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Do adolescents have a natural tendency to take more risks than children?

PHILADELPHIA – Compared with children and adults, adolescents appear to disproportionately engage in real-world risk-taking behavior. Is this because they're naturally inclined to be greater risk-takers or is something else at work?

An [article](#) recently published in Policy Insights from the Behavioral and Brain Sciences reviews research into whether adolescents are actually more likely to take risks than children, as some neuroscience theories have suggested. The policy review, based on an earlier meta-analysis of carefully controlled laboratory studies, finds that despite stereotypes to the contrary, the evidence does not support the notion of the out-of-control teenage brain.

Adolescents on average are no more risk-taking than children and in many cases are less so, wrote the review authors, led by Ivy N. Defoe, a recent postdoctoral fellow at the [Annenberg Public Policy Center](#) (APPC) of the University of Pennsylvania. In fact, when adolescents can decide to opt out of taking a risk and choose a safe option instead, they take the safe option more often than children do.

The policy review notes that there are distinct differences between the risk-taking behaviors of early adolescents (11- to 13-year-olds) and mid-late adolescents (14- to 19-year-olds), which have important policy implications. Early adolescents take more laboratory risks than mid-late adolescents. While that is inconsistent with real-world results, the apparent real-world increase in risk-taking by older adolescents may be partially because they are exposed to more risky environments.

“If adolescents are doing more dangerous things in the real world, it’s not because they are intrinsically more risk-taking than children,” said co-author [Dan Romer](#), APPC’s research director. “The question is, what would account for the real-world difference?”

Risky decision-making: Real world vs. the lab

In laboratory studies, people of various ages were asked whether they would take a risk to win more money (or other rewards) or would rather get a lower payoff with more certainty. Adults tend to be the least risk-taking on these tasks, but adolescents, in many cases, are less risk-taking than children. And it raises the question why the increase in real-world hazards and risks occurs during adolescence.

Recent neuroscience theories have pointed to a delay in the ability to control behavior in adolescence compared with the desire to do rewarding things. When faced with an opportunity to do something risky that appears rewarding, teens would be expected to take that choice and to do so more than children. But the current review suggests that this is not the explanation for the greater risk of injury in adolescence.

Adolescents and risk exposure

Romer suggests there are a number of possible explanations. Adolescents are under the watchful eye of parents a lot less than children, so even when children try to take greater risks, parents and other adults are sometimes there to protect them. This possibility is consistent with a theory of adolescent risk-taking

proposed by Defoe and colleagues, the Developmental Neuro-Ecological Risk-taking Model, which emphasizes that “risk exposure,” that is, access to risk-conducive situations whether physical or social, could explain age differences in risk-taking.

Defoe added that examples of physical risk exposure that adolescents experience to a higher extent than children could include access to driving a car and access to alcohol, a combination that could lead to drinking while driving. Fortunately, minimum-age laws for substance use and driving can lessen the amount of these types of risk exposures that adolescents encounter. Defoe added that although adolescents’ neuro-psychological development (e.g., heightened impulsivity in some) might play a role in their real-world risk-taking, there is also typically an interaction with physical/social environmental factors.

It is also possible that adolescents are not more risk-taking but are attracted to novelty, more inclined to try things that are new, Romer said. Given their lack of experience in doing those things – driving a car, say – adolescents are more likely to have accidents or to experience other adverse outcomes.

Another possible explanation for the divergent laboratory findings is that in the real world, the risks are not always so clear. In the lab, those are spelled out explicitly. This would reflect a tendency to take real-world risks primarily when the outcomes are less clear and avoid them more during laboratory tasks in which those risks are more clearly spelled out. This explanation fits another theory that explains the greater risks during adolescence as reflecting a lack of experience coupled with a desire to try new things. That theory, the Lifespan Wisdom Model, previously proposed by Romer and other researchers, suggests that much of what is considered teen risk-taking is actually a normal part of development in which teens seek to gain the experience required to assume adult roles and behaviors.

Implications for policy

The authors note that despite the lack of evidence for adolescents being inherently more risk-taking than younger children, they are more likely to take risks than adults, even when the risks are spelled out. This suggests that age needs to be taken into account when policies are formulated about unhealthy behavior such as smoking and behavior that harms others such as stealing. Adolescents may still be more likely to engage in those behaviors even though they know the risks, and those developmental differences should be considered when formulating policies about these behaviors.

[“Heightened Adolescent Risk-Taking? Insights From Lab Studies on Age Differences in Decision-Making.”](#) was written by Defoe, currently a postdoctoral researcher at the University of Twente, the Netherlands; Romer; and Judith Semon Dubas of Utrecht University, the Netherlands.

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