Psychosocial Antecedents of Variation in Girls' Pubertal Timing: Maternal Depression, Stepfather Presence, and Marital and Family Stress

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Drawing on Belsky, Steinberg, and Draper's evolutionary theory of the development of reproductive strategies, we tested a model of individual differences in girls' pubertal timing. This model posits that a history of psychopathology in mothers results in earlier pubertal maturation in daughters, and that this effect is mediated by discordant family relationships and father absence/stepfather presence. The model was supported in a short-term longitudinal study of 87 adolescent girls. In the primary test of the model, it was found that a history of mood disorders in mothers predicted earlier pubertal timing in daughters, and this relation was fully mediated by dyadic stress and biological father absence. In families in which the mother's romantic partner was not the biological father, dyadic stress accounted for almost half of the variation in daughters' pubertal timing. Stepfather presence, rather than biological father absence, best accounted for earlier pubertal maturation in girls living apart from their biological fathers. We propose that stepfather presence and stressful family relationships constitute separate paths to early pubertal maturation in girls.

INTRODUCTION

The onset of pubertal development has typically been viewed as an important marker of the transition into adolescence and is accompanied by major social and cognitive changes (Conger, 1984; Feldman & Elliot, 1990). Variations in the timing of pubertal maturation—in levels of physical and sexual development of adolescents in comparison to their same-age peers—has received considerable research attention. The most consistent finding to emerge from the literature is that early timing of puberty in girls is associated with negative health and psychosocial outcomes. In particular, early-maturing girls are at greater risk for breast cancer (e.g., Kampert, Whittemore, & Paffenbarger, 1988; Vihko & APter, 1986), obesity (e.g., Ness, 1991; Wellens et al., 1992), and teenage pregnancy (e.g., Udry, 1979; Udry & Cliquet, 1982), and tend to show more disturbances in body image, report more emotional problems such as depression and anxiety, and engage in more problem behaviors such as alcohol consumption and sexual promiscuity (e.g., Caspi & Moffitt, 1991; Flannery, Rowe, & Gulley, 1993; Graber, Lewinsohn, Seelye, & Brooks-Gunn, 1997; Susman, Nottelman, Inoff-Germain, Loriaux & Chrousos, 1985).

Although a good deal is now known about the sequence of variations in pubertal timing in girls, relatively little is known about the social and psychological antecedents of this variation. Recent theory and data (e.g., Belsky et al., 1991; Graber, Brooks-Gunn, & Warren, 1995) suggest that an individual's experiences during childhood may influence the physiological mechanisms that initiate and control timing of pubertal maturation. The present paper examines antecedents of variation in pubertal timing among adolescent girls. The authors seek to test and extend predictions derived from an evolutionary model of individual differences in pubertal timing. These predictions concern the relation between several forms of familial stress—maternal depression, family conflict, and divorce and remarriage—and the timing of pubertal maturation.

Sources of Variation in Pubertal Timing

Individual differences in the timing of pubertal maturation are influenced by both genes and environment. Behavioral genetic studies using twin and sibling designs have demonstrated that genetic differences account for substantial variation in pubertal timing (Farber, 1981; Kaprio et al., 1995; Treloar & Martin, 1990). At the same time, however, such studies have also documented the importance of shared environmental influences on age of menarche in girls. Farber (1981) reported that the degree of similarity between female twins in menarcheal age was positively related to the degree of consanguinity. Monozygotic twins reared together were most similar in menarcheal age (average difference = 2.8 months), followed by monozygotic twins reared apart (average difference = 9.3 months), followed by dizygotic twins reared together (average difference = 12 months). That monozygotic twins reared apart were similar in menarcheal timing to dizygotic twins reared together...