

STASH, Vol. 9(5) - Maybe problems don't last forever: An alternative view of remission from drug dependence

April 24, 2013

Many people believe that substance abuse and dependence are necessarily progressive illnesses, and that the probability of quitting drugs decreases with each successive year of heavy drug use. This might be a good way to summarize some individuals' experience with drug use. However, new research using data from a national survey suggests that the number of people who quit using drugs increases steadily over time, regardless of their time spent dependent on drugs. This week's STASH reviews an article exploring this phenomenon (Heyman, 2013).

Methods

- Heyman (2013) explored the rates of remission from cocaine, marijuana, alcohol and cigarette dependence using data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC; Grant and Dawson, 2006) and Lopez-Quintero et al (2011). For instance, a person is considered as having remitted from cocaine dependence if he describes himself as having been met diagnostic criteria for cocaine dependence at some point in his lifetime but not in the past year.
- The two key pieces of information were (1) the cumulative probability of remission (i.e., the proportion of participants who were currently remitted) and (2) the amount of time in years since the onset of dependence.¹
- Heyman's (2013) contribution was to determine the simplest possible mathematical relationship between years of drug dependence and cumulative remission rates. In doing so, Heyman found formulas for the percentage of eventual "remitters" and the percent of additional people who remit each year.

Results

- Figure 1 illustrates the cumulative probability of remission from cocaine, marijuana, alcohol, and cigarette dependence as a function of time since the onset of dependence. For all four drugs, the data fit the equations for exponential decay. That is, each year the number of people who quit drugs was a constant proportion of those currently dependent, regardless of how long they had been dependent.
- The chances that a person would eventually quit using if given enough time were 98% for cocaine, 94% for marijuana, 95% for alcohol, and 100% for cigarettes.²
- However, the time to remission varied considerably by drug. The half life for cocaine dependence—the time it took for half of people to stop being dependent - was 4 years. The half lives for marijuana, alcohol, and cigarettes were 6, 16, and 30 years, respectively.

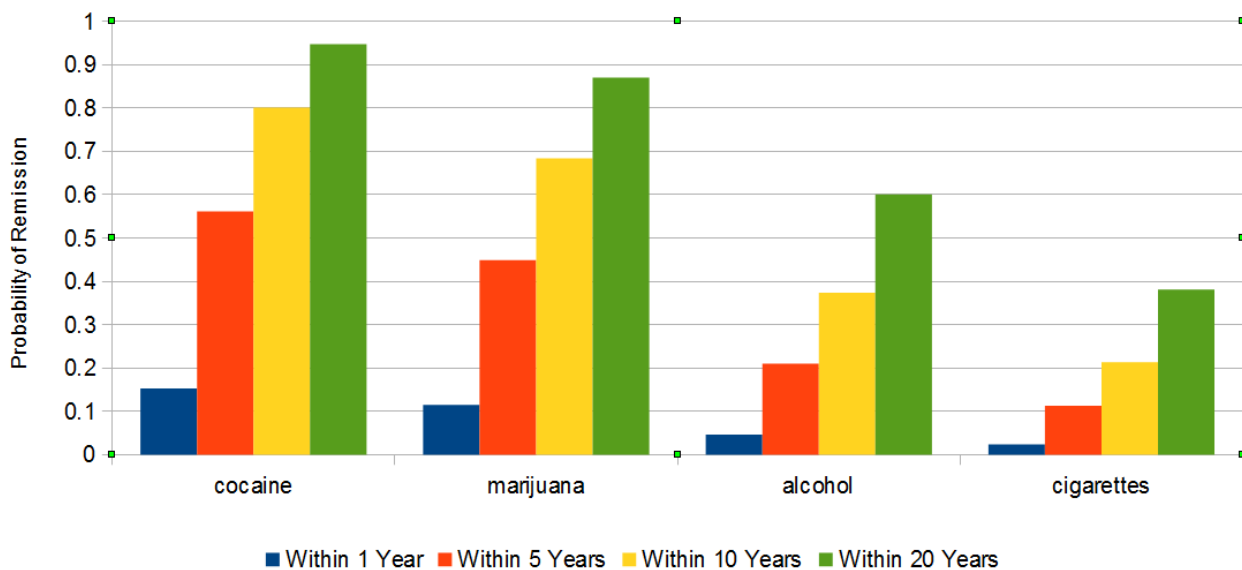


Figure. Cumulative probabilities of remission from each drug within one, five, ten, and twenty years of initial onset of dependence. Adapted from Heyman (2013). Click image to enlarge.

Limitations

- Substance use data were self-reported and therefore might be biased if respondents misremembered their past history or exaggerated or underrepresented important facts or details.
- Remission may have been temporary in some cases. Participants might have had relapses outside the scope of the study. They would count as

individuals in remission when they actually should not. This could mean that the real rates of remission may be lower than what the data show.

Conclusions

One of the more surprising findings from this study was the constant rate of remission regardless of time spent dependent. Heyman (2013) suggests that this is consistent with the view of addiction as “a steady by fragile state that can abruptly shift to a new state.” For example, moving to a new city or making a new set of friends might change one’s relationship with an object of addiction, regardless of time spent addicted. Overall, it took longer for people to quit using alcohol and cigarettes than cocaine and marijuana, and Heyman suggests that the efforts it takes to obtain the illegal substances may explain some of the differences. That is, it may be easier to quit something when it is harder to get. Still, whatever substance a person might have problems with, according to this “maturing out” model, there is always a chance of being able to put these problems in the past.

- Matthew Tom

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

References

Grant, B. F., & Dawson, D. A. (2006). Introduction to the national epidemiologic survey on alcohol and related conditions (NESARC). *Alcohol Health & Research World, 29*(2), 74.

Heyman, G. M. (2013). Quitting Drugs: Quantitative and Qualitative Features. *Annual Review of Clinical Psychology, 9*(1), 29-59. doi:10.1146/annurev-clinpsy-032511-143041

Lopez-Quintero, C., Hasin, D. S., de Los Cobos, J. P., Pines, A., Wang, S., Grant, B. F., & Blanco, C. (2010). Probability and predictors of remission from life-time nicotine, alcohol, cannabis or cocaine dependence: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Addiction (Abingdon, England), 106*(3), 657-669. doi:10.1111/j.1360-0443.2010.03194.x

[1] Lopez-Quintero et al. restricted the data set to individuals with lifetime DSM-IV diagnosis of dependence on any of the four substances (cocaine: n=408, marijuana: n=530, alcohol: n=4,781, and cigarettes: n=6,937).

[2] While the results imply that everyone eventually stops smoking, they say nothing about the circumstances under which people stop smoking. For example, some people might quit smoking in their old age because of a change in living circumstances, such as being hospitalized.