Child Care and Its Impact on Children 2–5 Years of Age. Commenting: McCartney, Peisner-Feinberg, and Ahnert and Lamb

W. Steven Barnett, PhD

National Institute for Early Education Research, USA

February 2011, Rev. ed.

Introduction

McCartney, Peisner-Feinberg, and Ahnert and Lamb have surveyed research on the hopes and fears that have emerged as formal child care has become the norm in many nations around the globe. The greatest hope has been that child care may significantly improve the lives and development of young children, especially those most at risk of poor outcomes, and this potential is now well established.[1,2] The greatest fear has been that child care may disrupt parent–child relationships and damage children's social and emotional development.[3] Typically, the change in child care arrangements is attributed to the movement of mothers into paid work outside the home. However, even children whose mothers are not in paid employment now commonly participate in similar arrangements.[4] In this way, we see that child care has two purposes:

1. Enabling parents to work and conduct other activities away from their children
2. Providing education and social activities for children.

Demand for both has driven changes in care; and attendance in school-like programs for much of the day is now nearly universal in some countries as early as age three.[5]

Research on child care is largely conducted and published in sub-specializations, each with its own perspective, as reflected in the reviews. McCartney describes child care research as evolving in stages; from simple comparisons of children in and out of care to analyses of the effects of quality ? controlling for family characteristics ? to examinations of the joint influences of child care and family contexts. Peisner-Feinberg categorizes research according to its focus on

1. Interventions seeking to improve education and development, or
2. Ordinary child care available to the general population.

Ahnert and Lamb tend to focus on children's relationships with parents, other caregivers, and other children. The fragmentation of research by specialization limits the clarity of conclusions from their review. Yet, all of the authors recognize the need for research to become more multidisciplinary and to encompass the broader social ecology if it is to increase our understanding of the effects of child care on development.

Research and Conclusions

The authors of these reviews identify as a primary goal of their research the production of estimates regarding the effects of variations in child care experiences on children's language, cognitive, social, emotional, and physical development, and well-being, both concurrently and projected in the future. The dimensions of experience they cite as important include age of entry, hours in care, type of caregiver and setting, and quality. Quality has been defined in terms of both process (activities) and structure (teacher characteristics, class size, etc.) and is poor to mediocre in many countries.[6-7] The effects of variations in care are not expected to be uniform; rather, it is expected to vary with the characteristics of the children, their families, and the broader social contexts in which they live. Indeed, researchers have come to view child care and home experiences as being jointly determined.[8]

Overall, the research gives us reason to hope and has allayed some major fears. Nevertheless, these particular reviews raise questions about whether we can expect only modest cognitive and social benefits which may be at least partially offset by modest negative effects on social behaviour and health. In my view, a more optimistic assessment of the potential of child care to improve development is called for based on a somewhat broader review of the research, with a greater emphasis on education.

To date, the immediate and lasting positive effects of quality care on language, cognitive development, and school achievement have been confirmed by converging findings from large, reasonably representative longitudinal studies and smaller, randomized trials with long-term follow-ups.[1,2,9-13] Contributors to this knowledge base include meta-analytic reviews of interventions and large longitudinal studies conducted in several countries.[1,2,14,15] Comprehensive meta-analyses now establish that effects of early care decline, but do not disappear, and when initial effects are large, long-term effects remain substantial.[1,2] Null findings in cognitive and social domains in a few studies may reasonably be attributed to the limitations inherent to their designs, samples, and measures. Child development benefits were most often found for quality center care, and further research is warranted on the effects of other types of care. Group size is a particularly important contributor to effectiveness in the broader education literature.[16] Results are mixed regarding the extent to which the benefits derived from the quality care (at least in some domains) may benefit disadvantaged children more than other children ? but such findings would be generally consistent with results from intervention and education studies.[11,16]

There also is sufficient research to conclude that child care does not pose a serious threat to children's relationships with parents or to children's emotional development.[1,2,9] A recent study of preschool centres in England produced somewhat similar results: children who started earlier had somewhat higher levels of anti-social or worried behaviour ? an effect reduced but not eliminated by higher quality.[17] In the same study, an

earlier start in care was not found to affect other social measures (independence and concentration, cooperation and conformity, and peer sociability), but was found to improve cognitive development. However, some studies find that the quality of publicly subsidized care in some countries is so low that it harms children's development.[18-20]

When national policies ignore child care quality in setting subsidy rates and regulations they forego the substantial positive benefits from high quality programs and instead reap null or even negative impacts on child development.[1,9, 20-22]

Selection bias is also a potential problem for most studies of child care as it may confound variations in child and family characteristics with variations in child care contexts. In research relating child care to behaviour problems, selection bias is especially worrisome as causality plausibly runs in the opposite direction. A randomized trial of Early Head Start found that a treatment group received more hours of care and had fewer behaviour problems in the preschool years.[23] Other experimental preschool studies have found lower rates of behaviour problems, conduct disorder, delinquency, and crime into adulthood among subjects placed in child care earlier in life.[9,24]

Implications for Policy and Service Development

All of the papers find that quality of care is frequently low, the primary reason being the relatively high cost of quality. For example, teacher quality is a compelling influencing factor in overall quality and its benefits for children ? a factor that is also highly dependent on compensation.[25] Parents appear to have difficulty affording or perceiving the need for quality care. Nations vary in the extent to which quality child care is viewed as a government responsibility to be supported by regulation and public funding.[5] Since support for education is widely regarded as an appropriate government function, it would appear that some nations still have an inadequate appreciation of the educative role of child care. Benefit–cost analyses regarding interventions provide wide margins for benefits over costs, suggesting that even small to moderate benefits from quality care are of sufficient value to warrant government regulation and financial support on behalf of all children.[26-27]

When governments inadequately invest in quality and policies even encourage use of poor quality care, poor teaching and care giving may lead to poor developmental outcomes for children and failure to obtain the potential benefits of quality care across all domains of development. The foregone developmental benefits are large relative to the employment benefits to parents from such policies.[26] Increased support for quality, particularly enhancing the professional capabilities of child care teachers through preservice education and ongoing training could greatly improve the benefits of child care policy for children, families, and the general public.[25]

References

1. Camilli G, Vargas S, Ryan, S, Barnett, WS. Meta-analysis of the effects of early education interventions on cognitive and social development. *Teachers College Record* 2010;112(3):579-620.
2. Nores M, Barnett WS. Benefits of early childhood interventions across the world: (Under) Investing in the very young. *Economics of Education Review* 2010;29(2):271-282.
3. Belsky J. Developmental risks (still) associated with early child care. *Journal of Child Psychology and Psychiatry and allied disciplines* 2001;42(7):845-859.
4. Casper LM, Bianchi SM. *Continuity & change in the American family.* Thousand Oaks, CA: Sage Publications; 2002.

5. Kamerman SB, ed. *Early childhood education and care:International perspectives. The report of a consultative meeting.* New York, NY: The Institute for Child and Family Policy at Columbia University; 2001.
6. Tietze W, Cryer D. Current trends in European early child care and education. *The Annals of the American Academy of Political and Social Science* 1999;563:175-193.
7. Goelman H, Doherty G, Lero D, LeGrange A, Tougas J. *You bet I care: Caring and learning environments: Quality in child care centers across Canada*. Guelph, ON: Centre for Families, Work and Well-Being, University of Guelph; 2000.
8. Ahnert L, Lamb ME. Shared care: Establishing a balance between home and child care settings. *Child Development* 2003;74(4):1044-1049.
9. Barnett WS. *Preschool education and its lasting effects: Research and policy implications*. Tempe, AZ: Education Policy Research Unit. Education and Public Interest Center; 2008.
10. McKay H, Sinisterra L, McKay A, Gomez H, Lloreda P. Improving cognitive ability in chronically deprived children. *Science* 1978;200(4339):270-278.
11. Peisner-Feinberg ES, Burchinal MS, Clifford R, Culkin M, Howes C, Kagan SL, Yazejian N, Byler P, Rustici J, Zelazo J. *The children of cost, quality and outcomes go to school.* Chapel Hill, NC: University of North Carolina, Frank Porter Graham Child Development Center; 1999.
12. Reynolds AJ. Educational success in high risk settings: Contributions of the Chicago Longitudinal Study. *Journal of School Psychology* 1999;37(4):345-354.
13. Campbell F, Pungello E, Miller-Johnson S, Burchinal M, Ramey C. The development of cognitive and academic abilities: Growth curves from an early childhood experiment. *Developmental Psychology* 2001;37(2):231-242.
14. Leseman PPM, Fahrenfort M, Hermanns JMA, Klaver AW. *De experimentenpovoedingsondersteuning: Leermomenten en toekomstperspectieven.* Den Haag, Neth: Ministerie van VWS; 1998.
15. Sammons P, Sylva K, Melhuish E, Siraj-Blatchford I, Taggart B, Elliot K. *Technical Paper 8a: Measuring the impact of pre-school on children's cognitive progress over the preschool period.* London, UK: Institute of Education, University of London; 2003.
16. Finn JD. Class-size reduction in grades K-3. In: Molnar A, ed. *School reform proposals: The research evidence.* Greenwich, Conn: Information Age Publishing; 2001:27-48.
17. Sammons P, Sylva K, Melhuish E, Siraj-Blatchford I, Taggart B, Elliot K. *Technical Paper 8b: Measuring the impact of pre-school on children's social/behavioural development over the preschool period.* London, UK: Institute of Education, University of London; 2003.
18. Datta-Gupta N, Simonsen M. Non-cognitive child outcomes and universal high quality child care. *Journal of Public Economics* 2010;94(1-2):30-43.
19. Bernal R. The effect of maternal employment and child care on children's cognitive development. *International Economic Review* 2008;49:1173-1209.
20. Herbst CM, Tekin E. *The impact of child care subsidies on child well-being: evidence from geographic variation in the distance to social service agencies*. Working Paper 16250. Cambridge, MA: National Bureau of Economic Research; 2010.
21. Burchinal P, Kainz K, Cai K, Tout K, Zaslow M, Martinez-Beck I, Ratgeb C. *Early care and education quality and child outcomes.* Research to policy brief No. 1. Washington, DC: Office of Planning, Research and Evaluation, Administration on Children and Families; 2009.
22. Felfe C, Lalive R. *How does early childcare affect child development? Learning from the children of German unification.* St. Gallen, Switzerland: University of St. Gallen; 2010.
23. Love J, Harrison L, Sagi-Schwartz A, van Ijzendoorn MH, Ross C, Ungerer JA, Raikes H, Brady-Smith C, Boller K, Brooks-Gunn J, Constantine J, Eliason Kisker E, Paulsell D, Chazan-Cohen R. Child care quality matters: How conclusions may vary with context. *Child Development* 2003;74(4):1021-1033.
24. Raine A, Mellingen K, Liu J, Venables P, Mednick S. Effects of environmental enrichment at ages 3-5 years on schizotypal personality and antisocial behavior at ages 17 and 23 years. *American Journal of Psychiatry* 2003;160(9):1627-1635.
25. Pianta RC, Barnett, WS, Burchinal M, Thornburg, KR. The effects of preschool education: What we know, how public policy is or is not aligned with the evidence base, and what we need to know. *Psychological Science in the Public Interest* 2010;10:49–88.
26. Barnett WS. Why governments should invest in early education. *CESifo- DICE report* 2008;6(2):9-14.
27. Barnett WS, Masse LN. Early childhood program design and economic returns: Comparative benefit-cost analysis of the Abecedarian program and policy implications. *Economics of Education Review* 2007;26:113-125.