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**BSc (Kinesiology), University of Saskatchewan, 2009**  
**MSc (Physical Therapy), University of Toronto, 2011**

**FACULTY OF HEALTH**

**TITLE OF THESIS:** The Feasibility and Impact of a Yoga Intervention on Cognitive and Physical Performance among People Living with HIV

**TIME/DATE:** 12:00 pm, Tuesday, December 17, 2019

**PLACE:** Room 3107, The Mona Campbell Building, 1459 LeMarchant Street

**EXAMINING COMMITTEE:**

Dr. David Kietrys, Rehabilitation and Movement Sciences, Rutgers University (External Examiner)

Dr. Kelly K. O'Brien, Department of Physical Therapy, University of Toronto (Reader)

Dr. Marie-Josée Brouillette, Department of Psychiatry, McGill University (Reader)

Dr. Jacqueline Gahagan, School of Health and Human Performance, Dalhousie University (Reader)

Dr. Marilyn MacKay-Lyons, Department of Physiotherapy, Dalhousie University (Supervisor)

**DEPARTMENTAL REPRESENTATIVE:** Dr. Marilyn Macdonald, School of Nursing, Dalhousie University

**CHAIR:** Dr. Norman Schepp, PhD Defence Panel, Faculty of Graduate Studies

**ABSTRACT**

This dissertation consists of three main projects.

**Project 1:**

Cognitive impairment is common among people living with HIV (PLWH). Physical activity has emerged as a potential management strategy for cognitive impairment. The study purpose was to map the evidence on exercise and cognition in HIV. We searched 5 databases for exercise and HIV terms. Two authors independently reviewed titles/abstracts for studies addressing physical activity/exercise and cognition in PLWH. Sixteen studies were included. Two of eight interventional studies found exercise improved cognition. Eight non-interventional studies showed a positive relationship between physical activity and cognition. These results suggest that physical activity may improve cognition in PLWH.

**Project 2:**

Although compelling evidence exists about the health benefits of exercise, many PLWH are physically inactive. The study purpose was to use the Theoretical Domains Framework to investigate older PLWH's exercise barriers and facilitators. This qualitative study involved semi-structured interviews with 12 PLWH $\geq$ 45 years. Data were analyzed thematically and were coded by two independent investigators. The participants had a working knowledge of exercise but were unfamiliar with specific exercise parameters. Barriers included co-morbidities, injuries, and side effects of HIV and medications. Facilitators included social support and technology. Those designing exercise interventions should incorporate strategies to address these obstacles.

**Project 3:**

The purpose of this pilot randomized trial was to assess the feasibility and satisfaction of a tri-weekly 12-week yoga intervention among PLWH. Other objectives included evaluating cognition, physical function, medication adherence, health-related quality of life (HRQoL), and mood among yoga participants versus controls using blinded assessors. We recruited 22 medically-stable PLWH aged $\geq$ 35 years. *A priori* feasibility criteria were defined as  $\geq$ 70% yoga session attendance and  $\geq$ 70% of participants satisfied with the intervention using a post-participation questionnaire. Two participants withdrew from the yoga group. Mean yoga class attendance was 82% with 100% satisfaction. Intention-to-treat analyses (yoga n=11, control n=11) showed no within- or between-group differences in cognitive and physical function. The yoga group improved over time in HRQoL cognition ( $p=.047$ ) with trends toward improvements in health transition ( $p=.063$ ) and depression ( $p=.055$ ). This pilot study provides preliminary evidence of feasibility and benefits of yoga for PLWH.