

Depression and Anxiety as Predictors of Reactions to the COVID-19 Pandemic in Patients with Advanced Non-Small Cell Lung Cancer

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AIM

To investigate the role played by anxiety and depressive symptoms in determining perceptions and reactions to the global pandemic caused by the SARS COVID-19 virus in patients diagnosed with advanced NSCLC.

INTRODUCTION

Anxiety and depression are prevalent among patients with advanced non-small-cell lung cancer (NSCLC) and predict adverse psychological and disease-related outcomes.

In addition to these, illness-related stress plays a significant role in influencing sickness behaviors, leading to worse disease-related outcomes

The global pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has far-reaching physical and mental consequences that have yet to be explored.

Little is known about how vulnerable populations have reacted to the unprecedented environment that exists as a result of the pandemic.

The current study employs regression analyses to investigate the role anxiety and depressive symptoms play in determining perceptions and reactions to the global pandemic in patients diagnosed with advanced NSCLC.

Hypothesis: Patients with higher anxious or depressive symptoms will experience significantly higher levels of stress during isolation while exhibiting poorer safety

METHODS

Patients with advanced NSCLC ($N = 76$) completed measures at initial cancer diagnosis and at the start of the COVID-19 pandemic

- **Depression:** Patient Health Questionnaire (PHQ-9)
- **Anxiety:** Generalized Anxiety Disorder scale (GAD-7)
- **COVID Illness perceptions:** Brief Illness Perceptions Questionnaire (BIPQ) containing items assessing Social Distancing Efficiency and Stress during Isolation

A **repeated measures** design was used.

Multivariate linear regression analyses predicted responses to items from patients' depression and anxiety scores at time of COVID-19 assessment, controlling for depression/anxiety at baseline (initial cancer diagnosis)

RESULTS

- Anxiety and Depression at baseline did not predict responses to any of the items
- Anxiety and Depression at the start of the pandemic predicted efficiency of social distancing.
- Anxiety and Depression at the start of the pandemic predicted also predicted stress levels during the initial period of isolation

Table 1. *Demographic Characteristics of NSCLC Patients*

Variable		NSCLC Patients (n = 76) n (%)
Race	White	64 (95.5)
	Non-White	3 (4.5)
Gender	Male	29 (43.3)
	Female	38 (56.7)
Marital Status	Currently Married	36 (53.7)
	Single, Never Married	9 (13.4)
	Separated or Divorced	20 (29.9)
	Widowed	2 (3.0)
Education	< 8 th grade or some HS	4 (6.0)
	HS grad	19 (28.4)
	Some college	30 (44.8)
	College grad	14 (20.9)
Income	\$15,000 or less	8 (11.9)
	\$15,001-\$25,000	3 (4.5)
	\$25,001-\$50,000	12 (17.9)
	\$50,001-\$75,000	15 (22.4)
	\$75,001-\$100,000	17 (25.4)
> \$100,000	12 (18)	
Smoking Status	Former Smoker	18 (26.9)
	Current Smoker	32 (47.8)
	Never Smoker	17 (25.4)

Table 2. *Effect sizes from linear regression analyses testing Depression and Anxiety responses at the beginning of the pandemic to predict responses to BIPQ items, controlling for baseline values of the predictors (ps < .04)*

Illness Perception	Depression	Anxiety
Social Distancing (Hours)	.496	-.460
Social Distancing (From Household)	.545	-.526
Personal Stress	-.319	.634

CONCLUSIONS

Anxiety and depressive symptoms occurring during the pandemic contribute to lung cancer patients' behavioral responses to the pandemic itself.

- *Patients high in anxiety spent less time at home during the day to avoid COVID-19 and were less successful in social distancing from other household members. They also experienced higher levels of stress.*
- *Patients high in depression were more successful in isolating themselves from other members of their household but did not experience higher levels of stress.*

Methods were rigorous. With controls, findings are not attributable to baseline anxiety or depression levels

These results indicate that at-risk individuals who are high in anxiety or depression reacted differently to the pandemic, according to their symptoms. These different reactions could potentially putting them at risk of being adversely affected by the pandemic