Predictors of the Trajectories of Self-Reported Attentional Fatigue in Women With Breast Cancer Undergoing Radiation Therapy

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Attentional fatigue is a decreased capacity to direct attention (Cimprich, 1992b). The capacity is defined by three concepts: selectivity, which is the ability to highlight one stimulus while ignoring others; sustained focus, which is the maintenance of selectivity over time; and limited capacity, which is a ceiling on the number of stimuli that can be processed successfully at any one time (Cimprich, 1992b; Kaplan & Kaplan, 1982). As involuntary attention requires effort that reduces our capacity to direct attention consciously for processing by voluntary attention, which is the ability to highlight one piece of information, experienced as distraction, a person must expend greater effort to direct voluntary attention (Cimprich, 1992b; Kaplan & Kaplan, 1982).

Some stimuli that fascinate us (Cimprich, 1992b; James, 1983; Kaplan & Kaplan, 1982) include nature, things that affect survival, and things that originate in our thoughts or in the world around us (i.e., our internal and external environments) — engage involuntary attention without effort (Cimprich, 1992b; James, 1983; Kaplan & Kaplan, 1982). Such stimuli include nature, things that affect survival, and things that fascinate us (Cimprich, 1992b; James, 1983; Kaplan & Kaplan, 1982). Other stimuli must be selected consciously for processing by voluntary attention, which requires effort that reduces our capacity to direct attention further (Cimprich, 1992b; James, 1983; Kaplan & Kaplan, 1982). Voluntary attention is required to act purposefully (Lezak, 1982), to monitor self, and to inhibit emotional reactions (Cimprich, 1992b). As involuntary attention is drawn to a greater diversity and intensity of sensory information, experienced as distraction, a person must expend greater effort to direct voluntary attention (Cimprich, 1992b; Kaplan & Kaplan, 1982).

Purpose/Objectives: To examine how attentional fatigue changed from the time of simulation to four months after the completion of radiation therapy and to investigate whether specific variables predicted initial levels and trajectories of attentional fatigue.

Design: Descriptive, longitudinal study.

Setting: Two radiation therapy departments.

Sample: 73 women with breast cancer who received primary or adjuvant radiation therapy.

Methods: Participants completed questionnaires prior to, during, and after radiation therapy. Descriptive statistics and hierarchical linear modeling were used for data analysis.

Main Research Variables: Attentional fatigue; demographic, clinical, and symptom characteristics.

Findings: Large amounts of interindividual variability were found in the trajectories of attentional fatigue. At baseline, women with breast cancer undergoing radiation therapy. The predictors should be considered in the design of future correlational and interventional studies.

Conclusions: This study is the first to identify predictors of interindividual variability in attentional fatigue in women with breast cancer undergoing radiation therapy. The predictors should be considered in the design of future correlational and interventional studies.

Implications for Nursing: Nurses could use knowledge of the predictors to identify patients at risk for higher levels of attentional fatigue. In addition, nurses could use the information to educate patients about how attentional fatigue may change during and following radiation therapy for breast cancer.