

Upper limb disability, quality of life and self-reported active life-style behavior in breast cancer survivors following a structured adapted physical activity intervention

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Growing evidence indicates that person-tailored physical activity interventions may improve the health outcomes (i.e. decreased shoulder range of movement, muscle weakness, pain, and psychological distress) of breast cancer survivors. However, knowledge about either longitudinal benefits on shoulder mobility and quality of life or physical activity maintenance among survivors after adapted physical activity (APA) interventions remains limited. Here, we evaluated the maintenance of a physically active lifestyle in breast cancer survivors after ending a specific APA intervention and examined longitudinally the possible implications in preserving the physical and mental benefits achieved with APA. The study included 112 breast cancer survivors recruited at the Cancer Rehabilitation Centre in Florence. Nine months after ending a supervised APA protocol, breast cancer survivors were interviewed on their participation in regular physical activity, drop-out reasons and surgical shoulder-arm symptoms, using a structured questionnaire. At 1.5-year post-APA follow-up to assess long-term effects, survivors were again evaluated as at baseline/post-APA by fitness tests (i.e. shoulder-arm mobility, range of motion, back flexibility) and Short Form-12 and numerical rating scale questionnaires to assess quality of life and pain intensity on back and surgical shoulder, respectively. Questionnaires on physical activity participation and upper limb function (QuickDASH) were also administered. Our findings indicated that long-term practice of physical activity was poorly maintained among breast cancer survivors resulting in an overall decrease in post-APA achieved benefits. Generalized physical activity does not seem appropriate to improve upper limb disability secondary to breast cancer treatments. In conclusion, the practice of general physical activity by breast cancer survivors seems not able to preserve overtime the physical and mental benefits achieved following a structured APA intervention, suggesting that participation in structured APA protocols should be maintained overtime. The findings of this study may help to plan future APA-based strategies in order to better manage the breast cancer survivor who is experiencing decreased function of the affected upper limb.

Key words

Breast cancer, adapted physical activity, survivorship, quality of life, upper limb disability, active lifestyle.