Associations Between Religious Fatalism and Modifiable Behavioral Cancer Risk Factors in Rural Cancer Survivors

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Background
Cancer mortality and morbidity rates are much higher in rural versus urban cancer survivors.1,2 Modifiable behavioral risk factors, such as physical inactivity, poor diet and tobacco use, contribute to cancer mortality, but most cancer survivors do not get adequate sleep, consume a healthy diet or engage in exercise.3,4 Previous studies show that 34%-57.8% of cancer survivors reported being physically inactive; 90% of cancer survivors report poor dietary habits; and 39%-50% reported excessive alcohol use.3,4,5

Religious fatalism, defined as the belief that health outcomes are determined by God, may influence cancer survivors’ decision to engage in healthy lifestyle behaviors. Fatalism has a salutary effect on some health behaviors and a deterrent effect on other modifiable behavioral cancer risk factors.6

The impact of fatalism on health behaviors is well studied, however, no studies to our knowledge have explored this impact among rural cancer survivors.7

Objectives and Hypotheses
The purposes of this study were:
1. To explore associations between fatalistic beliefs and modifiable behavioral cancer risk factors among rural cancer survivors

Hypothesis 1: High fatalistic beliefs will be associated with low modifiable behavioral risk factors such as physical exercise, healthy diet, alcohol consumption, sleep quality, and body fat.

Hypothesis 2: In women, as fatalism increases, sleep quality will increase. This reinforces previous findings that fatalistic belief may have a salutary effect on cancer survivors. Religious fatalism had an opposite effect on weekly leisure time physical activity. To better understand and design culturally appropriate lifestyle interventions, research exploring the impact of religious norms and expectations on prevention-seeking behavior may play a key role.

Methods
The Partnering to Prevent and Control Cancer (PPCC) study took place from 2018-2019. Cancer survivors residing in central Pennsylvania were mailed a brief questionnaire. Those who responded to the brief questionnaire were mailed an in-depth questionnaire to return by mail.

Cancer survivors contacted (n=572)

Excluded (n=23) • Pending screening or not interested

Returned brief questionnaire and enrolled in PPCC (n=506)

Excluded (n=12) • Ineligible (e.g., no history of cancer, not in catchment area)

Completed in-depth questionnaire on fatalism and health behaviors (n=219)

Construct
Religious Fatalism (score, scale: 1-5)
Physical Activity (min/week, scale: 0-24)
Fruit and Vegetable Intake (servings/day, scale: 0-9)
Sleep Quality (score, scale: 0-21)
Fat Intake (% kcal/day, scale: 20-35)
Alcohol Consumption (drinks/week, scale: 2-10)

Measure
17-item Religious Health Fatalism Questionnaire (RHFAQ)
4-item Godin Weekly Leisure-time Activity (WLA)
7-item NCI Fruit and Vegetable Screener
19-item Pittsburgh Sleep Quality Index (PSQI)
16-item NCI Fat Screener
3-item Alcohol Quantity and Frequency Questionnaire

Note: All linear regression analyses adjusted for gender, age, body mass index (BMI=kg/m²), and education.

Conclusion
After transforming data using square root transformation, we found that sleep quality and helpless inevitability had a positive relationship. As Religious fatalism increased, sleep quality increased. This reinforces previous findings that fatalistic belief may have a salutary effect on cancer survivors. Religious fatalism had an opposite effect on weekly leisure time physical activity. To better understand and design culturally appropriate lifestyle interventions, research exploring the impact of religious norms and expectations on prevention-seeking behavior may play a key role.

References