

Young children's interpersonal trust consistency as a predictor of future school adjustment

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Abstract

Young children's interpersonal trust consistency was examined as a predictor of future school adjustment. One hundred and ninety two (95 male and 97 female, $M_{\text{age}} = 6$ years 2 months, $SD_{\text{age}} = 6$ months) children from school years 1 and 2 in the United Kingdom were tested twice over one-year. Children completed measures of peer trust and school adjustment and teachers completed the Short-Form Teacher Rating Scale of School Adjustment.

Longitudinal quadratic relationships emerged between consistency of children's peer trust beliefs and peer-reported trustworthiness and school adjustment and these varied according to social group, facet of trust, and indicator of school adjustment. The findings support the conclusion that interpersonal trust consistency, especially for secret-keeping, predicts aspects of young children's school adjustment.

Key words: interpersonal trust consistency, trust beliefs, trustworthiness, school adjustment, peer relationships, social relations model

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Trust is a multifaceted phenomenon representing the propensity to believe that the actions, words, or behaviours of an individual or group can be relied upon (Rotenberg, 1994, 2010; Rotter, 1967; Tschannen-Moran & Hoy, 2000). Consequently, trust has been regarded as the 'glue' needed to form and maintain social relationships (Rotenberg, 1994, 2010).

From a developmental perspective, the emergence of trust is regarded as a crucial developmental stage (Erikson, 1963), with children from the age of three relying on trust for knowledge acquisition (Harris, 2007). Therefore, the role of trust and the importance of trust across the lifespan have been examined by researchers.

The propensity to trust others, and to engage in trustworthy behaviour, is associated with psychosocial adjustment (Bernath & Feshbach, 1995; Rotenberg, Boulton, & Fox, 2005; Rotenberg, MacDonald, & King, 2004; Rotenberg, McDougall et al., 2004) and school adjustment during childhood (Betts & Rotenberg, 2007a; Betts, Rotenberg, & Trueman, 2009; Rotenberg et al., 2010; Rotenberg, Michalik, Eisenberg, & Betts, 2008). The likely mechanism that underpins these relationships is that trust and trustworthiness facilitate the development of peer relationships which, in turn, aid positive school adjustment (Betts & Rotenberg, 2007a). However, whilst the role and importance of trust and trustworthiness for social relationships and psychosocial adjustment are widely acknowledged (Rotenberg, 1991, 1994, 2010; Rotter, 1971, 1980), researchers have only recently begun to explore the relationship between an individual's trust beliefs and their trustworthiness termed interpersonal trust consistency (Rotenberg & Boulton, 2012). The current study extended this line of research and examined the extent to which interpersonal trust consistency predicted school adjustment over a year in five- to eight-year-olds.

Interpersonal trust consistency reflects the extent to which there is coherence between an individual's trust beliefs in others and the individual's trustworthiness as reported by

others (Rotenberg & Boulton, 2012). Drawing on Rotenberg's (1994, 2010) Bases, Domains, and Target framework of interpersonal trust, trust beliefs represent cognitions about, and confidence in, others to engage in trustworthy behaviours such as keeping promises, keeping secrets, telling the truth, and acting honestly. Trustworthiness represents the extent to which an individual engages in trustworthy behaviour that is observed by others such as keeping promises, keeping secrets, and telling the truth (Bussey & Fitzpatrick, 2005; Rotenberg, McDougall et al., 2004). Trust beliefs and trustworthiness vary according to the target and domain of trust (see Rotenberg, 2010). In the current study, the domains of reliability and emotional trust were examined and operationalised as promise-keeping and secret-keeping respectively. These domains were selected because young children can readily understand these activities (Rotenberg et al., 2008). Further, evidence of the accuracy of preschool children's reports of promise-keeping and secret-keeping have been obtained using teacher reports of the same behaviour (Rotenberg et al., 2008).

As the emergence of trust is associated with attachment formation and internal working model refinement (Bridges, 2003; Szcześniak, Colaço, & Rondón 2012), it is likely that from an early age children begin to make judgements about the extent to: (a) trust others and (b) which it is appropriate to engage in trustworthy behaviour. In support of this proposition, Harris (2007) reported that three- to four-year-olds were able to distinguish between a reliable information source and an unreliable information source in ambiguous situations. Preschool children also form impressions of an individual's trustworthiness based on the individual's previous actions and non-verbal endorsements from bystanders (Fusaro & Harris, 2008; Harris, 2007). Together, these studies indicate that not only do young children have an appreciation of the relationship between trust and trustworthiness but that they may use this information when determining who to trust.

Young children's peer relationships provide important socialisation opportunities (Martin et al., 2012), facilitate skill development (Kutnick & Kington, 2005), and promote psychosocial adjustment (Hay, Payne, & Chadwick, 2004). An appreciation of the relationship between trust and trustworthiness and the extent to which young children demonstrate interpersonal trust consistency may impact on the development and maintenance of their peer relationships which, in turn, may influence their school adjustment. Further, due to the social learning aspects of trust, it is likely that young children who have low interpersonal trust consistency face challenges when they try to develop and maintain social relationships with their peers. Specifically, either displaying low trust beliefs and high levels of trustworthiness or high trust beliefs and low levels of trustworthiness would likely be regarded by other children as inconsistent with their expectations that high trustworthiness accompanies higher trust beliefs (Fusaro & Harris, 2008). Therefore, similar to other peer behaviours (Galvan, Spatzier, & Juvonen, 2011; Kwon & Lease, 2009; Nesdale et al., 2009; Nesdale & Dalton, 2011), peer groups may have embedded interpersonal trust consistency as a normative expectation. In support of this proposition, Rotenberg and Boulton (2012) reported that 9- to 11-year-olds with low interpersonal trust consistency, expressed as high trust beliefs in peers and low peer-reported trustworthiness, reported lower quality peer relationships. Specifically, children with lower interpersonal trust consistency experienced lower peer preference, higher peer victimization, and higher social disengagement in comparison to children with higher interpersonal trust consistency expressed as similar peer trust beliefs and peer-reported trustworthiness scores.

Similar to older children, young children who violate the normative expectation of their peer group with regard to interpersonal trust consistency are likely to experience poorer quality peer relationships which, in turn, may impact negatively on their adjustment. The longitudinal relationships between young children's peer-reported trustworthiness and

various indicators of school adjustment identified by Betts and Rotenberg (2007a) provided evidence that how young children are perceived by their peers impact on their school adjustment. Therefore, because of the: significance of children's social relationships for subsequent adjustment (Hay, Payne, & Chadwick, 2004); importance of trust for social relationship formation and maintenance (Rotenberg, 1994, 2010); and relationship between trustworthiness and school adjustment (Betts & Rotenberg, 2007a), young children's interpersonal trust consistency is likely to be predictive of school adjustment.

School adjustment reflects the extent to which children are interested, engaged, and successful whilst at school (Ladd, 1996; Ladd, Buhs, & Troop, 2002). To reflect this multi-faceted definition, a range of indicators have been used to assess school adjustment including children's reports of their attitudes toward school and their affect in the classroom and teacher reports of children's classroom behaviour and performance (Ladd, 1996; Ladd et al., 2002). A similar approach was adopted in the current study. Positive peer relationships have been identified as a crucial antecedent in facilitating young children's school adjustment (Hay et al., 2004; Ladd, 1990; Ladd & Price, 1987). For example, developing positive peer relationships are associated with higher levels of school liking (Ladd & Coleman, 1997; Hughes & Zhang, 2007), higher academic performance (Bossaert, Doumen, Buyse, & Verschueren, 2011), and lower levels of loneliness (Coplan, Closson, & Arbeau, 2007) during the early years of school. Further, both trust beliefs and trustworthiness predict children's school adjustment such that higher trust beliefs and higher levels of trustworthiness are predictive of successful school adjustment (Betts & Rotenberg, 2007a; Betts et al., 2009; Imber, 1973; Rotenberg, McDougall et al., 2004). A sense of trust has also been identified as crucial for fostering a positive classroom community (Graff, 2003). Together, these studies reinforce the importance of trust beliefs and trustworthiness for school adjustment and provide support for Ladd and Kochenderfer's (1996) proposition that consideration of the

role of young children's trust for successful school adjustment warrants exploration.

However, whilst the importance of peer perceptions of trustworthiness for school adjustment has been established in previous research (Betts & Rotenberg, 2007a), the importance of interpersonal trust consistency for young children's school adjustment has yet to be systemically examined.

Whilst it is widely acknowledged that from around the age of three the propensity to form same-sex peer relationships is strong (Hay et al., 2004; Maccoby, 1988, 1990; Yee & Brown, 1994), the social groups that children form at school often reflect the institutionalised class structure determined by the school administration (Howes, 2010). Therefore, it is important to recognise that children's social relationships operate in the broader social context of the classroom (Maassen, van Boxtel, & Goossens, 2005) and that whilst differences may emerge between same-sex peer groups' and the class groups' behaviour, the role of these two social groups should not be overlooked (Bukowski, Gauze, Hoza, & Newcomb, 1993; Duncan & Cohen, 1995; Underwood, Schockner, & Hurley, 2001). Consequently, the present research explored interpersonal trust consistency for same-sex peers and class-wide peers as separate predictors of school adjustment. Same-sex peer groups comprised same-sex peers within a child's class and the class-wide peer groups comprised all peers within the class including both same-sex and other-sex peers.

The aim of the present study was to explore young children's interpersonal trust consistency for same-sex peers and class-wide peers as predictors of future school adjustment over a year. Two indices of trust and trustworthiness were examined in the present study: Promise-keeping and secret-keeping which reflect the reliability and emotional bases of Rotenberg's (1994, 2010) Bases, Domains, and Target framework, respectively. As trust beliefs and trustworthiness tend to be associated in young children's knowledge acquisition (Fusaro & Harris, 2007; Harris, 2007), and because of the importance of normative

expectations for children's social interactions (Galvan et al., 2011; Kwon & Lease, 2009; Nesdale et al., 2009; Nesdale & Dalton, 2011), we explored the statistical nature of the relationship between interpersonal trust consistency and school adjustment. Consequently, the present study used quadratic and linear regression as analytical techniques. Quadratic relationships were expected with greater promise-keeping and secret-keeping interpersonal trust consistency (either trust beliefs exceeding trustworthiness or trustworthiness exceeding trust beliefs) predictive of higher school liking, on-task-classroom involvement, positive orientation, and maturity and lower loneliness. Further, it was expected that lower promise-keeping and secret-keeping interpersonal trust consistency would predict reduced school liking, on-task classroom involvement, positive orientation, and maturity, and greater loneliness over a year. Rotenberg and Boulton (2012) proposed that children with peer trust beliefs that exceed peer trustworthiness would be at greatest risk for developing poor peer relationships. Moreover, children with trust beliefs that exceeded their trustworthiness may be regarded as unreliable information sources (Fusaro & Harris, 2007; Harris, 2007) and this in turn may result in poorer social relationships and school adjustment. Therefore, negative linear relationships may occur between children's interpersonal trust consistency and school adjustment. Additionally, both same-sex and class-wide peer groups were examined in the current study in recognition of the importance of these two groups (Bukowski et al., 1993; Duncan & Cohen, 1995; Underwood et al., 2001).

Method

Participants

Data was collected from 192 children (95 male and 97 female, $M_{\text{age at Time 1}} = 6$ years 2 months, $SD_{\text{age at Time 1}} = 6$ months) twice over a one-year period. Participants were recruited after a minimum of one academic year in formal schooling and, to ensure familiarity with their classroom peers, data collection at Time 1 took place during November to January of the

children's second or third year at school. At Time 2, approximately one year later, with the exception of 5 participants, all of the children were in the same class groups as at Time 1. The five participants who had changed class groups were excluded from the analysis. The sample was predominately white (97% white and 3% from different Black Minority Ethnic groups) and comprised children recruited from eight classrooms across four primary schools in the UK. Three schools had catchment areas above the national average for professional employment and below the national average for unemployment, whilst one school's catchment area was below the national average for professional employment and above the national average for unemployment (Office for National Statistics, 2001).

Measures

Peer-reported trust and trustworthiness. Following Betts and Rotenberg's (2007a) procedure, children reported the extent to which they thought that each of their classmates kept their promises and secrets using a 5-point scale ranging from 1 (*Never ever*) to 5 (*Always*) with corresponding faces to denote strength of response similar to those used by Chambers and Johnston (2002).

The Social Relations Model (Kenny & La Voie, 1984) was used to derive separate, standardised, and unconfounded indices of peer-reported trust beliefs and peer-reported trustworthiness for promise-keeping and secret-keeping (see Betts & Rotenberg, 2008; Betts, Rotenberg, & Trueman, 2010). Specifically, the variance in dyadic relationships was separately partitioned into: (a) actor, (b) partner, (c) relationship, and (d) error, such that each component of the dyadic relationship was not influenced by the other components (Kenny & La Voie, 1984). For the present research the actor variance indicated the extent to which children thought that their peers kept promises/secrets and the partner variance indicated the extent to which children were rated by their peers as keeping promises/secrets. Therefore, for each child an indicator of their trust beliefs that was not confounded by their trustworthiness

score and an indicator of their trustworthiness that was not confounded by their trust beliefs score were yielded by the analysis and was also standardised for class size. Separate social relation analyses were completed for same-sex peer groups and class-wide peer groups.

The validity of the children's reports of trustworthiness was assessed at Time 2 through examining the association between teacher-reported trustworthiness and the indicators of trustworthiness yielded from the social relations analyses. For each participant, teachers reported the extent to which "This child is trustworthy" using a 7-point scale ranging from 1 (*Extremely untrue*) to 7 (*Extremely true*). The teacher-reports of trustworthiness were associated with same-sex promise-keeping trustworthiness, $r(185) = .53, p < .001$, same-sex secret-keeping trustworthiness, $r(185) = .45, p < .001$, class-wide promise-keeping trustworthiness, $r(185) = .83, p < .001$, and class-wide secret-keeping trustworthiness, $r(185) = .80, p < .001$.

Loneliness. Children completed four items from the Loneliness and Social Dissatisfaction Questionnaire (Asher, Hymel, & Renshaw, 1984) that directly assessed their experiences of loneliness at school (e.g., "I feel alone at school"). Similar measures have been used extensively with young children to assess their feelings of loneliness (e.g., Ladd, Kochenderfer, & Coleman, 1996; Ladd & Coleman, 1997) because there are only so many ways to ask an individual to report feelings of loneliness (Galanaki & Kalantzi-Azizi, 1999). Such measures of loneliness have demonstrated acceptable internal consistency in comparably aged samples ($\alpha > .70$, Ladd et al., 1996). Children responded using a 5-point scale ranging from 1 (*Not true at all*) to 5 (*Always true*) with corresponding faces to denote strength of response similar to those used by Chambers and Johnston (2002). High scores represented higher levels of loneliness. The scale demonstrated modest internal consistency ($\alpha = .66$ at Time 1 and $\alpha = .68$ at Time 2) although there was no evidence of stability of loneliness between Time 1 and Time 2, $p > .05$.

Child-rated school liking. The 14-item School Liking and Avoidance Questionnaire (SLAQ, Kochenderfer & Ladd, 1996a, 1996b; Ladd et al., 1996; Ladd, Buhs, & Seid, 2000) was used to assess children's school liking (9 items, e.g., "Is school fun?") and school avoidance (5 items, "Do you wish you didn't have to go to school?"). Children completed the items using a 3-point scale: 1 (*No*), 2 (*Sometimes*), 3 (*Yes*) with corresponding faces to denote strength of response similar to those used by Chambers and Johnston (2002). The school liking and school avoidance subscales (reverse coded) were strongly associated at Time 1, $r(181) = .69, p < .001$, and at Time 2, $r(165) = .77, p < .001$ and, as such, were combined to form a composite measure that had good reliability (Time 1 $\alpha = .91$ and Time 2 $\alpha = .94$) and was modestly stable over time, $r(161) = .43, p < .001$.

Teacher-rated school adjustment. Teachers completed the 16-item Short-Form Teacher Rating Scale of School Adjustment (Short-Form TRSSA, Betts & Rotenberg, 2007b) using a 3-point scale: 0 (*Doesn't Apply*), 1 (*Applies Sometimes*), to 2 (*Certainly Applies*). The Short-Form TRSSA assesses school adjustment across three subscales: On-task classroom involvement (e.g., "Follows teacher's directions"), maturity (e.g., "Is a mature child"), and positive orientation (e.g., "Is cheerful at school"). The Short-Form TRSSA subscales demonstrated acceptable internal consistency at Time 1 (on-task classroom involvement $\alpha = .89$, maturity $\alpha = .77$, and positive orientation $\alpha = .79$) and Time 2 (on-task classroom involvement $\alpha = .90$, maturity $\alpha = .74$, and positive orientation $\alpha = .86$) and the subscales were modestly stable over time, on-task classroom involvement, $r(184) = .53, p < .001$, maturity, $r(162) = .44, p < .001$, and positive orientation, $r(185) = .34, p < .001$.

Procedure

Children completed the measure of peer-reported trust and trustworthiness individually with a researcher in an area away from the classroom. Children indicated their responses by pointing to the face that corresponded to their beliefs and these were recorded by the same

researcher at Time 1 and Time 2. Prior to reporting their peer trust beliefs and trustworthiness, the children were given definitions of promise-keeping and secret-keeping and then asked to give their own definition and example of when someone had kept a promise and kept a secret (see Betts & Rotenberg, 2007a). The SLAQ and loneliness questionnaires were read to children in randomly selected groups of 5 to 6 same-sex peers. The group was seated so that they could not see the responses of the other children. To familiarise the children with the response formats, they completed practice items with the same response format before completing the questionnaires. The children completed the items by circling the corresponding response and were instructed to cover their responses when they had answered the questions. The children were told there were no right or wrong answers and to work in silence. Teachers completed the Short-Form TRSSA, and at Time 2 the trustworthiness item, after the children had participated in the research. Although the children remained in the same class groups, the class teachers were different at Time 1 and Time 2.

Head teachers initially granted permission for the children in the target classrooms to participate in the research. The children's parents/guardians were then informed of the research by a letter sent from the school detailing the nature of the study. Parents/guardians were instructed to return a slip to the school administrators if they did not want their son/daughter to participate in the research ($n = 14$). The names of the children whose parents/guardians indicated that they did not want their son/daughter to participate in the research were removed from the class list for the peer trust and trustworthiness measure. Such a consent procedure was implemented to gain a representative sample of the classroom social dynamics and to ensure the social validity of the peer-reported trust and trustworthiness measure which could only be achieved when a large proportion of a class

participate (Iverson, Barton, & Iverson, 1997). Children were also asked to give their assent before completing the questionnaire. Only one child declined to participate at Time 1.

Results

An index of interpersonal trust consistency was created for each child, separately for same-sex peers and class-wide peers and Time, by subtracting the peer-reported trustworthiness score from the corresponding peer trust belief score yielded from the social relations analysis. For example, the score for same-sex promise-keeping trustworthiness at Time 1 was subtracted from the score for same-sex promise-keeping trust beliefs at Time 1. For the purpose of the analysis interpersonal trust consistency scores close to zero indicated high levels of consistency between trust beliefs and trustworthiness whilst scores that deviated from zero indicated less consistency either higher trust beliefs than trustworthiness (positive values) or higher trustworthiness than trust beliefs (negative values).

There was some evidence of non-normality in the data. However, Tabachnick and Fidell (2001) recommend using conservative p values of $p < .001$ when testing for skew and kurtosis. Further, for large samples when tests of skew and kurtosis are statistically significant the impact of non-normality diminishes (Tabachnick & Fidell, 2001). Therefore, as the sample size is close to 200, the original data set was used in subsequent analysis to maintain the variability within the data.

Associations among measures

Correlations were used to explore the concurrent associations among the measures at Time 1 (Table 1) and at Time 2 (Table 2). At Time 1 and at Time 2 interpersonal trust consistency for promise-keeping was strongly associated with interpersonal trust consistency for secret-keeping for both same-sex and class-wide groups: The greater the children's promise-keeping consistency, the greater the children's secret-keeping consistency. However, although there were strong associations between these measures, for the remainder

of the analysis promise-keeping and secret-keeping will be treated as separate domains of trust following Rotenberg's (1994, 2010) Bases, Domains, and Target framework.

Also, at both times, there were small negative associations between all measures of interpersonal trust consistency, on-task classroom involvement, and maturity with the exception of same-sex promise-keeping consistency at Time 1 and at Time 2 and same-sex secret-keeping consistency at Time 2: As children become more trusting relative to trustworthy, the lower their on-task classroom involvement and maturity. There was also a small negative association between class-wide secret-keeping consistency and school liking at Time 1: As children become more trusting in their class-wide peers relative to trustworthy, the lower their school liking.

Insert Table 1 and Table 2 about here

Longitudinal relationships

Initially a series of multiple regressions were performed to create difference scores for the measures of school adjustment (see Table 3). Following Cohen, Cohen, West, and Aiken's (2003) recommendations, the predictor variable was the school adjustment measure at Time 1 and the outcome variable was the corresponding measure of school adjustment at Time 2. Age at Time 1 was also included to control for potential age differences in the sample because the sample spanned two school year groups and, as such, there were differences in the amount of time the children had spent at school. For each analysis the standardised residuals were saved to denote change in school adjustment.

School liking, on-task classroom involvement, positive orientation, and maturity at Time 1 significantly predicted the corresponding school adjustment measure at Time 2: Higher scores on school liking, on-task classroom involvement, positive orientation, and

maturity at Time 1 predicted higher scores at Time 2. Loneliness at Time 1 did not predict loneliness at Time 2. Age at Time 1 significantly predicted on-task classroom involvement, positive orientation, and maturity at Time 2: Older children at Time 1 had lower levels of on-task classroom involvement and positive orientation, and higher maturity at Time 2. Age at Time 1 did not predict school liking and loneliness at Time 2.

Insert Table 3 about here

A series of regressions that tested for both quadratic curvilinear relationships and linear relationships were used to examine the longitudinal relationships between interpersonal trust consistency at Time 1 and changes in school adjustment using the standardised scores yielded from the previous analysis (Table 4). Same-sex promise-keeping interpersonal trust consistency at Time 1 did not predict changes in school adjustment.

Insert Table 4 about here

Significant quadratic relationships emerged between same-sex secret-keeping interpersonal trust consistency at Time 1 and changes in school adjustment. Consistency between same-sex secret-keeping trust beliefs and trustworthiness at Time 1 predicted changes in school liking (Figure 1a): Greater same-sex secret-keeping consistency predicted increases in school liking and less consistency predicted decreases in school liking. Also, same-sex secret-keeping consistency at Time 1 predicted changes in loneliness (Figure 1b): Greater same-sex secret-keeping consistency predicted decreases in loneliness and less consistency predicted increases in loneliness. Same-sex secret-keeping consistency did not predict on-task classroom involvement, positive orientation, and maturity.

Insert Figure 1 about here

Significant quadratic relationships also emerged between class-wide interpersonal trust consistency at Time 1 and changes in school adjustment. Greater class-wide promise-keeping consistency at Time 1 predicted increases in on-task classroom involvement (Figure 2a), positive orientation (Figure 2b), and maturity (Figure 2c) whereas less consistency predicted decreases in these measures. Class-wide promise-keeping consistency at Time 1 did not predict changes in school liking, and loneliness.

Class-wide secret-keeping consistency at Time 1 predicted increases in on-task classroom involvement (Figure 3) whereas less consistency predicted decreases in on-task classroom involvement. Class-wide secret-keeping consistency at Time 1 did not predict any other changes in school adjustment.

Insert Figure 2 and Figure 3 about here

For class-wide peers there was also some evidence of negative linear relationships between interpersonal trust consistency and changes in school adjustment. Class-wide promise-keeping consistency negatively predicted changes in on-task classroom involvement and maturity: As children had higher class-wide peer trust beliefs for promise-keeping relative to their class-wide peer-reported promise-keeping trustworthiness at Time 1, the greater the reduction in on-task classroom involvement and maturity. Similarly, class-wide secret-keeping consistency negatively predicted changes in on-task classroom involvement and maturity: As children had higher class-wide peer trust beliefs for secret-keeping relative

to their class-wide peer-reported secret-keeping trustworthiness at Time 1, the greater the reduction in on-task classroom behaviour and maturity.

Discussion

The present study is the first to examine the effects of young children's interpersonal trust consistency for their school adjustment. Young children's interpersonal trust consistency predicted changes in school adjustment over twelve months, although the pattern of this relationship varied according to same-sex peer and class-wide peer groups and the indicator of trust. This variation suggests that promise-keeping and secret-keeping interpersonal trust consistency influences school adjustment in different ways and that this also varied according to whether same-sex peer groups or class-wide peer groups are considered.

For same-sex peers, similar to expectation and Rotenberg and Boulton's (2012) findings that interpersonal trust consistency is important for 9- to 11-year-olds psychosocial adjustment, secret-keeping consistency predicted increases in school liking and decreases in loneliness. The relationship between same-sex peers secret-keeping and school liking and loneliness may have emerged because of the importance of secret-keeping for relationship formation and peer relationships have been found to impact on young children's attitude to school (Hughes & Zhang, 2007; Ladd & Coleman, 1997) and loneliness (Coplan et al., 2007). However, the relationship between interpersonal trust consistency and loneliness needs to be interpreted with caution because of the modest reliability of loneliness scale and the lack of stability of the measure.

For class-wide peers, quadratic relationships emerged with promise-keeping consistency predicting changes in all indicators of teacher-rated school adjustment and secret-keeping consistency predicting changes in teacher-rated on-task classroom involvement. Again these findings were consistent with expectation, and the findings of Rotenberg and

Boulton (2012), that interpersonal trust consistency is important for psychosocial adjustment. Further, these relationships may have emerged because inclusion in class-wide peer relationships could promote on-task classroom involvement, positive orientation to school, and maturity because of the importance of peer relationships for children's social and cognitive development in school (Kutnick & Kington, 2005). For class-wide peers negative linear relationships emerged for promise-keeping consistency, secret-keeping consistency, and on-task classroom involvement and maturity whereby as trust beliefs exceeded trustworthiness the greater the reduction in on-task classroom involvement and maturity. A possible reason for these findings is that those children who had higher trust beliefs relative to their trustworthiness could be regarded as an unreliable information source (Harris, 2007; Koenig, Clément, & Harris, 2004), and as such may be less desirable work partners than children with high interpersonal trust consistency. Therefore, the children with low interpersonal trust consistency may not have had the opportunities to fully engage in the classroom activities and this could have been reflected in the teacher reports.

One potential explanation for the differences in the patterns of significant relationships, according to same-sex peers and class-wide peers, between the indicators of interpersonal trust consistency and school adjustment pertains to the observable qualities of the facets of trust. Specifically, whilst promise-keeping and secret-keeping reflect observable behaviours that children are likely to be aware of, especially in the context of friendships, the relative private nature of secret-keeping and disclosure (Betts et al., 2009), and the preference of young children to engage in same-sex peer relationships (Hay et al., 2004; Maccoby, 1988, 1990; Yee & Brown, 1994), may account for why secret-keeping interpersonal trust consistency was a stronger predictor of school adjustment. Also, secret-keeping interpersonal trust consistency may be more predictive of the child-rated measures of school adjustment because maintaining confidentiality and disclosure form a central part of children's peer

relationships, especially for girls (Berndt & Perry, 1986; Furman & Bierman, 1984). Further, the differences in relationships between interpersonal trust consistency for promise-keeping and secret-keeping and the indicators of school adjustment may have emerged because of the different respondents for the various measures. For example, promise-keeping interpersonal trust consistency may be more influential for teacher-rated school adjustment as fulfilling promises pertaining to the classroom activities may be regarded by teachers as facilitative for maintaining a positive classroom environment. In support of this proposition, a sense of trust in the classroom has been identified in older learners as a key component for developing a positive classroom community (Graff, 2003).

The results from the current study contribute to the growing literature on the importance of trust and trustworthiness for children's psychosocial adjustment (Bernath & Feshbach, 1995; Betts & Rotenberg, 2007a; Betts et al., 2009; Rotenberg et al., 2010; Rotenberg, Boulton, & Fox, 2005; Rotenberg, MacDonald et al., 2004; Rotenberg, McDougall et al., 2004; Rotenberg et al., 2008). Further, the findings of the present study extend previous research by exploring the direct relationship between interpersonal trust consistency and young children's school adjustment over a year. Although the study found some evidence that young children's interpersonal trust consistency predicted aspects of school adjustment, the underlying mechanism and behavioural aspects of this relationship remains unclear. Therefore, future research should examine these.

The findings of the present research underscore the importance of trust for children's social relationships in the context of early school adjustment. Trust is important for relationship formation and maintenance and Rotenberg et al. (2008) highlighted the importance of trust for children's preschool adjustment. Further, both positive peer relationships (Johnson, Ironsmith, Snow, & Poteat, 2000) and positive teacher-child relationships (Birch & Ladd, 1997; Howes, Phillipsen, & Peisner-Feinberg, 2000) facilitate

young children's transition to school and their school adjustment. Therefore, future research should further explore the formation of peer group norms concerning the expected consistency between trust beliefs and trustworthiness to gain additional understanding of children's peer group formation and maintenance. Understanding the antecedents of developing positive social relationships at school and facilitating early school adjustment is crucial because early difficulties adjusting to school potentially perpetuate throughout children's school career and shape children's academic trajectories (Alexander & Entwisle, 1988; Alexander, Entwisle, & Horsey, 1997; Ladd, 1990; Parker & Asher, 1987). Further, the cumulative deficit hypothesis proposed by Cox (1978, 1983) argues that these deficits build year-on-year and that less well adjusted children fall further behind relative to their well adjusted peers. However, it is also necessary to consider young children's trust in the broader social context as the origins of trust have been linked to early attachment relationships (Bridges, 2003) and as the child-mother relationship has been identified as an antecedent of children's kindergarten adjustment (Pianta, Nimetz, & Bennett, 1997).

Alongside facilitating social relationships, trust also has important implications for children's knowledge acquisition and children as young as three demonstrate selectivity in the individuals they trust (Harris, 2007). Further, three- to four-year-olds demonstrate selective trust by having confidence in the communications of those that have shown to be reliable in past ambiguous situations (Koenig et al., 2004). Three-year-olds can also distinguish between a reliable information source and an unreliable information source in unfamiliar situations and this preference is still evident one week after receiving information about the accuracy of the source (Cooriveau & Harris, 2009). Therefore, engaging in consistent trust behaviour may promote an individual as an accurate information source and, as such, these children may be regarded as desirable work partners for collaborative classroom activities. Further, successfully engaging in such collaborative learning will

enhance both the children's peer relationships and afford them the opportunities to capitalise on the learning experience (Cohen, Kulik, & Kulik, 1982).

The present research has highlighted the importance of interpersonal trust consistency for young children's school adjustment. Consequently, future research could examine the factors that promote children to develop interpersonal trust consistency. Further, by understanding those factors that contribute to the coherence of trust and normative group function interventions designed to enhance children's social skills, inclusion, and school adjustment similar to those developed by Harrist and Bradley (2003) could be refined to include promoting trust and trustworthiness consistency. For example, adapting Harrist and Bradley's procedure, young children could be read stories and engage in role plays highlighting the consequences of trust in various social agents and social situations. Additionally, appropriate promise-keeping and secret-keeping rules could then be built in to the classroom code of conduct.

There are a couple of limitations that should be acknowledged with the present research. First, the relative homogenous nature of the sample; therefore, future studies should explore the role of interpersonal trust consistency in more heterogeneous samples recruited from a range of backgrounds and cultures as such research will allow further exploration in to the universal nature of children's trust. Second, the magnitude of the effect sizes of the findings are small to moderate indicating that only a small proportion of the variance can be accounted for in the relationship between young children's interpersonal trust consistency and school adjustment. Therefore, future research should consider potential mediating factors in this relationship as these may increase the proportion of variance accounted for.

In summary, the results of the present study contribute to the growing evidence of the importance of children's trust and trustworthiness for psychosocial adjustment. In particular,

the present research has identified the importance of interpersonal trust consistency for young children's school adjustment.

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Table 1

Summary of intercorrelations, means, standard deviations, and Ranges for the measures of interpersonal trust consistency and school adjustment at Time 1

	<i>M</i>	<i>SD</i>	Range	2	3	4	5	6	7	8	9
1. Same-sex promise-keeping consistency	-.04	.84	4.81	.74***	.69***	.54***	.00	.07	-.15*	-.10	-.13
2. Same-sex secret-keeping consistency	-.01	.84	5.93		.55***	.71***	.02	.10	-.17*	-.10	-.15*
3. Class-wide promise-keeping consistency	-.04	.84	4.82			.73***	-.10	.08	-.25***	-.12	-.22**
4. Class-wide secret-keeping consistency	-.00	.79	4.95				-.15*	.09	-.25***	-.13	-.24***
5. School liking	27.91	8.76	28					-.19**	.12	.12	.31***
6. Loneliness	10.75	4.50	16						-.12	-.10	-.10
7. On-task classroom involvement	9.74	2.46	9							.57***	.55***
8. Positive orientation	7.92	2.05	8								.48***
9. Maturity	5.63	2.56	10								

Note. *df* = 190 *** $p \leq .001$, ** $p < .01$ * $p < .05$

Table 2

Summary of intercorrelations, means, standard deviations, and Ranges for the measures of interpersonal trust consistency and school adjustment at Time 2

	<i>M</i>	<i>SD</i>	Range	2	3	4	5	6	7	8	9
1. Same-sex promise-keeping consistency	-.02	.75	4.15	.67***	.71***	.47***	-.01	.06	-.35***	-.14*	-.14
2. Same-sex secret-keeping consistency	-.03	.76	4.71		.44***	.60***	-.10	.11	-.24***	-.06	-.10
3. Class-wide promise-keeping consistency	-.03	.72	3.96			.76***	.02	.07	-.41***	-.16*	-.25***
4. Class-wide secret-keeping consistency	-.03	.74	3.88				-.07	.13	-.31***	-.10	-.17*
5. School liking	28.50	8.99	28					-.31***	.21**	.11	.24***
6. Loneliness	9.53	4.33	16						-.21**	-.07	-.13
7. On-task classroom involvement	9.79	2.57	11							.51***	.55***
8. Positive orientation	7.88	2.32	8								.66***
9. Maturity	5.47	2.52	10								

Note. *df* = 190 *** $p \leq .001$, ** $p < .01$ * $p < .05$

Table 3

Multiple regression analyses predicting school adjustment at Time 2 from the corresponding adjustment measure and age at Time 1

Predictor variable at Time 1	School adjustment at Time 2				
	Loneliness	School liking	On-task classroom involvement	Positive orientation	Maturity
	β	β	β	β	β
Age	-.04	-.08	-.28***	-.16*	.13*
Corresponding adjustment measure	.11	.44***	.60***	.37***	.44***
R^2	.01	.19	.36	.12	.20
F	1.63	23.95***	53.97***	14.46***	26.28***

Note. $n = 190$ *** $p \leq .001$, * $p < .05$

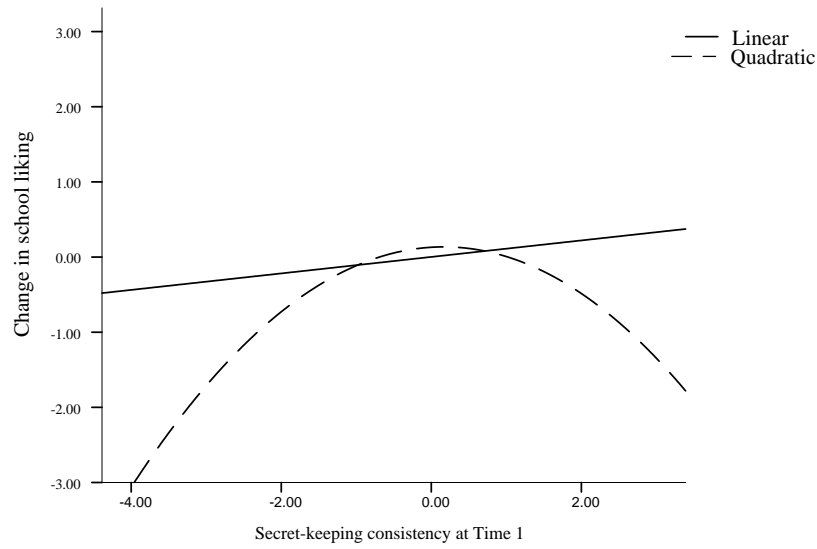
Table 4

Curvilinear and linear regression analyses predicting changes in school adjustment

Interpersonal trust consistency at Time 1	School adjustment at Time 2				
	Loneliness	School liking	On-task classroom involvement	Positive orientation	Maturity
Same-sex peers					
Promise-keeping					
Curvilinear β	.04	-.14	.02	-.01	-.01
Linear β	-.02	.09	-.10	-.12	-.11
R^2	.00	.03	.01	.01	.01
F	.79	3.17*	1.04	1.35	1.13
Secret-keeping					
Curvilinear β	.20**	-.24***	-.04	-.09	-.14
Linear β	-.03	.05	-.10	-.06	-.05
R^2	.04	.07	.01	.01	.02
F	4.04*	6.47**	.92	.98	1.77
Class-wide peers					
Promise-keeping					
Curvilinear β	.06	.09	.30***	-.16*	-.20**
Linear β	.07	-.10	-.25***	-.13	-.21**
R^2	.01	.02	.14	.03	.07
F	.72	1.69	16.80***	4.27*	8.45***
Secret-keeping					
Curvilinear β	-.04	.05	-.27***	-.10	-.10
Linear β	.09	-.14	-.24***	-.13	-.25***
R^2	.01	.02	.12	.02	.07
F	.92	2.18	13.68***	2.37	7.30***

Note. n = 190 *** $p \leq .001$, ** $p < .01$, * $p < .05$

(a)



(b)

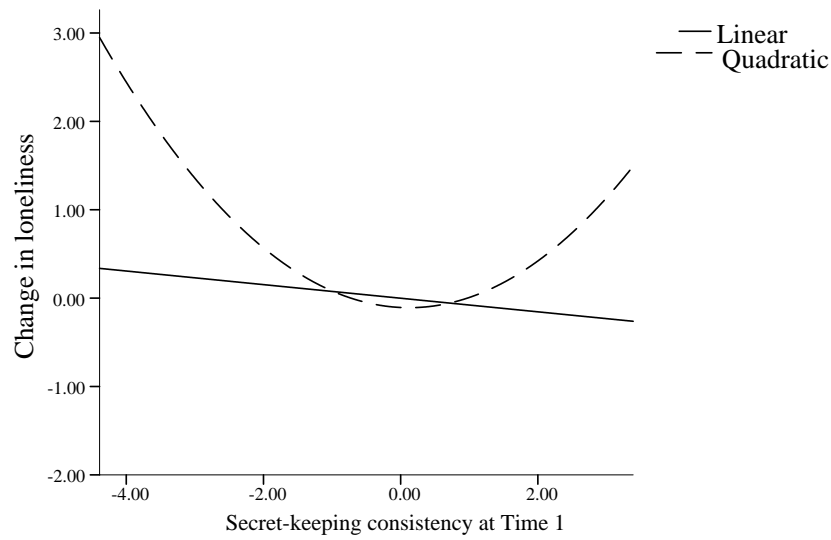
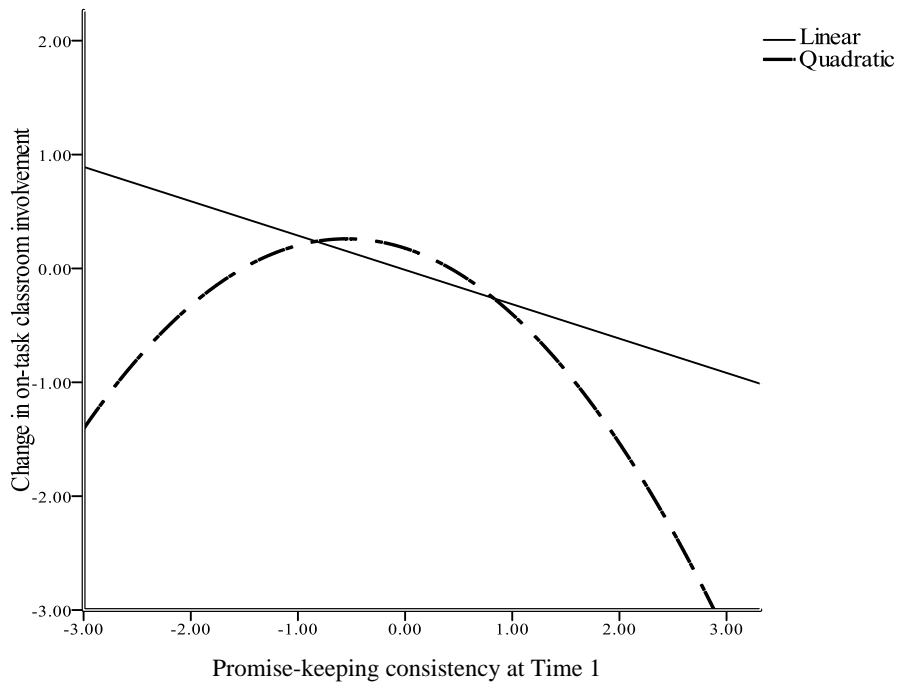
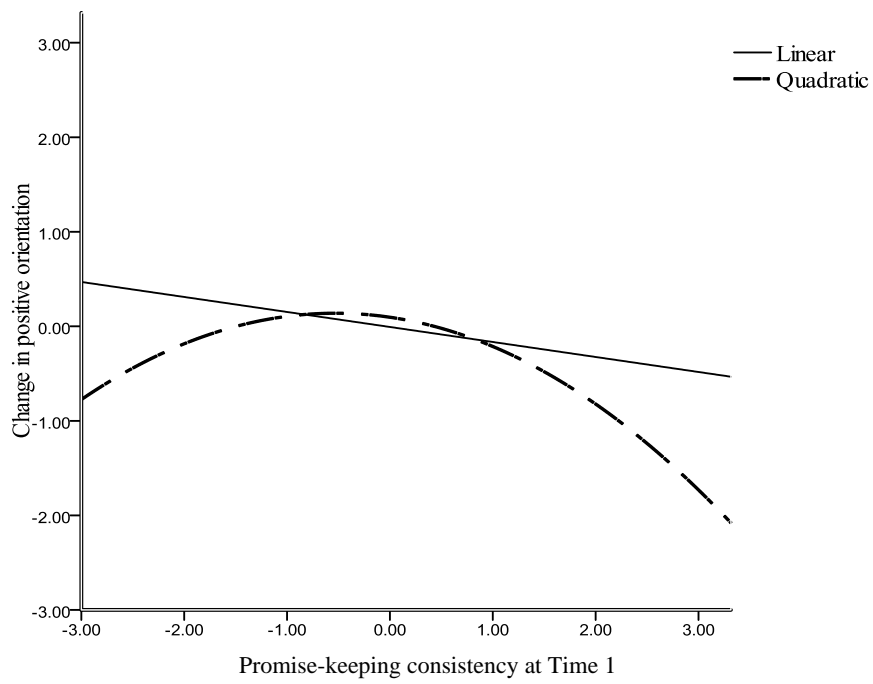


Figure 1. The relationship between same-sex secret-keeping consistency at Time 1 and changes in school liking (a) and changes in loneliness (b).

(a)



(b)



(c)

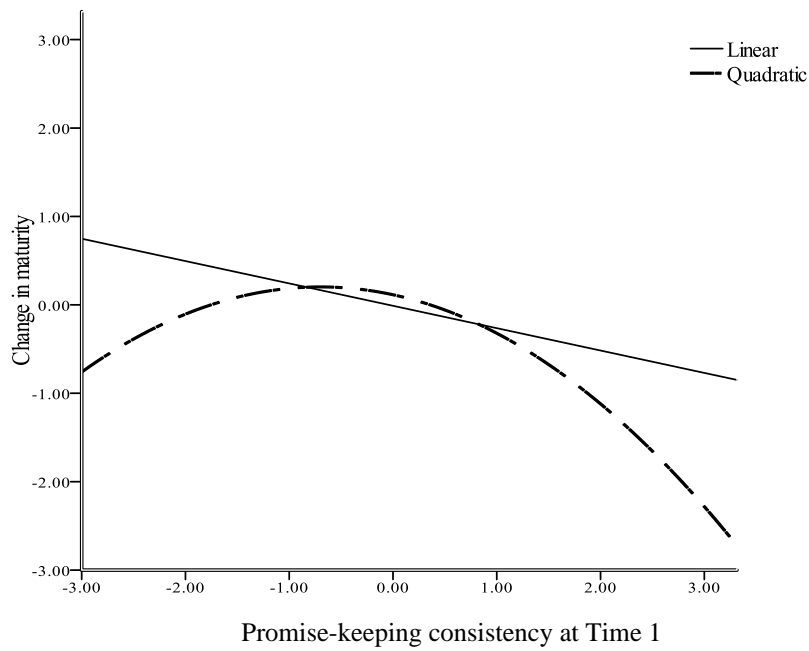


Figure 2. The relationship between class-wide promise-keeping consistency at Time 1 and changes in on-task classroom behaviour (a), changes in positive orientation (b), and changes in maturity (c).

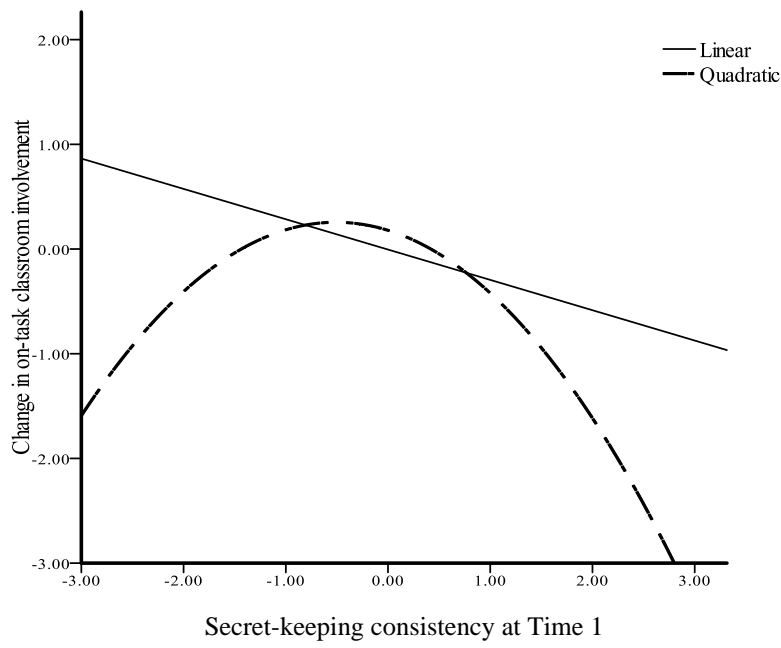


Figure 3. The relationship between class-wide secret-keeping consistency at Time 1 and changes in on-task classroom behaviour