



University
of Victoria

Graduate Studies

Notice of the Final Oral Examination
for the Degree of Doctor of Philosophy

of

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MSc (University of Victoria, 2015)
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“The Risk for Injury: Investigating the Roles of Alcohol, Caffeine, Risk-Taking Propensity, and Gender”

Department of Psychology

Monday, July 22, 2019
10:30 A.M.
Technology Enterprise Facility
Room 220

Supervisory Committee:

Dr. Timothy Stockwell, Department of Psychology, University of Victoria (Supervisor)
Dr. Erica Woodin, Department of Psychology, UVic (Member)
Dr. Cheryl Cherpitel, Alcohol Research Group, Public Health Institute (Outside Member)

External Examiner:

Prof. Mary Claire O'Brien, Department of Emergency Medicine, Wake Forest School of Medicine

Chair of Oral Examination:

Dr. Annalee Lepp, Department of Gender Studies, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies

Abstract

The combined use of alcohol and caffeine has been identified as a public health concern, and yet, our knowledge of this type of use and how it relates to the risk of incurring an alcohol-related injury remains limited. Study 1 is a systematic review examining and critically analyzing the literature on the combined use of alcohol with energy drinks and the risk of injury. Studies 2 and 3 use data from a controlled Emergency Department (ED) study that was collected over 1.5 years from 3 separate hospitals in British Columbia. There was a total of 2804 participants across the ages of 18-98. Given the strengths and limitations of these different methodologies, both case-crossover and case-control analyses were performed in order to test for consistency of results. Study 2 examined the temporal association between alcohol and caffeine and use (Alc+Caff) and the risk of injury, as well as the potential moderating role of risk-taking propensity and mediating role of Alc+Caff between risk-taking propensity and injury risk. The combined use of alcohol and caffeine was found to be associated with a higher risk of injury, even after controlling for dose of alcohol and caffeine, other substance use, location at time of injury, risk-taking propensity, and sociodemographic variables. Alcohol and caffeine use was also found to partially mediate the relationship between risk-taking propensity and injury. Study 3 examined gender differences in the risk-relationship of Alc+Caff use and injury by testing the interaction between gender and Alc+Caff use and then examining the risk of injury following Alc+Caff use separately for men and women. Women were found to have a significantly higher risk of injury following alcohol use and Alc+Caff use relative to men. These results were found in both the case-crossover and case-control analyses. The findings from these studies indicate a relationship between Alc+Caff use and an increased risk of injury, especially for women, which is supported by previous research. The results are supportive of differential low-risk drinking guidelines for men and women. The findings also offer a significant contribution to our knowledge base, as the use of standardized measures and inclusion of multiple confounding variables allowed for the examination of the unique effect of Alc+Caff use. Alc+Caff use is associated with an increased risk of injury that cannot solely be explained by increased alcohol consumption, other substance use, risk-taking propensity, location at time of injury, or sociodemographic factors. Based on the epidemiological criteria of causation, the findings contribute evidence supportive of an inference of causality between Alc+Caff use and injury. The results of the current studies also offer suggestions for future research needed in this area, and provide recommendations for policy prevention and intervention efforts to reduce the harm associated with this type of consumption.