

STASH, Vol. 7(2) - When I grow up, I want to be a drug user: Considering childhood self-control and adult substance abuse

February 9, 2011

Research indicates that several factors might place people at a higher risk for developing problems with substance use. These include exposure to violence, familial substance use, and low socioeconomic status (SES) (Kilpatrick et al., 2000). In this week's STASH, we review a study that aims to determine if lack of self-control mastery during childhood is a predictor of substance use disorders (SUD) during adulthood (Moffitt et al., in press-a).

Methods

- Participants (N at age 3=1,037; 52% male) born during April 1972 and March 1973 in Dunedin, New Zealand. When participants were age 32, 96% of the living participants completed the most recent assessments.
- The researchers used a multi-trait, multi-method strategy to measure childhood self-control (e.g., longitudinal design, observational ratings, parent, teacher and self reports, cognitive and motor tasks). They generated a self-control score for each child at ages 3, 5, 7, 9, and 11. Interested readers can find details about the composite self-control score, as well as SES and IQ scores, [here](#) (Moffitt et al., in press-b).
- When participants were 32, the researchers assessed past-year substance dependence for a variety of drugs (i.e., tobacco, alcohol, cannabis, and other drugs) using structured interviews and DSM-IV criteria. The researchers' Substance Dependence Index is the sum of the substances upon which each participant was dependent.
- Informants rated the likelihood that participants had problems with alcohol and with marijuana or other drugs, with 0 indicating no problem, 1 indicating a bit of a problem, and 2 indicating a problem; the researchers created another index from the sum of substances mentioned.

Results

- As Figure 1 shows, participants who had poor self-control during childhood were at a significantly elevated risk for SUDs during adulthood, as indexed both by the Substance Dependence Index ([incidence rate ratio](#) = 1.2; 95% confidence interval = 1.0-1.4; $p = 0.01$) and by informant-reported substance problems (standardized ordinary least squares regression coefficient = 0.17; standard error = 0.04; $p < 0.001$).
- Similarly, the Substance Dependence Index and informant-reported substance problems were significantly related to self control even after controlling for SES and IQ.

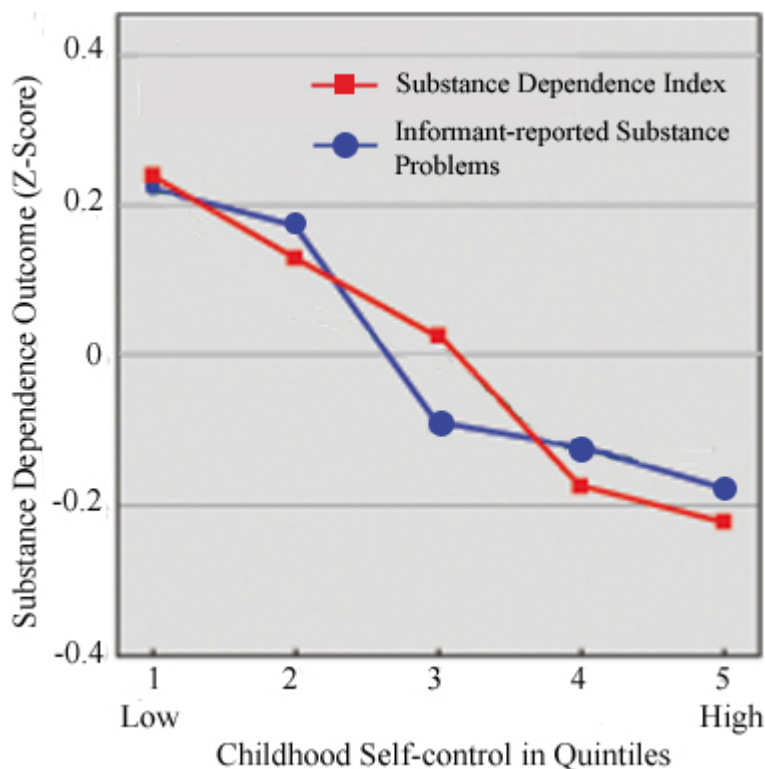


Figure. Self-control as a Predictor for Substance Use Dependence (adapted from Moffitt, et al., in press-a). Please note that the outcomes were converted to [Z-Scores](#) and childhood self-control is represented in quintiles. Click image to enlarge.

Limitations

- Other variables might be responsible for both childhood self-control and adult substance problems. The researchers statistically controlled for some of these variables.
- Because it is impossible to control for all potential alternative explanations, an experimental intervention would bolster researchers' confidence that poor childhood self-control causes adult substance

problems. Though it would be unethical to experimentally decrease childhood self-control and examine the effects on future substance problems, alternatively, researchers might increase the self-control among a subgroup of participants with the lowest childhood self-control scores and examine potential decreases in adult substance problems.

- The results reported significant, but basically small effects.

Discussion

Poor self-control during childhood appears to be related to more substance abuse during adulthood, even after accounting for other known risk factors (i.e., family SES and individual IQ). What accounts for this link? In analyses not reported here, Moffitt and colleagues observed that children with low self-control later make poor and impulsive decisions as adolescents (e.g., taking up smoking, becoming an unplanned parent, dropping out of school). They found support for the idea that making poor decisions during adolescence mediates the effects of poor self-control on future substance abuse. Perhaps adult substance use emerged as a way to deal psychologically with the ramifications of poor adolescent decisions. Future research should test whether intervention programs aimed at increasing childhood self-control results in lower risk for substance problems and other adulthood health concerns.

-Tasha Chandler

What do you think? Please use the comment link below to provide feedback on this article.

References

Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2000). Risk factors for adolescent substance abuse and dependence: Data from a national sample. *Journal of Consulting and Clinical Psychology*, 68(1), 19-30.

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., . . . Caspi, A. (in press-a). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Science*. doi: 10.1073/pnas.1010076108

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington,

H., . . . Caspi, A. (in press-b). Supplemental Information: Health, wealth, and public safety. Proceedings of the National Academy of Science. <http://www.pnas.org/content/suppl/2011/01/21/1010076108.DCSupplemental/sapp.pdf>