Security of Attachment and Trust Beliefs in

Close Others During Middle Childhood

Key Words: Secure Attachment; Trust Beliefs; Close Others; Middle Childhood

Abstract

 The study examined the relation between the security of attachment and trust beliefs in close others during middle childhood. In the study, 133 children (63 girls, *M* = 9.5) completed standardized measures of the security of attachment and three bases of trust beliefs in close others (reliability, honesty, and emotional). Correlational analyses showed that children’s security of attachment was associated with emotional trust beliefs in close others only. A Structural Equation Modeling analysis yielded a path between security of attachment and emotional trust beliefs in parents as a latent factor. Also, there was a path between the latent factor and emotional trust beliefs in peers. Alternative models did not adequate fit the data. The findings were ascribed to the role of parent’s emotional trustworthiness and children’s mental state discourse in promoting the relation between children’s security of attachment and their emotional trust beliefs in close others.

Security of Attachment and Trust Beliefs in

Close Others During Middle Childhood

According to Attachment Theory (Ainsworth, 1989; Ainsworth et al., 1978; Ainsworth, & Bowlby, 1991; Bowlby, 1969), attachment is the emotional bond between infants and their care providers, primarily their parents. By establishing secure attachment, children form an Internal Working Model (IWM) of parent-child relationship that includes trust in others. The IWM predisposes children to show social competence and psychosocial adjustment later in development. The current study was designed to fill a gap in knowledge regarding the relation between security of attachment and trust beliefs in close others during middle childhood. Guided by the Bases, Domains, and Target interpersonal trust framework (Rotenberg, 2010, 2019), children’s trust beliefs in close others were assessed as their expectations that close others (mother, father, and peers) demonstrate emotional trustworthiness (e.g., keeps information confidential), reliability (e.g., fulfils a word or promise), and honesty (e.g., tells the truth).The study examined whether or not children’s security of attachment was associated with each of their three bases of trust beliefs in close others.

**Attachment Theory Research**

An extensive body of research has examined attachment theory. The findings have been subjected to a range of meta-analyses, which have showed the following (with low to moderate effect sizes). Security of attachment is concurrently and prospectively associated by parental sensitivity which comprises parents’ understanding of the infant’s states and proclivity to respond to those states appropriately (see IJzendoorn & de Wolff, 1997; Lucassen et al., 2011). Security of attachment is concurrently and prospectively associated with parental mentalization, which entails parents identifying their children’s mental states, such as emotions, thoughts, desires, and intentions. Parental mentalization promotes security of attachment relationship because it allows parents to interpret the internal states of their children from their behavior during social interaction (Zeegers et al., 2017). Security of attachment is associated with parental mentalization and sensitivity separately and sensitivity mediates the relation between parental mentalization and attachment security (Zeegers et al., 2017). Parental mentalization and sensitivity increases the capacity for parents to regulate their children’s distress (see Brumariu et al., 2012; Sroufe, 2005). Finally, meta-analyses have shown that security of attachment is concurrently and prospectively associated with psychosocial adjustment as shown by social competence with peers, lower-levels of externalizing problems, and lower-levels of internalizing problems (Groh et al., 2016; Madigan et al., 2013).

**Trust and Attachment**

Central to Attachment Theory is the principle that trust plays a fundamental role in children’s security of attachment. Waters and Deane (1985) proposed that an infant’s trust in his or her care provider was shown by his or her use of the careprovider as a secure base which allowed him or her to explore the environment (also see Heylen et al., 2019). Attachment theorists have proposed that securely attached children develop an IWM which includes a sense of trust in others and positive thoughts regarding the intentions of other people’s behaviors (see Cohn, 1990; Lieberman, 1977). Attachment theorists have concepualized trust as children’s expectation that attachment figures are available to provide support (De Winter et al., 2016). As evidence, it was found that preadolescents’ security of attachment was associated with their bias in interpreting maternal behavior as supportive. Corriveau et al. (2009) found that infants with secure attachment predicted their trust in their mothers by preschool. Infants who had established secure attachment were more willing to accept a label of a hybrid figure given by their mothers than by a stranger. Children’s beliefs that their parents kept promises are associated with the children’s willingness to depend on peers to keep promises and their keeping promises to peers (Rotenberg et al. 2013).

**The Basis, Domain, and Target Interpersonal Trust Framework**

The current study drew upon the Basis, Domain, and Target interpersonal trust framework and measures (BDT; Rotenberg, 2010, 2019) in order to examine the relation between children’s security of attachment and trust beliefs in others. The BDT framework posits that trust beliefs comprise individuals’ expectations that others show three classes (bases) of behavior: emotional, reliability, and honesty. The emotional basis of trust beliefs comprises individuals’ expectations that other persons will refrain from causing emotional harm by not causing emotional embarassment, uncritically acceptance of personal disclosures, and maintaining confidentiality of them. The reliability basis of trust beliefs comprises individuals’ expectations that other persons show reliability by fulfilling their word or promise The honesty basis of trust beliefs comprises individuals’ expectations that other persons tell the truth as opposed to lying and engage in behaviur guided by benign rather than malevolent and sincere rather than insincere motivations. The three bases of trust extended across trust-dependent behavior (e.g., trusting) and trust enacting behavior (i.e., trustworthiness). According to the BDT interpersonal trust framework, individuals’ trust in other persons vary by the target dimensions of familiarity and specificity. Finally, the framework posits that trust is a reciprocal process in which individuals in dyads tend to match each other’s trust and thus establish a common social history.

A**ttachment and the Three Bases of Trust Beliefs**

 The research on attachment provides an insight into why and how the three bases of trust beliefs in close others are associated with security of attachment. The study by Corriveau et al. (2009) supports the conclusion that children’s security of attachment is associated with their expectations that mothers are accurate sources of information and thus honest. The study by De Winter et al. (2016) implies that children’s security of attachment is associated reliability trust beliefs in parents as expectations that they fulfill promises to be nurturant caregivers. The research parental mentalization and sensitivity provide an insight into the relation between security of attachment and children’s emotional trust beliefs in parents. Security of attachment is promoted by parental senstivity and mentalization during infancy and early childhood (Zeegers et al., 2017). During middle childhood, children are more verbally fluent and articulate. Parents would manifest those parenting styles by being emotional trustworthy with their children. Specifically, parents would refrain from causing their children emotional harm by not causing them embarrassment, uncritically accepting their disclosures, and maintaining confidentiality of them. As a consequence, the children would engage in mental state discourse (i.e., expressions of internal states) whereby parents could regulate their children’s distress and heighten the emotional bond with them.

 Other lines of research show relations between parental trust and children’s trust. Mother’s trust beliefs in others are associated with children’s trust beliefs in teachers and fathers’ and children’s trusting behaviors are associated (Rotenberg, 1995). Children’s trust beliefs in their parents have been found to buffer them from the effects of interpersonal stress on internalizing psychopathology (Sakai, 2010). Asthmatic children’s and their mothers’ trust beliefs in physicians are concurrently associated and reciprocal (Rotenberg, & Petrocchi, 2018).

**Overview of the Study and Hypotheses**

 The purpose of the current study was to examine the extent to which security of attachment is associated with the three bases of trust beliefs in close others during middle childhood. Guided by Attachment Theory and other longitudinal findings (Corriveau et al. (2009), the study tested the hypothesis that the security of attachment primarily affects children’s trust beliefs in their parents. Also, the hypothesis prescribes that children’s trust beliefs in parents affects their trust beliefs in peers because those are generalized via an Internal Working Moded (see Cohn, 1990; Lieberman, 1977). This attachment-trust hypothesis is depicted in Figure 1. The figure depicts security of attachment as a variable that predicts trust beliefs in parents as a latent factor from trust beliefs in each parent, which in turn, predicts trust beliefs in peers. This is a template model that could account for the relations between security of attachment and each of the three bases of trust beliefs in close others.

In the current study, elementary school children completed standardized measures of the security of attachment, trust beliefs in close others (reliability, honesty, and emotional bases/subscales) and loneliness. The study examined the associations between security of attachment and each of the three bases of trust beliefs in close others. It tested the attachment-trust model (see Figure 1) for each basis of trust beliefs using Structural Equation Modeling (SEM). SEMS also tested the adequacy of alternative models.

**Method**

**Participants**

The initial sample was composed of 141 children. Eight of the children completed 70% or less of the items and their data were omitted from the analyses. The final sample of participants was composed of 133 children (63 females; *M* = 9.5; *SD* = .5) ranging in age from 8 to 11.5 years. The children were drawn from two public schools in the UK. One school had a capacity of 161 students ranging in age from 3 to 11 years of age. Their language was predominately English (96%) and their neighbourhoods were composed of 82% White British, 11.6% South Asian, 2.6% White Other, 1.1% White Irish, 1.5% Mixed Race, 1.1% Black British, and 1% that are another ethnicity. The other school had a capacity of 172 students ranging in age from 3 to 11 years of age. Their language was predominately English (86%) and their neighbourhoods were 80% White British, 12.2% South Asian, 3.6% White Other, 1.0% White Irish, 1.6% Mixed Race, 1.0% Black British, and 1% that are another ethnicity

**Measures**

***Trust beliefs in close others.*** The 18-item Children’s Generalized Trust Scale (CGTS; Rotenberg et al., 2005) assesses the three bases of trust beliefs (emotional, reliability, and honesty) in mother, father, teacher, and peers. The peers were identified in the scale vignettes as friends and therefore close others. The items assessing trust beliefs in teachers were excluded for the current analyses because they were not conceptualized as close others. The participants imagined they were child protagonists who were of the same-gender in vignettes. The following are examples of the vignettes (items) presented to girls (wi*th the target and basis identified in brackets*): “Lorraine’s father said that he would take her to the cinema on Saturday. How likely is it that Lorraine’s father will take her to the cinema? (*Father-Reliability*). “Tina tells her Mother that she held hands with a boy at school, but asks her Mother not to tell anyone. How likely is it that Tina’s Mother will not tell others about it? (*Mother-Emotional*). The participants judged each vignettes on a 5-point Likert scale ranging from 1 – very unlikely to 5 very likely. The complete CGTS is reprinted in Rotenberg (2019).

The English CGTS was found to demonstrate construct validity by three-factor/bases by factor analyses and acceptable internal consistency (αs > .70). Shortened forms or subscales of the English CTGS have been used in other studies. Gordon, Lyon and Lee (2014) used a shortened version of the CGTS with elementary school children and found that it was associated with their willingness to keep parent’s secrets. Rotenberg, Qualter, Barrett, and Henzi (2014) found that elementary school children’s trust beliefs in peers subscale of the CGTS was associated with the quality of their peer interactions in the playground. The CGTS has been translated to assess trust beliefs in others by elementary school children in Italy (Rotenberg et al., 2015) and China (Ma et al.,2014). Confirmatory factor analyses of the translated scales have yielded the expected three factor/bases of trust beliefs. These studies have yielded acceptable internal consistency (αs > .70) and test-retest reliability for each of the three basis of trust subscales (*r*s > .55 *p*s< .001, across one month period). The CGTS has not been found to be appreciably associated with standardized measures of verbal ability (Rotenberg et al., 2015). With the trust beliefs in teachers excluded, the current scale assessed Trust Belief in Close Others (TBCO).

***Security of attachment*.** This was asssessed by the 15-item Security Scale developed by Kerns, Klepac, and Cole (1996). The scale employs a “Some Kids…Other Kids…” format to assess the child’s perceptions of the availability and responsiveness of the parent, reliance on the parent in times of distress, and ease in communicating with the parent (Kerns et al., 2000). The instructions to the children were “This questionnaire asks about what you are like with your mother – like how you act and feel around her. Before we get to those questions, let’s try a practice question. Each question talks about two kinds of kids, and we want to know which kids are most like you. Decide first whether you are more like the kids on the left side or more like the kids on the right side, then decide whether that is sort of true for you, or really true for you, and circle that phrase. For each question you will only circle one answer.” (see Kerns et al., 1996)

The following are examples of the items. “Some kids do not really like telling their mom what they are thinking or feeling BUT Other kids do like telling their mom what they are thinking or feeling”, “Some kids wish they were closer to their mom BUT Other kids are happy with how close they are to their mom”. “Some kids go to their mom when they are upset BUT Other kids do not go to their mom when they are upset”. The items were summed and averaged to yield a security of attachment scale. Higher scores denoted greater security. A meta-analysis of 57 studies by Brumariu Madigan, Giusepponea, Abtahi, and Kerns (2018) of the SS with elementary school children have yielded substantive evidence for its reliability and validity. The SS demonstrated stability over time (*r* = .51, p <.01) and small to moderate associations with other measures of security of attachment. The meta-analyses yielded small associations between SS and emotional competence, peer social competence, self-esteem, internalizing negatively) and externalizing (negatively). The security of attachment scale demonstrated acceptable internal consistency in the current study, α = .67.

**Procedure**

 The scales were adminsistrated to the participants in their classroom as a group. Neverthless, the participant completed his or her scales individually. The participants were informed that there were no right or wrong answers and they should give the answers that best describes their feelings or beliefs. They were informed that their answers would not to been seen by anyone else and kept confidential. The testing was completed in the two schools across two consecutive years.1 The study received ethical approval from the appropriate institution and the research was carried out in accordance with APA and BPS guidelines. The data is available on the OSF site at <https://osf.io/42gfm/?view_only=862c806825604938842ca9b116ac5c60>.

**Strategy for the Analyses**

 First the TBCO items were subjected to a confirmatory factor analysis by SEM. Second, the data were subjected to correlational analyses in order to test the associations between security of attachment and the three bases of trust beliefs in close others. A subanalysis tested the relative strength of the correlations. Third, a SEM analysis was carried out to test the attachment-trust hypothesis as it pertained to the observed association between security of attachment and a given basis of trust beliefs. If the correlational analyses failed to show associations between security of attachment and a given basis of trust beliefs in close others then the SEM was not performed to test the attachment-trust hypothesis for that basis of trust beliefs. Fourth and finally SEM analyses were carried out to test the adequacy of models that were alternatives to the model prescribed by the attachment-trust hypothesis.

**Results**

***Factor structure of the TBCO scale*.** Guided by Rotenberg et al.’s (2005) procedure, pairs of the items from the TBCO that assessed each basis for each target were summed and averaged. Those pairs served as raw measures to assess each of the three bases of trust beliefs for each of the three targets. The hypothetized model comprised paths between the three targets and each of the three bases of trust beliefs as latent factors (reliability, emotional and honesty). The hypothesized model is shown in Figure 1 and was a good fit of the data, yielding, χ2(23) = 20.34, *p* = .640, Normed Fit Index (NFI) = .82, Comparative Fit Index (CFI) =1.00, and Root Mean Square Error of Approximation (RMSEA) = .001. All paths between the raw measures and the three latent factors attained significance at *p* < .05 as did the covariance between two error terms. A nonsignificant, χ2, NFI and CFI > .90, and RMSEA <.07 demonstrates that the model is a good fit of the data (Hu & Bentler, 1999). The findings replicate those patterns found by Rotenberg et al. (2005) and provide evidence for construct validity of the TBCO scale. Only the path from the honesty trust beliefs in close others latent factor and the honesty trust beliefs in peers measure was lower than desired. For correlational analyses, the items were summed (and averaged) to yield a total TBCO scale, and three trust beliefs in close others (TBCO) subscales. Higher scores denoted greater trust beliefs on the scale or subscales. The TBCO total scale demonstrated acceptable internal consistency, α = .70.

 ***Correlational analyses.*** The correlations (with *M*s and *SD*s) are shown in Table 1. The TBCO total scale was correlated with each of the three TBCO basis subscales. There were correlations between each of the three TBCO basis subscales. Security of attachment was correlated with the Emotional TBCO subscale only. Contrary to expectation, the correlations between security of attachment and the other two bases of trust beliefs subscales were negative rather than positive but they did not approach of attain significance. The differences between the correlations were tested by a statistical program developed by Lee and Preacher (2013, September). The statistical program tests for differences between two dependent correlations with one variable in common. The correlation between security of attachment and the Emotional TBCO basis subscale was different from the corelation between the security of attachment and both the Honesty TBCO basis subscale, z = 2.47, *p* = .013, and the Reliability TBCO basis subscale, z = 3.38, *p* < .001..

 ***SEM of the Attachment-Trust Model****.* The SEM analysis test of this model is shown in Figure 4. Because only emotional trust beliefs in close others were associated with the security of attachment, the model was only tested for that basis of trust beliefs.2 The SEM analysis showed that the model were a good fit, with χ2(2) = .619, p = .734, NFI = .98, CFI = 1.00, and RMSEA <.001. All paths between the raw measures and the three latent factors attained significance at *p* < .05. As hypothesized, there was a direct path between security of attachment and the latent factor of emotional trust beliefs in parents to each parent. Also, there was a direct path between the latent factor of emotional trust beliefs in parent and emotional trust beliefs in peers. The attachment-trust model was not tested for the reliability and honesty bases of trust beliefs in close others because those bases were not appreciably correlated with security of attachment,

 ***SEM analyses of Alternative Models.*** The hypothesized model (Figure 2) was modified to include an additional direct path between security of attachment and emotional trust beliefs. The path did not attain statistical significance, β = .054, *p* = .594. Another SEM analysis tested a model in which there were paths between security of attachment and both emotional trust beliefs in parents and emotional trust beliefs in peers. This model included paths from emotional trust beliefs in parents and each parent (as in Figure 2). This SEM showed that this alternative model was not a good fit of the data χ2(2) = 4.14, *p* = .124, NFI = .86, CFI = .92, and RMSEA =.09. The latter criterion exceeded the recommended level. Furthermore, none of the direct paths in this alternative model attained significance at *p* < .05. As one further modification of that model, a covariance was included between the error term of emotional trust beliefs in parents and error term of emotional trust in peers. This covariance did not attain significance at *p* < .05. The additional SEM analyses supported the conclusion that the hypothesized Attachment-Trust model shown in Figure 3 was a better fit the data than alternative models.

**Discussion**

 The correlational analyses showed that the security of attachment was associated with emotional, but not reliability or honesty, trust beliefs in close others during middle childhood. The correlation between security of attachment and emotional trust beliefs in close others was appreciably different than the correlation between and reliability or honesty trust beliefs in close others. The SEM analyses showed that attachment-trust model was a good fit of the data regarding emotional trust beliefs in parents and peers only. As expected, there was a path between security of attachment and emotional trust beliefs in parents to each parent. There was a path between that latent measure and emotional trust beliefs in peers. The attachment-trust model was a better fit of the emotional trust beliefs in close others data than alternative models.

 The findings yield support for the Attachment Theory hypothesis by indicating that security of attachment affected children’s emotional trust beliefs in their attachment parents, which in turn, generalized to emotional trust beliefs in peers. The pattern is consistent with the research which shows that security of attachment is promoted by parental sensitivity and mentalization during infancy and early childhood (Zeegers et al., 2017). During middle childhood, parents would display those parenting styles by being emotional trustworthy. They would refrain from causing their children emotional harm by not causing them embarrassment, uncritically accepting their disclosures, and maintaining confidentiality of them. As a consequence, the children would engage in mental state discourse whereby parents could regulate their children’s distress and reinforce the emotional bond with them.

 The study showed that security of attachment was not appreciably associated with either reliability and honesty trust beliefs in close others during middle childhood. Those associations were slighly negative and weaker than the association between security of attachment and emotional trust beliefs in close others. This pattern of findings are not consistent with the implications of the following lines of research. The research Corriveau et al. (2009) indicates that security of attachment during infancy was predictive of preschool children’s honesty trust beliefs in parents. The research by De Winter et al. (2016) implies that children’s security of attachment is associated with reliability trust beliefs in parents as expectations that their parents fulfill promises to be nurturant caregivers. Neither reliability or honesty trust beliefs in close others appeared to be salient features of security of attachment during middle childhood.

 One interpretation is of the findings is that security of attachment is associated with children’s honesty trust beliefs in parents during other periods in development. Guided by Corriveau et al.’s (2009) findings, children’s honesty trust beliefs in parents may be a salient feature of security of attachment during early childhood. Regarding reliability trust beliefs in parents, children’s expectation that attachment figures are available to provide support may be a limited aspect of their trust beliefs (De Winter et al., 2016). Parents may or may not fulfill their promises to children for outcomes that are not strictly nurturing (e.g., promising to see a movie with the child). In future, it world be advisable to administer scales to children that explicitly assess their trust beliefs in close others, as was carried out in the current study. This methodology would be preferable to assessing children’s trust beliefs in close others from behavior (e.g., Corriveau et al. 2009) or by children’s inferences about the nurturing qualities of maternal behavior (e.g., De Winter et al., 2016).

**Directions for Future Research**

In the future, research could employ longitudinal designs to examine the causal relation between security of attachment and children’s trust beliefs in close othes, notably parents. Longitudinal research might show, for example, that the relations between those are reciprocal (see Cook & Kenny, 2005). The longitudinal research could address the role of parental emotional trustworthiness and children’s mental state discourse with parents in the relation between security of attachment and children’s trust beliefs in close others. Security of attachment is associated with psychosocial adjustment (Groh et al., 2016; Madigan et al., 2013) and children’s trust beliefs in parents is associated with psychosocial adjustment (e.g., Sakai, 2010. The research could examine the extent to which children’s trust beliefs is a mechanism by which security of attachment affects psychosocial adjustment. The results could address the issue raised by Groh et al. (2016) as a conclusion of the matra-analysis. It was argued that future research should systematically test the extent to which competing mechanisms were responsible for the relation between attachment and children’s later (mal)adaptation.

 By necessity trust beliefs are assessed by self-report. In future, it would be worthwhile to assess the relation between those beliefs and security of attachment using behavioral measures such as the strange situation. The current research assessed the attachment theory hypothesis that emotional trust beliefs in parent generalized to emotional trust beliefs in peers (Cohn, 1990; Lieberman, 1977). The relation between security of attachment and the peer social competence has been attributed to the consequences of secure attachments. The consequences include secure attachments promoting children’s learning of reciprocal relationship and increasing their willingness to independently explore new social environments and thus establishing peer relationships (see Seibert & Kerns, 2015). The precise mechanism responsible to the observed relation between children’s emotional trust beliefs in parents and emotional trust beliefs in peers warrants further examination. Finally, research could examine the extent to which the three bases of trust beliefs in close others are associated with each of the three types of insecure attachment (i.e., ambivalent, avoidant, and disorganized) (see Seibert & Kerns, 2015).

 Practitioners to consider including methods of promoting children’s emotional trust beliefs in parents and parents emotional trustworthiness as part of interventions designed to increase emotional self-regulation in children with mental health problems (see Wyman et al., 2010). In that vein, Colonnesi et al. (2012) reported some success of a Basic Trust intevention with parents of adopted children. The intervention involved teaching the parents to attend to their children’s behaviors and nonverbal signals as a means of promoting parental interpretation of communication skills and regulation of their children’s distress.

**Summary**

 The study supported the hypotheses that security of attachment is associated children’s emotional trust beliefs in parents which generalized to children’s emotional trust beliefs in peers. The findings were ascribed to the role of parent’s emotional trustworthiness and children’s mental state discourse in promoting the relation between children’s security of attachment and their emotional trust beliefs in close others.

**References**

Ainsworth, M. D. S. (1989). Attachments beyond infancy. *American Psychologist, 44,* 709-716.

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A*

 *psychological study of the strange situation.* Erlbaum.

Ainsworth, M. D. S., & Bowlby, J. (1991). An ethological approach to personality

development. *American Psychologist, 46,* 333–341. http://dx.doi .org/10.1037/0003-066X.46.4.333

Bowlby, J. (1969). *Attachment and loss, vol. 1*. Basic Books.

Brumariu, L. E., Kerns, K. A., & Seibert, A. (2012). Mother–child attachment, emotion

 regulation, and anxiety symptoms in middle childhood. Personal Relationships, 19, 569–

 585. https://doi.org/10.1111/j.1475-6811.2011.01379.x

Brumariu, L. E., Madigan, S., Giusepponea, K. R., Abtahi, M. M., & Kerns, K. A. (2018). The

 Security Scale as a measure of attachment: meta-analytic evidence of validity. *Attachment*

 *& Human Development, 20*(6), 600-625. https://doi.org/10.1080/14616734.2018.1433217

Cohn, D. (1990). Child-mother attachment of six-year-olds and social competence at

 school. *Child Development, 61*(1)*,* 152-162.

 https://doi.org/10.1111/1467-8624.ep9102040550

Colonnesi, C., Wissink, I. B., Noom, M. J., Asscher, J. J., Hoeve, M., Stams, G.J.J.M.,….

 Polderman, N. (2012). Basic trust: An attachment-oriented intervention based on mind-

 mindedness in adoptive families. *Research on Social Work Practice, 23*(2)*,* 179–188.

 https://doi.org/10.1177/1049731512469301

Cook, W. L., & Kenny, D. A. (2005). The Actor-Partner Interdependence Model: A

 model of bidirectional effects in developmental studies. *International Journal of*

 *Behavioral Development, 29,* 101-109. http://dx.doi.org/10.1080/01650250444000405

Corriveau, K. H., Harris, P. L., Meins, E., Fernyhough, C., Arnott, B., Elliott, L., Liddle, B.,

 Hearn, A.,Vittorini, L. & de Rosnay, M. (2009). Young children’s trust in their mother’s

 claims: Longitudinal links with attachment security in infancy. *Child Development, 80,*

 750-761. https://doi.org/10.1111/j.1467-8624.2009.01295.x

De Winter, S., Vandevivere, E., Waters, T. E. A., Braet, C. & Bosmans, G. (2016). Lack of trust

 in maternal support is associated with negative interpretations of ambiguous maternal

 behavior. *Journal of Child Family Studies, 25*,146–151.

 https://doi.org/10.1007/s10826-015-0197-4

Gordon, H. M., Lyon, T. D. & Lee, K. (2014). Social and cognitive factors associated with

 children's secret‐keeping for a parent. *Child Development, 85*(6), 2374-2388.

 https://doi.org/10.1111/cdev.12301

Groh, A. M., Fearon, R. M. P., van IJzendoorn, M. H., Bakermans-Kranenburg, M. J. &

 Roisman, G. I. (2016). Attachment in the early life course: Meta-Analytic evidence for its

 role in socioemotional development. *Child Development Perspectives, 11*(1)*,* 70-76.

 https://doi.org/10.1111/cdep.12213

Heylen, J., De Raedt, R., Rocklage, M. D., Fazio, R. H., Vasey, M. W., & Bosmans, G. (2019).

 From trust in caregivers’ support to exploration: The role of openness to negative affect

 and self-regulation. *Scandinavian Journal of Psychology, 60,* 309–322.

 https://doi.org/10.1111/sjop.12543

Hu, L., & Bentler, P. M. (1999). Cut-off criteria for fit Indexes in covariance structure

 analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling:*

 *A Multidisciplinary Journal, 6,* 1-55.

Kerns, K. A., Klepac, L. & Cole, A. (1996). Peer relationships and preadolescents' perceptions of

 security in the child-mother relationship. *Developmental Psychology, 32, 3,* 457-466.

 http://dx.doi.org/10.1037/0012-1649.32.3.457

Kerns, K. A., Tomich, P. L., Aspelmeier, J. E. & Contreras, J. M. (2000). Attachment-based

 assessments of parent-child relationships in middle childhood, *Developmental*

 *Psychology, 36*, 614-626. http://dx.doi.org/10.1037/0012-1649.36.5.614

Lee, I. A., & Preacher, K. J. (2013, September). Calculation for the test of the difference between

 two dependent correlations with one variable in common [Computer software]. Available

 from <http://quantpsy.org>.

Lieberman, A. F. (1977). Preschoolers’ competence with a peer: Relations with attachment and

 peer experience. *Child Development, 48,* 1277–1287. https://doi.org/10.2307/1128485

Ma, F., Zheng, T., Cai, W., & Xu, F. (2014). The Influence of trust propensity and facial

 trustworthiness to children’s trust judgment. *Chinese Journal of Applied Psychology*,

 20(3), 216- 226.

Madigan, S., Atkinson, L., Laurin, K. & Benoit, D. (2013). Attachment and internalizing

 behaviour in early childhood: A meta-analysis. *Developmental Psychology, 49,* 672-689.

 https://doi.org/10.1037/a0028793

Rotenberg, K. J. (2019). *The psychology of interpersonal trust: Theory and research*. Routledge,

 Taylor & Francis Group. https://doi.org/10.4324/9781351035743

Rotenberg, K. J. (2010). The conceptualization of interpersonal trust: A basis, domain, and target

 framework. In Ken J. Rotenberg (Ed). Interpersonal trust during childhood and

 adolescence (pp. 8-27). Cambridge University Press.

 http://dx.doi.org/10.1017/CBO9780511750946.012

Rotenberg, K. J. (1995). The socialisation of trust: Parents’ and children’s interpersonal trust.

 *International Journal of Behavioral Development, 18,* 713–726.

Rotenberg, K. J., Addis, N., Betts, L. R., Fox, C., Hobson, Z., Rennison, S., Trueman, M. &

 Boulton, M. J. (2010). The relation between trust beliefs and loneliness during early

 childhood, middle childhood and adulthood. *Personality and Social Psychology Bulletin,*

 *36* (8), 1086-1100. https://doi.org/ 10.1177/0146167210374957

Rotenberg, K. J., Fox, C., Green, S., Ruderman, L., Slater, K., Stevens, K. & Carlo, G. (2005).

 Constructions and validation of a children’s interpersonal trust belief scale. *British*

 *Journal of Developmental Psychology, 23,* 271-292.

 https://doi.org/10.1348/026151005X26192

Rotenberg, K. J., & Petrocchi, S. (2018). Longitudinal investigation of the relation between

 asthmatic children’s adherence to prescribed medical regimes and their and their parents’

 trust beliefs in physicians. *Child: Health, Care and Development, 44*(6)*,* 879-884

 https://doi.org/10.1111/cch.12604

Rotenberg, K. J., Petrocchi, S., Lecciso, F. & Marchetti, A. (2015). The relation between

 children’s trust beliefs in others and Theory of Mind abilities. *Infant and Child*

 *Development, 24,* 206-214. <http://dx.doi.org/10.1002/icd.1891>

Rotenberg, K. J., Qualter, P., Barrett, L., & Henzi, P. (2014). When trust fails: Children’s trust

 beliefs in peers and peer interactions in a natural setting. *Journal of Abnormal Child*

 *Psychology, 42,* 967-980. <http://dx.doi.org/10.1007/s10802-013-9835-8>

Sakai, A. (2010). Children’s sense of trust in significant others: Genetic versus

 environmental contributions and buffer to life stressors. In Ken J. Rotenberg (Ed).

 Interpersonal trust during childhood and adolescence (pp. 8-27). Cambridge University

 Press. http://dx.doi.org/10.1017/CBO9780511750946.004

Seibert, A., & Kerns, K. (2015). Early mother–child attachment: Longitudinal prediction to the

 quality of peer relationships in middle childhood. I*nternational Journal of*

 *Behavioral Development. 39*(2), 130–138. doi: 10.1177/0165025414542710

Sroufe, L. A. (2005). Attachment and development: A prospective, longitudinal study from birth

 to adulthood. *Attachment and Human Development, 7,* 349–367.

 https://doi.org/10.1080/14616730500365928

Waters, E., & Deane, K. E. (1985). Defining and assessing individual differences in infant

 attachment relationships: Q-methodology and the organization of behavior. In I. Bretherton

 & E. Waters (Eds.), Growing points of attachment theory and research (pp. 41–65).

 *Monographs of the Society for Research in Child Development, 50* (Serial No. 209).

 https://doi.org/10.2307/3333826

Wyman, P. A., Cross, W., Brown, C. H., Yu, Q., Tu, X., & Eberly, S. (2010). Intervention to

 strengthen emotional self-regulation in children with emerging mental health problems:

 proximal impact on school behaviour. *Journal of Abnormal Child Psychology, 38,* 707–

 720. https://doi.org/10.1007/s10802-010-9398-x

Zeegers, M. A. J., Colonnesi, C., Stams, Geert-Jan. J. M.. & Meins, E. (2017). Mind matters: A

 meta-analysis on parental mentalization and sensitivity as predictors of infant–parent

 attachment. *Psychological Bulletin**, 143*(12), 1245-1272.

 <http://dx.doi.org/10.1037/bul0000114>

|  |
| --- |
|  |
|  |  |

**Footnotes**

1 The subsample of children was administered measures of insecure attachment but those failed to demonstrate acceptable psychometric properties (i.e. internal consistency) and precluded their inclusion in the research. Also, that subsample was administered a standardized loneliness scale. The findings are available with loneliness upon request.

Table 1

*Correlations Between the Measures (with Means and SDs)*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Measure M SD TTot TEmot THon TRel

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Security of Attachment 3.23 .40.06 .27\*\* -.12 -.09

*Trust Beliefs in the Close Others (Total/Subscales)*

 Total (TTot) 3.34 .53 .74\*\*\* .70\*\*\* .72\*\*\*

 Emotional (TEmot) 3.12 .78 .24\*\* .36\*\*\*

 Honesty (THon) 3.18 .82 .27\*\*

 Reliability (Trel) 3.72 .70

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Note: \*\* *p* < .01 and \*\*\* *p* < .001. *dfs* = 131.