

**Effectiveness of an independent physical activity programme in improving physical activity amongst breast and colorectal cancer survivors: Study protocol for a randomized controlled trial**

**ABSTRACT**

**Background:** Previous research has documented the benefits of physical activity (PA) for cancer survivors which include improved quality of life, physical, physiological, emotional and social functioning, reduced relapse of cancer and the mitigation of cancer mortality. This study aims to evaluate the effects of an independent PA programme based on PA level, quality of life, self-efficacy, outcome expectations, reinforcement, behavioural capability and observational learning amongst registered National Cancer Society Malaysia's (NCSM) cancer survivors. **Methods:** A two-armed, parallel, double-blinded, randomized, controlled trial, intervention and wait-list control groups will be conducted amongst 106 NCSM's cancer survivors. The programme is developed based on a Social Cognitive Theory that combines both psychoeducation and social media approaches to behavioural intervention. The duration of intervention will be 2 months, in which data will be collected at baseline, 2-month (immediately post-intervention) and 4-month. The primary outcome of the study is to determine the PA level of the participant which will be measured as METminutes/week of PA using the International Physical Activity Questionnaire (IPAQ). There are four measurements of PA that are measured which are moderate and vigorous PA (MVPA) MET-minutes/week, light PA MET-minutes/week, moderate PA MET-minutes/week and vigorous PA METminutes/week. A Generalised Estimating Equation (GEE) analysis will be used to evaluate the effectiveness of the intervention, adjusted for baseline covariates on both continuous and categorical outcomes. This study will utilize a significance level of 0.05 with a confidence interval of 95% for means estimation in rejecting null hypothesis. The trial registered to the Australian New Zealand Clinical Trials (ANZCTR) with the Registration Number, ACTRN12620000039987. **Conclusion:** The programme will be useful as a supplementary prescription to assist policy makers to strengthen non-pharmacological cancer management options and to empower cancer survivors to be self-reliant and self-sufficient to include PA as part of their recovery process.

**Keyword:** Independent physical activity; Cancer survivor; Social cognitive theory