

Shahnaza Hamidullah 3MT Transcript | University of Guelph Campus Final 2020

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Title: Saying “No” to Drugs is Not Enough

Transcript: You might have come across these ads that urge people, specifically the youth to say no to drugs. This makes sense as youth may be especially vulnerable to the effects of drugs as their brains are going through a lot of maturational changes. However, just saying no to drugs is not enough as we know teenagers really like to push boundaries, my mom can attest to that. Instead, we need to empower youth with the information they need to make decisions that concern their health. But what if the information is not available? This is the case with how cannabis impacts the brain.

Although we know a lot about the short-term effects of cannabis use on the brain during adolescence, we don't know much about if there are any long-term effects 5, 10, 20 years down the line. This is what I set out to answer with my thesis project. We used an animal, rats, to allow us to control for various confounding factors, such as socioeconomic status that makes the interpretation of results from human studies very difficult. We took it a step further by looking at the effects of vaping which is different from earlier animal studies that have used injection methods which don't really match how humans use cannabis.

For this study, we exposed adolescent rats to the vapour of 9-delta-tetrahydrocannabinol, more commonly known as THC, which is the active ingredient found in cannabis that is responsible for the effects of cannabis in the brain. Then the animals were left alone until they reached adulthood during which they underwent behavioural testing to see if there are any long-term effects. One of the tests that we used was the delay-discounting task to assess impulsive behaviour. We as humans, actually use delay discounting as in our everyday lives. For example, we do this when we choose to receive \$100 in two weeks versus receiving \$10 now, although the \$100 would require us to wait.

The results showed that the rats that were exposed to vapourized THC had learning impairments as they were not able to learn the task compared to rats that didn't receive the vapourized THC despite going through the same training as them. This means that cannabis use during adolescence may have long-term impacts on behaviour and more studies need to be done to gain necessary information so we can empower our youth to make decisions that might have long-lasting consequences on their health.

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