

Multidimensional Rehabilitation Programs for Adult Cancer Survivors

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Objective

To assess the effectiveness of multidimensional rehabilitation programs (MDRPs) in terms of maintaining or improving the physical and psychosocial well-being of adult cancer survivors.

Type of Review

This systematic review contains interventions focusing on randomized, controlled trials measuring the effectiveness of the intervention of interest.

Relevance for Nursing

Improvements in cancer detection, treatment, and care have led to an increase in cancer survivors. Cancer survivors may experience detrimental physical and emotional symptoms including fatigue, weakness, weight gain, anxiety, and depression. MDRPs may address these issues and improve survivors' quality of life.

Characteristics of the Evidence

The review included 12 randomized, controlled trials involving 1,669 adult participants. The average age across the studies ranged from 48.8–71.7 years. Of the participants recruited, 938 were male and 793 were female. Five studies focused on prostate cancer, two focused on breast cancer, and one focused on nasopharyngeal cancer. Four studies included survivors with a range of cancers. In seven studies, the control group received standard care; in five studies, control groups received a lesser form of the intervention.

The MDRP interventions involved two or more sessions and included a physical component (e.g., exercise, dietary regimen) as well as at least one psychosocial component (e.g., counseling, cognitive

behavior therapy, psychoeducational strategies). Seven studies aimed to promote physical and psychosocial well-being and measured these as outcomes. Five studies aimed to improve either physical or psychosocial functioning despite including interventions and measuring outcomes pertaining to both.

All interventions were delivered by healthcare professionals (e.g., doctors, nurses, physical therapists). Interventions were individual or group sessions and could be delivered face-to-face or via telephone in any setting (e.g., home, community, clinic). In six studies, interventions were conducted face-to-face. Four studies included additional telephone follow-up. Two studies used printed materials to deliver interventions, with one also using telephone counseling. The length of the MDRPs was divided into two groups: less than six months (4–12 weeks) and greater than six months (6–12 months).

Primary outcomes of interest were physical outcomes including changes in physical or functional status (e.g., exercise tolerance, physical fitness, weight control, dietary intake) or symptom control (e.g., pain, fatigue). Psychosocial outcomes included measures of quality of life, self-efficacy, anxiety, or depression. Validated scales were used to assess these measures.

Secondary outcomes included participant adherence (64% measured by five studies) and satisfaction with the programs (positive findings reported by three studies). Adverse outcomes included mortality or morbidity directly related to the MDRP as well as program attrition. Three studies reported no adverse events, one

study reported no difference between groups, and one study reported only the number of serious adverse events for each study arm (35 out of 271 in the experimental arm, 39 out of 272 in the control arm).

Four studies had a moderate risk of bias, and eight had a high risk of bias. Six studies reported issues with small sample size.

Summary of Key Evidence

Insufficient evidence was found to assess the effectiveness of MDRPs in terms of maintaining or improving physical and psychosocial well-being. Statistical pooling was possible for only one outcome measure (using the SF-36® physical health component) in six studies. Data from one study were not provided by the authors following contact, so the main statistical finding was based on data from only 29% (474 of 1,669) of participants. An increase in SF-36 physical function of 2.22 (95% confidence interval [CI] [0.12, 4.31], $p = 0.04$) was identified in the intervention group compared with the control group for four studies ($n = 392$). The effect size was 1.79 (95% CI [-0.82, 4.49]).

Assessment time for studies varied from 3–12 months, and no evidence showed heterogeneity between studies in this effect ($I^2 = 0\%$). The SF-36 mental health component score was pooled for three studies, but considerable heterogeneity was identified ($I^2 = 84\%$).

Narrative analysis revealed that rehabilitation programs with a single dimension (e.g., physical outcomes only) appeared to be more successful for enacting positive change than multidimensional programs.

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Key words: multidimensional rehabilitation programs; adult cancer survivors; well-being

Digital Object Identifier: 10.1188/14.CJON.722-723