Religious Coping, Depressive Symptoms, and Adherence to Health Recommendations in Cardiac Rehabilitation Patients

Kalon R. Eways, Alisha D. Howarter, Kadie M. Harry, Jillian M. R. Clark, & Kymberley K. Bennett

University of Missouri-Kansas City

OBJECTIVES

1.) Test whether different religious coping patterns result in different physical and mental health outcomes in cardiac rehabilitation (CR) patients

2.) Test whether depressive symptoms mediate the relationships between religious coping and adherence to research-based health recommendations in CR patients

BACKGROUND

Cardiovascular Disease and Rehabilitation
- Cardiovascular disease (CVD) is the leading cause of death worldwide, contributing to approximately 17 million deaths each year
- CR is a class 1 recommendation by most clinical practice guidelines, and is known to improve patient outcomes and reduce morbidity and mortality
- CR is a 36 session, 12-week program that incorporates exercise, nutrition and medication counseling, and psychoeducation

Religious Coping and Health
- Research has shown that individuals often rely on religious and spiritual beliefs as a means of coping with stressful life events such as chronic illness
- Patterns of religious coping can vary and lead to disparate health outcomes
- Positive religious coping has been associated with better health outcomes, while negative religious coping has been associated with worse

Religious Coping, Depression, and CVD
- Religiosity and religious coping have been shown to have an effect on health outcomes via psychological factors
- This study examined whether the relationship between positive and negative religious coping and adherence to health recommendations was mediated by symptoms of depression

METHOD

Procedures:
- **Sample** (*N* = 87 CR participants; see Table 1)
  - Mean age = **64 years** (*SD* = 9.07)
  - Predominantly Male = **57%**
  - Predominantly European-American = **92%**
  - Median Income = **$70,000 – $79,999**

- **Data Collection**
  - Self-administered surveys completed at:
    - Beginning of CR (**Time 1**)
    - 12 weeks later at the end of CR (**Time 2**)
    - 18 months after CR (**Time 3**)

- **Data Analysis**
  Path analysis tested whether the relationships between negative and positive religious coping and adherence were mediated by depressive symptoms. Baseline levels of adherence were used as a control in the path model.

Table 1. Additional Patient Demographics

Employment Status	Employed (37.9%)
	Not employed (62.1%)
Marital Status	Partnered (78.2%)
	Un-partnered (21.8%)
Education	Some high school (1.1%)
	High school degree or GED (20.7%)
	Some college or trade school (23.0%)
	2-year college degree (12.6%)
	4-year college degree (20.7%)
	Graduate degree (21.8%)

Measures:

Time 1
- **Religious Coping: Brief Measure of Religious Coping (Brief RCOPE; see Table 2)**
  - 14-item self-report questionnaire measuring positive and negative religious coping patterns
  - Positive Religious Coping (Pos RCOPE): Items 1-7
    "How frequently have I tried to see how God might be trying to strengthen me in this situation?"
    - α = ~.90
  - Negative Religious Coping (Neg RCOPE): Items 7-14
    "How frequently have I wondered what I did for God to punish me?"
    - α = ~.81
  - 4-point scale
    - 0 "not at all" to 3 "a great deal"

Time 2
- **Depression: Beck Depression Inventory (BDI-II; see Table 2)**
  - 21-item self-report questionnaire measuring the severity of depressive symptoms
  - 0-13 = minimal; 14-19 = mild; 20 = 28 moderate; 29-63 = severe
  - 4-point scale
  - α = .93

Time 3
- **Adherence to Health Recommendation: Health Behaviors Scale (see Table 3)**
  - Self-report scale assessing adherence to health practices
  - Also assessed at Time 1 for use as a model covariate
  - "During the last month, how often did you eat red meat (for example, steak or hamburgers)?"
  - 7-pont scale (1 "never" to 7 "more than once per day")
  - Items recoded to dichotomous responses based on recommendations found in the literature:
    - 0 = did not follow recommendations, 1 = did follow recommendations

RESULTS

Path Analysis Model: (see Figure 1)
- Negative religious coping was positively related to depressive symptoms (β = .37), which was negatively related to health recommendation adherence (β = -.33)
- Positive religious coping was un-related to either depressive symptoms or health behavior adherence
- Indirect effect of Pos RCOPE = -.05; direct effect = -.08
  - Therefore, ~38% of effect operates through BDI-II
- Indirect effect of Neg RCOPE = -.13; direct effect = .11
  - Therefore, ~54% of effect operates through BDI-II
- Model Fit was acceptable: $\chi2$ *(1)* = 4.11, *p* = .04, *ratio* = 4.11, *CFI* = .94, *and IFI* = .95

Table 2. Descriptives: RCOPE and BDI-II

Variable	Mean *(SD)*
Pos RCOPE	13.55 *(4.36)*
Neg RCOPE	6.60 *(1.61)*
BDI-II	7.97 *(7.95)*

Table 3. Frequencies: Health Behaviors Scale

Health Behaviors Scale Item	% Adherent
1.) Avoiding Red meat	89.7%
2.) Eating Fruit	36.8%
3.) Eating Vegetables	35.6%
4.) Avoiding High-fat foods	92.0%
5.) Reducing Sodium Intake	92.0%
6.) Engaging in Light Exercise	54.0%
7.) Engaging in Moderate Exercise	40.2%
8.) Avoiding Cigarette Smoking	90.2%

Figure 1. Path Analysis Model of Religious Coping Patterns, Depressive Symptoms, and Adherence to Health Recommendations

**p < .01; ***p < .001
Model controls for baseline levels of health recommendation adherence
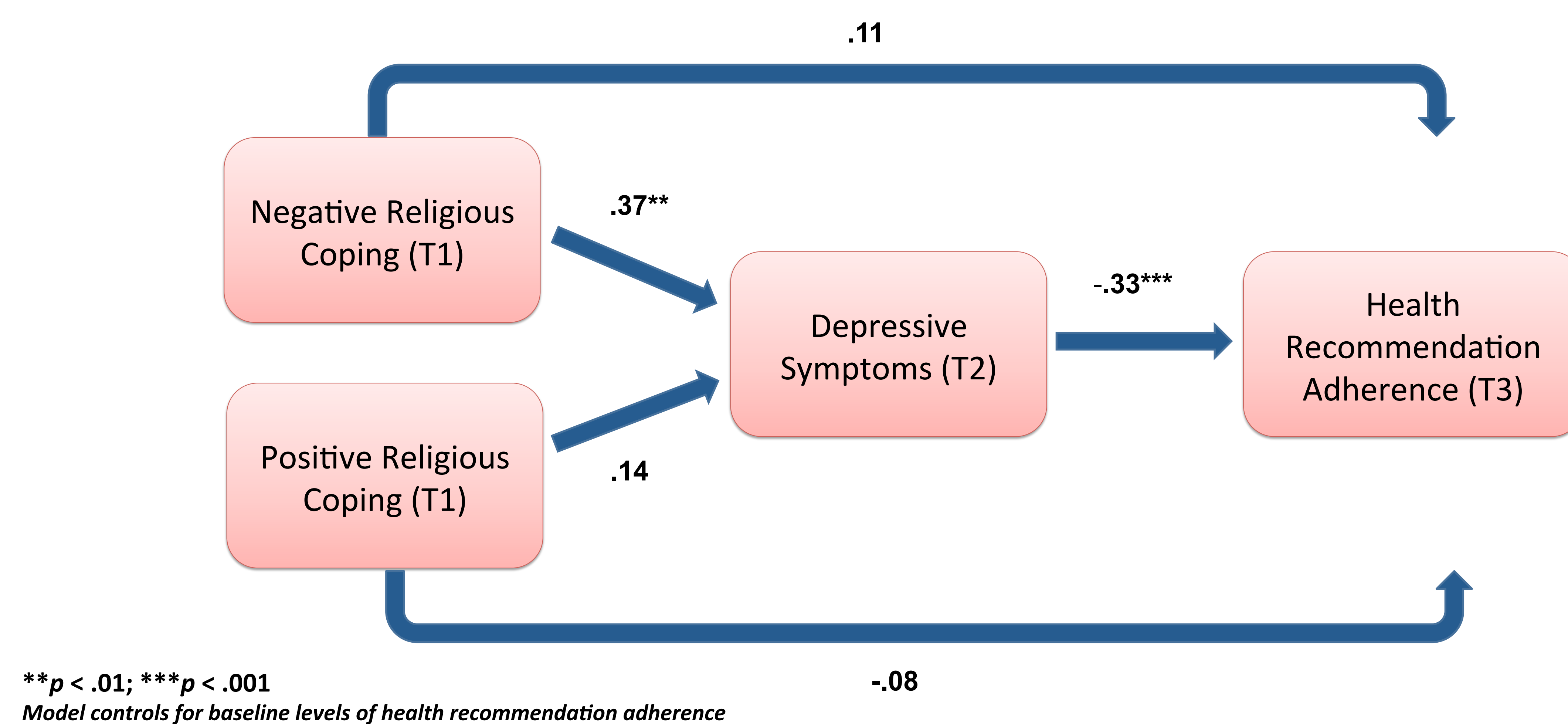
CONCLUSIONS

- Findings suggest that the relationship between negative religious coping and adherence to health recommendations is partially mediated by symptoms of depression
- Negative religious coping patterns seem to be associated with poorer health outcomes in patients who have experienced a cardiac event
- Results do not suggest an effect of positive religious coping on depression or adherence to health recommendations

Implications:
- Findings suggest that coping styles should be assessed at entrance to CR, with interventions implemented for patients who employ negative religious styles. These patients are at-risk for experiencing depressive symptoms, which may negatively affect their motivation to meet health recommendations.

Limitations of the Study:
- Generalizability
  - Predominantly male, affluent, and European-American sample
  - Not all CVD patients participate in CR
  - Does not address other forms of spiritual coping (i.e., focus on monotheistic approach)
- Data is from self-report only

Future Directions:
- Future research should further examine the effect of different religious patterns on mental and physical health outcomes
- Research should also be conducted in more diverse patient settings