

# Oncology Rehabilitation Outcomes Over Time: A Mixed-Methods Approach

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According to the Centers for Disease Control and Prevention ([CDC], 2012a), the incidence of breast cancer from 1999–2008 decreased by 1.2% and the mortality rate fell by 2%. During the same timeframe, colon cancer incidence and mortality among men was unchanged but, among women, incidence fell by 2.4% and mortality fell by 2.9% (CDC, 2012b). Similarly, the incidence of prostate cancer reduced by 1.6% and mortality fell by 3.6% (CDC, 2012c). Cancer survivors are living longer with a disease that has become, for an increasing number of Americans, a chronic condition. Therefore, longer lifespans lead cancer survivors to strive for the highest possible quality of life through improved physical and emotional functioning. In response, rehabilitation programs have emerged that strive to promote optimal physical, sensory, intellectual, psychological, and functional levels of health (World Health Organization, 2013). Specifically, cancer rehabilitation provides specialists to help those living with cancer to be as independent as possible (American Cancer Society, 2013).

Historically, oncology rehabilitation is a relatively new field of study; however, a significant body of quantitative research exists regarding the short-term benefits. When measured at program completion, individualized cancer rehabilitation programs have demonstrated improvements in patients' physical functioning (Jones & Alfano, 2013; McEwen, Elmi, Waldman, & Bishev, 2012; Spence, Heesch, & Brown, 2010). Meta-analyses have confirmed that a change in physical activity had either a large-to-moderate positive effect (Formica et al., 2011) or made a clinically important difference (Fong et al., 2012) on physical functioning measures. Similar meta-analyses have shown that oncology rehabilitation results in positive effects on health-related quality of life, psychological outcomes, and symptoms (Conn, Hafdahl, Porock, McDaniel, & Nielsen, 2006; Farin & Nagel, 2013; Fong et al., 2012). About two-thirds of the of 82 independent clinical stud-

**Purpose/Objectives:** To evaluate an oncology rehabilitation program over time.

**Design:** A cross-sectional, retrospective program evaluation using a mixed-methods approach.

**Setting:** An outpatient oncology rehabilitation program housed in an urban, hospital-based comprehensive cancer center in Alaska.

**Sample:** 102 cancer survivors who had completed a 10-week oncology rehabilitation program (mean time since completion was 2.5 years).

**Methods:** Participants completed a mailed, 28-item retrospective survey to collect perceived activity level recalled at various points in time as well as program perceptions. Open-ended questions elicited narrative comments about motivators and barriers. The Medical Outcomes Study (MOS) SF-36® was completed before and after the program.

**Main Research Variables:** Health-related quality of life, perceived health status, activity level, motivators, barriers, and program perceptions.

**Findings:** A small increase in level of activity from precancer to the current time (postrehabilitation) ( $z = -3.1$ ,  $p < 0.01$ ) was reported. Most and least helpful motivators emerged from the narrative data, resulting in the shared interpretation of "I have my life back."

**Conclusions:** Program motivators were effective in helping cancer survivors maintain some increased activity and retain positive perceptions well after the completion of the program.

**Implications for Nursing:** Survivors who complete a rehabilitation program retain a sense of restoration and caring, and some engage in physical activity over time. Adapting the program based on insights into the survivor perspective may assist oncology rehabilitation clinicians to promote optimum physical activity and sustain healthful change.

**Key Words:** oncology; rehabilitation; evaluation; activity; long-term

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ies systematically reviewed by Jones and Alfano (2013) found that exercise therapy is well tolerated and safe for cancer survivors.