2014

The Relationship between GABRA 2 and Illicit Substance Use

Hassan Khuram
 Virginia Commonwealth University

Follow this and additional works at: https://scholarscompass.vcu.edu/uresposters

© The Author(s)

Downloaded from
https://scholarscompass.vcu.edu/uresposters/79

This Article is brought to you for free and open access by the Undergraduate Research Opportunities Program at VCU Scholars Compass. It has been accepted for inclusion in Undergraduate Research Posters by an authorized administrator of VCU Scholars Compass. For more information, please contact libcompass@vcu.edu.
The Relationship between GABRA2 and Illicit Substance Use

H. Khuram, E. Long, A. Moscati, A. Adkins, Ph. D., D. Dick, Ph. D.

1Center for Clinical and Translational Research, 2Dept. Of Psychiatry, VCU

Introduction

- Spit for Science: the VCU Student Survey aims to understand how genetic and environmental factors come together to influence substance use and emotional health.
- Previous research has shown that GABRA2 is associated with alcohol use problems and illicit drug dependence. [1,2]
- It is therefore of great interest to find out whether variations in GABRA2 are associated with illicit drug use in this sample.
- We also tested for moderation of the association between GABRA2 and illicit drug use as a function of peer deviance.
- It is hypothesized that GABRA2 will be associated with illicit substance use and that individuals with high risk genotypes and more deviant peers will have increased illicit drug use.

Methods

- In the fall of 2011, incoming VCU freshman were invited to take the Spit for Science survey and also provide a saliva sample.
- Survey responses regarding substance use were combined into a sum score based on how many different categories of illicit drugs the student reported using at least once. The five categories were marijuana, opioids, cocaine, stimulants, and sedatives.
- Survey response regarding peer deviance in college were also combined into a sum score. Deviant behaviors included smoking marijuana, having any alcoholic drinks, having problems with alcohol, smoking cigarettes, and problems with the law.
- Response options ranged from “none” up to “all.”
- DNA samples were genotyped on the Axiom Biobank Array.
- We investigated eight single nucleotide polymorphisms (SNPs) in GABRA2.
- Linear regression (n=786) was used to test for association and moderation. Covariates included age, sex and ethnicity.

Results

- There was no significant association between GABRA2 genotype and illicit drug use.
- Peer deviance did not moderate the association between GABRA2 and illicit drug use.
- There was a positive association between peer deviance and illicit substance use.
- Limitations included that our sample only included college students. Previous studies found significant results in younger and older individuals.
- Future studies could examine the relationship between GABRA2 and drug dependence or frequency of drug use.
- This study is one of the first to examine this relationship in college-aged students transitioning into adulthood.

Conclusions

Acknowledgements

References