Background

Lung cancer is the second leading cause of cancer and accounts for 27% of all cancer deaths in the United States. African Americans experience a significant disparity in lung cancer incidence and mortality. In 2017, there were 24,000 lung cancer diagnoses amongst African Americans and over 17,000 deaths resulting from this disease. The overall 5-year relative survival rate for lung cancer is lower in African American in comparison to Caucasians: 14% versus 18%, respectively. In South Carolina, African American males have a higher age adjusted incidence rate of lung cancer and lower survival rate (88% / 13.4%) in comparison to Caucasian males (78.8% / 15.5%). Whereas, African American women have a lower age adjusted incidence and survival rate (39.5% / 19.1%) in comparison to Caucasian women (56.1% / 21.6%) with lung cancer. This cancer disparity is disconcerting for the African American community.

A health related stigma affects many aspects of the lives of individuals living with lung cancer. Lung cancer stigma, characterized by negative and “victim-blaming perceptions, verbiage or actions of others, exacerbates psychological distresses and negatively influence quality of life, which may affect survival rates. It is essential to investigate factors that may contribute to decreased survival rates and contribute to the cancer disparity among African Americans with lung cancer. To date, there is limited evidence investigating African Americans and lung cancer stigma. The cancer disparity among this under-represented population has to be addressed. Investigating the potential negative ramifications of lung cancer stigma among this vulnerable population will add to the body of knowledge of lung cancer survivorship and provide evidence that may assist with the development of intervention to mitigate the negative influences and improve quality of life and survival rates.

Purpose/Aims

The purpose of this study is to evaluate lung cancer stigma among African Americans in South Carolina. The aims of this study are: (1) to evaluate lung cancer stigma and its association with depression and global health status; and (2) to evaluate the readability and validity of the Cataldo Lung Cancer Stigma Scale among African American lung cancer survivors in South Carolina.

Methods

Quantitative and qualitative methods were used to address the study aims. Potential participants were recruited by mail from an American College of Surgeon’s Commission on Cancer approved cancer
program’s cancer registry in the Southeast. Eligibility requirements included the following: (1) adult (21 years of age or older); (2) a personal history of lung cancer; (3) speaks and read English; and (4) a resident of South Carolina. Eligible participants completed an investigator developed demographic information form, the Cataldo Lung Cancer Stigma Scale (CLCSS) [score range 31 (low stigma) to 124 (high stigma)], the Center for Epidemiologic Studies Depression Scale (CES-D) [score range 0 (low depressive symptoms) to 60 (high depressive symptoms)] and the European Organization for the Research and Treatment of Cancer Quality of Life Questionnaire Core (EORTC- QLC-C30) [score range 0 (low global health) to 100 (high global health)].

Data was analyzed using SPSS®, version 25.0. Descriptive statistics were calculated to examine participants’ demographical characteristics and instruments scores on lung cancer stigma, depression, and global health. Convergent validity of CLCSS was evaluated using a correlational analysis, which examined associations among lung cancer stigma and depressive symptoms, and lung cancer stigma and global health.

Concurrent with quantitative data collection, African Americans were recruited from the quantitative sample to participate in a phone or in-person, semi-structured interview about their interpretations of the CLCSS and their experiences of living with lung cancer. Interviews were audio-recorded, professionally transcribed and analyzed using thematic analysis.

**Preliminary Results**

A convenience sample of 21 African Americans (14 females, 7 males) completed the quantitative questionnaire. On average, these participants were 67 years old (SD=8.9, range 48 to 81). Half of the sample was married with some college education. The participants’ lung cancer staging ranged from 1A to 4B. Over 50% of the participants were diagnosed within the past two years and over 60% rated their health as fair to poor. Fifteen were former smokers, three current smokers, and three never smokers. The mean stigma score was 54.7 (SD=16.08, range 35 to 94) indicating a moderate level of stigma. The mean depression score was 16.3 (SD= 9.65, range 4 to 35) indicating moderate depressive symptoms. Global health score average was 63.4 indicating low to moderate global health (SD=23.45 range 12.5 to 100). Descriptive correlational analysis indicated a strong, statistically significant positive association between depression and stigma (r = 0.496 p = .026) and a medium, non-significant negative association between global health and stigma (r = -.299 p = 0.2). Preliminary analysis of the interview data revealed that the CLCSS is readable and comprehensible among this sample. The thematic analysis produced the following two themes: (1) I feel isolated because of physical limitations and, (2) no guilt, the only regret is I smoked.

**Conclusion**

Lung cancer stigma affects and manifests itself differently among individuals, ethnicities and race. In this sample of African American survivors of lung cancer, a significant level of depressive symptoms and low to moderate level of global health are associated with increased perceived lung cancer stigma. It is important for health care professionals to consider the relationship between these variables amongst all survivors of lung cancer. An evaluation of lung cancer stigma, depression and quality of life measures (global health, level of functioning and symptomatology) are warranted and should be considered when planning individualized care for lung cancer survivors. More research is needed to develop practical strategies to measure lung cancer stigma, depression, and quality of life in clinical settings.

**Title:**
Lung Cancer Stigma Among African American Survivors of Lung Cancer in South Carolina

**Keywords:**
African Americans, Lung Cancer Stigma and Mixed Method
References:


Abstract Summary:
This mixed method study examined lung cancer stigma, depressive symptoms, and global health among African American lung cancer survivors. The Cataldo Lung Cancer Stigma Scale was evaluated for readability and convergent validity and was found to be an effective instrument to evaluate stigma among this sample of cancer survivors.

Content Outline:
I. Background/Significance of Lung Cancer and Lung Cancer Stigma

II. Purpose/Specific Aim

III. Methods/Research Design

IV. Results

a. Sample Profile

b. Correlational Analysis of Stigma, Depressive Symptoms and Global Health

c. Readability Evaluation of the Cataldo Lung Cancer Stigma Scale

d. Thematic Analysis of Interviews

VI. Conclusion

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