

Virginity and Promiscuity: Evidence For the Very First Time

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True Love Waits is a virginity pledge program, probably the largest of its kind. Started by the Southern Baptist Convention in 1993, it now claims more than 2.5 million members, teenagers and young adults who have promised to remain sexually “pure” until marriage. Many other virginity pledge programs have sprouted up since the ‘90s, and what’s more, state lawmakers have jumped on the abstinence bandwagon. Thirty-four states now require that abstinence be taught or emphasized in the school curricula, while only 15 mandate instruction in contraception.

One of the major rationales for these efforts—at least the school-based programs—is that delaying sex reduces the frequency of risky sex and early pregnancy. And indeed, early sexual initiation has been linked again and again to risky sexual behavior in adulthood—more sexual partners, frequent sex under the influence of drugs or alcohol, less caution in avoiding disease—and to early pregnancy. This link is not disputed. What is disputed—because it remains unproven—is that early loss of virginity actually *causes* risky sexuality later.

A team of psychological scientists decided to test this underlying assumption, to see if they could prove or disprove a causal link. Marina Bornovalova of the University of South Florida and her colleagues wanted to explore alternative explanations—notably, that both early sexual initiation and later risky behavior are caused by something else entirely. This might be a social factor like the family’s economic situation or the influence of troubled peers. Or it could be that both early sex and risky sex are the consequence of a genetic predisposition toward uninhibited behavior in general. If either of these other explanations is correct, then delaying sex in adolescence might be ineffective in reducing risky sex later on.

To test this, the scientists studied more than 1000 pairs of twins over time, following many of them from age 11 to 24. Some of the twin pairs were identical twins, and others were fraternal twins. Some reported their first sexual encounter before age 16; the rest later. The scientists also gathered information—as the teens moved into adulthood—on total number of regular sexual partners and casual partners; regular and casual partners in the past year; sexual behavior under the influence of drugs or alcohol; and pregnancy.

The scientists combined a couple of analytic methods to create a rigorous test of the causality hypothesis, based on what would be expected from the genetics and upbringing of identical and fraternal twins. For example, if early sexual initiation really does cause later risky behavior, then within twin

pairs, only the twin who had early sex should go on to a risky sex life. But if, by contrast, the risky behavior is caused by either genetics or early social influences, then both twins would be expected to have equally risky sexual careers. Furthermore, if genetics alone are to blame, then identical twins—but not fraternal twins—should have similarly risky sex lives. And if environment is the cause of risk taking, then both types of twins should have the same outcomes, regardless of when they lost their virginity.

Bornovalova and her colleagues crunched all the data together, with provocative results. They did in fact replicate the well-known link between early sexual initiation and later sexual risk taking. But there was no evidence that an early loss of virginity actually caused risky sexuality later. Indeed, twins who had very different initiations into sex—one early and one late—nevertheless went on to have similarly risky sex lives, indicating that risk taking was influenced by some combination of shared genes and experience.

These findings have important public health implications, the most obvious being that delaying sexual initiation is unlikely to reduce risky sexuality, including unwanted pregnancy, later on. The results are consistent with other research, which suggests that virginity pledges may delay teens' loss of virginity up to 18 months—but do nothing to reduce sexually transmitted infections in young adulthood. Even more important is this general conclusion: A diverse set of adolescent problem behaviors appear to predict a diverse set of adult pathologies, so that intervening to stop any specific behavior will probably be ineffective. It might be better to identify the group of kids who are at high risk for all poor adult outcomes.

The scientists are not suggesting that having sex early has no untoward consequences. As they conclude in their [on-line report in the journal *Psychological Science*](#), losing one's virginity at an early age might lead to problems like depression and substance abuse. Lawmakers and pastoral leaders may have their own reasons for wanting to delay kids' sexual experience, but their alarms about promiscuity and pregnancy just lost much of their power.

Wray Herbert's book, [On Second Thought](#), explores irrational thinking and risk perception. Excerpts from his two blogs—"Full Frontal Psychology" and "We're Only Human"—appear regularly in *The Huffington Post* and in *Scientific American Mind*.