University of Victoria | Graduate Studies

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

of

HANNAH ROSE

BA (Simon Fraser University, 2010)

"Exploring the Impact of Environmental Cues on Fruit and Vegetable Consumption in Young Adults – a Randomized Controlled Pilot"

School of Exercise Science, Physical & Health Education

Friday, June 12, 2015
9:00am
McKinnon Building
Room 0025

Supervisory Committee:
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Dr. Ryan Rhodes, School of Exercise Science, Physical & Health Education, UVic (Member)

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Dr. Charlotte Loppie, School of Public Health and Social Policy, UVic

Dr. David Capson, Dean, Faculty of Graduate Studies

Abstract

Objective: University students have low levels of fruit and vegetable consumption (FVC). There is a paucity of research about changing FVC in this population, including the specific use of environmental cues to influence behaviour change. The purpose of this research was to investigate the effect of a cue (a modified plate design and/or plate size) on FVC while exploring explicit cognitions and attitudes in first year undergraduates.

Methods: This study utilized an experimental pre-post randomized control group design across six weeks, with two recruitment waves. First year full-time University students living off campus and consuming less than six servings of fruits and vegetables were eligible. Participants (n=39) were randomly assigned to intervention with an 8-inch dinner plate displaying recommended portion sizes, with an 8-inch dinner plate with no design, or a control group. All participants completed a food frequency questionnaire (FFQ), 24-hour food recall (24Hr), demographics, anthropometry and intentions toward FVC, with intervention groups receiving a lesson on Canada's Food Guide in addition to their plate.

Results: Eight out of twelve outcome measures had meaningful time by group effect sizes ($\eta 2 > 0.06$). For fruit frequency (per day), the effect was statistically significant ($p=0.03$). Adherence to plate use varied (design plate: 0.69±2.38 to 4.23±5.55 times per week; plain plate 3.39±7.31 to 12.80±7.89 times per week) but was low in the designed plate condition (average use: 2.46±3.88 times per week). Baseline intention, affective and instrumental attitudes, perceived behavioural control, subjective norms and automaticity did not predict FVC.

Conclusion: An environmental cue in the form of a modified dinner plate may significantly influence fruit and vegetable consumption in young adults. Change occurred despite low plate use, which appears to indicate that the role of the plate was more explicit, and could be due to affective attitude, subjective norms, or automaticity. However, further research is needed with larger sample sizes and with a higher adherence to the intervention.

Keywords: behavior economics, fruit and vegetable consumption, university students, environmental cues