ASSESSING A SELF-REPORTED OUTCOME ON PHYSICAL FUNCTION AND OUTCOME EXPECTATION OF EXERCISE AMONG DIABETIC PERIPHERAL NEUROPATHY PATIENTS

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Background: Diabetic peripheral neuropathy (DPN) is the most common complications affecting up to 50% of the patients with diabetes. It causes functional limitations in performing activities of daily living. DPN can be managed through the combination of medication, foot care and foot exercise. Foot exercise can delay the development of DPN. However, as the risk of foot ulceration outweighs the benefits of exercise, physical activity is often restricted.

Objective: To assess self-reported outcome on physical function and outcome expectation of exercise among diabetic peripheral neuropathy patients.

Methods: This is a quasi-experimental design with a control group. 54 patients were recruited in this study, with 26 and 28 patients assigned to the control and intervention groups, respectively. The intervention group was taught to perform a 4-weeks of non-weight bearing foot exercise (NoWBEx) while the control group was instructed to carry out their exercise activities as usual. NoWBEx foot exercise provides a combination of strengthening and flexibility of foot exercises without carrying own weight. Questionnaire were distributed to both group to assess their physical function and outcome expectation of exercise.

Findings: There was an improvement of physical performance in the intervention group, with significant increase of 2.57 %(95%CI, 0.99 to 4.16) $p < 0.05$ with effect size =0.08. There was also statistically significant difference in expectation for exercise mean score over the time ($F(1.00,52.00)=92.97$, $p<0.05$, partial $\eta 2=0.641$), effect size 0.4.

Conclusion: Those who performed NoWBEx were found to experience better improvement in their physical performance compared to those who did not perform the exercise. Those who performed NoWBEx showed positive expectation for exercise. Thus, based on this study, it is suggested that NoWBEx is an alternative exercise for DPN patients to be more physically active.