



Health Literacy Barriers and Facilitators to Lung Cancer Screening

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Background

Lung cancer is the leading cause of cancer-related death in the United States and more than 230,000 Americans are diagnosed with lung cancer each year. Recent advances in screening technologies have proven effective in reducing mortality and increasing early stage detection of lung cancer, yet only 3.9 percent of the 6.8 million eligible Americans were screened in 2015.

Patient-provider conversations about lung cancer have decreased since the release of the United States Preventive Task Force guidelines for the low-dose computed-tomography lung cancer screening in 2013. Current research has examined potential barriers to lung cancer screening, such as perceived risk, health insurance, and fear. However, there is limited research available on health literacy factors that may influence screening for lung cancer.

Goal

The goal of this grounded theory qualitative study was to explore how health literacy relates to intentions and behaviors to screening for lung cancer among older adult long-term smokers.

Objectives

There were several objectives relevant to this grounded theory study:

- To better understand older adult long-term smokers' experiences related to screening for lung cancer.
- To determine health literacy barriers and facilitators to lung cancer screening for older adult long-term smokers.
- To create a health literacy theoretical model about lung cancer screening "grounded" in the collected data.

Methods

<i>Design</i>	Grounded theory
<i>Method</i>	Semi-structured intense interviews
<i>Interview Guide</i>	Targeted domains of health literacy were patient-provider communication, shame/stigma, access and navigation of the healthcare system, and health information seeking behaviors.
<i>Participants</i>	- N = 12 (7 females, 5 males) - Mean age: 62 (55-71) - Mean pack-year history: 42 (30-66) - 9 current smokers, 3 former smokers - All had health insurance and saw their regular doctor in the past two years
<i>Analysis</i>	Audio files were transcribed, cleaned, and coded using the four stages of data analysis in grounded theory: open, focused, axial, and theoretical coding. A constant comparison method was used, which combined data collection, coding, and analysis to generate a theory "grounded" in the collected data.

Main Barrier Categories

Participants had **difficulty determining whether online health information is trustworthy.**

- "I don't know. How are you supposed to know what's true? I mean, if I Google something, I'm hoping it's true, so, yeah."

Knowledge about lung cancer screening was minimal and no participants knew about the LDCT scan. The primary reason participants had not screened for lung cancer was because their doctor had never discussed it or assessed their risk for lung cancer.

Main Facilitator Categories

Advocacy encompassed question preparation, desired and deal-breaking doctor traits, questions about jargon.

- "I have a list of questions I want to bring up, and I listen to him respectfully and ask questions back."
- "If I felt disrespected in any way by my physician, [snorts], goodbye."
- "Doc, hold up one second. Break that down to my terminology. Make me understand what you are saying. You know he might use some 23-letter word that I don't understand what it means. So no, no. Back up. Stop. Let's, let's talk at my language."

Participants had several **health information seeking behaviors** that they would use to become informed about lung cancer screening, including trusted people sources: friends and family members, someone who did LDCT scan, and their doctor; and trusted online sources: Google, WebMD, cancer organizations, and NIH.

Conclusions

These four categories, among others, led to the creation of a health literacy theoretical model of informed decision-making about lung cancer screening. It was critical to explore health literacy factors to understand how older adult long-term smokers make an informed decision to screen for lung cancer.

Public Health Implications

- The results of this study have implications for public health research, practice, and policy.
- This study may inform lung cancer screening guidelines by providing a clearer understanding of the ways in which health literacy barriers and facilitators are related to screening outcomes.
- Results of this study may be relevant for health literacy and health communication training for clinical and public health professionals.