for the actual performance in all current peer relationships.

The results of this study suggest that not all adolescents develop close and mutually supporting friendships. Interindividual differences in friendship quality and friendship concept are based at least partly on differences in attachment organization. This seems to support Bowlby’s (1973) expectation that the ability to develop mutually satisfying peer relationships characterized by competent seeking and giving of support when feeling distressed is based on internal working models developed in attachment relationships with the primary caregivers.

Acknowledgments

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Appendix. Domain-specific questions from the Friendship Peer Relations Interview

Friendship quality. Typical questions for this domain include the following: “For how long have you been friends?,” “How often do you meet your friend?,” “What do you do together?,” “What are you talking about?,” “Are there specific topics that you only tell your friend about?,” “Do you trust your friend?,” “Does she/he trust you?,” “Can you give me an example?,” “If you are sad/anxious/upset, what do you do?” (asked separately for each emotion), “Do you turn to your friend when you feel sad/anxious/upset?,” “Does your friend recognize how you feel?,” “How does she/he react?,” “Does your friend comfort you?,” “Do you remember a specific episode?,” and “Did you comfort your friend, when she/he felt sad/anxious/upset?”

Friendship concept. Typical questions for this domain include the following: “From your point of view, what is the difference between a good friend and a best friend?,” “What characterizes an ideal friend?,” “Do you think it is important to have a best friend?,” “Do you think that friends should trust each other?,” “What does trust in a friendship mean to you?,” “How would you feel and what would you do if a close friend moves away,” “What are the reasons for quarrels between friends?,” “How can they be resolved?,” and “What are the reasons when friends separate?"

Quality of romantic relationships. Questions for friendship quality are adapted for romantic relationships.

Peer integration. Typical questions for this domain include the following: “How many friends do you have?,” “Are you member of a clique, a sport team, or an interest group?,” “Are your friends in the same groups?,” “How often do you meet?”
“What do you do together?,” “Are you organizing group meetings or do you contribute to the things you do in the group?,” “Do you remember a specific episode?,” “If somebody in the group is ill, do you care?,” “What are you talking about in your clique?,” and “Do you talk about personal topics?”

**School integration.** Typical questions for this domain include the following: “Do you have friends in your class or school?,” “How do you spend the breaks in school?,” “Do you think you are popular in your class?,” “How do you know?,” “How do you get along with your classmates?,” and “Is there somebody that does not like you?”

**Cross-gender contacts.** Typical questions for this domain include the following: “Are there girls/boys in your clique?,” “Did you learn dancing in a group?,” “Was it easy for you to talk to the girls/boys?,” “Do you remember a specific episode?,” “Have you been in love?,” “Did you have a boyfriend/girlfriend?,” “What are you talking about with girls/boys?,” “Do you talk about personal things?,” “How do they react?,” and “Do you remember a specific episode?”

**Conflict resolution and hostility.** Typical questions for these domains include the following: “Do you feel angry when you spend time with your friends?,” “How do you react?,” “Have you ever been mean to your friends?,” “How did your friends react?,” “Do you remember a specific episode?,” “Have you ever been provoked by your friends?,” “How did you react?,” “Do you have conflicts with your friends?,” “How often?,” “Can you give me an example of what happens then?,” “How long do you quarrel?,” “Do you reconcile?,” “Do you have a specific memory?,” and “Did you ever break up a friendship because of a conflict?”

**Social anxiety.** Typical questions for this domain include the following: “Do you make new friends easily?,” “Do you approach other people easily?,” “Can you give me an example?,” “If somebody unknown to you talks to you, how do you feel and react?,” “Imagine you are invited to a party with new people—how do you react?,” “Would you ask somebody to dance?,” “Do you remember a specific episode?,” “Imagine you moved to a new town and see a group of people playing volleyball—would you ask whether you could join them?”

**References**


