

## ABSTRACT

The Effect of Aerobic Exercise Training on Functional Status and Health-Related Quality of Life in Community-Dwelling Stroke Survivors.

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**Purpose-** The main purpose of this study was to determine the effects of aerobic (walking) training on functional status and health-related quality of life (HRQL) in persons with chronic stroke. A second objective was to examine factors that were associated with any improvement in the outcomes.

**Methods-** A single-blind randomized controlled trial was conducted. The intervention group (n=64) participated in a 30 minute walking programme, three times per week for 12 weeks. The control group (n=64) received massage to the affected side. Assessments were done at baseline, 6 weeks, 3 months and 3 months post intervention. Main outcome measures were the Physical and Mental Health Components of The Medical Outcomes Short Form 36 (SF-36) and the Summary score of the Stroke-specific Quality of Life (SS-QOL) tools, used to assess health-related quality of life; Barthel Index and OARS functional status measures. Other outcomes measures were six minute walk test for endurance; the Motricity Index and hand dynamometer for lower and upper extremity strength respectively and the Geriatric Depression Scale (GDS) for depressive symptoms.

**Results-** The Physical Health component (PHC) score of the SF-36 improved by 5.6 points in the walking group and one point in the control group ( $p=.027$ ). ANOVA showed a significant group-by-time interaction for distance walked in six minutes ( $p<.001$ ). Mean distance walked improved by 43m in the walking group and 9m in the control group ( $p=.001$ ). From multivariate analysis, determinants of improvement in PHC were, being in the intervention group, employment and lower baseline PHC score ( $R^2=.285$ ); determinants of improvement in endurance were group (intervention), improvement in GDS score and strength of the affected side ( $R^2=.260$ ).

**Conclusion-** Aerobic walking is effective in improving the Physical Health component of quality of life and functional exercise capacity in community-dwelling persons with chronic stroke. It should form part of a comprehensive health promotion strategy aimed at improving activity and participation and preventing secondary conditions in this population.

Keywords: Carron D. Gordon, cerebrovascular accident, aerobic exercise, quality of life, community-dwelling, Jamaica.