

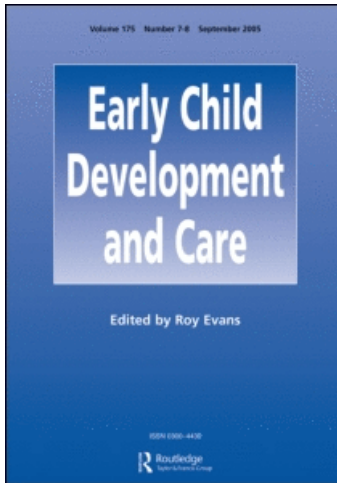
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## **Gender and cultural patterns of mothers' and fathers' attachment and links with children's self-competence, depression and loneliness in middle and late childhood**

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This study examined: (1) the independence of children's attachments to mother and father; (2) the relationships between father and mother quality of attachment and children's social and cognitive self-competence, depression and loneliness; and (3) differences in those relationships by gender. Spanish translations of standardised and self-report measures of mother and father attachment quality, scholastic and social competence, depression and loneliness were administered to 860 middle-class children, aged 8–12 in Buenos Aires, Argentina. Children's attachment security with mothers was only moderately related to their attachment security with fathers, suggesting that these two constructs were somewhat independent. In addition, mother security and father security were uniquely predictive of children's social–emotional outcomes. Availability of and reliance on father most strongly predicted lowered depression scores for children. There were differences in father and mother attachment dimensions and child outcomes by child gender, and these differences can be explained in part by cultural factors.

**Keywords:** attachment; self-competence; depression; loneliness

### **Introduction**

In the early years of life, attachment relationships provide the foundations for emotional, cognitive and social development. Parental physical contact, social and sensory stimulation and responses to children's signals contribute to children's feelings of security. Early felt security leads to trust and competent motivation, which promote effective engagement in the physical and social environment. Attachment theory suggests that children's experiences with their parents or attachment figures have a considerable bearing on their capacity to form affectionate bonds later on (Bowlby, 1999; Grossmann & Grossmann, 2007; Sroufe, Egeland, Carlson, & Collins, 2005). A plethora of studies have examined the development of attachment during infancy and early childhood (e.g. Belsky & Cassidy, 1994; Bohlin, Hagekull, & Rydell, 2000; Bretherton, Ridgeway, & Cassidy, 1990; Cassidy, 1988; Greenberg, Cicchetti, & Cummings, 1990). Likewise researchers have studied adolescents' and adults' general representations regarding attachment (Belsky & Cassidy, 1994).

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However, relatively little attention has been given to attachment during middle and late childhood (Dwyer, 2005).

Parental styles and behaviours are related to children's attachment security and social-emotional outcomes (Dwyer, 2005). Recent findings indicate that parental involvement, psychological autonomy granting and behavioural control are associated with security of attachment in middle and late childhood. Parental involvement and behavioural control are associated with children's greater social competence, autonomy, positive attitudes towards school and work, academic achievement and self-esteem, as well as with less depression, misconduct at school, delinquency and drug use (Doyle, Moretti, Brendgen, & Bukowski, 2004).

In order to understand the complex developmental outcomes associated with attachment security, it is important to examine specific attachment relationships in infancy and childhood. In contrast to the research examining infant-mother attachment, much less is known about the development of infant-father attachment relationships. Attachment studies have focused almost exclusively on the mother-child attachment relationship. Fewer studies have examined the precursors and consequences of father-child attachment security (Brown, McBride, Shin, & Bost, 2007; Newland, Coyl, & Freeman, 2008). According to Bowlby (1988), children develop attachments to their mother and other non-maternal figures, but there is a hierarchy of attachment figures, and the mother or primary caregiver is usually the primary attachment figure. Some early studies showed that many children were likely to be distressed upon separation from either parent (Field et al., 1984; Kotelchuck, 1976) and directed attachment-related behaviours towards both mothers and fathers upon reunion (Brown et al., 2007; Lamb, 1977; Lamb & Tamis-LeMonda, 2004). Other studies have found that the father-child relationships are qualitatively different from mother-child relationships, and are characterised by more sensitive play and exploration and perhaps less frequent activation of the attachment system (Grossmann et al., 2002; Paquette, 2004). Thus, the pathways from caregiving to attachment may differ for father-child pairs compared to mother-child pairs (Grossmann, Grossmann, & Zimmermann, 1999).

Recently, there has been an increased interest in understanding fathering effects on child development (Lamb & Tamis-LeMonda, 2004), probably due to increased father involvement in modern families (Pleck & Masciadrelli, 2004). More recent studies have found similar competencies for both parents to develop attachment (Belsky, 1996; Owen & Cox, 1997), and fathers generally serve as attachment figures for children, even when they are not the primary caregivers (Grossmann et al., 1999). In terms of the development of mother-child and father-child attachment relationships, most researchers have generally concluded that these relationships evolve independently from one another (Braungart-Rieker, Garwood, Powers, & Wang, 2001; Fonagy, Steele, Steele, Higgitt, & Target, 1994; Schoppe-Sullivan et al., 2006; Sroufe, 1985; van IJzendoorn & De Wolff, 1997). The independence or interdependence of mother-child and father-child attachment relationships needs to be more thoroughly examined.

Bowlby (1980) defined internal working models as mental representations that children construct on the basis of interactive experiences with their caregivers during infancy and early childhood. Attachment representation is thought to include means for processing attachment feelings and thoughts, information about who the primary caregivers are and how to seek proximity to them, and expectations about how those caregivers are likely to respond to different situations (Ziegenhain & Jacobsen, 1999).

Thus, the development of internal working models, of both fathers and mothers, may have long-term implications for self-conceptions and social relationships.

Secure father–child attachment has been related with fewer behaviour problems (Verschuere & Marcoen, 1999), greater sociability (Lamb, Hwang, Frodi, & Frodi, 1982; Sagi, Lamb, & Gardner, 1986) and higher quality peer interactions (Parke, 2002). In general, the strength of associations between attachment and developmental outcomes is quite similar in father–child and mother–child dyads (Brown et al., 2007). Father–infant attachment relationships are related to future competencies for children (Brown et al., 2007).

Although several studies have examined the universal and context-specific dimensions of attachment in infancy and childhood, there are still areas that require further exploration (van IJzendoorn & Sagi, 1999). Although the evidence is fairly sound for the universality and normativity of attachment, evidence is less clear cut for the sensitivity and competence hypotheses (van IJzendoorn & Sagi, 1999). Attachment behaviours are universal across cultures, and secure attachment seems to be “the norm”. However, less firm cross-cultural evidence supports the importance of sensitivity, and resulting competencies in later childhood (De Wolff & van IJzendoorn, 1997). One reason for the latter finding may be differences in parenting and valued outcomes for children across cultural groups. Mothers, fathers and families, in general, interact with their children in different ways according to their beliefs and values and those of their cultural environment. Cultural differences in what it means to be sensitive and responsive will affect how parents bring up and relate to their children (Reebye, Ross, & Jamieson, 1999). Cultural differences in expectations of children at every stage of children’s development may also lead to varying patterns of parent–child interaction and child outcomes.

In the present article, Argentine boys’ and girls’ mother and father attachment are studied. Argentina belongs to the western Christian culture, although it is predominantly Catholic and Latin of Italian and Spanish origin. It has a certain tendency to a moderate centripetal style – in a nuclear family, with an average, in middle social class, of three children, including more relatives (e.g. grandparents), which advocates the supremacy of the family over individual project. Family is seen as much more important than the country, religion or political ideas (Facio & Resett, 2006). Child-rearing practices are based on power assertion in discipline matters, with parents who control outings, schedules and friends, perhaps in a more intruding way than Anglo-Saxon parents (Facio & Batistuta, 1998).

Kerns and Barth (1995) argue that gender differences in attachment and related behaviours are also to be expected. Parents’ expectations for girls and boys differ, and girls are expected to be more nurturing and concerned with social evaluations of others, while boys are expected to be more autonomous. Consequently, stereotypical gender socialisation leads to a lower sense of mastery and control and a higher concern for external evaluation in girls than in boys (Blehar & Oren, 1999; Ruble, Greulich, Pomerantz, & Gochberg, 1993). Despite the fact that girls are, in general, more successful, academically speaking, and their academic motivation is higher than that of boys, studies of Argentinean girls reveal that they evaluate their scholastic competence as being lower than that of boys (Facio & Resett, 2006). Gender differences are also apparent in Argentinean parenting practices and children’s attachment security in relation to mothers and fathers, and those attachment differences are related to social–emotional outcomes (Richaud de Minzi, 2006).

Gender differences in Argentinean parenting and child outcomes can be attributed to larger societal norms. In Argentina, the mother is the central figure in family life, probably due to Argentina's Latin and Catholic tradition. As Facio and Batituta (1998) assert, there is a belief in the moral and spiritual superiority of women as opposed to men. The catholic devotion to Virgin Mary places a high importance on motherhood: it is expected that women sacrifice themselves on behalf of their children and the rest of their families, and in exchange they are greatly venerated and exercise a considerable amount of power at home. Boys and girls tend to forgive their mothers' faults more than their fathers', and the relationship with her deteriorates only as a consequence of very serious circumstances. Although women are highly regarded for their maternal role, young people of both genders consider "being capable of caring for children" important for defining an adult man. Nevertheless, girls are socialised to be more involved in domestic chores and less involved in jobs than boys (Facio & Resett, 2006). Children, especially boys, perceive that their fathers spend little time with them (Richaud de Minzi, 2002, 2005). Children's perceptions of parental support and availability, within their own unique cultural niche, are likely to affect related social-emotional outcomes such as depression, loneliness and self-competence.

## Objectives

In order to study the influence of mother and father attachment during middle and late childhood, this study explored:

- (1) the independence of children's attachment to mother and father in middle and late childhood;
- (2) the connections between father and mother quality of attachment and children's social and cognitive self-competence, depression and loneliness in middle and late childhood; and
- (3) gender differences in the connections between father and mother quality of attachment and children's social and cognitive self-competence, depression and loneliness in middle and late childhood.

## Methods

### *Participants and procedures*

The sample of this study included 860 middle-class children, aged eight ( $N=146$ ; 77 males and 69 females), nine ( $N=167$ ; 71 males and 96 females), 10 ( $N=171$ ; 77 males and 94 females), 11 ( $N=190$ ; 89 males and 101 females) and 12 ( $N=186$ ; 93 males and 93 females) from five elementary schools in Buenos Aires, Argentina. Fifty-five per cent of the children attended state-supported free public schools and 45 per cent attended private Catholic schools. These schools were located in middle-low and middle socio-economic level neighbourhoods in the city of Buenos Aires, attended by children of white-collar workers, shopkeepers and professionals such as physicians, lawyers, psychologists, etc. The children were selected from families with both parents living in the home. Children of divorced parents or with a deceased parent were excluded from the sample. The mean age of mothers and fathers were 35.40 ( $SD=3.20$ ) and 37.70 ( $SD=5.45$ ), respectively. The instruments were administered to children at each child's respective school, in groups of 15 children per session. Three

psychologists administered the instruments to each group, over 2 one-hour sessions per group.

### ***Ethical procedures***

Consent for this project was obtained at multiple levels. First, heads of schools at potential research sites were asked to discuss the project with the researcher. They were provided with a copy of the research proposal, and the characteristics of the research were explained. Once permission was received from heads of schools, a letter was sent to the household of each child explaining the aims of the project and procedures for administering measures to children. They were expressly told that participation was voluntary and anonymous. Written permission from each father and mother was obtained before data collection began. Finally, children were informed of the purpose of the study. They were then instructed in data collection procedures, and reminded that they could refuse to answer questions if they chose to.

### ***Instruments***

#### *Children's attachment security*

Children completed the Kerns' Security Scale, a self-report questionnaire that assesses children's perceptions of security in specific parent-child relationships during middle childhood (Kerns, Klepac, & Cole, 1996; Argentine adaptation by Richaud de Minzi, Sacchi, & Moreno, 2001). This measure was chosen because it is designed specifically for use with children in middle and late childhood, aged 8-12 (Dwyer, 2005), and assesses children's perceptions of a particular attachment relationship (i.e. attachment to mother and father are assessed separately). Items express a child's belief that a parent is responsive and available, open to communication and a reliable source of help and comfort when needed. The measure yields scores on a single continuous dimension of security, but Lieberman, Doyle, and Markiewicz (1999) suggest an alternative scoring procedure to derive two attachment dimensions: availability and reliance on the attachment figure.

Psychometric properties of the measure were assessed previously with an Argentine sample, and only 10 items were kept (five connected to trust and five to availability) out of 15 items in the original scale (see Richaud de Minzi et al., 2001). Items concerning communication quality were left out as they were not reliable in the Argentine sample. Factor analysis of items connected to reliance on parents' support and availability perceptions in the Kerns' Security Scale for mother and father ( $N = 1421$ ) showed two factors for each version: one related to trust or reliance (Cronbach's  $\alpha = .70$  for mother and  $.69$  for father) and another one related to availability (Cronbach's  $\alpha = .71$  for mother and  $.70$  for father).

#### *Children's self-competence*

The Self-Perception Profile for Children (Harter, 1985; Argentine adaptation by Richaud de Minzi et al., 2001) was used to study scholastic and social competence in middle childhood. This measure is a revised version of the Perceived Competence Scale for Children (Harter, 1979, 1982), and contains six separate sub-scales covering five specific domains: Scholastic Competence, Social Acceptance, Athletic

Competence, Physical Appearance and Behavioural Conduct, as well as Global Self-Worth. For the present study, we only used the Scholastic Competence Scale and the Social Acceptance Scale. The Scholastic Competence Scale measures the child's perception of his/her competence or ability within the realm of scholastic performance (Harter, 1985). The Social Acceptance Scale assesses the degree to which the child feels accepted by peers or feels popular, but does not measure social skills.

Each of the sub-scales contains six items, and adequate internal consistency and test-retest reliability for all six scales have been established previously (Granleese & Joseph, 1994; Harter, 1985). The Argentine adaptation of the scales was conducted with a sample of 1421 children. On the basis of the factor analysis of the 12 items (six corresponding to scholastic self-competence and six to social self-competence) in the original scales, we built a shorter, eight-item version measuring: scholastic self-competence (Cronbach's  $\alpha = .75$ ) and social self-competence (Cronbach's  $\alpha = .71$ ).

### *Children's depression*

The Dimensions of Depression Profile for Children and Adolescents is a self-report measure that operationalises four dimensions of depression: mood affect (the extent to which one feels cheerful and happy versus sad and depressed), global self-worth (the extent to which one feels pleased with oneself), energy/interest (the extent to which one feels wide awake and energetic) and self-blame (the extent to which a child feels that whatever goes wrong is his or her fault) (Harter & Nowakowski, 1987; Argentine adaptation by Richaud de Minzi et al., 2001). The measure provides a profile of scores across dimensions as well as a global depression score. Each of the sub-scales contains six items. The internal consistency reliability for all scales has been previously established (Harter & Nowakowski, 1987). Factor analysis by Richaud de Minzi et al. (2001) on an Argentine sample ( $N = 1421$ ) suggested four factors corresponding to the dimensions posited by Harter and Nowakowski (1987). For the present study, a new scale was formed including only the three items with greatest factor loadings on each factor, for a total of 12 items across four factors. Internal consistency coefficients were acceptable for each scale and global score, ranging from Cronbach's  $\alpha = .71$  to  $.77$ . For the present study, we only used the global depression score.

### *Children's loneliness*

The Louvain Loneliness Scale for Children and Adolescents (Marcoen, Goossens, & Caes, 1987; Argentine Adaptation by Richaud de Minzi et al., 2001) is a 48-item measure which includes four 12-item sub-scales: loneliness in relationships with parents, loneliness in relationships with peers, aversion to aloneness (negative attitude towards aloneness) and affinity for aloneness (positive attitude towards being alone). Subjects respond on a four-point scale (often, sometimes, seldom and never). Total scores range between 12 and 48 for each sub-scale. The measure provides a profile of scores across sub-scales as well as a global loneliness score. In the previous studies, internal consistency coefficients were adequate (alphas of  $.80$  or above; Goossens, Marcoen, van Hees, & van de Woestijne, 1998). In an Argentine sample, the 48 items of the original scale were factor analysed, resulting in loadings on the same four factors indicated previously (Richaud de Minzi et al., 2001). In the present study, a shorter, 16-item version was constructed by choosing items with the greatest factor loading on each factor. This shorter version was considered more appropriate for children, aged

between eight and 12, to prevent fatigue. Factorisation of these 16 items also resulted in four factors which coincide with the four dimensions of loneliness proposed by Marcoen et al. (1987): loneliness in relationships with parents (Cronbach's  $\alpha = .70$ ), loneliness in relationships with peers (Cronbach's  $\alpha = .72$ ), aversion to aloneness (Cronbach's  $\alpha = .71$ ) and affinity for aloneness (Cronbach's  $\alpha = .75$ ).

## Results

Correlations and hierarchical regressions were used to examine: (1) relationships between mother attachment and father attachment; (2) the amount of unique prediction from mother attachment and father attachment to children's competence, depression and loneliness; and (3) differences in patterns of prediction by child gender.

### *Relationship between mother and father attachment dimensions*

Correlations between mother and father attachment dimensions are presented in Table 1. All correlations are moderate and statistically significant; however, the correlations among fathers' attachment dimensions ( $r = .72$ ) and mothers' attachment dimensions ( $r = .63$ ) are larger than the correlations between mother and father reliance ( $r = .43$ ) and mother and father availability ( $r = .41$ ). Only 18.49% of the variance in father reliance was related to variation in mother reliance, while 16.81% of the variance in father availability was related to variability in mother availability.

### *Father and mother attachment and children's self-competence and feelings*

Hierarchical regression analyses were performed for each of the eight criterion variables to test the unique contribution of father attachment dimensions (reliance and availability) to children's depression, loneliness and self-competence, while controlling for mother attachment dimensions. The analyses were performed for the entire sample and for girls and boys separately. The first block in the equation included mother attachment dimensions, whereas the second block included father attachment dimensions. Tests of multicollinearity were satisfactory with all variance inflation factors less than 2.00 and tolerance of variables all near 1.00.

Table 2 shows a summary of the hierarchical regression analyses of mother and father attachment dimensions on children's self-competence, depression and loneliness. Because of the relatively large sample size, which results in increased power, alpha was set at  $p \leq .01$ . The global prediction for depression was significant for the

Table 1. Correlations of mother and father attachment dimensions.

Attachment dimensions	Mother reliance	Mother availability	Father reliance	Father availability
Mother reliance	1.00	.63**	.43**	.30**
Mother availability		1.00	.44**	.41**
Father reliance			1.00	.72**
Father availability				1.00

\* $p < .05$ ; \*\* $p < .01$ .



total sample,  $F(4, 578) = 247.27$ ;  $p = .000$ . The overall model explained 63% of the variance in children's depression, with the mother dimensions explaining 3% of the variance in Block 1, and the father dimensions accounting for an additional 60% of the variance. Father attachment dimensions, and especially father availability, exceeded mother attachment dimensions in terms of strength of prediction of children's depression. The same pattern is presented for both girls and boys. In both cases, overall prediction equations for depression were significant,  $F(4, 302) = 133.58$ ;  $p = .000$  and  $F(4, 271) = 112.06$ ;  $p = .000$ , respectively. For girls, mother and father attachment explained about 64% of the total variance in depression, with mother attachment explaining 1% and father attachment an additional 63%. For boys, attachment explained about 62%, with mother attachment explaining 4% of the variance and father attachment an additional 58%.

The overall prediction equation for loneliness in the total sample was significant,  $F(4, 605) = 34.36$ ;  $p = .000$ , explaining 19% of the variance in children's loneliness, with the mother attachment dimensions explaining 18% and the father attachment dimensions explaining an additional 1% of the variance. In the case of loneliness, all four predictors (mother and father reliance and mother and father availability) were significant. For both girls and boys, the overall prediction equations for loneliness were also significant: for girls,  $F(4, 322) = 19.16$ ;  $p = .000$  (explained variance = 19%) and for boys,  $F(4, 278) = 18.08$ ;  $p = .000$  (explained variance = 21%), with mother attachment explaining 18% of the variance in girls' loneliness and 17% of the variance in boys' loneliness.

The global prediction for loneliness with parents, loneliness with peers, affinity for aloneness and aversion to aloneness in the full sample was significant,  $F(4, 645) = 18.71$ ;  $p < .000$ ,  $F(4, 638) = 31.55$ ;  $p < .000$ ,  $F(4, 646) = 14.27$ ;  $p < .000$  and  $F(4, 635) = 3.43$ ;  $p < .009$ , respectively. The overall model explained 10%, 17%, 8% and 2% of the variance in loneliness with parents, loneliness with peers, affinity for aloneness and aversion to aloneness, respectively. In each of these models, mother attachment explained the most variance, except in aversion to aloneness where both mother and father attachment explained relatively little variance (1%).

In the case of boys, the overall prediction of loneliness with parents' equation was significant,  $F(4, 300) = 10.10$ ;  $p < .000$ , explaining 11% of the variance, with mother attachment explaining 6% of the variance and father attachment an additional 5%. In girls' loneliness with parents, the overall model was also significant,  $F(4, 340) = 11.31$ ;  $p < .000$ , and explained 12% of the variance, with mother attachment explaining 11% of the variance and father attachment an additional 1%. In all cases (total sample, girls and boys), mother and father reliance were significant unique predictors of loneliness with parents, but father attachment dimensions did not add very much explained variance in the model after controlling for mothering effects (see Table 2).

In the case of boys' loneliness with peers, the overall prediction equation was significant,  $F(4, 297) = 16.38$ ;  $p < .000$ , explaining 17% of the variance, with mother attachment explaining 16% of the variance in Block 1, and father attachment explaining an additional 1% of the variance. In girls' loneliness with peers, the overall model was also significant,  $F(4, 336) = 16.98$ ;  $p < .000$ , and explained 17% of the variance with mother attachment explaining all of variance (father attachment was not statistically significant for girls' loneliness with peers). In all cases (total sample, girls and boys), mother availability was a significant unique predictor, while father reliance was a unique predictor for the total sample only (see Table 2).

Table 2. Summary of hierarchical regression analyses predicting children's self-competence, depression, and loneliness from mother and father attachment dimensions.

Dependent	Predictors	Full Sample			Girls			Boys		
		Beta	t	$\Delta R^2$	Beta	t	$\Delta R^2$	Beta	t	$\Delta R^2$
Depression	Block1			.03			.01			.04
	Reliance mother	-.06	-1.19		-.04	-.59		-.06	-.79	
	Availability mother	-.12	-2.22*		-.08	-1.02		-.15	-1.94	
	Block 2			.60			.63			.58
	Reliance father	-.18	4.58***		-.23	-4.53***		-.12	-2.03*	
	Availability father	-.63	16.15***		-.59	11.55***		-.67	11.40***	
Loneliness	Block1			.18			.18			.17
	Reliance mother	-.20	-4.01***		-.30	-4.68***		.16	.16**	
	Availability mother	-.27	-5.47***		-.19	-2.93**		-.23	-3.11**	
	Block 2			.01			.01			.04
	Reliance father	-.16	-2.89**		-.12	-1.65		-.20	-2.33*	
	Availability father	-.14	-2.52*		-.10	-1.36		-.20	-2.39*	
Loneliness with parents	Block1			.08			.11			.06
	Reliance mother	-.21	-4.31***		-.24	-3.73***		-.20	-2.61**	
	Availability mother	-.10	-2.07*		-.13	-2.02*		-.08	-1.06	
	Block 2			.02			.01			.05
	Reliance father	-.22	-3.81***		-.24	-3.73**		-.46	-5.51***	
	Availability father	-.11	-2.06*		-.13	-2.02		.24	2.85**	
Loneliness with peers	Block1			.16			.17			.17
	Reliance mother	-.17	-3.60***		-.15	-2.42*		-.21	-2.89**	
	Availability mother	-.28	-5.80***		-.30	-4.76***		-.25	-3.49***	
	Block 2			.01			.00			.01
	Reliance father	-.16	-2.75**		-.14	-1.94		-.16	-1.84	
	Availability father	-.08	-1.32		-.02	-.28		-.15	-1.76	

Table 2. (Continued.)

Dependent	Predictors	Full Sample			Girls			Boys		
		Beta	<i>t</i>	$\Delta R^2$	Beta	<i>t</i>	$\Delta R^2$	Beta	<i>t</i>	$\Delta R^2$
Affinity for aloneness	Block1			.06			.09			.04
	Reliance mother	-.18	-3.69***		-.20	-3.07**		-.16	-2.14*	
	Availability mother	-.08	-1.69		-.13	-1.93		-.03	-.41	
	Block 2			.02			.01			.03
	Reliance father	-.08	-1.49		-.12	-1.68		-.03	-.38	
	Availability father	-.16	-2.91**		-.12	-1.62		-.20	-2.36*	
Aversion to aloneness	Block1			.01			.01			.02
	Reliance mother	.14	2.72**		.15	2.23*		.12	1.54	
	Availability mother	-.14	-2.74**		-.13	-1.82		-.17	-2.19*	
	Block 2			.01			.01			.02
	Reliance father	.14	2.40*		.14	1.90		.15	1.75	
	Availability father	-.15	-2.66**		-.08	-1.06		-.26	-2.96**	
Scholastic self-competence	Block1			.12			.12			.15
	Reliance mother	.10	1.98*		-.00	-.02		.22	3.13**	
	Availability mother	.28	5.90***		.35	5.45***		.20	2.79**	
	Block 2			.03			.04			.02
	Reliance father	.24	4.35***		.26	3.61***		.23	2.75**	
	Availability father	.09	1.69		.06	.84		.13	1.61	
Social self-competence	Block1			.10			.11			.09
	Reliance mother	.09	1.80		.04	.60		.15	2.07*	
	Availability mother	.25	5.06***		.30	4.67***		.18	2.46*	
	Block 2			.00			.01			.01
	Reliance father	.13	2.32*		.14	1.83		.12	1.42	
	Availability father	-.04	-.71		-.06	-.76		-.02	-.24	

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

The overall prediction equation for affinity for aloneness in boys was significant,  $F(4, 299) = 5.34; p < .001$ . The overall model explained 7% of the variance, with mother attachment explaining 4% of the variance and father attachment 3% of the variance. In the case of girls' affinity for aloneness, the overall model was also significant,  $F(4, 342) = 9.28; p < .000$ , and explained 10% of the variance with mother attachment explaining much more variance (9%) than father attachment (1%). Mother reliance was the only significant unique predictor in girls' affinity for aloneness,  $t(342) = -3.07; p < .002$ . In the full sample, the two significant unique predictors were mother reliance and father availability,  $t(646) = -3.69; p < .00$  and  $t(646) = -2.91; p < .004$ , respectively.

For boys, the overall prediction equation for aversion to aloneness was non-significant,  $F(4, 294) = 2.83; p < .03$ , with only about 4% of the variance explained by the predictors. For girls, the overall prediction equation for aversion to aloneness was also non-significant,  $F(4, 336) = 1.92; p = .11$ , with only about 2% of the variance explained by the predictors.

The overall prediction equation for scholastic self-competence in the total sample was significant,  $F(4, 643) = 27.86; p < .000$ , explaining 15% of the variance in children's scholastic self-competence, with mother attachment dimensions explaining 12% and father attachment dimensions explaining an additional 3% of the variance. In the case of scholastic self-competence, mother availability was the strongest unique predictor, followed by father reliance (see Table 2). For both girls and boys, the overall prediction equations for scholastic self-competence were significant. For girls,  $F(4, 338) = 15.70; p < .000$  (explained variance = 16%) and for boys,  $F(4, 300) = 15.77; p < .000$  (explained variance = 17%), with mother attachment explaining 12% of the variance in girls' scholastic self-competence and 15% of the variance in boys' scholastic self-competence. Significant unique predictors were mother availability and father reliance for girls and mother reliance and availability and father reliance for boys (see Table 2).

The overall prediction equation for social self-competence in the total sample was significant,  $F(4, 637) = 18.54; p < .000$ , explaining 10% of the variance in children's social self-competence, with mother attachment dimensions explaining all of the variance. In this case, mother availability had the greatest influence. Father reliance was also a unique predictor, but it added less than 1% explained variance to the model (see Table 2). For both girls and boys, the overall prediction equations for social self-competence were significant. For girls,  $F(4, 335) = 10.94; p < .000$  (explained variance = 12%) and for boys,  $F(4, 297) = 8.19; p < .000$  (explained variance = 10%), with mother attachment explaining 11% of the variance in girls' social self-competence and 9% of the variance in boys' social self-competence. The only significant unique predictor was mother availability for girls,  $t(335) = 4.67; p < .000$ , while for boys, both mother attachment dimensions uniquely predicted their social self-competence.

## Discussion

This study aimed to extend the literature in three ways by examining: (1) the independence of mother and father attachment systems in middle and late childhood; (2) prediction from quality of father and mother attachment to children's self-competence, depression and loneliness; and (3) differences in prediction by child gender, within a unique cultural context.

Results regarding the independence of children's attachment to mother and father suggest that they are moderately related, but there is only about 16% shared variance between the two attachment systems. This suggests that the two constructs are relatively independent of one another and indicates two different, but not completely unique, ways of bonding. This result seems to coincide with Fonagy et al.'s (1994) statement that each parent transmits her/his internal model of relationships, independently from each other's actions. In this way, the child develops and maintains distinguishable groups of mental representations about the expectations of relationships with each primary caregiver. When the child matures, he/she will combine these separate models to determine his/her integrated view towards attachment relationships.

Regarding the connections between father and mother quality of attachment and children's social and emotional development in middle and late childhood, several findings stand out. First, the principal and most remarkable finding was the inverse association of father attachment (especially availability, but reliance as well), with children's depression. In that model, father availability and reliance were the strongest unique predictors of children's depression, even when controlling for maternal attachment. Mother availability was also uniquely predictive, but explained very little of the variability in depression, and dropped out as a unique predictor when examining models for boys and girls separately. Thus, in regards to children's depression symptoms in Argentina, father attachment influences were much stronger than mother attachment influences.

The second compelling finding was the prediction from mother attachment (both reliance and availability) to children's loneliness. Across several models (with differing dimensions of loneliness entered as dependent variables), mother attachment outweighed father attachment in explaining the variance of loneliness across groups (the total sample, boys only and girls only). Father attachment added to the variance explained in all models, but did not add very much compared to mother attachment. Nevertheless, both father availability and reliance on fathers seem to add unique predictive power when explaining several dimensions of loneliness in childhood. These results fit well with the findings of Michiels, Grietens, Onghena, and Kuppens (this issue), who found that paternal affection, as opposed to maternal affection, was associated with fewer emotional symptoms in middle childhood. In addition, they found that paternal attachment security and positive affection were stronger unique predictors of prosocial behaviour and peer relationships in childhood, although maternal variables accounted for slightly more shared variance in predicting peer relationships. In our study, we hypothesise that mother attachment, at least in Argentina, facilitates social involvement and is a protective factor against loneliness in both girls and boys, due to cultural patterns. In Argentine culture, the mother is typically the central figure in family life, while fathers tend to be less influential in choices related to friendships, homework, parent-teacher conferences, etc. In spite of the fact that it is the mother who imposes family norms, she is perceived as more tender, more understanding and closer than the father (Facio & Batistuta, 1998). It is worth noting that in Michiels et al.'s (this issue) Belgian sample as well as in Newland, Coyl, and Chen's (this issue) Taiwanese and US sample, child-father attachment was related in a positive way to reduced emotional symptoms in children.

The pattern of associations between attachment and loneliness was unique when examining affinity for aloneness and aversion towards aloneness. In the total sample, affinity for aloneness was inversely associated with mother reliance and, in

a lesser degree, with father availability. Aversion towards aloneness, on the other hand, was directly associated to mother and father reliance and inversely related to mother and father availability. It would seem that when children are more reliant on both fathers and mothers, but report that parents are less available for support, this may lead to an ambivalent attachment style that produces a deep fear of being alone (aversion to aloneness in children). When examining boys and girls separately, the patterns are a bit different. For girls, only reliance on mother predicted affinity for and aversion to aloneness, while for boys, father availability remained a significant predictor of both of these outcomes. Thus, this study warrants further investigation into specific pathways in father–son and father–daughter relationships. In Argentina, girls, in general, experience a close relationship with their mothers and their maternal grandmothers (Facio & Resett, 2006), and this is probably an important protective factor against affinity for aloneness. Fathers, on the other hand, tend not to display affection for their sons, but instead do house chores/tasks, play soccer, go to games and engage in more functional tasks with them. Generally, however, boys demand more availability from their fathers than girls do (Richaud de Minzi, 2002, 2005). These cultural factors explain why father availability may be more influential in boys' feelings about being alone.

In both scholastic and social self-competence, mother attachment outweighed father attachment in explaining variance (for the global sample, and boys and girls separately). In the case of scholastic self-competence, both father and mother reliance as well as mother availability were important unique predictors for the full sample and for boys. For girls, father reliance and mother availability uniquely predicted self-competence. As noted previously, in Argentine culture girls are, in general, more academically successful; however, they evaluate their scholastic competence as being lower than that of boys, probably because of the cultural belief that males are more capable than girls, but girls try harder than boys (Facio, 2006; Richaud de Minzi, 2005). It would seem that girls need to feel secure in relying on their fathers, in addition to feeling that mothers are available when needed, in order for girls to build scholastic self-competence. Boys, however, seem to rely on both mothers and fathers to motivate them and also seek out their mother's help, but in a lesser degree. When analysing social self-competence, the only significant unique criterion in the total sample and in girls is availability of mother. This is likely due to the Argentine characteristics of relationship between mother and daughter already described.

These results are in line with our previous research findings, in which children's security with their mother seems to be particularly important in the first years of life, but as children move from early childhood into middle childhood, positive father–child relationships provide protection against depression and contribute to functional coping strategies, academic achievement and self-esteem (Grossmann et al., 1999; Kerns & Stevens, 1996; Michiels et al., this issue; Newland et al., this issue; Richaud de Minzi, 1991, 2005, 2006).

### *Implications of the present study*

The results of this study suggest that systems of attachment to mother and father are two distinct but perhaps complementary ways of bonding. Thus, it is necessary to study the influences of both distinguishable groups of mental representations in the development of socio-cognitive and emotional processes in children. It is essential, therefore, that in developmental studies we examine the patterns of relationship

between attachment to fathers and related developmental outcomes. This is particularly important for identifying patterns that are unique to the father–child, as opposed to the mother–child relationship, especially in middle and late childhood (Richaud de Minzi, 1991, 2005, 2006).

This study found that child gender was an important consideration when examining mother–child and father–child relationships, especially when taking into account cultural patterns that influence gender roles of children and parents. Cultural norms, which establish the role of each parent in children’s socialisation, are very different from one culture to another, beyond the universal basis of human attachment relationships.

### **Limitations and future research directions**

A limitation of the present study is its correlational nature, which does not allow exploration of causal relationships. It was carried out within a specific cultural niche and in a specific age range: middle and late childhood. Future research efforts directed at studying mother and father attachment in the prediction of diverse processes in different stages of children’s development within a variety of cultural groups will be necessary. The importance of a culture-sensitive approach to establish universal and specific pathways to children’s developmental outcomes cannot be understated.

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