

**Effective Polygyny in the United States:  
Adolescent Precursors**

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This paper opens an investigation into the extent and correlates of effective polygyny in contemporary American society. The level of effective polygyny is a potentially important determinant of the level of resources that a society devotes to its children.

The concept of effective polygyny is based on some measure of reproductive success. It is usually defined as the ratio of the variance in male reproductive success to the variance of female reproductive success. Higher variance in the number of births to individuals means that reproductive success is more skewed: some individuals are responsible for a disproportionate share of births. If lifelong monogamy were the rule, variance would be the same for men as for women. In the context of multiple-partner fertility, however, variance may well differ between the sexes, with possible implications for gender equity and child well-being.

A simple example illustrates what variance captures, and what it doesn't. Imagine two societies, each containing three lifelong monogamous couples. In one society, all three couples have one child apiece, whereas in the other society, one couple has no

children, another has one, and a third couple has two. While the mean number of children is the same in these two societies, variance is higher in the second. Within each society, however, variance is the same for men and for women. Now, consider a third society, prone, like that of the United States, to multiple-partner fertility. If each woman has one child, but one man fathered two, and another none, variance is higher for men than for women, implying an index of effective polygyny greater than one.

There are a number of ways in which a high degree of effective polygyny could undermine gender equity and investment in children. The degree of effective polygyny influences the likelihood that a child lives with its own father. Co-residence has been shown to be an important factor in fathers' investment in their children, with co-resident children being favored over others. The degree of effective polygyny may also affect the proportion of children who are born to men with a high propensity to invest in them. High variance in male reproductive success means some men father many children, and others may be crowded out of fatherhood altogether. Men vary both in their ability to provide for children and in their willingness to do so. If a rise in effective polygyny signals a disproportionate increase in paternities by men who cannot or do not contribute heavily to their children's support, then effective polygyny would be correlated with an increased burden on mothers and reduced child wellbeing.

Measuring effective polygyny in American society is novel. The concept has been used primarily in studies of other species, and when it has been applied to human beings, they typically have been ethnic subgroups in developing countries. It has never, to our knowledge, been applied to the population of a modern industrialized country.

The principal challenge that confronts the researcher trying to compute measures of effective polygyny for the United States is the dearth of data on male fertility, as there

has not been any institutionalized mechanism for collecting such data. One strategy is to rely, directly or indirectly, on marital status to compute effective polygyny measures. Some researchers, for example, have used the average age difference between husband and wife as a measure of reproductive success. Others have used the male-female difference in the proportion married in younger age brackets.

Our strategy in this study is to treat adolescent relationships and sexual behaviors as proxies for reproductive success. We measure the variance in the number of relationships among adolescent boys and among adolescent girls. Our data on adolescents are from the National Longitudinal Survey of Adolescent Health (Add Health). We decompose the adolescent population into subgroups defined by a variety of attributes, in an effort to identify some of the correlates of our measure of effective polygyny. We are particularly interested in correlates considered to be precursors of paternal investment in children.