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# Early Day Care and Infant-Mother Attachment Security

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## Introduction

Whether and how non-maternal child-care experience affects children's development have been of long-standing interest to parents, policymakers and developmental scholars. Ever since Bowlby[1] promulgated attachment theory, thinking derived from it has led some to expect day care, especially when initiated in the earliest years of life, to undermine the security of infant-parent attachment relationships. To some, this was because day care involved the infant's separation from mother (or other principle caregiver), as separation from the attachment figure was inherently stressful. Separation could also undermine the mother's own capacity to provide sensitive care, the primary determinant of security, thereby fostering insecurity indirectly (i.e., separation-insensitivity-insecurity). A final reason for anticipating a link between day care and attachment security was because security reflected general emotional well-being, so adverse effects of day care in infancy would manifest themselves as insecure attachment.

## Background

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Early research on the link between day care and attachment, often carried out on children 3-5 years of age, provided no compelling evidence to support the claim that day care undermined security.[2] But by the mid-1980s, studies carried out on much younger children began to chronicle links between day care and insecurity as measured in the Strange Situation Procedure (SSP) (e.g., Barglow, Vaughn & Molitar[3]). This led Belsky[4,5,6] to conclude that infant day care, especially that initiated on a full- or near full-time basis beginning in the first year of life,[7] was a "risk factor" in the development of insecure attachment in infancy (and of aggression and disobedience in 3-8 year olds).

This conclusion did not go unchallenged. One criticism was that the apparent influence of early and extensive day care on insecurity was the result of other explanatory factors (e.g., family income) not adequately accounted for in existing research.[8] Another was that (unmeasured) poor quality care and not timing and quantity of care was the influential factor.[9] And a third was that independent behavior displayed by day care children not particularly stressed by the SSP – due to their familiarity with separation – was misconstrued as avoidant behavior, leading to erroneous assessments of children as insecure-avoidant.[10]

**Research Questions**

All agreed, however, that more research was needed to illuminate the conditions under which early day care did and did not undermine – or enhance – attachment security. Considered especially important was (a) taking into account confounding child, parent and family background factors that could be responsible for any putative child care effects; (a) distinguishing and disentangling potential effects of distinctive features of the child-care experience, particularly quality, quantity and type of care (e.g., center-based vs. home-based); and (b) determining whether day care was associated with less separation distress in the SSP or independent behavior was mischaracterized as avoidant behavior.

**Recent Research**

The NICHD Study of Early Child Care and Youth Development (SECCYD), launched in 1991 in the US, sought to address these issues and many others.[11] It followed more than 1300 children from birth through the primary-school years[12] and into adolescence,[13] while administering SSP assessments at 15 and 36 months.

After taking into account a host of potentially confounding background factors, results proved strikingly consistent with the risk-factor conclusion[14]– even though the opposite is implied by many writers.[15,16] Typically emphasized is that no single feature of the day care experience *in and of itself*– quantity, type or quality of care – predicted attachment security, *seeming* to suggest no effect of day care on attachment security. Yet what the findings actually revealed was a "dual-risk" phenomenon.[17] Although the strongest predictor of insecurity at 15 months of age was, as expected, insensitive mothering (observed at ages 6 and 15 months), this effect was *amplified* if any one of three distinct child-care conditions characterized the child's experience across the first 15 months of life: (a) averaging more than 10 hours per week in any type of care, irrespective of quality; (b) enrolment in more than a single child-care arrangement; and (c) exposure to low quality care. The first two amplifying conditions applied to most children being studied. But only the first, quantity of care, also contributed to the prediction of attachment insecurity at 36 months,[18] again in interaction with insensitive mothering. Just as important was evidence that infants with extensive day care experience (a) were not less stressed in the SSP than other infants (see also[19]) and that (b) putatively independent behaviour was not misconstrued as avoidant behaviour.[14]

Notably and more recently, Hazen and associates re-examined the issue of quantity of care using NICHD SECCYD data, this time focusing on disorganized attachment in particular.[20] Results revealed that after the age of 6 months as care hours increased from 40 to 60 hours per week, risk of disorganized attachment increased; and after 60 hours per week it increased exponentially. These results emerged with statistical controls for quality of care, family income and infant temperament. Importantly, similar results emerged in a separate and smaller study carried out in Austin, TX (n = 125).

Two other reasonably large-sample studies yield results that are at odds with those of the US study. In one investigation of more than 700 Israeli infants, Sagi and associates[21] found that "center-care, in and of itself, adversely increased the likelihood of infants developing insecure attachment to their mothers as compared with infants who were either in maternal care, individual nonparental care with a relative, individual nonparental care with a paid caregiver, or family day-care." Additional results suggested it was "the poor quality of center-care and the high infant-caregiver ratio that accounted for this increased level of attachment insecurity among center-care infants" (see also[16]). In a second study of 145 first-born Australian infants, Harrison and Unger[22] focused on maternal employment more than features of day care. Return to

employment before five months postpartum – and thus earlier use of child care – predicted decreased rates of insecurity at 12 months of age relative to returning to work later in the first year or not at all. The Australian mothers were more likely than their American and Israeli counterparts to be employed part-time rather than full-time.

Perhaps the most recent work addressing what seems to have become a less pressing question in developmental science—effects of day care on attachment--is that of Carcamo, Vermeer, vand der Veer and van IJzendoorn which was carried out in Chile. This research involved a small sample of 95 poor Mapuche children younger than 12 months of age, 36 of whom entered day care on a full-time basis following first measurement at age 6 months. A second measurement at age 15 months afforded assessment of change in attachment, using The Attachment During Stress Scale; this observational measure had been found to correlate reasonably well with Strange Situation classifications.[23] Evidence revealed, consistent with expectations, that being in day care was associated with increased attachment security over time.

**Research Gaps**

It remains unclear why results from different locales produce variable findings. It could well involve the broader, national child care systems in which day care is embedded. More cross-national research seems called for.

Characteristics of children themselves, perhaps especially their genetic make up, also merits further consideration. After all, ever more evidence indicates that children vary substantially in their susceptibility to environmental influences,[24,25,26] including day care[27] with some proving more developmentally malleable than others.

**Conclusions**

After decades of debate and study, findings from the largest studies of day care and attachment compellingly discredit any claim that “no relation exists between day care and attachment.” Also disconfirmed are assertions that the SSP is methodologically unsuited for evaluating effects of day care or that, at least in the US, adverse effects of day care are simply a function of poor quality care. Nevertheless, the fact that results of three large-scale studies carried out in different locales vary substantially should make it clear that there are probably no inevitable effects of day care on attachment. Effects appear contingent on the societal context in which day care is experienced.

## Implications

The fact that detected effects of day care on attachment security vary substantially by national context means that it is precarious to draw strong inferences from attachment theory as to what the effect of day care will be. Ultimately, day care is a multi-dimensional phenomenon, so questions such as “is day care good for infants (or young children)?” are too simplistic. Quality, type, timing and quantity of care must be distinguished and effects of these features of the child care may vary as a function of the larger familial, community, societal and cultural context in which child care occurs. Not to be forgotten in any evaluation of the effects of day care are humanitarian considerations: What, not only, do mothers, fathers, policymakers and society more generally want, but what do children want?

**References**


1. Bowlby J. *Attachment and Loss*. New York, NY: Basic Books; 1969. Attachment. Vol 1.
2. Belsky J, Steinberg L. The effects of day care: A critical review. *Child Development* 1978;49(4):929-949.
3. Barglow P, Vaughn B, Molitor N. Effects of maternal absence due to employment on the quality of infant-mother attachment in a low risk sample. *Child Development* 1987;58(4):945-954.
4. Belsky J. Infant day care: A cause for concern? *Zero to Three* 1986;6(4):1-7.
5. Belsky J. The “effects” of infant day care reconsidered. *Early Childhood Research Quarterly* 1988;3(3):235-272.
6. Belsky J. Emanuel Miller Lecture: Developmental risks (still) associated with early child care. *Journal of Child Psychology and Psychiatry* 2001;42(7):845-859.
7. Belsky J, Rovine M. Nonmaternal care in the first year of life and the security of infant-parent attachment. *Child Development* 1988;59(1):157-167.
8. Scarr S, Phillips D, McCartney K. Facts, fantasies, and the future of child care in the United States. *Psychological Science* 1990;1(1):26-35.
9. Phillips D, McCartney K, Scarr S, Howes C. Selective review of infant day care research: A cause for concern. *Zeroto Three* 1987;7:18-21.
10. Clarke-Stewart KA. Infant day care: Maligned or malignant? *American Psychologist* 1989;44(2):266-273.
11. NICHD Early Child Care Research Network, ed. *Child Care and Child Development: Results of the NICHD Study of Early Child Care and Youth Development*. New York, NY: Guilford Press; 2005.
12. Belsky J, Vandell D, Burchinal M, Clarke-Stewart KA, McCartney K, Owen MT and The NICHD Early Child Care Research Network. Are There Long-term Effects of Early Child Care? *Child Development* 2007;78(2):681-701.
13. Vandell DL, Belsky J, Burchinal M, Steinberg L, Vandergrift N, the NICHD Early Child Care Research Network. Do Effects of Early Child Care Extend to Age 15 Years?*Child Development*. In press.
14. NICHD Early Child Care Research Network The effects of infant child care on infant-mother attachment security: Results of the NICHD Study of Early Child Care. *Child Development* 1997;68(5):860-879.
15. Allhusen VD, Clarke-Stewart KA, Miner JL. Childcare in the United States: Characteristics and consequences. In: Melhuish E, Petrogiannis K, eds. *Early Childhood Care and Education: International Perspectives*. London, UK: Routledge;

2008:7-26.

16. Love M, Harrison L, Sagi-Schwartz A, van Ijzendoorn MH, Ross C, Ungerer JA, Raikes H, Brady-Smith C, Boller K, Brooks-Gun JC, Jill K, Ellen E, Paulsell D, Chazen-Cohen R.Child Care Quality Matters: How Conclusions May Vary with Context. *Child Development 2003;*74(4):1021-1033[JL1] .
17. NICHD Early Child Care Research Network The effects of infant child care on infant-mother attachment security: Results of the NICHD Study of Early Child Care. *Child Development* 1997;68(5):876.
18. NICHD Early Child Care Research Network. Child care and family predictors of preschool attachment and stability from infancy. *Developmental Psychology* 2001;37(6):847-862.
19. Belsky J, Braungart J. Are insecure-avoidant infants with extensive day-care experience less stressed by and more independent in the strange situation? *Child Development* 1991;62(3):567-571.
20. Hazen NL, Allen SD, Christopher CH, Umenmura T, Jacobvitz DB. Very extensive nonmaternal care predicts mother-infant attachment disorganization: Convergent evidence from two samples. *Development and Psychopathology* 2015;27(3):649-661.
21. Sagi A, Koren-Karie N, Gini M, Ziv Y, Joels T. (2002). Shedding further light on the effects of various types and quality of early child care on infant-mother attachment relationship: The Haifa Study of Early Child Care. *Child Development* 2002;73(4):1166.
22. Harrison LJ, Ungerer JA. Maternal employment and infant-mother attachment security at 12 months postpartum. *Developmental Psychology* 2002;38(5):758-773.
23. Cárcamo RA, Van IJzendoorn MH, Vermeer HJ, Van Der Veer R. The validity of the Massie-Campbell Attachment During Stress Scale (ADS). *Journal of Child and Family Studies* 2014;23(5):767–775. doi:10.1007/s10826-013-9728-z
24. Belsky J, Bakermans-Kranenburg M, van Ijzendoorn M. For Better and for worse: Differential susceptibility to environmental influences. *Current Directions in Psychological Science* 2007;16(6):305-309.
25. Belsky J, Pluess M. Beyond risk, resilience and dysregulation: Phenotypic plasticity and human development. *Development and Psychopathology* 2013;25(4 Pt 2):1243-1261.
26. Belsky J, Van IJzendoorn MH. Genetic differential susceptibility to the effects of parenting. *Current Opinion in Psychology* 2017;15:125-130.
27. Pluess M, Belsky J. Differential susceptibility to rearing experience: the case of childcare. *Journal of Child Psychology and Psychiatry* 2009:50(4):396-404.