PHYSICAL ACTIVITY CAN BOOST EMOTIONAL QUALITY OF LIFE IN BREAST CANCER SURVIVORS: SUB-SET ANALYSES OF KROG 14-09 NATIONWIDE QUESTIONNAIRE STUDY

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Background: To investigate the relation between physical activity (PA) and quality of life (QoL) through nationwide multi-institutional questionnaires.

Methods: Data from 1156 questionnaires obtained from breast cancer survivors after adjuvant radiotherapy were analyzed. After screening uncertain information and heavy activity for PA (>900, minutes/week), 682 questionnaires were available and divided by three groups of inactivity (<150), regular activity (150–450) and moderate activity (<450–900). Global physical activity question, 5-dimensional questionnaire by EuroQol (EQ-5D), EORTC QLQ-BR23 and were used including clinical and socio-demographic information. A linear-to-linear correlation test and Spearman’s test for each item of EQ-5D and summation of EQ-5D, respectively and multiple comparison by Tukey test after Kruskal-Wallis analysis for QLQ-BR23 were conducted.

Results: 144 (21.1%), 309 (45.3%) and 229 (33.6%) survivors had inactivity, regular PA and moderate PA, respectively. There was no difference for age groups (P=0.246). The age distribution For EQ-5D, mobility (P=0.021), usual activity (P=0.049) and anxiety (P=0.022) were aggravated in inactive PA. The survivors showing scale 5 for summation of EQ-5D (the best score on all 5 items) were 24.8%, 32.1% and 39.0% for inactive, regular and moderate PA, respectively and the extent of PA was inversely correlated with summation of EQ-5D (P=0.004). For QLQ-BR23, systematic therapy symptom (P=0.010), and body image (P=0.048) and future perspective (P=0.004) for functional area were improved by regular and moderate PA. However, the differences between regular and moderate PA were insignificant in all areas.

Physical activity	Mobility 1: 2: 3	Self- Manage ment 1: 2: 3	Usual Activity 1: 2: 3	Pain 1: 2: 3	Anxiety 1: 2: 3
P value	0.021	0.900	0.049	0.105	0.022
Inactive	85.1: 14.2: 0.7	97.2: 2.8: 0.0	82.3: 17.7: 0.0	41.1: 56.7: 2.1	52.5: 46.8: 0.7
Regular	86.6: 13.4: 0.0	97.1: 2.9: 0.0	85.9: 13.7: 0.3	50.0: 50.0: 0.0	56.4: 42.0: 1.6
Moderate	92.1: 7.9: 0.0	97.4: 2.2: 0.4	89.5: 10.5: 0.0	50.0: 49.1: 0.9	63.6: 36.4: 0.0

Conclusion: Emotional and physical quality of life could be improved by physical activity. However, involvement in physical activity over regular extent could have a minimal impact on quality of life .