

# The Relationship Between Learned Resourcefulness and Cancer-Related Fatigue in Patients With Non-Hodgkin Lymphoma

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**N**on-Hodgkin lymphoma (NHL) is the sixth most prevalent cancer in men and fifth in women. In the United States, the incidence rate of NHL per 100,000 Caucasian people older than age 65 was reported to be 110 in men and 77 in women (Alexander et al., 2007). In Canada and Israel, the rates reported for all age groups per 100,000 were 14 and 16 for men and 10 and 12 for women, respectively (Alexander et al., 2007). The main treatment for NHL is the CHOP (cyclophosphamide, doxorubicin, vincristine, and prednisone) chemotherapy regimen (Zelenetz et al., 2010). That regimen can lead to numerous side effects, the most common being fatigue (Byar, Berger, Bakken, & Cetak, 2006). Other common symptoms include neutropenia, pain, sleep disturbances, nausea, issues with concentration, anxiety, and depression (Kimby, Brandt, Nygren, & Glimelius, 2001).

The National Comprehensive Cancer Network defined cancer-related fatigue as “an unusual persistent subjective sense of tiredness related to cancer or cancer treatment that interferes with usual functioning” (Mock et al., 2000, p. 152). Cancer-related fatigue differs from acute fatigue in that it cannot be fully relieved by resting (Siefert, 2010). Fatigue has been found to increase significantly after the first cycle of chemotherapy and remains elevated during the following cycles (Byar et al., 2006). One study reported fatigue persisted in patients with breast cancer for 1.5 years after adjuvant chemotherapy (Broeckel, Jacobsen, Horton, Balducci, & Lyman, 1998). Fatigue negatively impacts patient quality of life by impairing mood and the ability to perform usual daily activities. As a result, fatigue can affect all dimensions of a person’s life (Fortner, Tauer, Okon, Houts, & Schwartzberg, 2005; Siefert, 2010).

Fatigue associated with cancer can be caused by physiologic factors including anemia and impaired nutrition resulting from nausea or vomiting (Glaspy, 2001;

**Purpose/Objectives:** To investigate the effect of learned resourcefulness on fatigue symptoms in patients with non-Hodgkin lymphoma (NHL) receiving chemotherapy.

**Design:** Quasi-experimental with repeated measures.

**Setting:** Two large hospitals in Israel.

**Sample:** 46 patients with NHL.

**Methods:** On the first day of a cycle of chemotherapy treatment, participants completed questionnaires assessing fatigue and learned resourcefulness. Fatigue was assessed again after 10 and 21 days.

**Main Research Variables:** Cancer-related fatigue, learned resourcefulness.

**Findings:** Fatigue increased 10 days following chemotherapy treatment and returned to pretreatment levels at day 21. Learned resourcefulness correlated negatively with each of the three measurements of fatigue. In addition, a calculated partial correlation showed the specific effect of learned resourcefulness on chemotherapy-related fatigue.

**Conclusions:** The findings showed a negative correlation between a physiologic variable (fatigue) and a psychological variable (learned resourcefulness), which is related to individual coping ability.

**Implications for Nursing:** Nurses should receive education about learned resourcefulness to potentially help patients with cancer cope with chemotherapy-related fatigue.

**Knowledge Translation:** As learned resourcefulness was negatively correlated with chemotherapy-related fatigue in patients with NHL, having this personality trait may help those patients manage fatigue.

Vadhan-Raji et al., 2003). However, fatigue cannot be explained by physiologic mechanisms alone; it is multidimensional with physical, psychological, social, and spiritual aspects (Kirshbaum, 2010; Piper et al., 1998). Cognitive coping styles have been effective in patients with cancer for managing fatigue (Lee, Tsai, Lai, & Tsai, 2008); therefore, personality characteristics related to coping may explain differences in levels of fatigue experienced by patients receiving the same treatment.