

# Religious and Non-Religious Pathways to Stress-Related Growth in Younger Adult Cancer Survivors

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# Stress-Related Growth

- The perception of experiencing positive life changes following stressful life experiences
- Commonly reported following a range of stressful encounters
- Growth appears to be an important part of the cancer experience
  - reported in dozens of studies
  - appears to be very common
- Most studies report the majority of cancer survivors report growth
- Percents as high as 83% (Sears, Stanton, & Danoff-Burg, 2003)

# Predictors of Growth in Cancer Survivorship

- A number of personal factors and types of coping have been implicated.
  - Hopefulness and optimism (e.g., Karanci & Erkam, 2007; Stanton et al., 2006).
  - Problem-focused coping, active coping, positive reappraisal (e.g., Bellizzi & Blank, 2006).
- Curiously, one set of variables strongly associated with stress-related growth following other difficult life situations--religiousness and spirituality--has not been closely examined in the context of growth in cancer survivorship.

# Religiousness/Spirituality

- Multidimensional construct
- Dimensions that have been linked with stress-related growth following other stressful experiences:
  - Personal religiousness (the extent to which one identifies as “religious” or finds his or her master motive in religion)
  - Religious appraisals of control (the extent to which one perceives control of the event as in God’s hands)
  - Religious coping (the extent to which one uses religious methods to deal with stressful events)

# Religiousness/Spirituality in Survivorship

- Few studies have linked religious coping with growth in cancer survivors (e.g., Urcuyo, Boyers, Carver, & Antoni, 2005)
- Virtually no research has examined other dimensions, such as personal religiousness or religious control appraisals, as predictors of survivors' subsequent growth
- Somewhat surprising given the burgeoning research demonstrating that cancer patients and survivors tend to rely heavily on religious and spiritual resources in coping with their cancer (e.g., see Stefanek, McDonald, & Hess, 2005, and Thune-Boyd et al., 2007, for reviews)

# Pathways to Stress-Related Growth in Survivorship

- Very few studies have examined the pathways of growth in cancer survivors (cf., Schulz & Mohamed, 2004; Luszczynska, Mohamed, & Schwarzer, 2005).
  - That is, few studies have tested whether personal resources lead to survivors' growth directly or indirectly, by influencing appraisals and coping.
  - Instead, most have simply separately examined the independent effects of various categories of predictors such as resources and coping (e.g., Sears et al., 2003; Urcuyo et al., 2005).

# Study Goals

- 1. To examine linkages among religious resources, appraisals of religious control over one's cancer, and religious coping and growth in a sample of cancer survivors transitioning into longer term survivorship, to determine the extent to which religiousness predicted growth.
  - We hypothesized that individuals who considered themselves highly religious would make religious appraisals of control for their cancer, perceiving God as in control of their lives
  - In turn, we expected appraisals of God's control to lead to greater use of religious coping with the stressors associated with their cancer diagnosis and treatment
  - In turn, we expected greater use of religious coping would predict survivors' subsequent reports of growth.

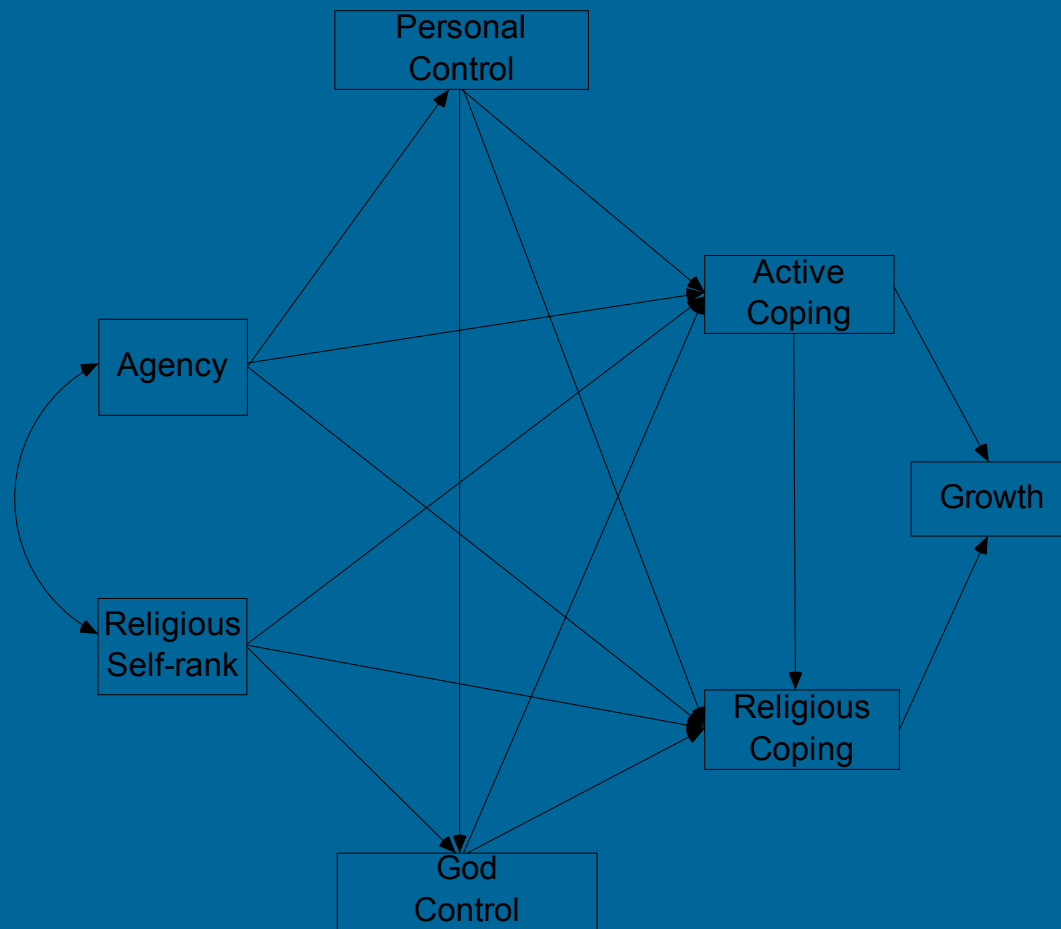
# Study Goals (continued)

- 2. To compare a religious pathway of growth with a parallel secular pathway that reflects cancer survivors' resources, coping, and growth as currently described in the literature
- Given the research demonstrating that an optimistic, hopeful outlook consistently predicts stress-related growth (Helgeson et al., 2006; Stanton et al., 2006), we included the personal resource of hopeful agency, the sense that one can and will successfully meet one's goals (Snyder et al., 1991).

# Study Goals (cont.)

- As a secular counterpart to religious control appraisals for one's cancer, we included appraisals of personal control over cancer (e.g., Gall, 2004).
  - We hypothesized that cancer survivors higher in hopeful agency would be more likely to attribute control over their cancer to themselves
- Finally, we assessed active coping as a counterpart to religious coping, given previous research linking it to survivors' stress-related growth (e.g., Urcuyo et al., 2005).

# Figure 1. Theoretical Model for Resources, Control Appraisals, Coping, and Growth



# Study Method

- Survivors recruited from the Cancer Registry at Hartford Hospital, a major regional medical center in Connecticut
- Focused on “younger” cancer survivors (i.e., those who got cancer as young or middle-aged adults)
- Recruited via a mailed survey
- Longitudinal (Time 2 = 1 year later)

# Participants

- ❑ 172 cancer survivors at Time 2
- ❑ 32% men, 68% women
- ❑ Age 34-55 (mean = 46)
- ❑ 88% Caucasian
- ❑ Mean time since completion of primary treatment = 21 months
- ❑ 44% Catholic, 28% Protestant, 5% Jewish, 7% None, 16% Other
- ❑ Most common cancer sites in the sample were breast (47%), prostate (12%), colon/rectal (6%), lymph nodes (5%) and cervix/uterus (4%)

# Measures

- Religiousness was assessed with religious self-ranking item from the BMMR/S (Fetzer/NIA, 1999).
  - Extent to which they consider themselves a religious person
  - Rated from 1 (*not at all*) to 4 (*very much*)
- Hope/Agency was assessed with the agency subscale of the Dispositional Hope Scale (Snyder et al., 1991)
  - 6 items (e.g., “I meet the goals that I set for myself.”)
  - Rated from 1 (*definitely false*) to 5 (*definitely true*)

# Measures (continued)

- God and Self Appraisals for Control of the Cancer
    - "How much control do you feel God has over the cancer?"
    - "How much control do you feel you have over the cancer?"
    - Each rated by participants from 1 (*not at all*) to 4 (*very much*).
  - Religious and Active Coping
    - Each assessed with 2 item subscales from the Brief COPE (Carver, 1997)
    - Extent to which they used each item (e.g., "Prayed or meditated", "Concentrated my efforts on doing something about the situation I'm in") to cope with their cancer experience
    - Rated from 1 (*I didn't do this at all*) to 4 (*I did this a great deal*)
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# Measures (continued)

- Stress-related growth was assessed with the Perceived Benefits Scale (Tomich & Helgeson, 2004), a commonly used measure of positive life changes reported by cancer survivors.
  - 15 items (e.g., “My relationships with family”, “My sense of purpose in life”)
  - Rated from 1 (*much worse now*) to 5 (*much better now*) (per Bellizzi, Miller, Arora, & Rowland, 2007).
  - Scores for perceived *positive* change were calculated from recoded items (i.e., 0 “no change” to 2 “much better now”), then summed.

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- All study predictor variables assessed at Time 1
  - Stress-related growth assessed at Time 2
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# Results

- Theoretical (Specified) Model (Figure 1)
  - Reasonable fit:  $\chi^2 (6) = 12.16$ ,  $p = .06$ ;  $\chi^2/df = 2.03$ , CFI = .98; RMSEA = .06 (CI = .00 - .12)
  - Non-significant paths were trimmed
- Final Respecified Model (Figure 2)
  - Better fit:  $\chi^2 (9) = 9.45$ ,  $p = .40$ ;  $\chi^2/df = 1.05$ ; CFI = .99; RMSEA = .01 (CI = .00 - .07)
  - All paths were significant at  $p < .05$ , except for one

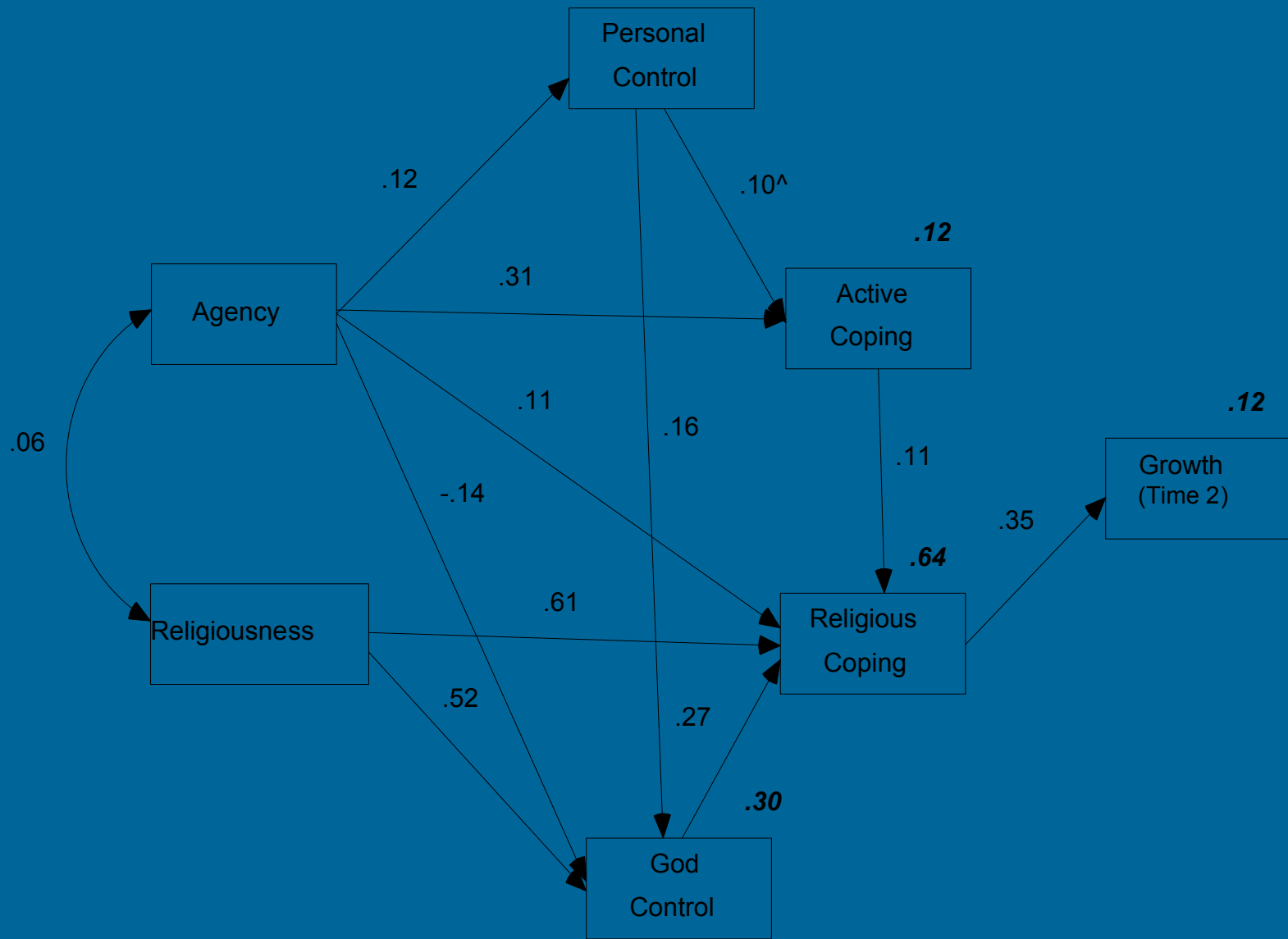


Figure 2. Final Respecified Structural Equation Model for Resources, Control Appraisals, Coping, and Growth. Standardized path coefficients are represented with their corresponding paths. An estimate of the proportion of variance explained in each endogenous variable (i.e.,  $R^2$ ) is represented in bold italics above the variable.

# Summary

- Few individuals can be considered wholly religious/spiritual or wholly secular, and for most, both ways of dealing with cancer coexist.
- Thus, we tested both religious and secular pathways to growth from the experience of cancer.
- We found that, while religious and secular pathways to growth are intertwined, only religious coping directly predicted stress-related growth from cancer over time.

# Limitations

- Only two time points examined in a very complex process that occurs over an extended period
- Questionable correspondence between reports of growth and actual positive changes that survivors made or experienced in their lives
- Unknown generalizability to other samples
  - E.g., types of cancer, demographic groups
  - Present sample was skewed towards White, female, and higher SES
- Causal inferences cannot be drawn
  - Myriad alternative models could explain these data

# Conclusions

- These findings are particularly important given that so little attention has been given to the roles of religiousness in the stress-related growth that cancer survivors often report (Stanton et al., 2006) in spite of the well-documented importance of religion and spirituality for many survivors (Stefanek et al., 2005)
- At least some religious individuals utilize multiple types of coping strategies to deal with the stresses of their transition to longer term survivorship
- While both religious and secular pathways can lead to stress-related growth, religious pathways appear much more strongly linked with perceptions of growth

# Further Conclusions

- Future research is needed to explore the nature of the connections and the temporal distribution of the use of both religious and personal agentic coping beginning at initial diagnosis and proceeding to long-term survivorship
- Research that can form the basis for interventions must explore the relationship between both religious and agentic coping –separately and together—in relation to health behavior changes and improved quality of life beyond self-perceived benefits and growth