Involvement of Cannabinoid System in the Nucleus Accumbens on Delay-Based Decision Making in the Rat

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Method Section: This study's goal was to figure out the effect of cannabinoid activation in the nucleus accumbens on delay-based decision-making. The hypothesis was that the injection of cannabinoid would result in less rational decision-making. In order to test this hypothesis, the researchers trained rats via a maze to choose between a small but immediate reward and a large but delayed reward. Then, on the day of the test, the rats received a dose of cannabinoid agonist and/or antagonist, then were put through the maze and observed to see which reward they would go for. Here, the independent variable was the cannabinoid activation, and the dependent variable was the decision made by the rat.

Discussion Section: The results of the study proved quite interesting. They showed that the administration of the cannabinoid caused a decrease in high reward choice, and as a result, the rats injected with the cannabinoid tended to go for the small but immediate reward, as opposed to the large yet delayed one. Furthermore, those rats experienced an increase in the reward achievement's latency. Even when the researchers ran the experiment with the delay being equal for both rewards, the rats' preferences remained the same. Therefore, according to the results, the hypothesis was correct, and the cannabinoid system activation in the nucleus accumbens plays a critical role in the regulation of delay-based decision-making. Granted, this experiment was done on rats, so the effect might not be *quite* the same on human specimens, but other than that obvious drawback (I'm not even sure if it's possible to replicate this experiment on humans anyway), the experiment was a success.