

# Association of Smoking in the Home With Lung Cancer Worry, Perceived Risk, and Synergistic Risk

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**Purpose/Objectives:** To examine the association of smoking in the home with lung cancer worry, perceived risk, and synergistic risk, controlling for sociodemographics, family history of lung cancer, and health-related self-concept. The hypothesis is that participants with smoking in the home would have higher scores for lung cancer worry, perceived risk, and synergistic risk.

**Design:** Cross-sectional baseline survey.

**Setting:** Participants recruited from an outpatient clinic and pharmacy at University of Kentucky HealthCare, an academic medical center.

**Sample:** 515 homeowners from a larger randomized, controlled trial aimed at reducing exposure to radon and secondhand smoke (SHS).

**Methods:** Homeowners were selected via quota sampling so that about half would have a smoker or smokers in the home.

**Main Research Variables:** Lung cancer worry and perceived risk; perception of synergistic risk of radon and SHS exposure; demographics.

**Findings:** Participants with smoking in the home had higher rates of lung cancer worry and perceived risk. In addition, those with less education and a family history of lung cancer and who were current smokers had higher lung cancer worry and perceived lung cancer risk scores. Predictors of perception of synergistic risk were marital status and health-related self-concept.

**Conclusions:** Homeowners with smoking in the home, less education, and a family history of lung cancer had greater lung cancer worry and perceived lung cancer risk. Lung cancer risk reduction interventions with vulnerable populations are needed.

**Implications for Nursing:** Nurses are in a unique position to target high-risk populations and identify opportunities to create teachable moments to reduce environmental risks of radon and tobacco smoke exposure.

Lung cancer remains the leading cause of cancer death in the United States (Henley et al., 2014), although it is largely preventable by eliminating smoking, as well as exposure to radon and secondhand smoke (SHS) (Centers for Disease Control and Prevention [CDC], 2016c). Many people have heard that exposure to tobacco smoke is a cause of lung cancer because this information is widely available in the popular press. However, an estimated 25% of lung cancer cases globally occur in nonsmokers, resulting in about 300,000 deaths every year (Sun, Schiller, & Gazdar, 2007). The second leading cause of lung cancer among smokers and the leading cause among nonsmokers is radon exposure (Neri, Stewart, & Angell, 2013), causing about 15,000–22,000 lung cancer deaths annually in the United States (National Cancer Institute, 2011). More radon-related lung cancers occur in those with a history of smoking than in those without a history of smoking. Exposure to