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Effects of the Multimodal Oncology Rehabilitation Exercise (MORE[©]) program on cognitive performance, sleep quality, and psychological distress amongst head and neck cancer survivors undergoing chemoradiotherapy (CRT).

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Background: Head and neck cancer (HNC) and its treatments have significant detrimental effects on multiple survivorship domains. Multimodal programs incorporating exercise-based interventions are frequently integrated as supportive care strategies in western cohorts, however evidence in resource constrained settings remains scarce. The purpose of this study was to evaluate the effects of the MORE[©] program, a structured exercise-based intervention incorporating physical exercises, cognitive exercises, and psychosocial strategies on subjective cognitive function, sleep quality and psychological distress among HNC survivors undergoing CRT.

Methods: 118 HNC survivors presenting with HNC stages III to IVb were recruited in the MORE[©] program, delivered thrice weekly across eight weeks. Outcomes were assessed at baseline, four, eight and twelve weeks. Subjective outcomes were assessed using validated patient reported outcome measures, translated into the Kannada language. Changes in outcomes over time were assessed using the linear mixed effects model.

Results: Median age of the survivors was 47 years (78.8% males), with a high prevalence of tobacco chewers. Oral cavity was the most common primary tumor site, and majority presented with stage IVa of the disease. Significant improvements were observed in perceived cognitive impairments (β : 3.45, $p < 0.001$), sleep quality (β : 2.8, $p < 0.001$), and psychological distress (β : -2.4, $p < 0.001$) by the 12th week. However, none of the demographic or clinical covariates were associated with magnitude of improvements in the outcomes.

Conclusion: The MORE[©] program demonstrated significant improvements in subjective cognitive function, sleep quality and psychological distress among HNC survivors undergoing CRT. These findings highlight the potential of structured, multimodal exercise programs as adjuncts to cancer treatment for improving cancer related outcomes. To the best of our knowledge, this is the first study to evaluate the effects of such an intervention among HNC survivors, highlighting the need for large scale randomized controlled trails to strengthen the evidence supporting these findings.

Keywords

Cognition, Distress, Exercise, Head and Neck Cancer

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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