

## DOCTORAL THESIS

### **Social cognitive theory based physical activity intervention targeting non-working time physical activity of workers with intellectual disabilities**

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## ABSTRACT

The purpose of the study was to evaluate the effects of a Social Cognitive Theory (SCT) based physical activity intervention designed to evaluate the effectiveness of the twelve-week intervention with regard to psychosocial behaviour using SCT and physical activity behaviour among adults with intellectual disability in non-working time.

**Design:** The study involved pre-post randomized control trial and employed a MANCOVA analysis for this study. Between-Subjects Design was used to assess the effect of independent variable (twelve-week intervention programme) on two groups (intervention group and control group). Follow-up (separate ANVOAs) were calculated on the four dependent variables (self-efficacy, outcome expectancy, barrier to exercise, and moderate physical activity).

**Participants:** Eighty participants from St. James settlements aged over 18 years participated in the present study. After data screening, 59 (30 males, 29 females; n for intervention=29, n for control=30) cases with completed data were analyzed. The final data set contained participants with age ranged from 21 to 67 years ( $M=35.83$ ,  $SD=10.28$ ) and BMI ranged from 13 to 64 ( $M=27$ ,  $SD=7.33$ ). Intervention group received a SCT-based intervention programme for twelve one-hour lectures.

**Outcome measures:** The Primary outcomes included Self-efficacy, Outcome expectation and Barrier to exercise Questionnaire (SOBQ) on psychosocial behaviour (self-efficacy, outcome expectancy and perceived barrier) and Physical Activity Recall (PAR) on physical activity behaviour (moderate physical activity) among adults with intellectual disabilities. Secondary outcome include objective check list to evaluate the designed treatment being delivered to participants adequately. Measures were taken at baseline and posttest and additionally, intervention group were recruited for follow-up at 4-month.

**Results:** After controlling the pretest scores, the MANCOVA results showed a statistically significant difference between two groups (intervention group and control group)  $F(4,48)=32.8$ ,  $P<0.001$ ; Wilk's Lambda=0.27, partial eta squared =0.73. Result of follow-up measure on MANCOVA, showed that 12-wk intervention between-subjects are significant for all 4 dependents variables: self-efficacy:  $F(1,116)=47.12$ ,  $p<0.0125$ ,  $\eta^2=0.48$ ; outcome expectation:  $F(1,134)=22.27$ ,  $p<0.0125$ ,  $\eta^2=0.30$ ; barrier to exercise:  $F(1,100)=10.50$ ,  $p<0.0125$ ,  $\eta^2=0.17$ ; moderate physical activity  $F(1,114)=96.79$ ,  $p<0.0125$ ,  $\eta^2=0.65$  with a Bonferroni adjusted alpha level of 0.0125.

The MANOVA results showed that the outcome of the 12-week intervention programme significantly influence time (pretest and posttest) of self-efficacy, outcome expectation, barrier to exercise, moderate physical activity. All scores are significantly higher for posttest in self-efficacy ( $p < 0.01$ ), outcome expectation ( $p < 0.01$ ), moderate physical activity ( $p < 0.01$ ), and lower in barrier to exercise ( $p < 0.01$ ).

Lastly, the four months follow-up test showed that the intervention group had significantly lower mean scores compared with posttest in self-efficacy, outcome expectancy, and barrier to exercise. There was no significant difference in moderate physical activity between follow-up and posttest in the intervention group.

Conclusions: The twelve-week SCT-based educational treatment shows significant effects in posttest and also intervention group on the targeted constructs: self-efficacy, outcome expectation, and barrier to exercise as well as increasing the moderate physical activity among working adults with intellectual disabilities.

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