Father Absence, Body Mass Index, and Pubertal Timing in Girls: Differential Effects by Family Income and Ethnicity

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ABSTRACT

Purpose: Numerous studies show associations between father absence and girls' early puberty. However, most research has been retrospective, focused on menarche, and failed to consider body mass index (BMI), ethnicity, and income in the analyses. This study resolves these scientific gaps.

Methods: This was a prospective study of 444 girls aged 6–8 years and their caregivers (96% mothers). Data were collected annually in clinic, including weight, height, and Tanner stage for breast and pubic hair. Caregivers reported on father absence and demographics. This report focuses on the assessment of father absence at baseline and 2 years of follow-up for pubertal outcomes. Cox proportional hazards regression models were used to test whether father absence at baseline predicted pubertal onset by follow-up visit 2. BMI was assumed to be in the causal pathway. Differences by ethnicity and income were examined.

Results: Income and ethnicity moderated associations between father absence and pubertal onset when adjusting for BMI. Father absence predicted earlier onset of breast development only in higher-income families and onset of pubic hair development only in higher-income African American families. BMI was not related to father absence and therefore was not in the causal pathway.

Conclusion: Among girls from higher-income families, father absence was linked to earlier puberty. This was particularly true for African Americans in terms of pubic hair development. These effects are not explained by body weight. Future research is needed to identify social and biophysiological mechanisms through which father absence, ethnicity, and income affect the pubertal onset.

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