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Father Absence

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Definition

The term “father absence” is generally taken to indicate that an individual has spent some or all of their childhood with a nonresident biological father. While this can be due to paternal death, the majority of research concentrates on cases of non-resident fathers who are separated from (or were never pair bonded with) the individual’s mother.

Introduction

Evolutionary research into the impacts of father absence on offspring has largely fallen into two camps, which one might roughly characterize as developmental psychology versus behavioral ecologically, respectively, and investigated two sets of outcomes: offspring reproductive outcomes and offspring condition.

Reproductive Development of Offspring

A considerable body of work has amassed investigating the reproductive outcomes of children

(mainly daughters) of father-absent households in the West. Although interest in the links between father absence and girls’ sexual behavior dates back to developmental psychologist Marion Hetherington’s 1970 observation that daughters of divorced, but not widowed, mothers displayed elevated sexual behavior as teenagers, the more recent contribution of evolutionary research was, at its core, to propose that early father absence (potentially among other stressors) may accelerate pubertal development and the onset of sexual behavior in daughters as a response to environments which were unstable and/or unlikely to support viable pair-bonds (Belsky et al. 1991; Draper and Harpending 1982). As such, maximizing reproductive success might best be achieved, for girls, by starting reproduction earlier.

Studies of the association between father absence and puberty in girls typically report father-absent girls experiencing first menses around 6–12 months earlier than their father-present counterparts. Webster et al. (2014) published a meta-analysis of this literature and reported a significant mean weighted association of $r = 0.14$ between father absence and earlier menarche. This suggests that approximately 5.6 % of variance in age of menarche may be explained by the presence or absence of the biological father from the home in early childhood. Alongside earlier menarche, father absence in Western samples is also typically associated with earlier sexual activity and earlier reproduction in women (e.g., Ellis et al. 2003; Boothroyd

et al. 2013). The dominant current explanation for these phenomena focuses on the influence of stress on the maturation of the endocrine system (see, e.g., Ellis 2013). It is particularly in the context of this latter potential mechanism that father absence is posited as one among many potential stressors, and adaptive hypotheses center around the fitness benefits of either successfully predicting the harshness of the environment in which reproduction will take place (standard psychosocial acceleration models) or of responding appropriately to the effects of the current environment on one's own condition (internal prediction models: Rickard et al. 2014). The key factor from either perspective is that father absence may trigger earlier menarche and earlier reproduction as a means of maximizing reproductive success when faced, in some form, with harsh environments.

There has been less attention to the sequelae of father absence in boys. Although father-absent boys are more likely to go on to be absent fathers themselves (see, e.g., Jaffee et al. 2001), and to reproduce earlier in the West, the literature regarding timing of puberty in boys is sparse and the results decidedly mixed, with some authors even finding father absence to predict later puberty in boys (e.g., Sheppard et al. 2015). Several authors have argued that a sex difference in responses to father absence is consistent with sex differences in predictors of reproductive success, with males perhaps benefiting most from building competitive advantage rather than accelerating reproduction in harsh and/or low-paternal-investment environments (see Draper and Harpending 1982; James et al. 2012).

Behavioral Ecology Approaches to Reproductive Development in Offspring

Behavioral ecology approaches to father absence have tended to concentrate on offspring outcomes in terms of survival and fertility, often with the primary goal of understanding drivers of parenting behavior, rather than drivers of child development. The remarkable feature of this particular

literature is the extent to which father absence (or presence) often makes very little difference to offspring at all. In a wide-ranging systematic review, Sear and Coall (2011) found that, while among low-fertility samples (i.e., “WEIRD,” Western, educated, industrial, rich, democratic (Henrich et al. 2010)) the presence of fathers appeared to have an inhibitory effect on fertility (indexed by less teenage pregnancy, later first birth) as discussed above, fathers in high-fertility samples had a facilitatory or no effect on offspring fertility. Where there were significant associations, present/living fathers were typically associated with earlier first birth and a greater number of children born, the former of which is directly at odds with the data from Western samples. Perhaps the most likely explanation for these results is that in small-scale and high-fertility populations, the most critical contribution of secondary caregivers (as fathers tend to be) is to supplement the child's nutritional or social status in a manner which makes a much greater contribution to maturation and/or marriageability than any variation induced by psychosocial stressors. Indeed the simple fact that girls in WEIRD samples display considerably earlier menarche than in small-scale societies suggests that considerable nutritional constraints on menarche have been lifted in the West and, as such, raises the question of how much these WEIRD samples can tell us about ancestral selection pressures on reproductive development.

Mortality and Morbidity Outcomes in Offspring

One factor which unites both the behavioral ecology and evolutionary developmental psychology approaches to father absence is an interest in how paternal care may influence offspring viability and condition. Indeed, as discussed above, one strand of developmental interest in father absence argues that earlier menarche in father-absent daughters is an adaptive response to the effects of adversity on the well-being of offspring. There are a number of large epidemiological studies in the West which find an association between parental divorce (usually synonymous with father absence in

these data) and poorer adult health, shorter adult height, and shorter life expectancy in offspring (e.g., Maier and Lachman 2000; Schwartz et al. 1995; Sheppard et al. 2015). In some samples, the associations between family structure and later offspring outcomes were mediated by stressors inherent in, or other sequelae of, the separation (e.g., Maier and Lachman 2000), which is consistent with other evidence suggesting relational stress in childhood may be associated with health outcomes in later years.

Unlike the data regarding reproductive development, these associations are not limited to WEIRD samples. For instance, Flinn and England (1997) assessed the living conditions of children and adolescents living in a village in Dominica and took regular saliva samples (several times a day for multiple days) to assess their levels of cortisol (a stress-related hormone) and monitored children's health. The population they studied was matrilocal and the parenting conditions were very varied; half of children (approx. 54 %, averaging across 4 study seasons) were living with their mother and their biological or stepfather, while a further 12 % lived alone with a single parent. The remainder of the children lived with mother and kin, grandparents, distant kin, or nonrelatives. Flinn and England found that children living without their biological father experienced significantly more days of illness and had significantly higher cortisol levels than those living with both parents (even if their father was often absent from the home, e.g., for work or after rows). They also found a moderate positive correlation (0.35) between levels of cortisol and self-reported days of illness, again supporting the suggestion that any impacts of father absence on offspring health are mediated by stress.

The impacts of father absence on *mortality* in preindustrial populations, however, are rather more ambiguous. While there are notable examples of father absence or death of father being associated with slightly higher offspring mortality in both anthropological and historical records, Sear and Coall (2011) found that in more than half of small-scale societies for which data were published, father loss (by death or absence) had no significant link with offspring survival.

Conclusion

Overall, these data suggest that father absence may sometimes be detrimental to offspring survival (and ergo adaptive benefits of long-term pair-bonds may certainly include greater reproductive success in some ecologies), but is perhaps more likely to impact on offspring condition. This may be mediated by stress, and while in WEIRD samples, daughters may be able to offset any loss of condition via accelerated reproductive development, there is no evidence that sons or non-WIERD daughters do the same. The primary challenge facing the literature at the current time may be to comprehensively unite these diverse results in a single explanatory framework.

Cross-References

- [Ecology of Paternal Investment](#)
- [Ecology of Pair-Bond Stability](#)
- [Father-Absence and Step-Father Presence](#)
- [Life History Strategies](#)
- [Puberty](#)
- [Stress Reactivity](#)

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