

An Adapted Measure of Sibling Attachment: Factor Structure and Internal Consistency of the Sibling Attachment Inventory in Youth

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Published online: 23 June 2017

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Abstract Parent-youth and peer relationship inventories based on attachment theory measure communication, trust, and alienation, yet sibling relationships have been overlooked. We developed the Sibling Attachment Inventory and evaluated its psychometric properties in a sample of 172 youth ages 10–14 years. We adapted the 25-item Sibling Attachment Inventory from the Inventory of Parent and Peer Attachment-Revised peer measure. Items loaded onto three factors, identified as communication, trust, and alienation, $\alpha=0.93$, 0.90 , and 0.76 , respectively. Sibling trust and alienation correlated with depression ($r_s=-0.33$, $r_s=0.48$) and self-worth ($r_s=0.23$; $r_s=-0.32$); sibling trust and alienation correlated with depression after controlling for parent trust and parent alienation ($r_s=-0.23$, $r_s=0.22$). Preliminary analyses showed good internal consistency, construct validity, and incremental predictive validity. Following replication of these properties, this measure can facilitate large cohort assessments of sibling attachment.

Keywords Sibling · Attachment · Relationships · Youth · Measure

Introduction

Attachment is an enduring affectional bond between two people with a desire of maintaining proximity [1, 2]. This type of relationship may have evolved through natural selection as a method of protection [1]. A person may form multiple attachment relationships with significant people (e.g., friends and romantic partners), including siblings, who would be among the earliest attachment figures influencing a person's early psychosocial development [1, 3–5]. A person's attachment to their siblings can endure through the lifespan, such that some people identify the relationships with their siblings as their primary attachment bond [6, 7].

Several components define attachment relationships: good quality verbal communication, trust (respect and mutual understanding), and minimal to no alienation (isolation from others), all of which have a significant impact on a person's emotional and behavioural development [8–11]. Research using the strange situation procedures [12] has shown children to exhibit attachment behaviors to their siblings when the primary caregiver is not available [5, 13]. Siblings who are close in age and are playmates may develop attachment relationships to one another as a result of mutual trust, inherent in the function of a playmate [14]. Since most attachment research is comprised of either small observational studies with children or questionnaire-based studies among adults, more evidence using larger samples and scales developed for youth is needed for generalizability of findings [15].

The existing inventories that allow for large scale assessments of sibling attachment have several limitations: the scales do not capture the variability between the components of attachment [16], the measures were developed for adults [17], or the inventories fail to capture the related but

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distinct components of attachment [7]. Without an inventory of sibling attachment for youth, we cannot understand population trends in sibling attachment in childhood and early adolescence as we do in adults. Furthermore, a Likert scale questionnaire quantifies sibling attachment, allowing researchers to easily assess change over time and across groups. These questionnaires allow for data collection on a larger and more cost-effective scale than participant observation.

The purpose of this study was to develop and assess the factor structure, internal consistency, and accumulate evidence of validity of the Sibling Attachment Inventory in children and early adolescent youth. We adapted the inventory from the peer measure within the Inventory of Parent and Peer Attachment-Revised [8]. The peer measure is comprised of three scales that capture the components attachment: communication, trust, and alienation. We hypothesized that the items comprising the adapted sibling inventory would yield three factors representing the constructs of communication, trust, and alienation. As a preliminary assessment of construct and predictive validity, we examined the association between these scales and two central components of attachment theory: self-worth and depressive symptoms [18, 19]. The following relationships would provide evidence for construct validity: positive correlations between self-worth and sibling communication and trust; a negative correlation between self-worth and alienation; negative correlations between depression and sibling communication and trust; a positive correlation between depression and alienation. These correlations continuing to be >0.15 after controlling for the respective parent attachment construct would provide evidence for incremental predictive validity [20].

Methods

Participants

Drawing from a larger study of 208 youth, this study included 172 youth (100 girls and 72 boys) ranging in age from 10 to 14 years ($M=11$ years 9 months, $SD=1$ year) with at least one sibling and who had completed the Sibling Attachment Inventory; of the 208 initial participants, 19 youth (9%) did not have a sibling and 17 youth (8%) had siblings but had not completed the Sibling Attachment Inventory. These 17 youth had missed the administration session. Using visual inspection, no pattern emerged between the youth who had completed the measure and those who had not. We sent letters describing the study to 33 schools within the Eastern School District of Newfoundland. Of the 33 schools contacted, seven schools (four elementary and three junior high schools) agreed to take

part in the study. Of these seven schools, three were in rural communities from which 69% of participants ($n=119$) were recruited. We solicited students from grades five and six within the four elementary schools and we solicited students from grades seven and eight within the three junior high schools. The average parental consent rate at each school was 31%, ranging from 10 to 83% across the schools.

The majority of participants were White ($n=168$; 98%). Seventy-seven percent of participants ($n=132$) lived in a two-parent home. Of the participants we assessed, 61% ($n=104$) had one sibling, 25% ($n=43$) had two siblings, 11% ($n=19$) had three siblings, 2% ($n=3$) had four siblings, 0.6% ($n=1$) had five siblings, and 1% ($n=2$) had seven siblings.

Procedure

We obtained ethics approval from Memorial University's Interdisciplinary Committee on Ethics and Human Research and the Eastern School District of Newfoundland. After receiving ethics approval from the two boards, we mailed a letter to the principals and guidance counsellors of 33 elementary and junior high schools of the Eastern School District of Newfoundland, outlining the purpose, rationale, and procedure of the study, and the commitments required by the students, staff, and parents for the study. We made follow-up phone calls to the principals and guidance counsellors regarding the school's interest in taking part in the study.

For schools that agreed to take part in the study, the investigator and a research assistant approached grades five through eight classes and provided a brief 2–3 min description of the study and distributed parent consent forms to all students. The investigator informed the students about an incentive (valued at \$50), which was given to one student selected by a draw from the sample of students who agreed to take part in the study. Each school received one draw.

On the day of assessment (assessments took place during class hours), research assistants gathered the students with parent signed consent forms in an empty classroom or library. Prior to administering the questionnaires, we provided an assent form to students with parent consent. Research assistants read the assent form out loud. We then instructed students to sign the assent form if they agreed to take part in the study. Students who did not wish to take part in the study left the session at this time and returned to class. Of the students with parent consent, 97% assented to take part in the study. Only those students with both parent consent and their own written assent took part in the study. As part of a larger package, participants completed a demographic information form, the Sibling Attachment Inventory, the Inventory of Parent and Peer Attachment-Revised,

the Revised Child Anxiety and Depression Scale Major Depressive Disorder Scale, and the Self-Perception Profile for Children. Participants read their own questionnaires and completed their questionnaires over two 30-min sessions, which took place on two different days. All participants recorded their own responses. Research assistants were available to answer questions and provided individual attention to participants who were having difficulty with reading or writing. The questionnaires in each half package were counterbalanced according to a Latin squares design. Questionnaire packages were only identifiable by participant number after the participant had completed both parts. Following completion of both parts of the package, all questionnaires were anonymous.

Measures

Demographic Information Form

The demographic information form consisted of questions related to participant age, sex, parents' marital status, number of siblings, and ethnicity.

Sibling Attachment Inventory

We adapted the Sibling Attachment Inventory from the original 25 items of the peer measure of the Inventory of Parent and Peer Attachment Scale-Revised [8]. The 25 items of the Sibling Attachment Inventory are identical in wording and presentation order to those of the 25-item peer measure except the phrase 'brother or sister' was substituted for the word 'peer'. For example, item six on the IPPA-R peer measure, 'My friends understand me', was adapted for the sibling measure as 'My brother or sister understands me'. Participants reflected on their relationships with their siblings in general (similar to the peer measure on which they reflected on their relationships with their peers in general). Participants then identified how true each statement was for them using a three-point scale (1 = "never true", 2 = "sometimes true", 3 = "always true"). Across the Sibling Attachment Inventory, 0.8% of values were missing. The items showed no pattern of omission. We imputed the missing values using multivariate imputations by chained equations [21].

Inventory of Parent and Peer Attachment-Revised (IPPA-R) [8]

The IPPA-R is a child measure of parent-child and peer relationships. The IPPA-R is a simplified version of the adult measure, the Inventory of Parent and Peer Attachment (IPPA) [22]. The IPPA-R is comprised of a parent measure with 28 items, and a peer measure with 25 items. Each

measure is comprised of three scales: communication, trust, and alienation. Examples of items on each scale on the parent measure include, "I tell my parents about my problems and troubles" (communication scale), "My parents listen to my opinions" (trust scale), and "I don't get much attention at home" (alienation scale). Examples of items on each scale on the peer measure include, "My friends support me to talk about my worries" (communication scale), "I trust my friends" (trust scale), and "I feel angry with my friends" (alienation scale). Items are rated on a three-point scale: 1 = "never true", 2 = "sometimes true", 3 = "always true", where the child is to indicate the extent to which each item reflects a characteristic of his/her parent-child and peer relationships. Five items were removed from the parent measure and one item was removed from the peer measure based on the developers' scoring key, rendering a 23-item parent measure and a 24-item peer measure [8]. The 23-item parent measure (communication scale = seven items; trust scale = eight items; alienation scale = eight items) and the 24-item peer measure (communication scale = eight items; trust scale = nine items; alienation scale = seven items) were used in the present study. We calculated mean scale scores where higher scores on each scale represent greater perception of that construct (i.e., communication, trust, and alienation). Across the peer measure, 1.1% of values were missing. The items showed no pattern of omission. Across the parent measure, three participants had incomplete responses (no items were completed). Among the remaining 169 participants, 1.1% of values on the parent measure were missing. The items showed no pattern of omission. We imputed the missing values using multivariate imputations by chained equations [21].

Internal consistencies with 95% confidence intervals of the communication scale, trust scale, and alienation scale on the parent measure were, $\alpha = 0.87$ (0.84, 0.90), 0.87 (0.84, 0.90), and 0.85 (0.81, 0.88), respectively. Internal consistencies with 95% confidence intervals of the communication scale, trust scale, and alienation scale on the peer measure were, $\alpha = 0.82$ (0.78, 0.86), 0.81 (0.76, 0.85), 0.72 (0.66, 0.78), respectively.

Self-Perception Profile for Children—Global Self-Worth Scale (SPPC-GSW) [23]

The SPPC-GSW scale is a six-item scale from the 36-item Self-Perception Profile for Children questionnaire, assessing a youth's satisfaction with the way he/she lives his/her life. Each item on the scale is comprised of two opposing statements. Youth are to select the statement that best describes them (e.g., "Some kids are happy with themselves as a person" versus "Other kids are often not happy with themselves"). After selecting a statement, youth are to

indicate whether the statement is “somewhat true” or “very true” for them. Items are rated on a four-point scale: In the direction of the low self-worth statement, very true=1 and somewhat true=2; In the direction of the high self-worth statement, very true=4 and somewhat true=3. We calculated mean scale scores where higher scores indicate higher perceived self-worth. Across the Global Self-Worth measure, 14 participants had incomplete responses (completed either one or no items on the measure). Among the remaining 158 participants, 1.1% of values were missing. The items showed no pattern of omission. We imputed the missing values using multivariate imputations by chained equations [21]. Internal consistency with a 95% confidence interval was $\alpha=0.81$ (0.76, 0.86).

Revised Child Anxiety and Depression Scale Major Depressive Disorder Scale (RCADS-MDD) [24]

The RCADS-MDD scale is a 10-item scale within the 47-item Revised Child Anxiety and Depression Scale designed to measure depressive symptoms in youth ages 6–18 years. Each item is a statement describing a depressive symptom, which the youth is to indicate how often the statement happens to him/her on a four-point scale ranging from 0=“Never” to 3=“Always”. Sample items include “I feel restless” and “I feel worthless”. We calculated mean scale scores where higher scores indicate greater presence and persistence of depressive symptoms. Across the RCADS measure, 0.5% of values were missing. The items showed no pattern of omission. We imputed the missing values using multivariate imputations by chained equations [21]. Internal consistency with a 95% confidence interval in the current sample was $\alpha=0.90$ (0.88, 0.93).

Statistical Analyses

We used R version 3.3.1 to conduct the exploratory factor analysis, which used the polychoric correlation matrix to assess the factor structure of the Sibling Attachment Inventory [25, 26]. For the factor analysis, we used a promax rotational technique because the factors were expected to be non-orthogonal based on previous findings showing moderate correlations between communication, trust, and alienation among parent–child and peer relationships [8]. We used parallel analysis to identify the number of factors. We used the pattern matrix to identify the items that corresponded with each factor [27]. As per the recommendations of Comrey and Lee [27] the present study used the following categorizations of factor loadings: loadings >0.71 were considered excellent; 0.63–0.70 were considered very good; 0.55–0.62 were considered good; 0.45–0.54 were considered fair; and 0.32–0.44 were considered poor. We removed items that loaded on more than one factor and/or

showed poor loadings across all factors (≤ 0.44). We performed the factor analysis a second time to ensure each item loaded on only one factor. We used these remaining items, which loaded onto only one factor, to calculate the mean scale scores.

We assessed the internal consistency of the scales using Cronbach’s α . We assessed construct validity using correlation analysis with the RCADS-Major Depressive Disorder scale and the SPPC-Global Self-Worth scale. We assessed incremental predictive validity using semi-partial correlation analyses between the sibling attachment scales and depression and self-worth, controlling for the respective parent–child attachment scale. To reduce risk of type 1 error, we set significance levels at $p < .01$.

Results

Factor Structure and Internal Consistency of the Sibling Attachment Inventory

The parallel analysis of the 25 items of the Sibling Attachment Inventory suggested that the factor analysis revealed three factors, which accounted for 46.4% of the variance in scores. Factor one consisted of ten items (loadings ranging between 0.48 and 0.90), factor two consisted of six items (loadings ranging between 0.47 and 0.86), and factor three consisted of five items (loadings ranging between 0.47 and 0.62); the remaining four items showed poor loadings across the three factors. After removing these four items, the remaining 21 items accounted for 49% of the variance in scores (see Table 1 for the factor loadings). Of the 21 items, 20 items had their highest loadings on the same factor as observed from the factor analysis of the 25 items; however, the highest loading for item five changed from the second factor (0.47) in the first analysis to the third factor (0.51) in the second analysis. We have assigned item five to the third factor, rendering ten items on factor one, five items on factor two, and six items on factor three. We labelled factors one, two, and three, communication, trust, and alienation.

The sibling communication items aligned with seven of the eight peer communication items. Item 17 falls in the communication scale of the peer measure, whereas this item fell in the trust scale of the sibling measure. The sibling trust items aligned with four of the nine peer trust items. Items 6, 15, and 19 fall in the trust scale of the peer measure, whereas these items fell in the communication scale of the sibling measure. Items 12 and 14 of the peer trust scale did not load on any factor on the sibling measure. The sibling alienation scale aligned with five of the seven peer alienation items. Items four and nine of the peer alienation scale did not load on any factor on the sibling

Table 1 Factor loadings for the 21-item Sibling Attachment Inventory (N = 172)

Item number ^a	Item	Factor 1	Factor 2	Factor 3
1	I like to get my brother or sisters' opinions on things I'm worried about	0.86	−0.30	
24	I tell my brother or sister about my problems and troubles	0.81		
7	My brother or sister supports me to talk about my worries	0.81		−0.12
19	I can count on my brother or sister to listen when something is bothering me	0.73		
15	When I am angry about something, my brother or sister tries to understand	0.73	0.26	
3	When we talk, my brother or sister listens to my opinion	0.65	0.21	
2	My brother or sister can tell when I'm upset about something	0.59		
16	My brother or sister helps me to understand myself better	0.59	0.20	
25	If my brother or sister knows that I am upset about something, they ask me about it	0.56	0.31	
6	My brother or sister understands me	0.49	0.27	−0.13
8	My brother or sister accepts me as I am		0.83	
17	My brother or sister cares about the way I feel	0.20	0.74	
13	My brother or sister is a good sibling		0.73	−0.18
21	My brother or sister respects my feelings	0.23	0.69	
20	I trust my brother or sister	0.14	0.58	−0.16
18	I feel angry with my brother or sister	−0.13		0.61
22	I get upset a lot more than my brother or sister knows about		0.24	0.59
23	My brother or sister gets annoyed with me for no reason	−0.11		0.59
5	I wish I had a different brother or sister	0.14	−0.38	0.51
10	My brother or sister doesn't understand my problems	−0.24		0.49
11	I do not feel like I belong when I am with my brother or sister	0.210	−0.33	0.48

Loadings are organized by factor and by size beginning with factor 1. For each item, the bolded value indicates the highest factor loading across the three factors

Factor loadings ≤ 0.10 are not included. Item 17 is a peer communication item. Items 6, 15, and 19 are peer trust items

^aOriginal item numbers from the 25-item scale. Items 4, 9, 12, and 14 have been removed due to poor factor loadings (< 0.44) across all factors

measure. Item five, which did not load on any factor on the peer measure, loaded on the alienation scale of the sibling measure.

Cronbach's alpha with a 95% confidence interval for the communication scale, trust scale, and alienation scale of the sibling measure were, $\alpha = 0.93$ (0.91, 0.95), 0.90 (0.88, 0.92), and 0.76 (0.70, 0.82), respectively.

We tested whether school accounted for a significant amount of variance through linear regression, ranking the skewed variables. Results showed that school accounted for $< 2.0\%$ of variance in scores. Since these findings showed that only a small amount of variance is attributable to school, we did not cluster the data by school. Tables 2 and 3 present mean scale scores and standard deviations for the communication, trust, and alienation scales of the parent and peer IPPA-R measure, the Sibling Attachment Inventory, the Global Self-Worth scale, and the RCADS Major Depressive Disorder scale. Because these variables were significantly skewed, we used Spearman's rank correlation (r_s) to examine the construct validity and incremental predictive validity.

Neither the parent, peer, nor sibling attachment scales were significantly correlated with age. Neither parent

communication nor all peer and sibling attachment scales were significantly correlated with the number of siblings had by participants. Parent trust was negatively correlated with the number of siblings had by a participant, $r_s(169) = -0.32$, and parent alienation was positively correlated with the number of siblings had by a participant, $r_s(169) = 0.26$. Peer communication was greater among girls, $r_s(172) = -0.30$, $p < .01$. Correlations between communication and trust within each of the sibling, parent, and peer measures were, $r_s(172) = 0.76$, $r_s(169) = 0.72$, and $r_s(172) = 0.69$, respectively ($p < .01$). Correlations between communication and alienation within each of the sibling, parent, and peer measures were, $r_s(172) = -0.54$, $r_s(169) = -0.59$, and $r_s(172) = -0.30$, respectively ($p < .01$). Correlations between trust and alienation within each of the sibling, parent, and peer measures were, $r_s(172) = -0.62$, $r_s(169) = -0.70$, and $r_s(172) = -0.46$, respectively ($p < .01$).

As seen in Table 2, the parent and peer communication scales and the sibling communication scale were significantly correlated [$r_s(169) = 0.32$, $p < .01$ and $r_s(172) = 0.33$, $p < .01$, respectively]. Likewise, the parent and peer trust scales were significantly correlated with the sibling trust scale [$r_s(169) = 0.26$, $p < .01$ and $r_s(172) = 0.29$, $p < .01$,

Table 2 Means, standard deviations, and Spearman's rank correlations between the parent and peer IPPA-R scales, the Sibling Attachment Inventory scales, age, and sex

	Sibling communication	Sibling trust	Sibling alienation	Age	Sex ^a	Number of siblings	N	Mean (SD)
Sibling communication	–			<0.01	–0.04	0.06	172	1.93 (0.55)
Sibling trust	0.76*	–		0.05	–0.05	–0.05	172	2.39 (0.56)
Sibling alienation	–0.54*	–0.62*	–	–0.05	–0.05	0.14	172	1.66 (0.44)
Parent communication	0.32*	0.28*	–0.30*	–0.11	0.13	–0.17	169	2.54 (0.47)
Parent trust	0.28*	0.26*	–0.34*	–0.05	0.20	–0.32*	169	2.76 (0.35)
Parent alienation	–0.29*	–0.32*	0.51*	0.04	–0.12	0.26*	169	1.50 (0.45)
Peer communication	0.33*	0.24*	–0.13	–0.06	–0.30*	0.03	172	2.36 (0.40)
Peer trust	0.24*	0.29*	–0.27*	0.05	–0.13	–0.03	172	2.62 (0.34)
Peer alienation	–0.17	–0.23*	0.37*	0.06	–0.09	0.08	172	1.62 (0.37)

IPPA-R Inventory of parent and peer attachment-revised

* $p < .01$

^aSex: girl = 0, boy = 1

Table 3 Spearman's rank correlations and semi-partial correlations between the sibling communication, trust, and alienation scales and depressive symptoms and self-worth

Sibling attachment scale	Depressive symptoms (N = 172) M = 0.69, SD = 0.59		Self-worth (N = 158) M = 3.43, SD = 0.59	
	r_s	Semi-partial r_s (N = 169)	r_s	Semi-partial r_s (N = 156)
Communication	–0.15	–	0.13	–
Trust	–0.33*	–0.23*	0.23*	0.13
Alienation	0.48*	0.22*	–0.32*	–0.08

Semi-partial Spearman's rank correlation between sibling trust and depression controlled for parent trust.
Semi-partial Spearman's rank correlation between sibling alienation and depression controlled for parent alienation

* $p < .01$

respectively]. The parent and peer alienation scales were significantly correlated with the sibling alienation scale [$r_s(169) = 0.51$, $p < .01$ and $r_s(172) = 0.37$, $p < .01$, respectively].

Construct and Incremental Predictive Validity

Self-worth was positively correlated with sibling trust [$r_s(158) = 0.23$, $p < .01$] and negatively correlated with sibling alienation [$r_s(158) = -0.32$, $p < .01$]. Depressive symptoms were negatively correlated with sibling trust [$r_s(172) = -0.33$, $p < .01$] and positively correlated with sibling alienation [$r_s(172) = 0.48$, $p < .01$]. Sibling communication was not significantly correlated with either self-worth or depressive symptoms.

Using semi-partial Spearman's rank correlations, depression was significantly correlated with sibling trust [$r_s(169) = -0.23$, $p < .01$] and sibling alienation [$r_s(169) = 0.22$, $p < .01$] after controlling for the respective parent scale. Self-worth was no longer correlated with

sibling trust or sibling alienation after controlling for the respective parent scale.

Discussion

The Sibling Attachment Inventory was designed to measure the multiple components of attachment in siblings: communication, trust, and alienation. Results found that the measure's three scales showed good internal consistency and correlated with their respective parent attachment and peer attachment scales. Results in this sample suggested that greater sibling trust and minimal alienation was associated with fewer depressive symptoms and greater self-worth. Secondly, the associations with depressive symptoms sustained after controlling for parent attachment (incremental predictive validity criteria $r \geq .15$; [20]).

This sibling measure captures and quantifies youth's attachment relationships with their siblings. With this measure, sibling attachment may be used to capture the

change in the quality of sibling attachment throughout childhood and adolescence with the potential, using data across multiple studies, of identifying group trends. The scale would benefit from factor analyses in larger and more diverse samples. Additionally, researchers may consider using this questionnaire to allow the youth themselves to be informants in observational studies.

The present study's factor analysis of the Sibling Attachment Inventory revealed a similar factor structure to the parent and peer attachment measures, which are used with children and young adults [8, 22]. The Sibling Attachment Inventory also captured variability within the components of attachment (communication, trust, and alienation), which is central to the theory of attachment and is consistent with previous findings among parent-youth attachment relationships and attachment relationships with significant others (e.g., Bartholomew [28]). The associations between the sibling attachment scales and the parent and peer attachment scales are consistent with earlier findings showing a positive association between good quality sibling relationships and good quality peer relationships and parent-youth relationships [29, 30]. Attachment bonds may also influence depressive symptoms and self-worth. The enduring states of depression and low self-worth appear to co-vary with sibling attachment, such that improvements in one would likely result in improvements in the other. These relationships have been shown in late adulthood as well, suggesting they endure throughout the lifespan [2].

The lack of a unique relationship between sibling communication and depression and self-worth may be accounted for by unmeasured modifiers such as sibling age or birth order; however, sibling age and birth order may not be as critical in establishing attachment relationships where monozygotic twins have been shown to form attachment relationships with one another even more often than non-twin siblings [15]. Alternatively, sibling communication may be uniquely related to other constructs not captured, such as anxiety.

Limitations

The sample was drawn from a small sample of schools from the number of schools solicited. Parent consent rate was not consistent between schools, ranging between 10 and 83%. We did not collect information about the participant's birth order or age of siblings. We also did not instruct the participants to rate a specific sibling, where attachment relationships could vary across siblings (we provided the same directions on the sibling measure as on the peer measure, which instructs youth to rate their friends). Notably, number of siblings was not significantly correlated with any of the sibling attachment scales. We did not collect sibling attachment information from another informant, such as a

parent, or through another method, such as observation as evidence of validity. Symptoms of depression were low in the school sample; however, the variability of scores may have been sufficient where observed correlations with depressive symptoms were medium in effect size and in the expected direction; Systematic variance is always a concern when comparing constructs measured using the same method (in this case questionnaires) as it can inflate significant findings.

Summary

The Sibling Attachment Inventory is a measure of attachment consisting of three scales: communication, trust, and alienation. The scales demonstrated good to excellent internal consistency and correlated with depressive symptoms and self-worth. Self-report sibling attachment in the context of observational studies of sibling attachment would identify similarities and differences between perceived and observed attachment behaviours. Factor analyses and assessments of sibling attachment among larger youth samples may be a next step in providing more evidence for the factor structure and accumulating validity evidence of this newly adapted measure.

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