Notice of the Final Oral Examination
for the Degree of Master of Science

of

CLEA STURGESS

BA (University of Victoria, 2015)

"Do Marijuana Use and Externalizing Behaviours Mediate the Association between Academic Aptitude and Academic Performance?"

Department of Psychology

Wednesday, July 4, 2018
1:30PM
Cornett Building
Room A228

Supervisory Committee:
Dr. Bonnie Leadbeater, Department of Psychology, University of Victoria (Supervisor)
Dr. Brianna Turner, Department of Psychology, UVic (Member)

External Examiner:
Dr. A. Anne Marshall, Department of Educational Psychology & Leadership Studies, UVic

Chair of Oral Examination:
Dr. Andrew Rowe, Department of Mechanical Engineering, UVic

Dr. Stephen V. Evans, Acting Dean, Faculty of Graduate Studies

Abstract

Past research has explored the concurrent and longitudinal associations between externalizing behaviours, marijuana use, and academic outcomes and has found that externalizing behaviours and marijuana use negatively affect academic performance. However, precursors to these pathways are not well understood. Early evidence of academic aptitude is an important predictor of academic performance in high school. Performance at a young age does not guarantee results in high school and low early academic aptitude does not necessarily result in low later performance. It is important to understand the factors that may impact students' academic performance as they proceed through middle school and high school, and how early academic aptitude can influence risk factors that impact later academic performance. This project examines the role that marijuana use and externalizing behaviours play in the association between early academic aptitude and later academic performance. The project uses six waves of data from the Victoria Healthy Youth Survey (V-HYS), a 10-year prospective longitudinal study. A community-based sample of youth (N = 662; 48% male; ages 12 to 18) were surveyed biannually from 2003 (W1) to 2014 (W6). Frequency of marijuana use over the past year and externalizing behaviours were assessed at each time point. To assess academic aptitude, participants' British Columbia Foundation Skills Assessment (FSA) percentile scores in numeracy, reading, and writing were measured in grades 7 and/or 10. Academic performance was assessed using participants' provincially reported grade 12 English and Math course percentage grades as well as self-reported grade 12 grades. Structural equation modeling (SEM) was used to test the possible mediating and moderating effect of marijuana frequency and externalizing behaviours in the association between academic aptitude and academic performance. Academic aptitude was positively associated with academic performance (β = .59, SE = .04, p < .001) and negatively associated with marijuana use (β = -.21, SE = .04, p < .001). Marijuana use was negatively associated with academic performance (β = -.25, SE = .04, p < .001). The indirect effect of marijuana use was significant (b = .04, SE = .01, 95% CI = .018, .068). In terms of moderation, for the High Externalizing group (n = 75, 47% males), no paths were significant. For the Low Externalizing group (n = 445, 49% males), all paths were significant, and the indirect effect was significant (β = .05, SE = .02, CI = 0.01, 0.08). Marijuana use mediates the association between early academic aptitude and later academic performance, indicating the importance of early prevention and intervention. Externalizing behaviours moderated this association. While youth with externalizing behaviours are at high risk for marijuana use and should be targeted for intervention, youth who do not exhibit externalizing behaviours should also be included for prevention and intervention and may require different strategies.

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