

Attachment Hierarchies Among At Risk Teens and Psychological Adjustment

by

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B.Sc., Queen's University, 2009

Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Arts

In the

Department of Psychology
Faculty of Arts and Social Sciences

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SIMON FRASER UNIVERSITY

Summer 2014

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Abstract

The study examined the degree to which teens at high risk for behaviour problems rely on friends and romantic partners rather than parents to meet attachment needs and whether this affected their psychological adjustment. Participants were 158 adolescents recruited from youth custody settings and a mental health facility. Attachment functions shifted from parents to peers much earlier compared to previously published results based on normative samples. Only 9% of participants preferred their parents for proximity seeking, 18% for safe haven, 23% for secure base, and 17% reported separation distress. Males reported experiencing greater separation distress in relation to their parents than females. No other gender differences were found. For all attachment functions, adolescents who turned more to their romantic partners than to their friends or parents reported higher levels of internalizing symptoms. No significant differences were found for externalizing symptoms. Clinical implications were discussed including the necessity of attachment-based interventions.

Keywords: Attachment; Adolescent; Mental Health; High-Risk

Acknowledgements

I would like to thank my research supervisor, Dr. Marlene Moretti, for her time and guidance. I would also like to thank my committee members, Dr. Alexander Chapman and Dr. Roger Kobak, for their thoughtful feedback which fostered an interesting discussion. A big thanks also goes to the other members of the Adolescent Health Laboratory.

To my friends, I appreciate your encouragement. You've been there with me through the highs and the lows. Most importantly, I would like to thank my family for their consistent support throughout this process and for countless free meals.

Funding for this study was provided by the Canadian Institutes of Health Research (CIHR) New Emerging Team Grant awarded to Dr. Marlene Moretti (Grant #54020).

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Chapter 1.

Introduction

Children draw on secure attachment to regulate their affect and behaviour, particularly when distressed (Bowlby, 1988). Parents typically serve as the primary attachment figure; however, in adolescence, the process of developing bonds with friends and romantic partners begins. Although parents remain important attachment figures well into early adulthood, friends and romantic partners increasingly function to meet attachment needs during this period (Hazan, Hutt, Sturgeon, & Bricker, 1991; Rosenthal & Kobak, 2010). However, teens who have experienced disruptions or trauma in their attachment relationships with primary caregivers may turn to friends and romantic partners to meet their attachment needs much earlier than those who have enjoyed greater attachment security (Moretti & Holland, 2003). Adolescents who precociously shift from parents to friends and romantic partners as primary attachment figures may be at risk for a variety of mental health and social problems (Rosenthal & Kobak, 2010). Disruptions in attachment and early shifts to relying on peers may both contribute somewhat independently to the development of mental health problems. The current study examines the degree to which teens with significant behaviour problems rely on friends and romantic partners rather than parents to meet attachment needs. Gender and age differences are examined. The relationship between relying on friends and romantic partners versus parents and psychological adjustment (e.g. internalizing

and externalizing symptoms) concurrently is also examined. Results from this study will be compared to published findings using normative samples.

1.1. Attachment Theory

Attachment is an affective bond that is formed between a child and an attachment figure (Bowlby, 1973). Bowlby described the attachment system as a biologically based regulatory system that provokes behaviours that elicit proximity between the parent and infant. A secure attachment between parent and child provides a secure base that supports the child's endeavors to explore their world. The child relies on caregivers in times of distress and returns to them for safe haven.

Bowlby also described attachment in terms of working models that guide behaviour and cognitive processing. Based on experiences with primary attachment figures, children and adolescents develop an internal representation of expectations surrounding relationships that may be generalized to new relationships. A secure attachment bond fulfills several functions that distinguish it from other relationships. First, children seek proximity to their attachment figure. Second, the attachment figure acts as a safe haven and provides nurturance and support. Third, the attachment figure functions as a secure base from which the child can explore their environment. Fourth, the child experiences separation distress when their attachment figure is inaccessible or when there is a rupture in the bond.

Secure attachment bonds continue to be an internal resource and assist individuals in reacting constructively to problems, while also serving to moderate stress (Bowlby, 1988). Children who have a secure and supportive attachment relationship are more resilient to early childhood adversity (e.g. traumatic events) than those reporting

insecure attachment relationships (Werner & Smith, 2001). Insecure attachment relationships, however, are characterized by anxiety or avoidance. Anxiously attached children have a strong need for closeness, often cling to relationships, and fear rejection. Children who are avoidant of attachment relationships prefer to be self-reliant, independent, and attempt to distance themselves from others. Two different insecure strategies are adopted to deal with emotional distress (Shaver & Mikulincer, 2002). Hyperactivation of the attachment system occurs as a result of inconsistent availability of the caregiver, attachment anxiety and the use of proximity seeking to elicit responsiveness. Deactivation of the attachment system occurs as a result of caregiver rejection or neglect, attachment avoidance and the masking of attachment needs.

1.2. Attachment in Adolescence

In adolescence, attachment bonds expand to include peers and romantic partners. The relative reliance on various attachment figures changes over time (Hazan et al., 1991), but this is a complex and gradual process (Cassidy & Shaver, 2008). As adolescents develop close relationships with their peers, they begin to seek them out as sources of emotional and social support (Wilkinson, 2010). Although attachment bonds with parents endure, adolescents face a number of unique challenges in this developmental period, for which same-age peers may provide more knowledgeable support. Adolescents also prefer to spend more time with their peers than parents during this period, and these two factors together form the basis of an attachment bond (Kobak, Rosenthal, Zajac, & Madsen, 2007).

An attachment hierarchy provides a framework that describes the shift in attachment figures over the course of development (Bowlby, 1969, 1982). Preferences

for attachment figures are organized within this hierarchy providing a way to conceptualize how adolescents manage enduring attachment bonds with parents while forming new bonds with peers. It is important to note the distinction between an attachment shift and an attachment transfer. The former describes this process more accurately and is the focus in this current study. The latter asserts that attachment functions are relinquished from parents to peers.

Fraley and Davis (1997) were the first to examine youth attachment hierarchies. They used a revised version of the WhoTo questionnaire (Hazan et al., 1991). Participants reported to whom they turned for each attachment function. They found that young adults continued to use parents as a secure base, but that proximity-seeking behaviours specifically appeared to have shifted to peers. College-aged students turned to both parents and peers for safe haven. The degree of reliance on their peers was related to the relationship length and other elements of the relationships such as mutual trust and support. The findings also suggested that young adults with secure attachment bonds were better able to establish and maintain relationships with their peers, which may have actually promoted the shift of attachment functions earlier. However, this shift would likely only occur for proximity seeking but not necessarily for safe haven or secure base.

Using the Important Person Interview, Rosenthal and Kobak (2010) asked participants to identify the four most important people in their lives and rate their importance in a variety of contexts corresponding to different attachment functions. In their sample of high school and college students, mothers continued to be primary or secondary attachment figures, and peers held the tertiary and quaternary positions. As well, college students placed their romantic partner higher in their attachment hierarchies than did adolescents.

Previous research has not found a significant correlation between age and peer attachment (Gorrese & Ruggieri, 2012); however, attachment functions consistently shift from parents to peers in a particular order starting with proximity-seeking shifting first, followed by safe haven, and finally secure base (Hazan & Zeifman, 1994). Hazan and Shaver (1994) provide a model of the transfer of attachment functions that occurs across development (See Figure 1). The transfer of secure base has been found to occur only in the context of close relationships that last an average of at least two years. Some researchers have suggested that, for adolescents, peer relationships are limited to fulfilling proximity-seeking and safe haven functions, but teens do not experience separation distress with peers nor do they seek a secure base within these relationships (Furman, 2001). This differs from romantic relationships in which teens may experience separation distress (Fraley & Davis, 1997; Freeman & Brown, 2001).

Although some research indicates that adolescents who internalize secure attachment models with parents and are then better able to form close relationships with peers earlier (Fraley & Davis, 1997), this research is almost entirely based on normative samples in which parents are likely to function as reliable attachment figures. Further, the relationships with peers may constitute other types of affectional bonds that include proximity seeking and separation distress but fail to function as a secure base or safe haven, functions that are essential to Ainsworth's (1989) concept of an attachment bond. A contrasting view suggests that children who do not experience secure attachment bonds to parents may precociously look to peer and romantic relationships to meet attachment needs (Moretti & Obsuth, 2011). One study of adolescents in their last two years in high school found that teens who reported secure attachment to their mothers on the Adolescent Separation Anxiety Test rated them as their primary support figure, whereas those with insecure attachments indicated a strong preference for their

boyfriends or girlfriends and best friends (Freeman & Brown, 2001). Nickerson (2005) also found that young adolescents who viewed their attachment to parents as less secure turned to their peers for their attachment needs. This pattern may be even more pronounced among teens with clinically significant behavior problems because of family conflict and harsh parenting common in these families – problems that may compromise attachment security with their parents.

1.3. Earlier Shift in Attachment Functions and Psychological Adjustment

Adolescents who precociously turn from parents to peers and romantic partners may be at greater risk for problem behaviours, such as substance use and antisocial behavior (Dishion, Spracklen, & Skaggs, 2000). Delinquent peer affiliation and disengagement from parents is associated with delinquent behaviour (Dishion, Nelson, Bullock, 2004). Further, adolescents who identify friends as their primary attachment figures are at higher risk for both internalizing and externalizing behaviour (Rosenthal & Kobak, 2010). However, this may only apply to the early shift from secure base to peers and romantic partners. Attachment functions that are commonly transferred in adolescence, such as proximity seeking, are not associated with problems in psychological adjustment.

1.4. Gender Differences

There is some evidence to support the notion that gender may play a role in determining the impact of precocious reliance on peers and romantic partners for attachment needs. First, girls report relying more on their peers for attachment needs

compared to boys (Gorrese & Ruggieri, 2012). Girls are also more likely to seek support from their peers (Gullone & Robinson, 2005; Nelis and Rae, 2009), perhaps in an effort to regulate their emotions, and girls report higher scores on trust and communication, which are key aspects in developing secure attachments (Gorrese & Ruggieri, 2012). Girls more than boys are influenced by the quality of their peer relationships, and when they believe their peers perceive them negatively they are more likely than boys to suffer negative outcomes, such as depression or involvement in antisocial behaviour (Letendre, 2007; Purdie & Downey, 2000). Rosenthal and Kobak (2010) also found that girls who placed peers high on their attachment hierarchy were more likely to suffer from internalizing problems, but this was not true for boys. There is also reason to believe that precocious transfer of attachment functions to romantic partners may have more deleterious consequences for girls than boys. Research shows establishment of early romantic relationships is associated with increased risk for emotional (Moretti, Holland, & McKay, 2001) and behavioral problems (Eklund, Kerr, & Stattin, 2010; Monahan, Dmitrieva, & Cauffman, 2014), particularly for girls.

1.5. Current Study

The primary aim of the current study was to examine the shift of attachment functions from parents to friends and romantic partners among adolescents at high risk for behavioral and social-emotional problems, thereby extending beyond existing research based largely on normative samples of adolescents and young adults. Findings from the current study were compared to past research using normative samples to determine whether at-risk teens precociously turn from parents to friends and romantic partners to meet their attachment needs. Hypothesis 1 was that attachment functions

would shift from parents to peers much earlier in this high-risk population compared to previously published results based on normative samples. Gender differences in the attachment hierarchies of high-risk adolescents were explored. Based on previous research (Gorrese & Ruggieri, 2012), it was predicted that compared to boys, girls would be more likely to turn to their peers and romantic partners rather than parents (Hypothesis 2). Hypothesis 3 was that older adolescents would rely more on their peers and less on their parents than younger adolescents.

A second aim of the current study was to examine whether adolescents who rely more on their friends or romantic partner than on their parents to meet attachment needs develop more internalizing and externalizing symptoms than those who still rely on their parents. Friends and romantic partners were differentiated in order to determine whether turning to a romantic partner is more problematic than turning to a peer. Hypothesis 4 was that adolescents who turn to peers rather than parents would be at higher risk for externalizing and internalizing problems. Hypothesis 5 was that teens who turned to their romantic partners to meet their attachment needs would report higher levels of internalizing and externalizing problems than those who turned to their friends or parents because this is very atypical and precarious during this developmental period. Given the absence of clear empirical or theoretical support for a moderating effect of gender on the association of shifting attachment with poor psychological adjustment, there were no directional hypotheses about gender. Gender differences in these relationships were simply explored while controlling for age.

Chapter 2.

Method

This study utilized data collected as part of a longitudinal project examining gender and aggression in high-risk Canadian and American youth. Selected measures administered at entry to the study (Time 1) at the Canadian site were included in this current study.

2.1. Participants and Procedures

Participants were 179 adolescents (97 males, 82 females) between the ages of 12 and 18 ($M = 15.34$, $SD = 1.53$). Youth were recruited from youth custody settings (53%), a mental health facility (45%) and probation offices (2%). The sample was predominantly Caucasian (66%), with a substantial minority of youth self-identifying as Aboriginal (23%). Exclusionary criteria included an IQ below 70 and the presence of any significant Axis I psychotic symptomology. In the youth justice settings, parental consent was sought to approach 132 youth and was refused by parents of 28 youth (21%). Of the 104 youth whose parents gave consent, 5 youth (4%) refused to consent/assent and one youth withdrew prior to completing the study (<1%). In the mental health setting, parental consent was sought and received for 102 youth. Of these youth, 19 (19%) refused to give consent/assent and two (2%) withdrew prior to completing the study. No significant differences were found between youth who participated and those who did not

participate with respect to age [$F(1, 226) = .78, p > .05$] or gender ($\chi^2 = .31, p > .05$). Each participant completed 6 to 8 hours of individual assessment including semi-structured clinical interviews, computerized assessments, and self-report measures. Participants received a \$30 cash honorarium or a gift certificate for their participation.

2.2. Treatment of Missing Data

Only youth who had completed the attachment measure at Time 1 were included in the study. The final sample consisted of 158 adolescents (82 males, 76 females) between the ages of 12 and 18 ($M = 15.45, SD = 1.50$). There were no significant differences between the full sample ($N=179$) and the final sample in internalizing, $t(155) = -0.60, p > .05$, or externalizing symptoms, $t(155) = -0.37, p > .05$. There were no significant differences in levels of internalizing symptoms across settings [$F(2, 137) = .22, p > .05$], but there were significant differences in externalizing symptoms [$F(2, 137) = 5.33, p < .01$]. A Tukey's post hoc analysis revealed that participants recruited from youth custody settings ($M = 15.22, SD = 6.83$) reported higher levels of externalizing symptoms than those recruited from probation offices ($M = 2.50, SD = 0.71$), $p < .05$.

2.3. Measures

2.3.1. Attachment Hierarchy

The Parent and Peer Attachment Function questionnaire (PPAF; Moretti, 2003) is a 4-item self-report measure based on the WhoTo questionnaire (Hazan & Shaver, 1991), which included three questions each for proximity seeking, safe haven, and the secure base function. Each item on the PPAF corresponds directly to one of the four

attachment functions: proximity-seeking, safe haven, secure base, and separation distress (See Appendix G). A sample item is “How much I know my mother will always be there for me.” For each item, participants were asked to report how often they turned to various figures (e.g., mothers, fathers, friends, and romantic partners) for support during times of stress using a 3-point Likert scale ranging from 2 (*A lot*) to 0 (*Very little or none*). A total attachment score was created for each attachment figure ranging from 0 to 8, with a higher score indicating the person that the teen was most likely to turn to. Coefficient alphas in the current sample were .85 for mother, .86 for father, .81 for romantic partner, and .72 for friend.

2.3.2. Internalizing and Externalizing Symptoms

Internalizing and externalizing symptoms were assessed using the Ontario Child Health Study Scales (OCHS; Boyle, Offord, Hofman, Caitlin, Byles, Cadman, et al., 1987). This 59-item scale closely follows the Child Behaviour Checklist and Youth Self-Report (CBCL-YSR; Achenbach & Rescorla, 2001) and assesses common behavioural and emotional disorders using the Diagnostic Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 2000) criteria for clinical disorders among children and adolescents. Participants reported their current and past symptoms (occurring in the last six months) using a 4-point scale where 0 indicated “Never or not true of me” and 3 indicated “Often or very true of me.” The OCHS yields five subscales consistent with DSM-IV diagnoses of Separation Anxiety, Depression, Attention Deficit and Hyperactivity Disorder, Conduct Disorder, and Oppositional Defiant Disorder. Four of these subscales were used in the current study. Separation Anxiety and Depression were combined to form Internalizing Symptoms, which included 24 symptoms, and Oppositional Defiant Disorder and Conduct Disorder were combined to form

Externalizing Symptoms, which consisted of 19 symptoms. On average, participants reported 16.91 ($SD = 9.07$) internalizing symptoms and 13.94 ($SD = 6.97$) externalizing symptoms. Coefficient alphas in the current sample were .88 for internalizing symptoms and .87 for externalizing symptoms.

Chapter 3.

Results

3.1. Descriptives

The PPAF mean scores and standard deviations appear in Table 1.

Table 1. PPAF mean scores and standard deviations

		<i>M</i>	<i>SD</i>
Proximity Seeking	Turning to mother	1.24	0.76
	Turning to father	1.01	0.76
	Turning to friend	1.66	0.56
	Turning to romantic partner	1.68	0.61
Safe Haven	Turning to mother	1.15	0.80
	Turning to father	0.86	0.81
	Turning to friend	1.34	0.70
	Turning to romantic partner	1.46	0.73
Secure Base	Turning to mother	1.59	0.70
	Turning to father	1.34	0.82
	Turning to friend	1.48	0.63
	Turning to romantic partner	1.55	0.65
Separation Distress	Turning to mother	1.41	0.74
	Turning to father	1.19	0.83
	Turning to friend	1.30	0.71
	Turning to romantic partner	1.69	0.57

Data were examined for normality. Although data were slightly skewed and kurtotic, only one significant outlier appeared that was more than three standard deviations away from the mean for internalizing symptoms. This case was removed during all relevant analyses.

Zero-order correlations appear in Table 2. For each attachment figure, all attachment functions were strongly and positively correlated. Internalizing symptoms were positively correlated with turning to romantic partner for safe haven, $r = .22$, experiencing separation distress towards a friend, $r = .27$, and experiencing separation distress towards a romantic partner, $r = .32$. Internalizing symptoms were also negatively correlated with turning to mother for secure base, $r = -.17$. Externalizing symptoms were not correlated with any attachment functions.

Table 2. Zero-order correlations between PPAF scores, externalizing and internalizing symptoms

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1																	
2	.37**																
3	.05	-.07															
4	-.01	.02	.17														
5	.61**	.28*	-.00	-.07													
6	.26**	.65**	-.06	-.01	.47**												
7	-.08	.01	.34**	-.02	-.01	.08											
8	-.07	.077	-.02	.37**	.10	.28*	.33**										
9	.54**	.24**	.10	.09	.52**	.27**	-.07	.05									
10	.17	.59**	.01	.07	.19*	.63**	.08	.23*	.47**								
11	.09	.03	.40**	-.06	-.03	.08	.46**	.10	.02	.05							
12	-.06	.15	.04	.42**	-.03	.29**	.04	.62**	.07	.21*	.13						
13	.62**	.31**	-.04	.01	.65**	.37**	.05	.05	.57**	.28**	.06	-.07					
14	.22**	.57**	.02	.01	.37**	.62**	.06	.19*	.34**	.62**	.07	.16	.49**				
15	-.12	-.01	.21**	.10	-.04	.03	.45**	.15	-.09	.05	.45**	.05	.13	.19*			
16	-.09	.07	-.06	.56**	.06	.18	.10	.66**	.03	.09	-.07	.53**	.11	.16	.21*		
17	-.14	-.03	-.12	.05	.03	.00	.17	.22*	-.17*	-.10	-.02	.05	.03	.13	.27**	.32**	
18	.03	-.06	.03	-.04	.03	.05	-.01	.02	.03	-.02	.10	.02	.13	.12	.08	.15	.49**

$p < .05^*$, $p < .01^{**}$ Note: proximity seeking – turning to mother (1), turning to father (2), turning to friend (3), turning to romantic partner (4), safe haven – turning to mother (5), turning to father (6), turning to friend (7), turning to romantic partner (8), secure base – turning to mother (9), turning to father (10), turning to friend (11), turning to romantic partner (12), separation distress – turning to mother (13), turning to father (14), turning to friend (15), turning to romantic partner (16), internalizing symptoms (17), externalizing symptoms (18).

3.2 Attachment Hierarchies

Hypothesis 1. It was predicted that the attachment functions would shift from parents to peers earlier in this high-risk population compared to previously published results based on normative samples. Rosenthal and Kobak (2010) found that adolescents elect mothers as primary attachment figures (53%) followed by friends (13%), romantic partners (12%) and fathers (11%). To compare our data to this normative sample, analyses were conducted following similar procedures to those employed by Rosenthal and Kobak (2010). First, based on attachment scores for each function, participants were categorized into one of three categories reflecting their primary attachment figure: parent (mother or father), friend, or romantic partner. Based on the developmental progression from parents to peers as primary attachment figures, in cases where friends or romantic partners were tied with the highest ratings of either mother or father (see Table 3), participants were coded in the friend or romantic partner as primary attachment figure category because parents no longer held the primary position. In cases where friends or romantic partners were tied (see Table 4), participants were coded in the romantic partner as primary attachment figure category because turning to romantic partners in adolescence is less normative and likely more problematic.

Table 3. The frequency of ties between turning to parent and to friend/romantic partner

	Parent	Friend/Romantic	Ties
Proximity Seeking	13	72	73
Safe Haven	29	64	65
Secure Base	35	33	89
Separation Distress	27	39	92

Table 4. The frequency of ties between turning to friend and to romantic partner

	Friend	Romantic Partner	Ties
Proximity Seeking	48	29	80
Safe Haven	46	38	73
Secure Base	47	32	77
Separation Distress	30	45	82

The percentages of parent, friend, or romantic partner as primary attachment figure for each attachment function appear in Figure 2. In order to examine whether primary attachment figures differed across attachment functions, a two-way chi square test (attachment function x primary attachment figure) was conducted. The chi square test was significant, $\chi^2(6, N = 628) = 18.74, p < .01$, Cramer's $V = .12$. Follow-up tests revealed that adolescents turned to their romantic partners for proximity seeking, safe haven, secure base, and separation distress, significantly more frequently than to their friends or parents (See Table 5).

Table 5. Attachment figures for each attachment function

	Parent	Friend	Romantic Partner	χ^2
Proximity Seeking	13 (8%) _a	45 (28%) _b	100 (63%) _c	73.53***
Safe Haven	29 (19%) _a	37 (24%) _a	90 (58%) _b	42.27***
Secure Base	35 (22%) _a	35 (22%) _a	87 (55%) _b	34.45***
Separation Distress	27 (17%) _a	24 (15%) _a	106 (68%) _b	82.64***

Note. Frequencies in the same row that do not share subscripts differ at $p < .001$ in the pair-wise chi square comparisons.

*** $p < .001$

3.3 Gender Differences in Attachment Hierarchies

Hypothesis 2. It was predicted that compared to boys, girls will be more likely to turn to their peers and romantic partners rather than parents. Analyses were conducted for each attachment function separately to determine if there were any gender differences in primary attachment figures. Chi square analyses found no significant gender differences in attachment function rankings for attachment figures for proximity seeking, safe haven or secure base (See Figure 3). For separation distress, the chi-square test was significant, $\chi^2 (2, N = 157) = 10.80, p < .01$, Cramer's $V = .26$. The frequency of reporting separation distress from parents was higher among boys than expected and significantly higher than reported by girls (See Figure 4). As well, the frequency of reporting separation distress from friends was lower for boys than expected and significantly lower than reported by girls.

3.4 Developmental Differences in Attachment Hierarchies

Hypothesis 3. It was predicted that older adolescents would rely more on their peers and less on their parents than younger adolescents. The percentages of parent, friend, and romantic partners ranked highest in meeting attachment functions was plotted by developmental period. Results are presented for each of three age groups: 12-14 years ($n = 57$), 15-16 years ($n = 77$), and 17-18 years ($n = 45$), respectively. Analyses were conducted for each attachment function separately to determine if there were any differences in primary attachment figures across developmental periods. Chi square analyses found no significant developmental differences in attachment placement for each attachment figure for proximity seeking, secure base, or separation distress (See Figure 5). For safe haven, the chi-square test was significant, $\chi^2(4, N = 156) = 10.63, p < .05$, Cramer's $V = .19$. Younger teens (12-14 years) more frequently turned to their parents or friends for safe haven compared to older teens (17 to 18 years; See Figure 6). Similarly, younger teens (12 to 14 years) turned to their romantic partners for safe haven less frequently than older teens (17 to 18 years). Pair-wise comparisons between younger teens (12 to 14 years) and middle teens (15 to 16 years) were not significant, nor were pairwise comparisons between older teens (17 to 18 years) and middle teens.

3.5 Attachment Hierarchies and Psychological Adjustment

Hypothesis 4 and 5. It was predicted that adolescents who turned to their friends or romantic partners rather than their parents to meet their attachment needs would report higher levels of internalizing and externalizing problems. It was also predicted that adolescents who turned to their romantic partners to meet their attachment needs would

report higher levels of internalizing and externalizing problems than those who turned to their friends or parents.

Preliminary analyses were conducted using separate attachment function scores to determine whether mother and father as primary attachment figures could reasonably be considered together as parental attachment figures. There were no significant differences in outcomes associated with turning or not turning to mothers versus fathers for proximity seeking, safe haven, or secure base. A trend emerged for separation distress; teens who ranked fathers high in relation to separation distress ($M = 21.60$, $SD = 8.91$) reported higher levels of internalizing symptoms than those who ranked mothers high in relation to separation distress ($M = 15.28$, $SD = 9.62$), or from both mothers and fathers ($M = 16.65$, $SD = 8.89$), $F(2, 136) = 2.71$, $p = .07$, but this was not statistically significant.

Subsequently, analyses were conducted using separate attachment function scores to determine whether friend and romantic partner as primary attachment figures can be collapsed in an overall category of peer as primary attachment figure. ANOVAs were used to determine if adolescents who turn primarily to friend, romantic partner, or both friend and romantic partner, were more likely to report internalizing and externalizing symptoms.

Adolescents who turned more to their romantic partners for proximity seeking ($M = 19.85$, $SD = 9.91$), reported higher levels of internalizing symptoms than those who turned to friends ($M = 14.32$, $SD = 8.64$), $F(2, 136) = 3.26$, $p < .05$. There was no significant difference in outcomes for safe haven. A trend emerged; adolescents who turned to romantic partners for secure base ($M = 19.20$, $SD = 10.28$) reported higher levels of internalizing symptoms than those who turned to friends ($M = 14.40$, $SD =$

8.30), $F(2, 135) = 2.68, p = .072$, but this was not significantly different. There were no significant differences in outcomes for separation distress.

Data reduction procedures supported the combination of fathers and mothers into an overall parent as primary figure with respect to the various attachment functions. Data reduction procedures did not support combining friends and romantic partners into a single category. Subsequent analyses were conducted comparing youth who turned primarily to their parents, those who turned to their friends, and those who turned primarily to their romantic partners for each attachment function.

ANOVAs were utilized to determine if adolescents who turned primarily to parents, friends, or romantic partners were more likely to report internalizing and externalizing symptoms. A trend emerged for proximity seeking; adolescents who turned to their romantic partners reported higher levels of internalizing symptoms than those who turned to their parents or to their friends, $F(2, 137) = 2.82, p = .06, \eta^2 = .04$. For safe haven, the difference was significant, $F(2, 135) = 3.84, p < .05, \eta^2 = .05$. Teens who turned to their romantic partners for safe haven reported significantly higher levels of internalizing symptoms than those who turned to their parents, $p < .05$, but the difference between teens who turned to their romantic partners for safe haven and those who turned to their friends was not significant. A trend emerged for secure base; adolescents who turned to their romantic partner for secure base reported higher levels of internalizing symptoms than those who turned to their parents or to their friends, $F(2, 136) = 2.45, p = .09, \eta^2 = .03$. For separation distress, the difference was significant, $F(2, 136) = 7.11, p < .01, \eta^2 = .09$. Adolescents who experienced more separation distress from their romantic partners reported significantly higher levels of internalizing symptoms than those who experienced more separation from their parents, $p < .01$. The difference

between those who experienced separation distress from their romantic partners and from their friends was not significant.

Externalizing problems did not differ significantly for teens as a function of who they ranked to meet attachment functions. A trend emerged for separation distress; adolescents who experienced more separation distress from their romantic partners and parents reported significantly higher levels of externalizing symptoms than those who experienced more separation from their friends, $F(2, 136) = 2.55, p = .08, \eta^2 = .04$, but this was not statistically significant.

In order to determine whether these effects were moderated by gender, two – way ANCOVAS (gender x attachment figure) were conducted with age as a covariate. Previous analyses had not found differences in primary attachment figures across developmental periods for proximity seeking, secure base, and separation distress, and therefore this procedure controlled for any effects of age on the outcome variables. The results are summarized in Table 6 and described below.

Table 6. Mean internalizing and externalizing symptom scores as a function of turning to parents, friends or romantic partners

		Parent	Friend	Romantic Partner
Internalizing Symptoms	Proximity Seeking	15.77 _a (8.09)	14.12 _a (8.89)	18.16 _b (9.33)
	Safe Haven	13.33 _a (9.75)	15.83 _a (8.25)	18.69 _b (9.10)
	Secure Base	15.00 _a (9.47)	14.97 _a (8.38)	18.41 _b (9.22)
	Separation Distress	11.20 _a (6.73)	15.30 _b (8.43)	18.54 _c (9.40)
Externalizing Symptoms	Proximity Seeking	12.23 (5.21)	13.85 (7.64)	14.17 (6.70)
	Safe Haven	12.37 (7.06)	13.94 (7.70)	14.35 (6.43)
	Secure Base	13.53 (6.88)	13.15 (7.19)	14.47 (6.71)
	Separation Distress	14.44 (5.42)	11.09 (6.49)	14.58 (7.09)

Note. Means in the same row that do not share subscripts differ at $p < .05$ in the post hoc pairwise comparisons examining main effects of attachment figure.

Overall, females ($M = 19.86$, $SD = 9.19$) reported significantly more internalizing symptoms than males ($M = 13.75$, $SD = 8.26$), $F(1, 139) = 17.14$, $p < .001$, but there were no interactions of gender with attachment figure. There were main effects for attachment figures predicting internalizing symptoms for each attachment function. First, teens who turned to their romantic partners for proximity seeking reported higher levels of internalizing symptoms than those who turned to their parents or their friends, $F(2, 133) = 3.86$, $MSE = 73.54$, $p < .05$, $\eta^2 = .06$. Second, teens who turned to their romantic partners for safe haven reported higher levels of internalizing symptoms than those who

turned to their friends or their parents, $F(2, 131) = 3.98$, $MSE = 74.50$, $p < .05$, $\eta^2 = .06$ ¹. Third, teens who turned to their romantic partners for secure base reported higher levels of internalizing symptoms than those who turned to their friends or parents, $F(2, 132) = 3.52$, $MSE = 73.63$, $p < .05$, $\eta^2 = .05$. Finally, teens who felt more separation distress towards their romantic partner than their friends or parents reported higher levels of internalizing symptoms than those who felt more separation distress towards their friends or parents, $F(2, 132) = 6.48$, $MSE = 71.20$, $p < .01$, $\eta^2 = .09$. There were no significant effects for primary attachment figure predicting externalizing symptoms.

¹ These analyses were repeated without controlling for age for the safe haven function only because of significant developmental differences. When age was treated as a moderator, again, teens who turned to their romantic partners for safe haven reported higher levels of internalizing symptoms than those who turned to their friends or their parents, $F(2, 103) = 4.88$, $MSE = 344.78$, $p < .01$, $\eta^2 = .09$.

Chapter 4.

Discussion

The current study examined whether, compared to youth recruited from normative populations, youth with clinically significant levels of behaviour problems were more likely to turn to friends and romantic partners rather than parents to meet attachment needs. The study also examined whether turning to peers and romantic partners versus parents was related to concurrent internalizing and externalizing problems. Results showed that at-risk teens turned to peers and romantic partners more frequently than to their parents to meet all attachment functions. Specifically, only 9% of participants preferred their parents for proximity; 18% sought their parents for safe haven; 23% for secure base; and 17% experienced separation distress. As predicted, rates for proximity seeking with parents versus peers were similar to those found in past research (See Table 7), but there were substantial differences in rates of turning to parents for safe haven and secure base. For example, Rosenthal and Kobak (2010) found that among high school and college students, 53% turned to their mothers for safe haven and secure base; 13% to friends; 12% to romantic partners; 11% to fathers, and 7% to siblings. Other studies have also found in high school samples (Freeman & Brown, 2001), college samples (Hazan & Zeifman, 1994; Trinke & Bartholomew, 1997), and samples of adults in their 20's (Markiewicz, Lawford, Doyle, & Hagart, 2006),.

Table 7. Percentage of teens and young adults turning to parents versus friends/romantic partners in past studies

Study	Participants and Measures	Percentage of Sample Turning versus Friends/Romantic Partners			
		Proximity Seeking	Safe Haven	Secure Base	Separation Distress
Fraley and Davis (1997)	237 young adults; WHOTO questionnaire	14% vs. 86%	46% vs. 54%	62% vs. 38%	
Nickerson (2005)	303 elementary school students; WHOTO questionnaire	49% vs. 51%	54% vs. 46%	69% vs. 31%	
Rosenthal and Kobak (2010)	212 high school students and 198 college students; Important Person Interview	Combined Attachment Functions: 64% vs. 25%			
Current Study	158 participants; Parent and Peer Attachment Function Questionnaire	9% vs. 91%	18% vs. 82%	23% vs. 77%	17% vs. 83%

participants consistently reported turning to their parents over their peers for secure base

The pattern of turning to friends and romantic partners for attachment functions evident in this clinical sample of adolescents is clearly different from what has been previously noted in normative samples of teens and young adults, where parents are preferred for meeting secure base needs while friends are preferred for proximity seeking. In early adolescence peers are sometimes sought out for safe haven, however this function is fulfilled by romantic partners by late adolescence and early adulthood (Nickerson & Nagle, 2005; Markiewicz, Lawford, Doyle & Hagar, 2006; Trinke & Bartholomew, 1997). Rosenthal and Kobak (2010) suggested that adolescents who turn to their peers for safe haven and secure base do so to compensate for poor attachment bonds with their parents. This explanation may very well apply to teens in the current study, especially given the high levels of attachment anxiety and attachment avoidance documented in this sample (Moretti, Obsuth, Craig, & Bartolo, in press; Obsuth, 2009).

With respect to gender differences, although findings did not show that females turned to their peers more than males, females were more likely to report distress in relation to separation from their friends. Results suggest that peers may be equally important to males and females in relation to attachment functions, however, consistent with past research, girls may suffer distress when their relationships with peers are disrupted (Conley & Rudolph, 2009). Interestingly males reported more distress related to separation from their parents than did females. This unanticipated and novel finding requires further investigation.

It was also expected that older adolescents would rely more on their peers and romantic partners and less on their parents to meet attachment needs, but contrary to predictions there were no significant differences across developmental periods for

proximity seeking, secure base, or separation distress. The only finding to emerge was that teens ages 12 to 14 years were more likely to turn to their parents or friends for safe haven compared to teens ages 17 to 18 years who were more likely to turn to their romantic partners. Although turning to romantic partners for safe haven at 17 or 18 years of age is somewhat precocious, it is consistent with Rosenthal and Kobak's (2010) finding that college age students begin to choose romantic partners over friends for attachment functions.

The second major aim of this study was to examine whether teens who relied on their romantic partners to fulfill attachment functions were at greater risk for internalizing and externalizing problems. Consistent with this prediction, higher levels of internalizing problems were reported by teens who sought proximity or safe haven more frequently to their romantic partners than to their friends or their parents. Similarly, teens who sought secure base more frequently in romantic partners compared to their parents or friends reported higher internalizing symptoms as did teens who experienced more distress when separated from their romantic partners compared to their parents or friends.

These findings differ from those of Rosenthal and Kobak (2010) who found that overall, higher placement of friends in the attachment hierarchy was associated with negative outcomes, whereas romantic partner placement was not. One potential explanation is that because the current sample is slightly younger than the one in Rosenthal and Kobak's study, turning to romantic partners is less normative during this developmental stage and therefore associated with worse outcomes. Interestingly, a higher proportion of teens in the current study reported that they had a romantic partner than did participants in previous studies that examined attachment hierarchies. Eighty two percent of teens in the current study reported turning to a romantic partner, whereas approximately 22% of high school students and 38% of college students reported a

romantic relationship in normative samples (Rosenthal & Kobak, 2010). This suggests that at-risk adolescents date earlier and may be drawn to romantic relationships because of the attachment functions they may serve.

Contrary to previous research (Dishion, Spracklen & Skaggs, 2000; Dishion, Nelson, & Bullock, 2004), teens who turned to romantic partners and friends for attachment functions rather than to parents did not report higher levels of externalizing problems. It is possible that the current study failed to detect meaningful differences in externalizing problems because of the restricted range of scores that resulted from recruitment of this sample from a facility that provided clinical services for teens with severe problems.

The findings in this study suggest that turning to friends or romantic partners for fundamental attachment needs does not confer the same advantages for teens as turning to parents. Although friends and romantic partners represent important relationships for teens and these bonds provide a sense of belonging, they are largely motivated by sociability and affiliative systems (Kobak & Herres, 2012). They fundamentally differ from bonds with parents that promote survival and welfare. Further, relationships with peers and romantic partners tend to be less stable and less enduring than relationships with parents, nor do these relationships offer mature support and opportunities to co-regulate difficult emotions. Finally, in the current sample, peers may have also been troubled youth who themselves suffered from mental health problems. Hence turning to these youth to meet attachment needs may even be harmful (Ingram et al., 2007). Future analyses should examine whether ratings of peer delinquency moderated the relationship between turning to peers to meet attachment needs and poor psychological adjustment.

4.1. Clinical Implications

High risk adolescents have complex mental health needs and require evidence-based interventions that address the broad range of challenges that they face. The findings of the current study suggest that beyond mental health symptoms, troubled adolescents may also experience fundamental disruptions in primary attachment relationships with parents that lead them to precociously turn to peers and romantic partners for attachment functions. Attachment based interventions that increase security in the parent-teen relationship may be effective because they increase the likelihood that adolescents will turn to their parents for secure base and safe haven, reducing the need to precociously turn to friends or romantic partners. Evidence-based attachment interventions include Connect (Moretti, Braber, & Obsuth, 2009) and Attachment Based Family Therapy (Diamond, Reis, Diamond, Siqueland, & Isaacs, 2002). Connect has been effective in reducing adolescents' problem behaviour and shifting their parental representations (Moretti, Obsuth, Craig, & Bartolo, in press). Similarly, Attachment-Based Family Therapy has shown decreases in severity of anxiety and depression symptoms post treatment (Diamond, Reis, Diamond, Siqueland, & Isaacs, 2002).

4.2. Limitations and Future Directions

Findings from this study extend past research by showing that troubled teens, unlike their normally developing peers, precociously turn to peers and romantic partners rather than parents to meet attachment needs and as a result are at greater risk for internalizing problems. While important, certain caveats should be kept in mind when interpreting these findings. First, the attachment measure on which the PPAF was based, the WhoTo, was criticized by Rosenthal and Kobak (2010) because the items did

not capture Bowlby's idea of an enduring bond. The two items that came closest were secure base and separation distress. In order to circumvent this limitation, we examined each attachment function separately. Future research should focus on establishing a reliable and consistent way to measure the four attachment functions.

Second, the study was cross-sectional in nature. Although we weren't able to examine the causal link between attachment and poor psychological adjustment, there is good evidence to suggest that insecure attachments with parents lead to mental health concerns (Mikulincer & Shaver, 2012). Future studies should employ longitudinal designs to determine whether changes in primary attachment figures over time are related to changes in psychological adjustment.

Third, the analyses did not control for base levels of attachment. Other studies have examined the role of attachment security in the shift of attachment functions to specific figures (Freeman & Brown, 2001; Markiewicz, Lawford, Doyle & Hagart, 2006). The conclusion that poor internalizing symptoms are due to turning to peers may be overreaching. Perhaps poor psychological adjustment was simply due to insecure attachments with parents. Future analyses should control for base levels of attachment to clarify whether not relying on parents for attachment needs and turning to peers precociously independently contribute to poor outcomes.

4.3. Conclusion

Despite the limitations, the current study highlighted the drastic differences between primary attachment figures in normative samples and high risk samples. Adolescents in this study turned to their peers much earlier to meet their attachment needs. The study also found that those who relied on their peers rather than their

parents were at risk for developing internalizing disorders. The transition into adolescence is particularly difficult for these youth and attachment based interventions may be the most effective mode of treatment for families of high risk adolescents. Future studies should examine whether adolescents begin to rely more on their parents than peers post-treatment and whether this shift is associated with decreases in internalizing and externalizing symptoms.

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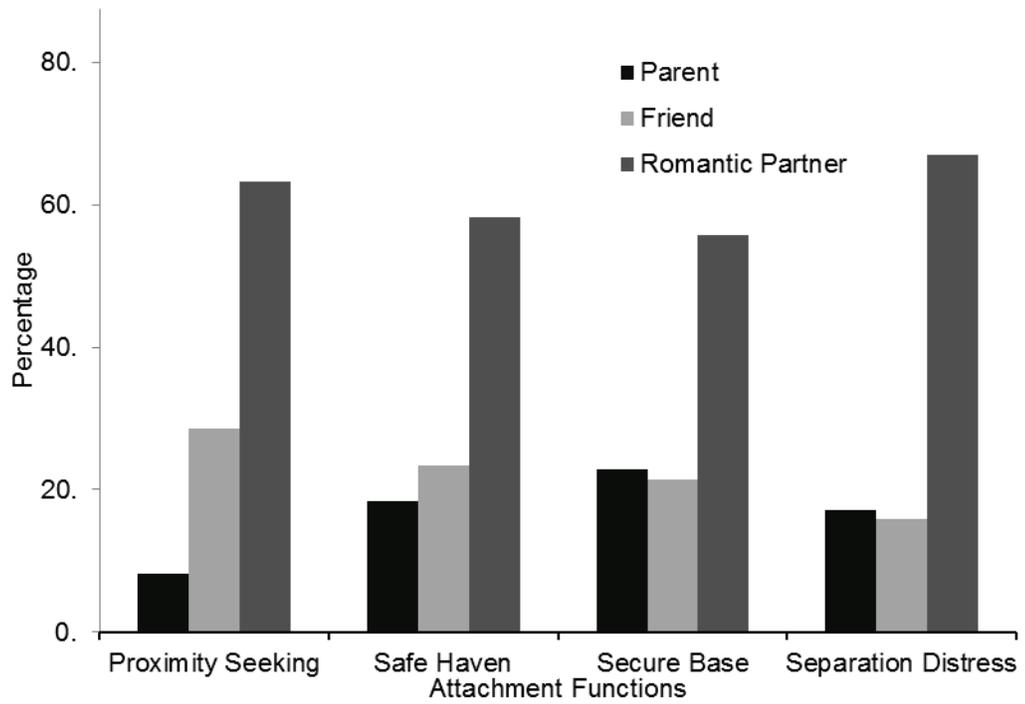
Appendix A.

Figure 1. The shift of attachment functions during development (Hazan & Shaver, 1994).

DEVELOPMENTAL PHASE	TARGET OF ATTACHMENT BEHAVIORS	
	Parents	Peers
Infancy	proximity maintenance safe haven secure base	
Early Childhood	safe haven secure base	proximity maintenance
Late Childhood/ Early Adolescence	secure base	proximity maintenance safe haven
Adulthood		proximity maintenance safe haven secure base

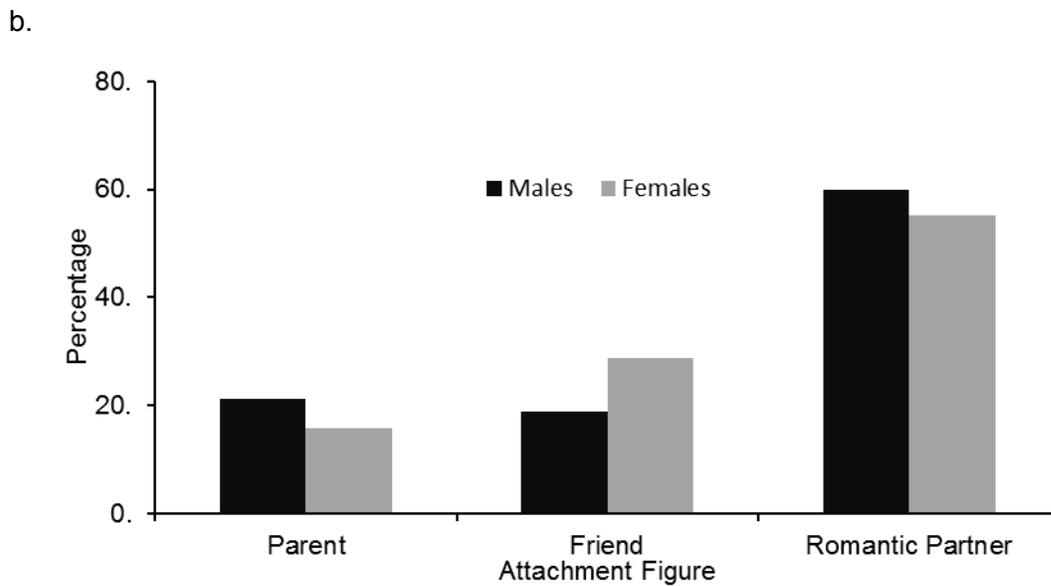
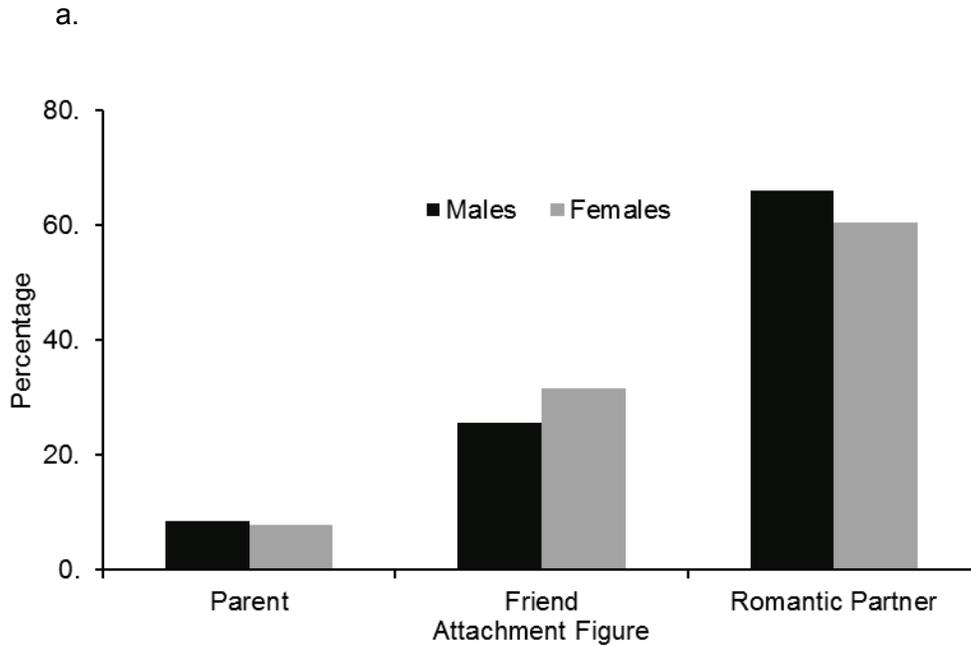
Appendix B.

Figure 2. Attachment figures for each attachment function.

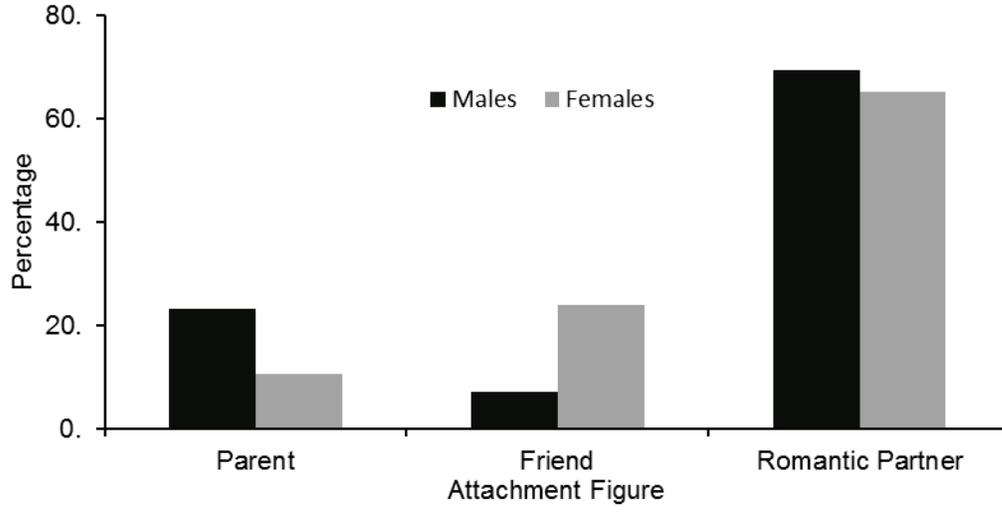


Appendix C.

Figure 3. Gender differences in attachment figures for each attachment function: a. proximity seeking, b. safe haven, and c. secure base.

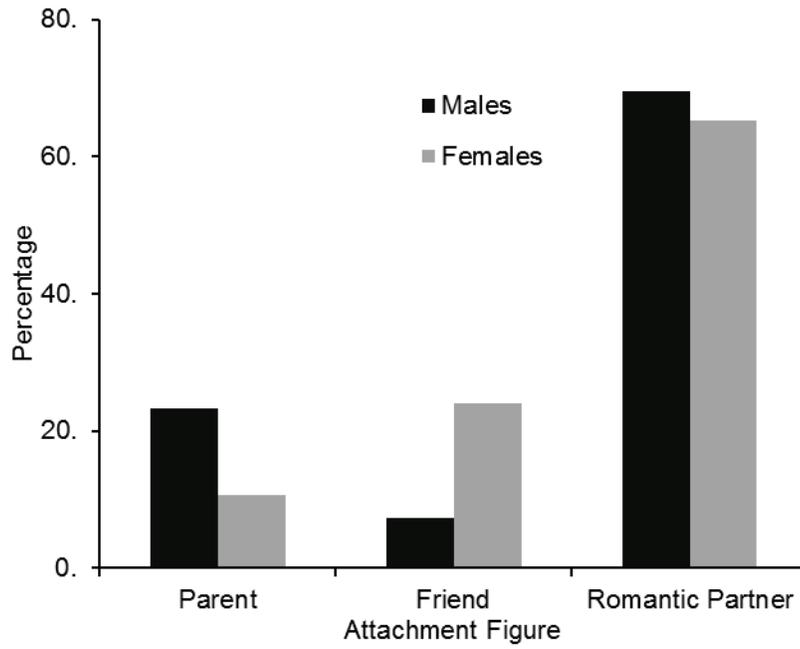


c.



Appendix D.

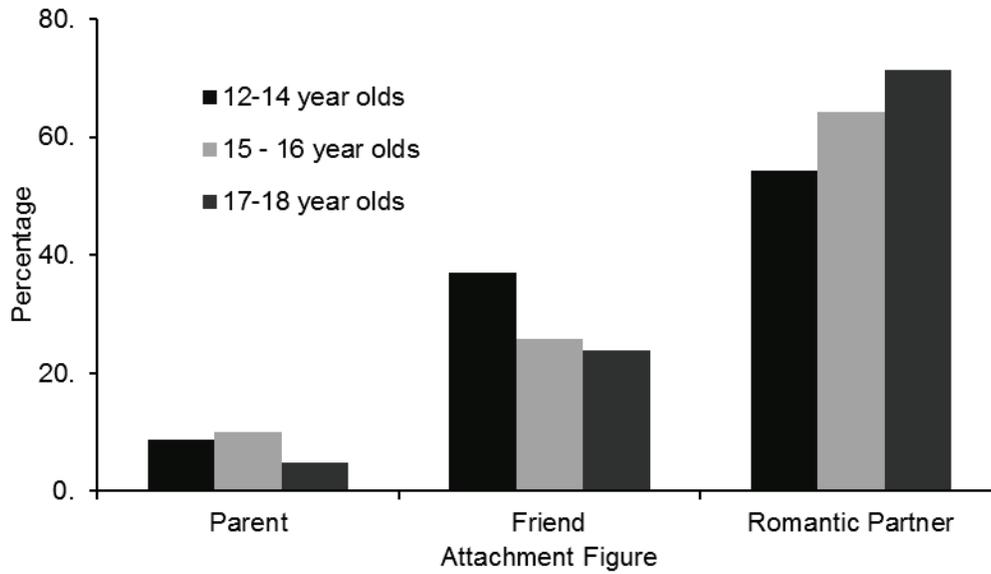
Figure 4. Separation distress towards attachment figures by gender.



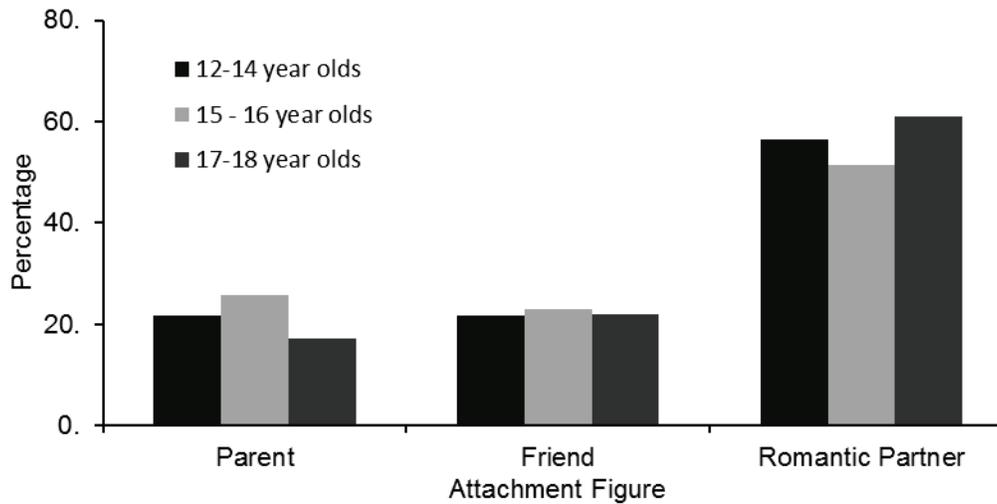
Appendix E.

Figure 5. Developmental differences for attachment figures for each attachment function: a. proximity seeking, b. secure base, and c. separation distress.

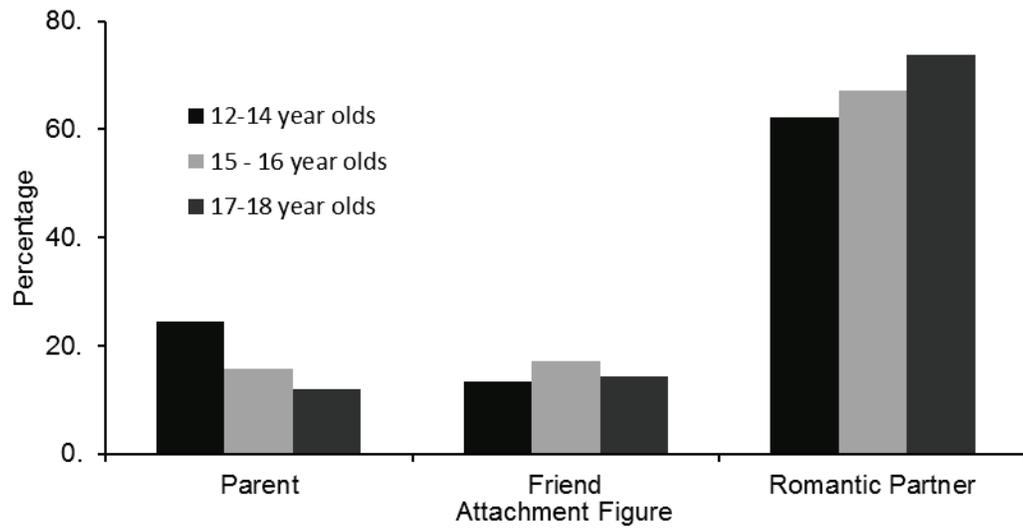
a.



b.

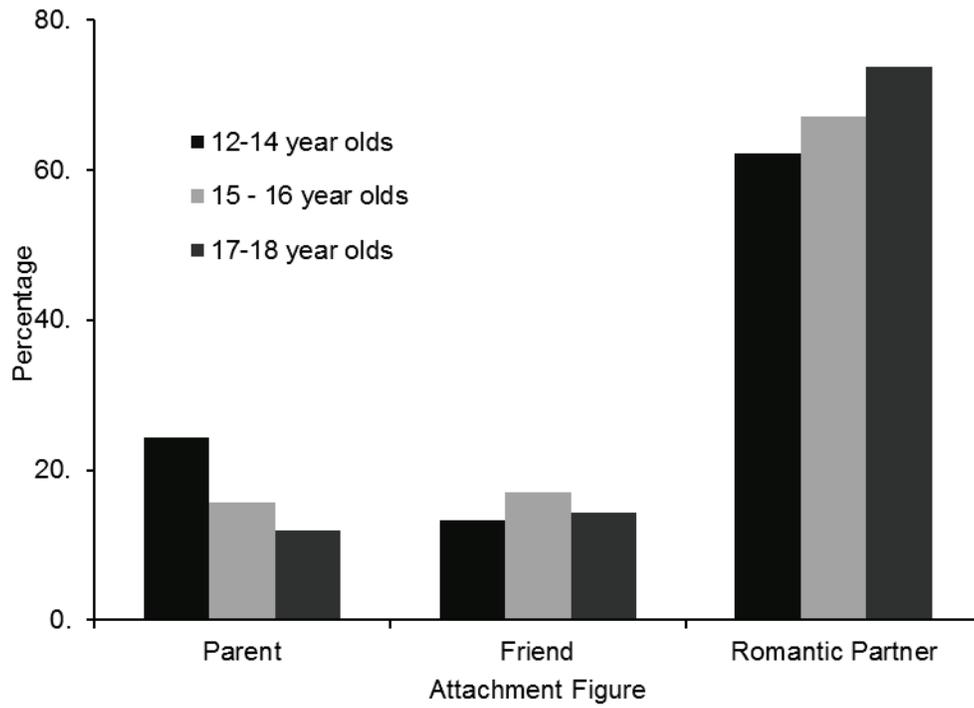


c.



Appendix F.

Figure 6. Developmental differences for attachment figures for safe haven.



Appendix G.

RELATIONSHIP QUALITY AND SUPPORT

I am going to ask you some questions about the people in your life. Please let me know how you feel about them by answering - A LOT, SOME or VERY LITTLE/NONE

1. How much time do you like to spend with your _____

	A lot (0)	Some (1)	Very little or none (2)
Mother			
Father			
Girlfriend or boyfriend			
Friends in general			

2. How much do you want to talk to your _____ when something bad happens:

	A lot (0)	Some (1)	Very little or none (2)
Mother			
Father			
Girlfriend or boyfriend			
Friends in general			

3. How much you know that your _____ will always be there for me if you need them:

	A lot (0)	Some (1)	Very little or none (2)
Mother			
Father			
Girlfriend or boyfriend			
Friends in general			

4. How much do you miss your _____ when you are apart:

	A lot (0)	Some (1)	Very little or none (2)
Mother			
Father			
Girlfriend or boyfriend			
Friends in general			