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Relationship between quality of life and aerobic fitness level: Home based cardiac rehabilitation through educational booklet of post CABG patients. A randomized control trial

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Objective: To find out the relationship between quality of life and aerobic fitness level in comparison with both experimental and control groups of cardiac rehabilitation home based program through educational booklet of post CABG patients.

Methods: This study was a prospective, randomised controlled trial conducted at Ibrahim Cardiac Hospital & Research Institute of Dhaka City in Bangladesh. One hundred and one adult patients with the age range of (25-64) were enrolled in this study. The experimental group received all usual post discharge care with educational booklet in addition to special cardiac rehabilitation classes. On the other hand control group receive only as usual post discharge care. Outcome was measured in three follow-up after the date of discharges, 1st follow-up - 45 days, 2nd follow-up - 3 months and 3rd follow-up - 6 months later from the date of discharge. The quality of life (QOL) measured by using WHO QOL-BREF questionnaire tools and aerobic fitness score (AFS=10xVO_{2max}) was measured by using VO_{2max} equation (VO_{2max} =15.1+ (21.8x speed) – (0.327xHR) – (0.263xspeedxage) + (0.00504xHRxage)+(5.98xgender) of single stage treadmill walking test protocol. We conducted the statistical analysis using SPSS software (IBM Corporation, version 16.0).

Results: One hundred and one (101) patients were recruited into this randomised control trial study. There were no statistical significant differences in demographic characteristics such as gender, age, educational level and occupation between the two groups. The participants' mean ages were 54±6.07 for both control and experimental groups. There were few differences in the pre-operative risk factors between control and experimental groups. In the experimental group, participants smoked more than control. In-addition, both control and experimental groups did not differ significantly regarding BMI, hypertension, dyslipidemia and history of diabetic's mellitus. After 6 months home based cardiac rehabilitation program through educational booklet, In experimental group demonstrates a significant association between WHOQOL-BREF scores and aerobic fitness score (AFS) in the domain-1; physical domain (P=0.05; i.e., medical condition), In response to domain-2; Psychological domain the two facets had respectively shown significant correlation of AFS (Positive feelings; P=0.048 and negative feelings; P=0.010) and in domain-4, environmental domain three facets had respectively shown positive correlation of AFS (Physical safety; P=0.026, physical environment; P=0.025 and leisure activities; P=0.037) but in domain-3, social relationship domain did not show positive correlation of both control and experimental group.

Conclusion: This study highlights the importance of proper physical exercise programs, lifestyle modifications, and strong social support networks as factors that maximize the cardiovascular fitness and improve the QOL of the patients who have undergone CABG surgery.

Biography

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