Notice of the Final Oral Examination
for the Degree of Master of Science
of
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BSc (University of Guelph, 2015)

“A Feasibility Study to Test the Potential Efficacy of a Rowing-Related Yoga Program on Male Varsity Competitive Rowers”

School of Exercise Science, Physical Health Education

Monday April 6, 2020
9:30 am
Remote Defence

Supervisory Committee:
Dr. Kathy Gaul, School of Exercise Science, Physical Health Education, University of Victoria (Supervisor)
Dr. Sandra Hundza, School of Exercise Science, Physical Health Education, UVic (Member)

External Examiner:
Dr. Anne Bruce, Department of Nursing, UVic (Outside Member)

Chair of Oral Examination:
Dr. Alexandra D’Arcy, Department of Linguistics, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies
Abstract

The purpose of this present study was to assess the feasibility and determine the potential short-term efficacy of implementing a specific 9-week “Yoga for Rowers” (ROWGA) program on male varsity rowers during a competitive training season. Sixteen competitive male varsity rowers (20.6 ± 2.1 years) were recruited to participate, using a single group, pre-test-post-test, experimental research design. All participants performed two 60 min ROWGA sessions per week for 9 weeks during their fall competitive season. The primary objectives were to test the efficacy of a ROWGA program in a real-world context by evaluating: 1) the feasibility of implementing the program during the training and competitive season as measured by program adherence; 2) its potential effect on strength by evaluating hip muscle strength acting in the sagittal, frontal, and transverse planes as well as on hip muscle strength ratios between the agonist versus antagonist muscle groups; and 3) its potential effect on hip flexion range of motion (ROM). Two pre-test baseline measurements were performed on all participants over 1-week prior to initiating the ROWGA sessions while a single post-test was conducted following the ROWGA intervention. Intraclass correlation coefficients for ROM and strength were used to determine reliability of measurements by taking the two pre-intervention test scores. Outcome measures included hip flexion range of motion, peak isometric hip muscle forces normalized to body weight, including hip flexors, extensors, abductors, adductors, both internal and external rotators as well as peak isometric agonist-antagonist hip muscle strength ratios. Pre and post peak isometric hip strength measurements were calculated for agonist-antagonist muscle groups within each plane by dividing flexors by extensors, adductors by abductors, and internal by external rotators. Feasibility of the ROWGA program was determined from program attendance and adherence rates.

The adherence rate was considered high with 89% attending all sessions, after adjusting for compulsory competitions. Significant improvements in peak isometric strength were demonstrated for hip flexors, extensors, abductors, and adductors, and external rotators, while a significant reduction for hip flexion ROM was observed. No significant changes in isometric hip muscle strength agonist-antagonist ratios were demonstrated. The results from this research support the feasibility of the ROWGA program in terms of rower’s acceptance, adherence, and the ability to accommodate the time requirements within their schedule as well as potential strength benefits gained. This research could help provide a platform for future large-scale research related to injury prevention in rowing.