

# Synthetic Cannabinoid-Induced Compulsive Sexual Behaviors: A Case Report

Amanda Klass, DO

## **Abstract:**

Compulsive sexual behavior, also referred to as hypersexuality, is defined as an excessive preoccupation with sexual fantasies, urges, or behaviors that are difficult to control, cause distress, or negatively impact one's health, job, relationship, or other parts of life <sup>[1]</sup>. Slavin et. al. explored the link between marijuana and hypersexuality and found preliminary evidence for a relationship in university students <sup>[2]</sup>. This result could be due to the interaction between the endocannabinoid and dopaminergic systems whereby behavioral-related rewards and reinforcement roles are experienced through cannabinoid-induced increases in extracellular dopamine levels <sup>[3]</sup>. This case report serves to provide data on the effects of synthetic cannabinoid-induced compulsive sexual behaviors.

## **CASE REPORT**

Mr. R was a 23 year-old male at the time of assessment with no known psychiatry history who was initially seen in the emergency room after being brought to the hospital by his family and employer due to concerns of increasing anger, impulsivity, and paranoia. He was fairly high functioning with some college education as well as working in a high pace, high-stress field without issue prior to his sudden onset of symptoms.

During his initial evaluation in the emergency room, he perseverated on his relationship with his current significant other. He described paranoia related to his partner being unfaithful and reported people were telling him information about his partner and their relationship. He described several instances where his coworkers told him about events that he in turn directly related to her. Over the course of several visits, it became clearer that these thoughts and feelings were based on his paranoia and delusions rather than based on evidence or objective reality. Additional collateral obtained from his family members and coworkers also provided more details to the delusional nature of his perseverations.

He denied recent substance use before admission at his initial presentation but did report historical marijuana use. He worked in a field that heavily tested for substance use which he identified as the reason he was not currently using. Furthermore, urine drug screens were negative for illicit substances, including tetrahydrocannabinol. He later admitted using synthetic cannabinoids to circumvent the drug screening process to avoid his employer's penalties.

During one outpatient appointment, he demonstrated increasing compulsive sexual behaviors, which was atypical for him. He made several sexual innuendos, including asking where a nice and nearby hotel was located if he wanted to "take a lady there" and used an exercise where he was instructed to make a list of goals to include "asking you out." At another point in the appointment, he excused himself to the restroom, returned, and stated that he wished to show a photo on his phone. When he turned the phone, it displayed a photo of his erection. His behaviors were repeatedly re-directed without evidence of learning or social reciprocity that would be expected based on prior interactions, and the session was terminated. At his next appointment, his

behaviors had returned to baseline without evidence of ongoing hypersexuality.

A short time later, he was again admitted to an area hospital for recurrent impulsive and high-risk behaviors. During that admission, clinical documentation indicated that he had a return of compulsive sexual behaviors, including propositioning several healthcare workers during his time there which required constant observation status due to concerns he would impulsively act on these behaviors and urges. Again, his urine drug screen was negative for illicit substances. However, during that admission, he revealed that he had used synthetic cannabinoids several times prior to presenting to the hospital. During his brief admission, his symptoms spontaneously resolved. He did receive several dosages of as-needed benzodiazepines to assist with his acute emotional and behavioral lability, but no medications were continued on discharge as his symptoms again spontaneously resolved.

## **DISCUSSION**

While the literature on the side effects of synthetic cannabinoids well-documented the psychoactive effects, including anxiety, changes in mood, paranoia, and or hallucinations <sup>[4]</sup>, little information is available related to compulsive sexual behaviors. This case report adds to the literature related to compulsive sexual behavior in synthetic cannabinoid use. Given Mr. R's resolution of symptoms in the setting of sobriety without the use of psychotropic medications, it is more likely that it was related to substance use than a manifestation of an abrupt onset, episodic primary psychiatric disorder.

## **AUTHOR INFORMATION**

Send correspondence to Amanda Klass, DO  
([aklass@kumc.edu](mailto:aklass@kumc.edu))

Klass A. (2021, June). Synthetic Cannabinoid-Induced Compulsive Sexual Behaviors: A Case Report. *The Journal of Psychedelic Psychiatry*, 3(2).

## **REFERENCES**

1. Mayo Foundation for Medical Education and Research. (2020, February 7). Compulsive sexual behavior. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/compulsive-sexual-behavior/symptoms-causes/syc-20360434>.
2. Slavin MN, Kraus SW, Ecker A, et al. Marijuana Use, Marijuana Expectancies, and Hypersexuality among College Students. *Sex Addict Compulsivity*. 2017;24(4):248-256. doi:10.1080/10720162.2017.1388203
3. Laksmidewi, A.A.A.P., Soejitno, A. Endocannabinoid and dopaminergic system: the pas de deux underlying human motivation and behaviors. *J Neural Transm* 128, 615–630 (2021). <https://doi.org/10.1007/s00702-021-02326-y>
4. NIDA. 2018, February 5. Synthetic Cannabinoids (K2/Spice) DrugFacts. Retrieved from <https://www.drugabuse.gov/publications/drugfacts/synthetic-cannabinoids-k2spice> on 2021, June 28

