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

of

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MA (University of Western Ontario, 2012)
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"An Evaluation of the Alcohol Total Consumption Model and Development of the International Model of Alcohol Harms and Policies"

Social Dimensions of Health

Tuesday, April 9, 2019
4:00 P.M.
Clearihue Building
Room B017

Supervisory Committee:
Dr. Timothy Stockwell, Department of Psychology, University of Victoria (Co-Supervisor)
Dr. Scott MacDonald, School of Health Information Science, UVic (Co-Supervisor)
Dr. Russell Callaghan, Northern Medical Program, University of Northern BC (Outside Member)

External Examiner:
Dr. Kypros Kypri, School of Medicine and Public Health, University of Newcastle, Australia

Chair of Oral Examination:
Dr. Eric Roth, Department of Anthropology, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies

Abstract

Alcohol is the most widely used psychoactive drug on earth and continues to be responsible for a substantial burden of death and disability. Mitigating these harms is an important focus of any healthful society. Population-level alcohol policy strategies may be employed to decrease these harms and improve population health. To assist towards these goals, this dissertation has two research objectives relating to the estimation and mitigation of alcohol harms: (1) to complete a series of studies regarding the Alcohol Total Consumption Model (TCM) and (2) to specify and test a novel alcohol health harms estimator and alcohol policy scenario modeler, the International Model of Alcohol Harms and Policies (InterMAHP).

The TCM is an important theory in alcohol studies and connects alcohol policies, *per capita* alcohol consumption and alcohol-attributable (AA) harms in a unified social theory. In brief, policies are expected to reflect on population-level consumption, which in turn is the most important predictor of alcohol harms. The TCM theorizes that change should flow directionally through the model – a policy expected to decrease consumption would be predicted to decrease alcohol harms. This theory has been critical towards informing alcohol control policies in the past five decades. In this dissertation, a series of studies were conducted to test the assumptions of the TCM, to test their continued viability. Study A is a comprehensive systematic review and series of meta-analyses that established the link between alcohol policies influencing day/hours of sale and outlet density and *per capita* consumption. Study B is a primary research study that examined the direct effect of a changed alcohol policy on alcohol-related ED visits, in the context of Saskatchewan. Studies C and D establish the link between alcohol consumption and AA mortality and morbidity through mathematical specification of InterMAHP. Next, the model was applied to the exemplar of AA mortality in Canada in 2016. Last, Study E extended InterMAHP functionalities to include modeling changes in AA harms expected from potential or realized *per capita* consumption changes resulting from policy change. An application was provided in the context of Québec.

The results of this dissertation research provide some support, in a modern context, the relationships defined in the TCM. The findings suggest that the TCM continues to be a largely appropriate conceptual model in consideration of alcohol policy-making. InterMAHP provides global alcohol researchers with a novel model towards estimating the health harms of alcohol.