Acta Pædiatrica ISSN 0803–5253

REVIEW ARTICLE

Fathers' involvement and children's developmental outcomes: a systematic review of longitudinal studies

Anna Sarkadi (Anna.Sarkadi@kbh.uu.se)[1,4], Robert Kristiansson[2], Frank Oberklaid[3], Sven Bremberg[4]

1.Department of Women's and Children's Health, Uppsala University, Sweden
2.Centre of Clinical Research, Västerås County, Sweden
3.Centre for Community Child Health, Royal Children's Hospital, Melbourne, Australia
4.National Institute of Public Health, Östersund, Sweden

Keywords
Fathers, Father-child relations, Paternal behaviour

Correspondence
A Sarkadi, Dept. of Women's and Chidren's Health, Unit for Child Public Health, Uppsala Academic Hospital, Gate 17, 751 85 Uppsala, Sweden.
Tel: +46 18 611 59 65 | Fax: +46 18 50 45 11 | Email: Anna.Sarkadi@kbh.uu.se

Received
15 April 2007; revised 19 September 2007; accepted 26 September 2007.

DOI:10.1111/j.1651-2227.2007.00572.x

Abstract

Objective: This systematic review aims to describe longitudinal evidence on the effects of father involvement on children's developmental outcomes.

Methods: Father involvement was conceptualized as accessibility (cohabitation), engagement, responsibility or other complex measures of involvement. Both biological fathers and father figures were included. We searched all major databases from the first dates. Data on father involvement had to be generated at least 1 year before measuring offspring outcomes.

Results: N = 24 publications were included in the overview: 22 of these described positive effects of father involvement, whereof 16 studies had controlled for SES and 11 concerned the study population as a whole [five socio-economic status (SES)-controlled]. There is certain evidence that *cohabitation* with the mother and her male partner is associated with less externalising behavioural problems. Active and regular *engagement* with the child predicts a range of positive outcomes, although no specific form of engagement has been shown to yield better outcomes than another. Father engagement seems to have differential effects on desirable outcomes by reducing the frequency of behavioural problems in boys and psychological problems in young women, and enhancing cognitive development, while decreasing delinquency and economic disadvantage in low SES families.

Conclusions: There is evidence to support the positive influence of father *engagement* on offspring social, behavioural and psychological outcomes. Although the literature only provides sufficient basis for *engagement* (direct interaction with the child) as the specific form of 'effective' father involvement, there is enough support to urge both professionals and policy makers to improve circumstances for involved fathering.

INTRODUCTION

There would be general agreement with the intuitive hypothesis that the involvement of fathers is important for the development and welfare of their children. Historically, the father-ideal has gone through different phases; from moral teacher and disciplinarian, through breadwinner and later gender-role model and 'buddy', to the new nurturing, coparenting father (1). Qualitative interviews with fathers from several different Western countries show that the discourse of modern, nurturing fatherhood appears to influence the interviewed men's ways of thinking about their roles as fathers, with wanting to 'be there' for their children as the major concern (2–7). Reflecting this social trend, the American Academy of Paediatrics (AAP) Committee on Psychosocial Aspects of Child and Family Health recently stated that actively enhancing men's roles in their children's care and development is an important aspect of paediatric work (8).

Unfortunately, current institutional policies in most countries do not support the increased involvement of fathers in child rearing. Paid parental leave for fathers, fathers' groups and employers supportive of men staying home with their infants and sick children are still, but a dream in most countries. If the scientific community wishes to argue for institutional policies promoting involved fathering, evidence on the role of fathers in child development needs to be presented in a convincing way. This systematic review aims to describe available prospective evidence on the effects of specific forms of father involvement on the development and welfare of children.

METHODS

Definition of terms used

For the purposes of this systematic review the definition of 'father' included biological fathers as well as father figures. These could both be identified as stepfathers or as men cohabiting with the child's mother. None of the original articles made any mention of adoptive fathers and therefore this category of fathers is not specifically included in this review. In defining aspects of 'father involvement' we used the conceptualization proposed by Lamb et al. (9): *accessibility*–father's presence and availability, *engagement*–direct contact, such as play, reading, outings or care-giving activities and *responsibility*–participation in decisions on childcare, health visits and other practical issues, such as choosing clothes, diapers and sleeping arrangements for the infant (10,11). Accessibility according to Lamb et al. (9) implies being available for interaction with the child, a circumstance that could not be ascertained in a number of large studies. Here, only information on whether the father/father figure resided with the mother was available. Therefore, we used fathers' *cohabitation* instead of accessibility as a measure of involvement in these instances.

Although financial support to the child is part of the responsibility aspect, providing financial support only was not considered as a measure of father involvement. We did not review studies examining the effects of father absence: there is a vast literature attending to this issue (12).

The outcomes studied were different aspects of children's 'development and welfare'. We accepted a broad range of outcome measures as long as these could reasonably be assumed to have long-term effects on the health and well being of the study subjects. Outcome measures, thus selected fell mainly into the category of proximal determinants of health. Measures relating to education were educational attainment (self-reported or from public educational certificates) and age-appropriate assessments of IQ and cognitive skills. Measures relating to behaviour were parent-or teacher reported externalising and internalising behavioural problems, adolescent-reported delinquency and mothers' report of trouble with the police. Measures relating to psychological outcomes included self-reported negative feelings or psychological distress/morbidity, and – on the positive end – internal locus of control. Measures relating to social outcomes included psychologist-assessed social skills, problem-solving abilities and adaptive behaviour, as well as self-reported empathic concern. Teenage smoking and economic disadvantage in adulthood were included because both these measures are related to less favourable long-term outcomes of health. We did not, however, include outcome measures relating to parent behaviour, such as child abuse or quality of the home environment.

Literature review

We conducted a systematic literature review in June 2003 with an update in September 2007. We required a true prospective, longitudinal design, that is data on father involvement had to be generated at least 1 year before measuring offspring outcomes. Due to this criterion, several otherwise interesting cross-sectional publications had to be excluded. Because socio-economic variables often confound both parenting behaviours and child outcomes, we specifically examined if these variables were controlled for in the study.

We included the databases PubMed, ERIC, Sociological Abstracts, Cochrane Library, Campbell Collaboration and Psychinfo from the first dates available with the search words (anywhere in the text): 'father (paternal)' & 'involvement (engagement)' & 'longitudinal (prospective)'; 'study (survey)'; 'cohort'; 'accessibility'; 'engagement' and 'responsibility' in different combinations.

RESULTS

Of 63 identified publications, a total of 24 qualified for inclusion in our systematic review on father involvement. The papers that did not qualify either presented cross-sectional data or lacked adequate measures of father involvement or child outcomes. The 24 selected papers have drawn data from 16 different longitudinal studies involving approximately 22 300 individual datasets from newborn babies to young adults. The results are presented in two tables – Table 1 includes studies that had controlled for socio-economic status (SES), and Table 2 those that had not.

Wherever possible we indicated for each study the aspect of father involvement that was documented. We also indicated if the study concerned biological fathers only, if the informant on father involvement was the child or another person, and if any controlling factors of interest had been presented. In the final column we summarize the results of each study.

Studies with control for SES: Some general, but more subgroup-specific effects

Five of the 18 publications controlling for SES (Table 1, Supplementary Material online) described general positive effects of father involvement on offspring outcomes for the study population as a whole. Another 11 papers described positive effects, but only for certain subgroups, such as boys, girls, poor families, adolescents with high-delinquency rates or African Americans. In the total of 16 studies with positive effects, outcomes affected could be described as behavioural, social, cognitive and psychological. In addition, one study found no effect of father involvement (13), whereas

another described some possible negative effects of involvement (14).

General effects of father involvement

Of the studies describing general positive effects, one concerned *cohabitation* (15), two *engagement* (16,17) and one a combined measure of *involvement* (18), as the form of father involvement that predicted positive outcomes. An additional study included all aspects of father *involvement* and showed a protective effect against regular smoking in adolescence (19). Outcomes in studies showing general effects were decreased behavioural problems in adolescence (15,18), better social/relational functioning both in childhood (16) and adulthood (20) and better educational outcomes (17) (Table 1, Supplementary Material online). The analyses in these studies were based on approximately 14 000 datasets from three national longitudinal surveys and a small study on premature infants.

Subgroup-specific effects of father involvement

Behavioural effects

Boys were found to benefit from a *cohabiting* father resulting in less aggressive behaviour in a socio-economically disadvantaged sample of 326 children (21). In a socially much more advantaged population of 600 children with intact families, boys with a highly *engaged* father had less behavioural problems during the early school years than boys with less engaged fathers during the preschool years (22). A form of behavioural problem significant during the teens and early adulthood, delinquency or criminality, was also affected by father involvement. Specifically, high father *engagement* in poor families (with stable marriages) predicted lower incidence of delinquency during the early adult years for both sexes (23,24). For adolescents already engaging in rather high rates of delinquency at baseline, higher rates of father involvement had a protective effect against criminality 1–2 years later (25). In addition, intact family structure at age seven (father *cohabitation*) had a protective effect against trouble with the police for teen girls and father *engagement* at age seven a protective effect against trouble with the police for teen boys in the National Child Development Study (26).

Social effects

The subsample for which father engagement at age seven had a selective social effect in the National Child Development Study was men from a manual socio-economic family background (27). These men were more protected against economic disadvantage, such as homelessness or state benefits, in their adult lives compared to their counterparts without an engaged father.

Cognitive effects

In a sample of 985 prematurely born infants, a highly *engaged* father predicted significantly higher IQ scores at 3 years of age in the socially disadvantaged subgroup of African American youngsters compared to those African American children whose fathers had not been playing with or caring for their children daily (28). In the National Survey of Children from the U.S. it was instead in the socially more advantaged families, only temporarily or never experiencing poverty, that father *engagement* affected educational attainment (23,24).

Psychological effects

The risk of psychological morbidity during adulthood for women was decreased by their father's *engagement* in them at age seven (reads to child) and at age 16 (interested in child's education) in the National Child Development Study (29,30). In the National Survey of Children from the U.S., an *engaged* father in socially more advantaged families – only temporarily or never experiencing poverty – had a protective effect against emotional distress in young adulthood (23).

Lack of effect or negative effect of father involvement

Two of the 18 publications controlling for SES (Table 1, Supplementary Material online) described a lack of effect or a negative effect of father involvement on offspring outcomes for the study population as a whole. Father *cohabitation* during the first three years did not seem to affect cognitive development in a large U.S. study of socio-economically disadvantaged families (13). Similarly, a lack of effect of father *engagement* on the child's cognitive abilities at 14 years of age was seen in a long-term follow-up of 90 premature infants (14). In fact, in the same study, high father involvement at age six was associated with more hyperactivity at age 14.

Studies with no control for SES: General positive and specific social effects

All six publications not controlling for SES (Table 2, Supplementary Material online) described general positive effects of father involvement on offspring outcomes for the study population as a whole. The outcomes concerned enhanced cognitive development during infancy (31), better than average social functioning during childhood (32,33), and improved psychological functioning in adulthood, such as more internal locus of control and better empathic capacity (34,35). An additional publication described general positive effects of father engagement on cognitive development with the slightly intriguing restriction that it is the father's involvement *reported by the mother* and *not* the father's own report of his involvement that is associated to positive outcomes (36).

DISCUSSION

Forms of father involvement predicting positive outcomes

A whole 17 of the 18 publications examining the effects of father *engagement* reported positive outcomes. Two publications showed a general effect of father engagement. Adding to the validity of these analyses is the fact that 12 of the 18 publications have controlled for SES in their analyses. Therefore, we conclude that there is evidence to indicate that father *engagement* positively affects the social, behavioural, psychological and cognitive outcomes of children.

The two studies that used a measure of father involvement based on the definition according to Lamb et al. both showed positive effects, one for the study population as a whole (19) and one for a more vulnerable subgroup of adolescents exhibiting criminal behaviour (25). Yet another study using a combined measure of child-reported father involvement showed general positive effects on behavioural outcomes (18).

Three of the four studies examining *cohabitation* found a positive effect: all three had controlled for SES, included both biological fathers and father figures and all outcomes related to reduction of behavioural difficulties. In two studies, the positive effects concerned subgroups, such as decreased aggressive behaviour of boys (21) and less risk of trouble with the police at age 16 for girls (26). Notably, in the only study, where a general positive effect was found for father *cohabitation* (15), the effect of cohabitation on behavioural outcomes diminished when current paternal involvement, as described by the adolescent, was added to the regression equation. In summary, studies on cohabitation provide certain evidence to that when children live with their mothers and her male partner they have less adverse behavioural outcomes compared to those children whose mothers live alone. However, as has been pointed out in the literature, father cohabitation sets the stage for involved fathering (24,37) and it is therefore impossible to tell whether it is a non-measured element of father involvement or support to the mother in her role and in disciplining the children (or both) that have led to the observed outcomes.

Further studies needed to clarify the role of biological fathers vs father figures

None of the six studies not controlling for SES (Table 2, Supplementary Material online) included non-biological father figures in their samples: however, 12 of the 18 studies controlling for SES (Table 1, Supplementary Material online) did so. In all of these 12 latter studies positive effects were described for father involvement, possibly suggesting that a biological bond is not necessary for mediating outcomes. In fact, one study suggests that a highly engaged father figure may have a greater impact in reducing the risk for emotional and behavioural problems at age 16 than engagement of a biological father, although absolute levels of problems were lower in the latter group (30). On the other hand, involvement of non-resident biological fathers in a low-income minority population had a significant effect on altering the criminal behaviour trajectory of their adolescents with high initial levels of delinquency, even after controlling for the presence of a father figure in the household (25). Thus, further studies specifically designed to examine the role of fathers versus father figures in mediating child outcomes are needed.

Methodological comments

Generally the 18 studies controlling for SES (Table 1, Supplementary Material online) would be regarded as having a higher quality than the six studies (Table 2, Supplementary Material online) that do not. With a total of ~22 000 children from a variety of backgrounds included, these prior publications provide a solid base for conclusions concerning some of the more general effects of paternal involvement. However, only three (14,16,28) of these 18 studies had the effects of father involvement as its explicit focus in their original design and only one of these produced general effects (16). This means that 15 studies included father involvement as one of many variables of interest for the outcomes examined.

Although most of these studies were designed to extensively control for confounders relating to socio-economic status and family environment, difficulties arise in interpreting the results. When conducting extensive statistical analyses on large datasets where the chosen variable of interest for a certain paper is one among many the risk of statistically significant results without corresponding absolute or "real life" significance is impending.

The six studies not controlling for SES (Table 2, Supplementary Material online) totalled ~310 children, a small fraction of the total child population in this systematic review. Weaknesses of methodology in several of these studies include the small number of children involved and the skewed selection of socio-economically advantaged, intact, white families. It could be argued that positive outcomes are mainly a function of higher SES: more affluent or better-educated fathers would, thus, be more involved with their children. On the other hand, these studies often included rather advanced outcome measures, such as laboratory observations of child play interaction or standard interviews by a trained psychologists. In addition, five of these studies had the effects of father involvement as its explicit focus resulting in more adequate design and measures. These studies could perhaps be described as having more of an exploratory character rather than producing generalisable data. Specifically, these smaller studies can cast light on important details in the quality of father–child relationship affecting later outcomes. In summary, papers presented in Table 2 support the notion that father involvement positively affects developmental outcomes, but fail to deal with important confounding factors.

Further limitations for publications in both Tables 1 & 2 (Supplementary Material online) include that the measures used to describe father involvement differ and results are therefore not a suitable basis for social or clinical decision making. Another limitation is that 14 of the 24 articles included are from the U.S. and another seven from the U.K. Neither of these countries have policies promoting paternal involvement, such as parental leave for fathers or supporting part-time work of fathers with young children. Results based on research in, for example the Nordic countries with explicit social policies that promote paternal involvement would be an important complement to these studies. Also, because the extent and form of father involvement differs between generations (1), papers with datasets from the 1950s or even 1980s have questionable validity for today's fathers. Future research should also be designed to effectively take into account today's diverse non-intact family structures with children, for example spending equal time with both parents.

CONCLUSIONS

Although almost all studies in this overview are subject to methodological criticism, some conclusions could be argued to be valid. It would seem that active and regular *engagement* in the child predicts a range of positive outcomes, although it is not possible to say exactly what constitutes fathers' 'effective' type of engagement. Measures have ranged from talking and common activities to a salient role in care taking with the common theme of actual bidirectional interaction taking place between the child and the father/father figure. On the other hand, what is especially promising with the effects of father engagement is that it seems to differentially influence desirable outcomes. Father engagement reduces the frequency of behavioural problems in boys and psychological problems in young women; it also enhances cognitive development while decreasing criminality and economic disadvantage in low SES families.

More studies are needed to explore the role of a biological bond between the father figure and the child on the effects of paternal involvement. There are results to indicate that non-biological father figures can play an important role for children in their households, but also that biological fathers may be salient in a specific way.

With the above mentioned methodological limitations in mind there is still enough evidence to support the intuitive assumption that engaged fathers are good for their children. This seems especially valid when it comes to children at risk of poor outcomes. Professionals who work with young children and their families are recommended to enquire about and actively encourage fathers' engagement with their children from an early age. Strategies for this may include actively inviting fathers to come in for health-care related visits for their infants, to speak directly to the father as well as the mother and to explicitly solicit his opinions during consultation, including not asking the father to send the mother to the phone if calling home to the family (8). Stating that fathers, indeed, have an important role in promoting their child's social and emotional development might also be a useful strategy in promoting father involvement.

How father involvement could be operationalized to serve as a basis for social policies and interventions is still unclear. There are many ways for fathers to be positively involved with their children and besides vast individual variations there are also cultural and social norms that influence fathering. The literature only provides sufficient basis for recommending *engagement* as the specific form of involvement without further detail. Nonetheless, public policy has the potential to serve as a facilitator or barrier to fathers spending time with their children during the crucial early years of development. Thus, even without knowing what exactly brings about the positive outcomes seen in this review, there is enough support to urge both professionals and policy makers to improve circumstances for involved fathering.

ACKNOWLEDGEMENTS

Anna Sarkadi was supported through a personal research grant from the Swedish council for working life and social research, grant nr 2002–0940.

References

1. Pleck E, Pleck J. Fatherhood ideals in the United States: Historical dimensions. In: Lamb M, Editor. *The father's role in child development*. New York: John Wiley & Sons, 1997: pp. 33–48.
2. Daly K. Reshaping fatherhood: finding the models. *J Fam Issues* 1993; 14: 510–30.
3. Olsson P, Jansson L, Norberg A. Parenthood as talked about in Swedish ante- and postnatal midwifery consultations. *Scand J Caring Sci* 1998; 12: 205–14.
4. Anderson A. The father-infant relationship: Becoming connected. *J Soc Pediatr Nurs* 1996; 1: 83–92.
5. Barclay L, Lupton D. The experience of new fatherhood: a socio-cultural analysis. *J Adv Nurs* 1999; 29: 1013–1020.
6. Henderson A, Brouse J. The experiences of new fathers during the first 3 weeks of life. *J Adv Nurs* 1991; 16: 293–8.
7. Jordan P. Laboring for relevance: expectant and new fatherhood. *Nurs Res* 1990; 39: 11–6.
8. Coleman WL, Garfield C, and the Committee on Psychosocial Aspects of Child and Family Health. Fathers and Pediatricians: enhancing men's roles in the care and development of their children. *Pediatrics* 2004; 113: 1406–11.
9. Lamb M, Pleck J, Charnov E, et al. A biosocial perspective on paternal behavior and involvement. In: Lancaster J, Altman J, Rossi A, et al., Editors. *Parenting accross the lifespan: Biosocial perspectives*. New York: Academic Press 1987: 11–42.
10. Cabrera N, Tamis-LeMonda S, Bradley R, et al. Fatherhood in the twenty-first century. *Child Dev* 2000; 71: 127–36.
11. Lamb M. Fathers and child development. In: Lamb M, Editor. *The father's role in child development*. New York: *John Wiley & Sons* 1997: 1–18.
12. Single-Rushton W, McLanahan S. Father absence and child wellbeing: A critical review. In: Moynihan D, Smeeding T, Rainwater L, Editors. *The future of the family.* New York: Russel Sage Foundation, 2004: 116–55.
13. Crockett L, Eggebeen D, Hawkins A. Father's presence and young children's behavioural and cognitive adjustment. *J Family Issues* 1993; 14: 355–77.
14. Levy-Shiff R, Einat G, Mogilner M, et al. Biological and environmental correlates of development outcome of prematurely born infants in early adolescence. *J Ped Psychol* 1994; 19: 63–78.
15. Carlson M. Family structure, father involvement, and adolescent behavioral outcomes. *J Marriage Family* 2006; 68: 137–54.
16. Levy-Shiff R, Hoffman M, Mogilner S, et al. Father's hospital visits to their preterm infants as a predictor of father-infant relationship and infant development. *Pediatrics* 1990; 86: 289–93.
17. Flouri E, Buchanan A. Early father's and mother's involvement and child's later educational outcomes. *Br J Educ Psychol* 2004; 74: 141–53.
18. Chang J, Halpern C, Kaufman J. Maternal depressive symptoms, father's involvement, and the trajectories of child problem behaviors in a US national sample *Arch Pediatr Adolesc Med* 2007; 161: 697–703.
19. Menning C. Nonresident fathers' involvement and adolescent smoking. *J Health Soc Behav* 2006; 47: 32–46.
20. Flouri E, Buchanan A. What predicts good relationships with parents in adolescence and partners in adult life: Findings from the 1958 British Cohort Study. *J Fam Psychol* 2002; 16: 186–98.
21. Vaden-Kiernan N, Ialongo N, Pearson J, et al. Household family structure and children's aggressive behavior: A

longitudinal study of urban elementary school children. *J Abnormal Child Psychology* 1995; 23: 553–68.
22. Aldous J, Mulligan G. Father's child care and children's behavioral problems. *J Family Issues* 2002; 23: 624–47.
23. Harris K, Marmer J. Poverty, paternal involvement, and adolescent well-being. *J Family Issues* 1996; 17: 614–40.
24. Harris K, Furstenberg F, Marmer J. Paternal involvement with adolescents in intact families: The influence of fathers over the life course. *Demography* 1998; 35: 201–16.
25. Coley R, Medeiros B. Reciprocal Longitudinal Relations Between Nonresident Father Involvement and Adolescent Delinquency. *Child Dev* 2007; 78: 132–47.
26. Flouri E, Buchanan A. Father involvement in childhood and trouble with the police in adolescence. *J Interpers Violence* 2002; 17: 689–701.
27. Flouri E, Buchanan A. Childhood families of homeless and poor adults in Britain: a prospective study. *J Econ Psychol* 2004; 25: 1–14.
28. Yogman M, Kindlon D, Earls F. Father involvement and cognitive behavioral outcomes of preterm infants. *J Am Acad Child Adolesc Psychiatry* 1995; 34: 58–66.
29. Buchanan A, Flouri E, Ten Brinke J. Emotional and behavioural problems in childhood and distress in adult life: risk and protective factors. *Austr N Z J Psychiatr* 2002; 36: 521–7.
30. Flouri E, Buchanan A. The role of father involvement in children's later mental health. *J Adolescence* 2003; 26: 63–78.
31. Nugent K. Cultural and psychological influences on the father's role in infant development. *J Marriage Fam* 1991; 53: 475–85.
32. Pruett K. Father's influence in the development of infant's relationships. *Acta Pediatr Scand* 1988; 77: 43–52.
33. Pruett K. Role of the father. *Pediatrics* 1998; 102: 1253–61.
34. Williams E, Radin N. Effects of father participation in child-rearing: twenty-year follow-up. *Am J Orthopsych* 1999; 69: 328–36.
35. Koestner R, Franz C, and Weinberger J. The family origins of empathic concern: A 26-year longitudinal study. *J Pers Soc Psych* 1990; 58: 709–17.
36. Broberg A, Wessels H, Lamb M, et al. Effects of day care on the development of cognitive abilities in 8-year-olds: A longitudinal study. *Dev Psychol* 1997; 33: 62–9.
37. Gable S, Crnic K, Belsky J. Coparenting within the family system: Influence on children's development. *Family Relations* 1994; 43: 380–86.

Supplementary material

The following supplementary material is available for this article:

Table S1 Longitudinal studies on the effects of father involvement on offspring development and welfare – control for SES*

Table S2 Longitudinal studies on the effects of father involvement on offspring mental health – no control for SES

This material is available as part of the online article from: http://www.blackwell-synergy.com/doi/abs/10.1111/j.1651-2227.2007.00572.x
(This link will take you to the article abstract).

Please note: Blackwell Publishing is not responsible for the content or functionality of any supplementary materials supplied by the authors. Any queries (other than missing material) should be directed to the corresponding author for the article.