University of Victoria | Graduate Studies

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

of

RYAN WONG

BA (University of Alberta, 2014)

"Deriving an Executive Behaviour Screener from the Behaviour Assessment System for Children – 2: Applications to Adolescent Hockey Players With and Without Concussions"

Department of Psychology

September 27, 2017
9:00 A.M.
Clearihue Building
Room B021

Supervisory Committee:
Dr. Mauricio Garcia-Barrera, Department of Psychology, University of Victoria (Supervisor)
Dr. John Sakaluk, Department of Psychology, UVic (Member)
Dr. Martin Mrazik, Educational Psychology, University of Alberta (Outside Member)

External Examiner:
Dr. David Bridgett, Department of Psychology, Northern Illinois University

Chair of Oral Examination:
Dr. Brian Christie, Division of Medical Sciences, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies

Abstract

The overall goal of the study is to develop a reliable clinical measurement tool for clinicians to use when assessing for executive behaviour change after a concussion. To understand the context and process in which this tool was derived, the relationships between concussions, adolescent development, and executive functions and their measurement must first be examined. Preventable injuries lead to nearly 3.5 million emergency department visits with a total economic cost of 26.8 billion dollars each year in Canada (Parachute Canada, 2015). For Canadian adolescents, 64% of hospital emergency room visits are related to participation in sports and physical activities (Government of Canada, 2016). Among those adolescents entering emergency departments with sports-related head injuries, the vast majority suffers from concussions with over 15,000 individuals visiting emergency departments in Alberta and Ontario in 2015 alone (CIHI, 2016). In the past 15 years there has been an increasing concern surrounding concussions in youth contact sports like hockey (Johnson, 2011; King & LeBlanc, 2006; Marchie & Cusimano, 2003), with medical organizations like the Canadian Academy of Sport and Exercise Medicine (CASEM) advocating for a targeted, age-restricted ban on body checking in an effort to reduce the number of concussions in youth hockey (Kissick, 2007). In Canada, over 30 percent of individuals who played sports as children or adolescents reported suffering concussions or suspected concussions, with half of these individuals never being formally diagnosed (ARI, 2015) supporting the idea that epidemiological data for concussion rates are generally considered to be far lower than the actual incidence rate as many people do not seek medical attention when they receive concussions (McCrea, Hammeke, Olsen, Leo, & Guskiewicz, 2004). These rates of concussion are particularly concerning as concussions can affect higher cognitive processes, like executive functions (Karr, Garcia-Barrera & Arenshekoff, 2014a) and this has widespread implications for public health policy and economic development where these cognitive processes are heavily implicated in positive and adaptive social outcomes (Scorza, Araya, Wuermli, & Betancourt, 2015). Due to the widespread prevalence of concussions it is important to understand what they are, how they manifest in individuals, and what risks are associated with receiving concussive injuries.