

Cancer Rehabilitation Evaluation System Questionnaire: A Disease-specific and Treatment-specific Measure of Rehabilitation Needs and Self-reported Quality of Life

Sir,

I would like to appreciate the leadership role played by the Indian Journal of Palliative Care in establishing evidence for evaluation tools in terms of their psychometric properties for use in palliative and end-of-life care settings in developing countries.^[1] This letter to editor introduces readers of IJPC to Cancer Rehabilitation Evaluation System (CARES), a self-reported questionnaire for assessment of rehabilitation needs and quality of life in cancer survivors.

CARES is the first of its kind tool, for evaluating quality of life from disease-specific and treatment-specific perspectives, among cancer survivors. Maintaining “quality of life” for a cancer patient is analogous to caring for the “whole” patient which should include integration of multispecialty services, on-going patient education, attention to supportive care, and efforts to achieve organ preservation.^[2] Patients’ feelings, psychological and functional status, and quality of life have often been regarded as unmeasurable subjective entities that cannot be scientifically studied.^[3]

Keeping the above-mentioned challenges in mind, Schag and Heinrich^[4] developed a cancer-specific rehabilitation and treatment planning questionnaire, CARES (CAncer Rehabilitation Evaluation System). CARES is a comprehensive, reliable, valid, cost-efficient and pertinent to patients’ quality of life. The CARES was adapted for research settings and a computer-based scoring and professional reporting system was available to clinicians with access to IBM compatible personal computers.

Evidence for CARES was established by Ganz *et al.*^[5] who reviewed studies on CARES, and presented data to demonstrate that the CARES was a generic measure of health-related quality of life, suitable for use in cancer. The CARES performed well across different cancer sites and phases of the disease. CARES was also responsive to changes in health-related quality of life over time. Considering the practical difficulties in application of CARES, a shorter version of the instrument was developed as CAncer Rehabilitation Evaluation System-short form (CARES-SF).

Schag *et al.*^[6] described the development and psychometric properties of the CARES-SF and their findings demonstrated that the CARES-SF was highly related to the CARES, had excellent test-retest reliability, concurrent validity with related measures, and acceptable internal consistency of summary scales.

Subsequently, te Velde *et al.*^[7] investigated the validity and reliability of the CARES-SF on 485 cancer patients who completed the CARES-SF before treatment (T1), 1 month later (T2), and 3 months following T2 (T3), with a sub-sample of patients completing the CARES-SF a fourth time (T4) 1 week following T3, for purposes of test-retest reliability estimation. Internal consistency was high for four of six multi-item scales; test-retest reliability for the six scales were also high; selective scales distinguished clearly between patients differing in disease stage, performance status, treatment modality and tumor response; and they were also responsive to changes in health status over time.

Hjermstad *et al.*^[8] studied the rehabilitation needs after high-dose chemotherapy (HDC) in 130 cancer patients treated with HDC and allogeneic (SCT) or autologous stem cell transplantation (ASCT). The SCT group had better psychosocial subscale scores at the 6 and 12-month assessments, as well as better satisfaction on the marital subscale 6 months post-transplant.

The CARES and CARES-SF appeared to be two promising evaluation tools that could be used in palliative care settings, to measure disease-specific and care-specific quality of life in cancer survivors, and this poses a huge opportunity for palliative care clinicians and researchers in developing countries to implement and establish further evidence respectively.

With only few studies describing application of CARES and/or CARES-SF in oncology settings, can palliative care physicians and rehabilitation professionals co-operate in evaluating the rehabilitation needs and quality of life in cancer survivors in developing countries using either CARES or CARES-SF?

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