

# Rural Living as Context: A Study of Disparities in Long-Term Cancer Survivors

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**T**wenty-one percent of the U.S. population lives in rural areas, defined as sparsely populated counties a long distance from comprehensive healthcare centers (U.S. Census Bureau, 2010). Defining rural elements are the vast distance between individuals and a low population density with limited face-to-face contact, both of which influence human networking (Giles, Glonek, Luszcz, & Andrews, 2005) and affect health outcomes (Fassio, Rollero, & De Piccoli, 2012; Strasser, 2003).

Rural Americans suffer disproportionately from chronic illnesses such as cancer (Gamm, Hutchison, Dabney, & Dorsey, 2003). Not only are they at risk for poor health outcomes, such as increased mortality and morbidity, but they also report poor health-related quality of life (HRQOL) (Gamm et al., 2003; Weaver, Geiger, Lu, & Case, 2013). HRQOL is a multidimensional, subjective, evaluative construct that describes how individuals judge their lives based on current health status (King et al., 1997). For cancer survivors, that includes an individual's perceived quality of survival. Persistent, long-term, distressing late effects from diagnosis and treatment of cancer can diminish HRQOL (Mah, Bezjak, Loblaw, Gotowiec, & Devins, 2011; Weeks, Wallace, Wang, Lee, & Kazis, 2006). Those effects contribute to the vulnerability of rural long-term (at least five years postdiagnosis or treatment) cancer survivors. Weaver et al. (2013) reported that, from 2006–2010, about 21% of cancer survivors resided in rural areas. The effects of diseases such as cancer on rural dwellers' HRQOL are poorly understood. Rurality (i.e., the degree or extent to which an area can be considered rural), however, has been a key metric in determining access to cancer treatment and a predictor of mortality and cost of care (Bettencourt, Schlegel, Talley, & Molix, 2007; Eberhardt & Pamuk, 2004; Gamm et al., 2003). Therefore, an examination of the impact of rurality on HRQOL can provide relevant information in evaluating rural dwellers' HRQOL outcomes following cancer treatments.

**Purpose/Objectives:** To explore the impact of rurality on health-related quality-of-life (HRQOL) disparities in rural long-term cancer survivors.

**Design:** Cross-sectional survey.

**Setting:** Rural-Urban Continuum Codes (RUCC) 7, 8, and 9.

**Sample:** 91 adults at least five years post-treatment.

**Methods:** Mailed surveys measured HRQOL, self-esteem, and social support. Regression models were estimated to isolate (from self-esteem and social support) the effect of level of rurality on HRQOL.

**Main Research Variables:** HRQOL, self-esteem, social support, and rurality.

**Findings:** No differences in demographic characteristics existed among RUCCs. Survivors residing in RUCCs 7 or 8 tended to be similar in several dimensions of HRQOL. Survivors living in RUCC 7 reported significantly lower social function and greater financial difficulty and number of symptoms compared to survivors in RUCC 9 (the most remote). Self-esteem and social support strongly correlated with HRQOL.

**Conclusions:** The significant impact of rurality on HRQOL beyond self-esteem and social support suggests its role in explaining cancer survivorship disparities and directing practice. Until additional exploration can identify mechanisms behind rurality's impact, consideration of level of rurality as a potential factor in evaluating survivors' HRQOL outcomes is reasonable.

**Implications for Nursing:** Survivor context (e.g., level of rurality) influences HRQOL outcomes. Context or culture-relevant risk minimization and HRQOL optimization nursing practices are indicated.

**Key Words:** survivorship; quality of life; care of the medically underserved; rural issues; health policy

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Investigating rural dwellers' HRQOL necessitates understanding the effect of context (i.e., rurality) on health outcomes: lack of understanding about context (i.e., how rurality affects circumstances) confounds isolation of the true impact of cancer on the rural survivor. A circumstantial marker such as "rurality" is not monolithic: