

# Religion, Spirituality & Mental Health: Research on the Connections

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**Duke**Medicine



# Overview

8:45-10:00

- Freud and religion
- Religion and coping with illness
- Research on religion/spirituality (R/S) and mental health
- Research on R/S, health behaviors, and disease prevention
- Research on R/S and physical health
- Current research at Duke
- Further resources

# Freud on Religion

(from "Future of an Illusion", 1927)

“Religion would thus be the universal obsessional neurosis of humanity... If this view is right, it is to be supposed that a turning-away from religion is bound to occur with the fatal inevitability of a process of growth...If, on the one hand, religion brings with it obsessional restrictions, exactly as an individual obsessional neurosis does, on the other hand it comprises a system of wishful illusions together with a disavowal of reality, such as we find in an isolated form nowhere else but amentia, in a state of blissful hallucinatory confusion...”

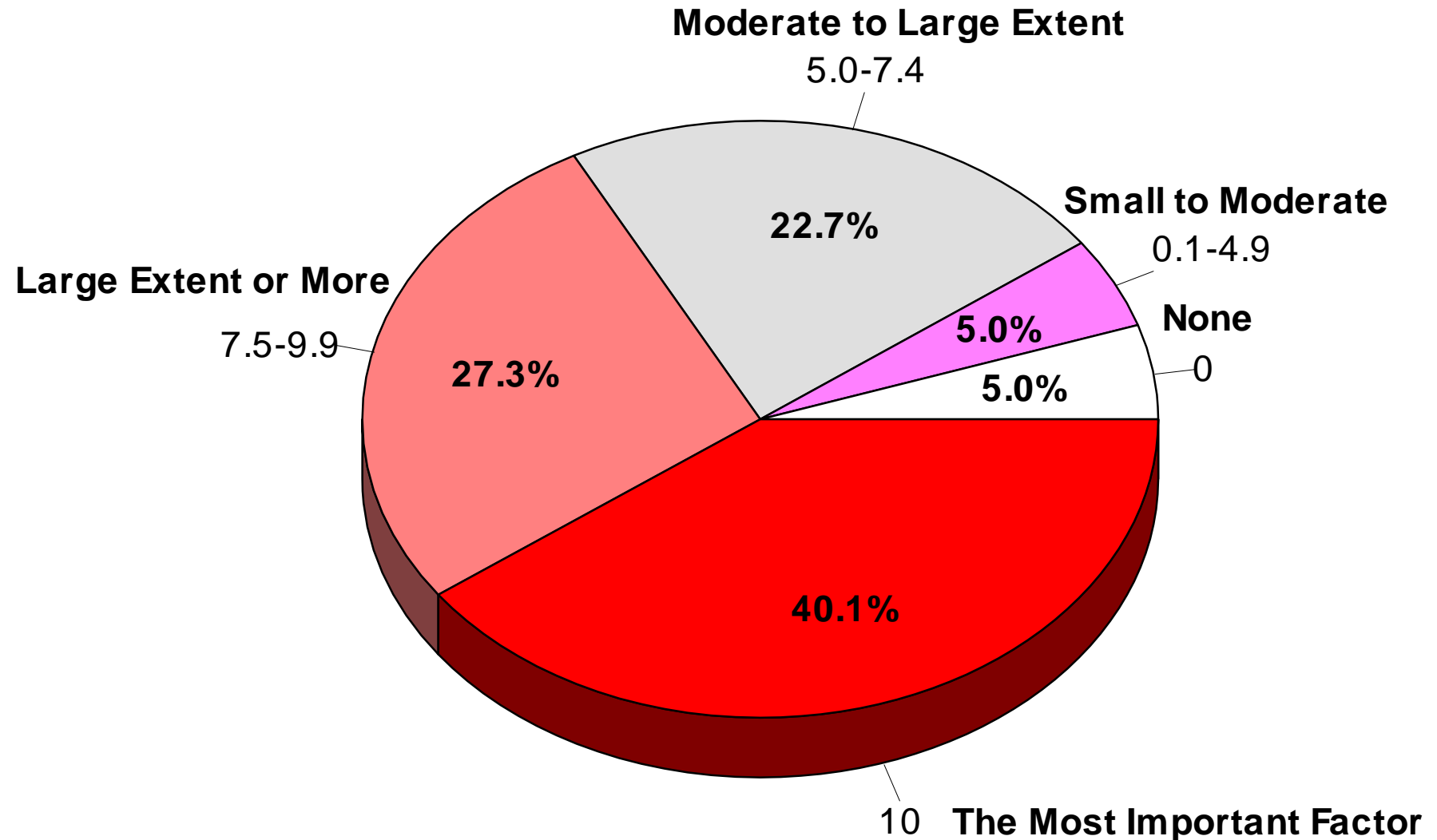
Is religious involvement  
really neurotic, a Freud said?

Might religion serve another purpose besides  
a marker for neurosis?

Religion is often used to cope with loss,  
stress, and difficult life circumstances –  
including the stress of medical illness  
and chronic health problems (including  
chronic mental health problems)

# Self-Rated Religious Coping

(On a 0-10 scale, how much do you use religion to cope?)



Responses by 337 consecutively admitted patients to Duke Hospital (Koenig 1998)

# Religious Coping is Common in USA

America's Coping Response to Sept 11th:

1. Talking with others (98%)
2. **Turning to religion (90%)**
3. Checked safety of family/friends (75%)
4. Participating in group activities (60%)
5. Avoiding reminders (watching TV) (39%)
6. Making donations (36%)

Based on a random-digit dialing survey of the U.S. on Sept 14-16

New England Journal of Medicine 2001; 345:1507-1512

Does religion actually help people  
to cope better, or not

# The Research

(systematic review 1872-2010 of all quantitative research published in peer reviewed academic scientific journals in the English language listed in PsychInfo and Medline)

This research is documented in:

Handbook of Religion and Health , 1<sup>st</sup> ed (Oxford University Press, 2001)

Handbook of Religion and Health, 2<sup>nd</sup> ed (Oxford University Press, 2011) (forthcoming)

# Research on Religion and Mental Health

## Emotional disorders

Depression

Suicide

Substance use

## Positive emotions/virtues

Well-being and happiness

Meaning, purpose, and hope

Forgiveness, altruism, gratitude, compassion

## Social health

Social support

Social capital

Marital stability

# Emotional Disorders



# Depression

(systematic review)

Religious involvement is related to:

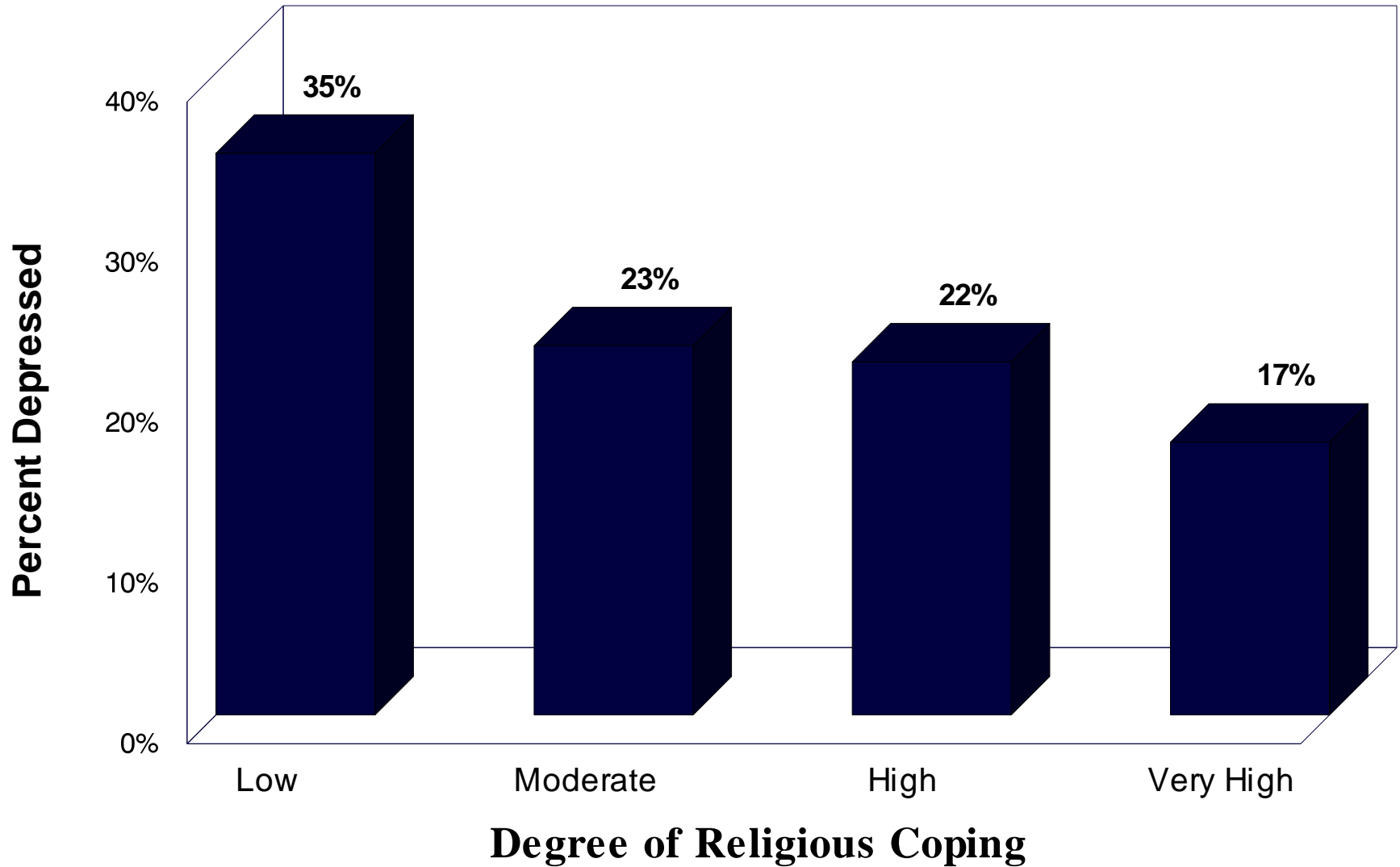
Less depression, faster recovery from depression

272 of 444 studies (61%)

[67% of best]

More depression (6%)

# Religion and Depression in Hospitalized Patients

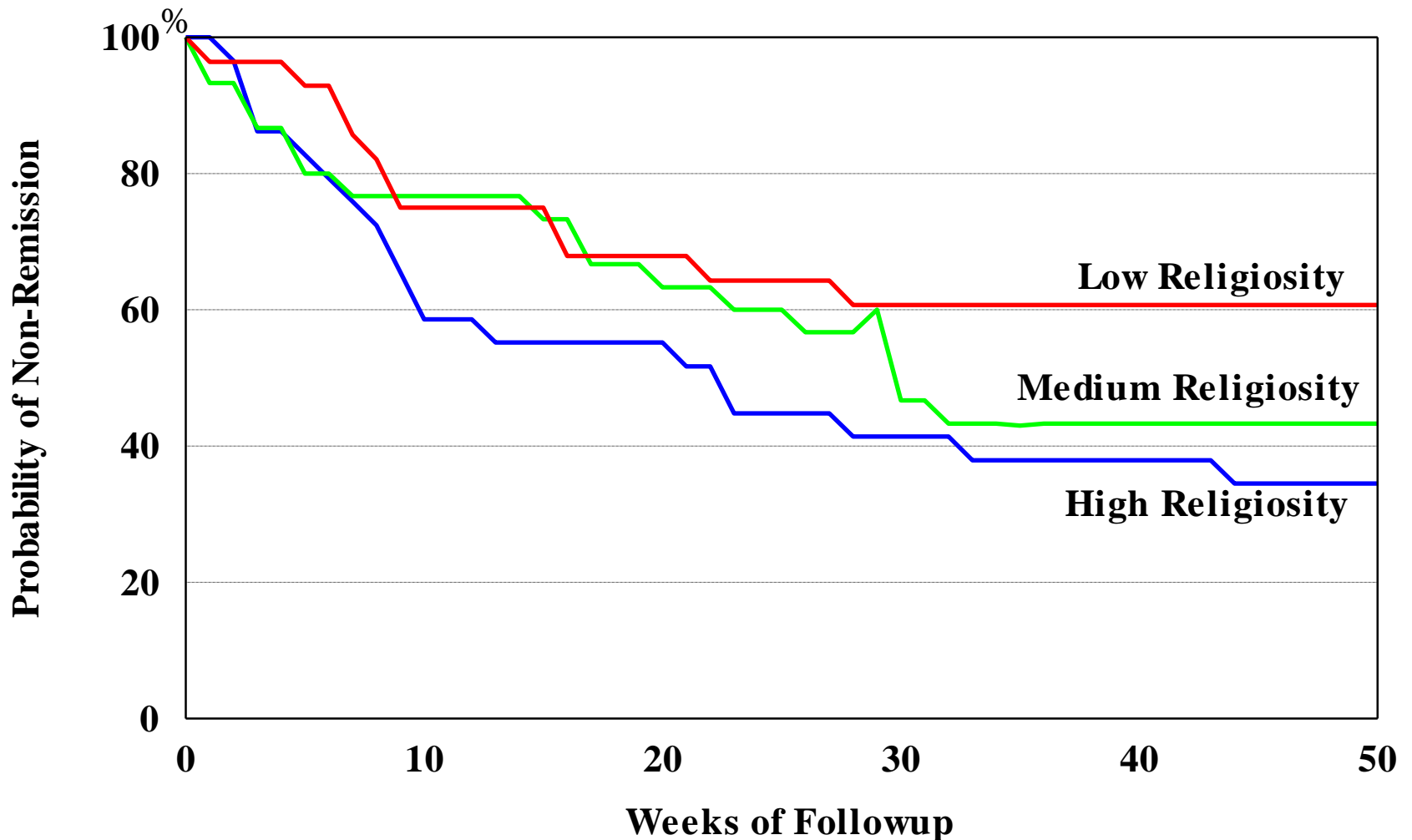


Geriatric Depression Scale

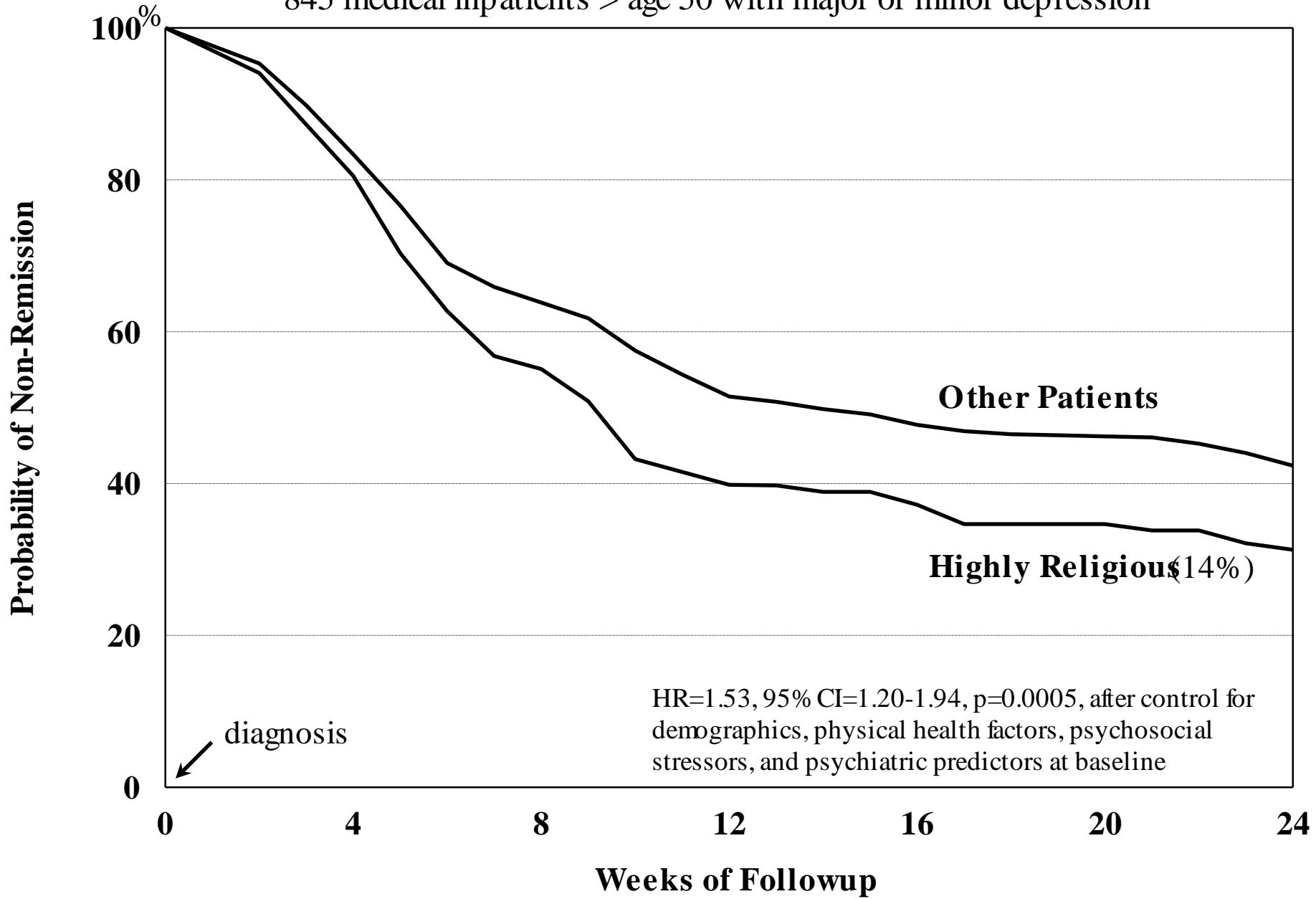
Information based on results from 991 consecutively admitted patients (differences significant at  $p < .0001$ )

# Time to Remission by Intrinsic Religiosity

(N=87 patients with major or minor depression by Diagnostic Interview Schedule)



845 medical inpatients > age 50 with major or minor depression



# Suicide

(systematic review)

Religious involvement is related to:

Less suicide and more negative attitudes toward suicide  
106 of 141 studies (75%)

# Alcohol Use/Abuse/Dependence

(systematic review)

Religious involvement is related to:

Less alcohol use / abuse / dependence

240 of 278 studies (86%)

[90% of best]

# Drug Use/Abuse/Dependence

(systematic review)

Religious involvement is related to:

Less drug use / abuse / dependence

155 of 185 studies (84%)

[86% of best]

[95% of RCT or experimental studies]

# Positive Emotions / Virtues

The image features a solid blue background. In the top-left corner, the text "Positive Emotions / Virtues" is written in a bold, white, sans-serif font. In the bottom-right corner, there are several overlapping, wavy, light-blue lines that create a sense of movement and depth.

# Well-being and Happiness

(systematic review)

Religious involvement is related to:

Greater well-being and happiness

256 of 326 studies (79%)

[82% of best]

Lower well-being or happiness (<1%)

# Meaning, Purpose, Hope, Optimism

(systematic review)

Religious involvement is related to:

Significantly greater meaning and purpose in life

42 of 45 studies (93%)

[100% of best]

Significantly greater hope

29 of 40 studies (73%)

Significantly great optimism

26 of 32 studies (81%)

# Positive Human Virtues / Character Traits

(systematic review)

Religious involvement is related to:

Significantly more forgiveness

34 of 40 studies (85%)

[70% of best]

Significantly more altruism / volunteering

33 of 47 studies (70%)

[75% of best]

Significantly more gratitude, compassion, kindness

8 of 8 studies (100%)

# Social Health



# Social Support

(systematic review)

Religious involvement is related to:

Significantly greater social support

61 of 74 studies (82%)

[93% of best]

# Social Capital

(systematic review)

Religious involvement is related to:

Significantly greater social capital  
11 of 14 studies (79%)

# Marital Stability

(systematic review)

Religious involvement is related to:

Significantly greater marital stability

68 of 79 studies (86%)

[88% of best]

less divorce, greater marital satisfaction, less spousal abuse

# Religion, Health Behaviors, and Disease Prevention

Exercise

Weight

Sexual behavior

Cigarette smoking

Diet

Cholesterol

Seatbelt use


Disease screening

Treatment compliance

# Health Behaviors

(systematic review)

Religious involvement is related to:

- More exercise/physical activity  
25 of 37 studies (68%)  
[76% of best]
- Less extra-marital sex, safer sexual practices (fewer partners)  
82 of 95 studies (86%)  
[84% of best]
- Lower weight  
(7 of 36 studies) (19%)  
Heavier weight  
(14 of 36 studies) (39%) 

# Health Behaviors (cont)

Religious involvement related to:

- Less cigarette smoking, especially among **the young**  
123 of 137 studies (90%)  
[90% of best]
- Better diet  
13 of 21 studies (62%)
- Lower cholesterol  
12 of 23 studies (52%)
- More likely to wear seat belts  
3 of 3 studies

# Disease Screening and Compliance

Religious involvement is related to:

- Greater likelihood of participating in disease screening behaviors - mammography, glucose, BP, prostate, etc.  
28 of 44 studies (64%)
- Greater likelihood of complying with treatment  
15 of 27 studies (56%)

# Research on Religion and Physical Health

Heart disease

Hypertension

Cerebrovascular disease

Dementia

Immune function

Endocrine function

Cancer

Overall mortality

# Heart Disease

(systematic review)

Religious involvement is related to:

Significantly lower rates of coronary artery disease  
12 of 19 studies (63%)  
[69% of best]

Lower cardiovascular reactivity, greater heart rate variability,  
more positive cardiovascular functions  
11 of 16 studies (69%)  
[69% of best]

# Hypertension and Stroke

(systematic review)

Religious involvement is related to:

- Lower BP or lower rates of hypertension  
36 of 63 studies (63%)
- Lower rates of stroke or less carotid artery thickening  
4 of 9 studies (44%)

# Dementia

(systematic review)

Religious involvement is related to:

Significantly less cognitive impairment or  
slower progression of dementia

11 of 21 studies (52%)

54% of best

71% of prospective cohort studies

# Immune and Endocrine Function

(systematic review)

Religious involvement is related to:

- Better immune function (higher lymphocyte counts, lower inflammatory markers, etc.)  
14 of 25 studies (56%)  
[60% of best]
- Better endocrine function (cortisol, epi and norepinephrine)  
23 of 36 studies (64%)

# Cancer

(systematic review)

Religious involvement is related to:

- Lower rates of cancer or better prognosis  
14 of 25 studies (56%)  
[65% of best]

# Overall Mortality

(systematic review)

Religious involvement is related to:

- Lower mortality, longer survival  
82 of 121 studies (68%)  
[66% of best]  
[76% of very best]

# Current Research at Duke



# **Conventional vs. Religious Psychotherapy for Major Depression in Patients with Chronic Illness**

# Specific Aims (by study Phase)

## Phase I

1. Develop an RCBT treatment manual, adapted to the particular cognitive distortions of chronically ill religious patients, to guide a therapeutic intervention for depression in Christian, Jewish, Muslim, Buddhist, and Hindu patients.
2. Determine whether adequate numbers of depressed religious persons with chronic illness can be identified, recruited, assessed and retained during the intervention
3. Determine if delivering CBT by telephone, online via the Internet and/or by Skype, is the most accessible and acceptable way of treating depressed persons with chronic disabling physical illness.
4. Give therapists experience with online and telephone methods of delivering CBT.

# Specific Aims

## Phase II

1. Determine if RCBT is more effective than CCBT in treating major depression in religious patients with disabling chronic illness.
2. Determine if RCBT is more effective than CCBT in reducing anxiety and improving optimism, life satisfaction, daily spiritual experiences, social and physical functioning.
3. Determine if RCBT is more effective than CCBT in (1) reducing 12-hour urinary cortisol, norepinephrine and epinephrine; (2) reducing pro-inflammatory cytokines (interferon- $\gamma$  [INF-  $\gamma$ ], interleukin-1 $\beta$  [IL-1 $\beta$ ], IL-6, tumor necrosis factor- $\alpha$  [TNF $\alpha$ ]) and C-reactive protein (CRP); and (3) increasing anti-inflammatory cytokines (IL-4, IL-10) (i.e., optimizes the balance and modulation of endocrine/ immune functions adversely affected by depression)
4. Determine if genetic polymorphisms that increase susceptibility to depression in the presence of stressful life events are more prevalent in deeply religious depressed subjects vs. those less religious. Of particular interest are the serotonin transporter-linked promoter region (5-HTTLPR) genotype SL/SS, the rs6295 5-HT1A receptor genotype CG/GG, and the MAOA-uVNTR promoter high-activity-allele carriers.
5. Determine if RCBT is more effective than CCBT in the presence of one or more of these genetic polymorphisms, and whether treatment efficacy is moderated by the religiosity.

# Methods and Procedures

## Phase I

Open trial of 30 patients

- Recruit 15 at Duke Health Systems (Durham, NC)
- Recruit 15 at Glendale Medical Center (Glendale, CA)

Randomize 30 eligible patients to either RCBT or CCBT

Ten 50-min CBT therapy sessions delivered over 12 weeks

# Methods

## Phase II

RCT of 70 patients, using protocol refined during Phase I

Enroll 35 patients from Glendale

Enroll 35 patients from Duke Health Systems

Randomize 70 eligible patients to RCBT or CCBT

## **Methods – Baseline and Outcome Measures**

### Questionnaire

Beck Depression Inventory (BDI) – primary outcome

Optimism (10-item Life Orientation Test)

Purpose in life (20-item)

Gratitude (6-item)

Generosity (10-item)

Social functioning (11-item Duke Social Support Index)

Medical illness severity (12-item Cumulative Illness Rating Scale)

Religious attendance, private religious activity (2-items)

Daily spiritual experiences (16-item DSE scale)

Intrinsic religiosity (10-item Hoge scale)

Religious coping (14-item brief RCOPE)

### Blood

Genetic analyses (baseline only)

Inflammatory markers (INF-gamma, IL1-B, IL-6, TNF-alpha, IL-4, Il-10, CRP)

### Urine (12-hr overnight)

Cortisol, norepinephrine, epinephrine

# Methods

## Interventions

Conventional CBT (demonstrated effectiveness)

- Four therapists (licensed, master's level, CBT experience)
- Standard manualized CCBT (based on work of Aaron & Judy Beck)

vs.

Religious CBT (no demonstrated effectiveness, except...)

- Four therapists (licensed, master's level, CBT experience)
- Standard CBT, but integrating subjects religious beliefs/practices, using a manualized RCBT developed for this study

# Expected Outcomes

## Emotional

- Relief of depressive symptoms
- Increased gratitude, optimism, generosity
- Increased meaning and purpose in life

## Social

- Increased social functioning and support

## Physiological

- Reduction of cortisol and catecholamine production
- Reduction of inflammatory markers
- Determination of whether genotype affects response

## Spiritual

- Resolution of spiritual struggles
- Increased spiritual growth
- Establishment of healthy religious cognitive style
- Development of contemplative prayer routine

# Summary

- Religion can be a powerful coping resource
- Religion is related to better mental health
- Religion is related to better health behaviors
- Religion is related to better physical health
- Research on religion and outcomes involving chronic mental illness is scarce and in great need
- Research on integrating religion into psychotherapy is possible and now being done

# Further Reading

1. *Faith and Mental Health* (Templeton Press, 2005)
2. *Medicine, Religion and Health* (Templeton Press, 2008)
3. *Spirituality in Patient Care* (Templeton Press, 2007)
4. *Handbook of Religion and Mental Health* (Academic Press, 1998)
5. *Handbook of Religion and Health* (Oxford University Press, 2001, 2011)
6. *Healing Power of Faith* (Simon & Schuster, 2001)
7. *The Healing Connection* (Templeton Press, 2004)

Duke website: <http://www.spiritualityandhealth.duke.edu/>

The Center was founded in 1998, and is focused on conducting research, training others to conduct research, and field-building activities related to religion, spirituality, and health. In addition, we serve as a clearinghouse for information on religion, spirituality and health, and seek to support and encourage dialogue between researchers, clinicians, clergy, and others interested in the intersection.



## Goals & Focus

The three main goals of the Center are:

- Conducting interdisciplinary research on spirituality, theology and health
- Training and supporting those wishing to do research on the topic
- Building a community of researchers, clinicians, clergy, and others interested in dialogue and discussions related to spirituality, theology and health
- Informing the public about relationships between religion, spirituality and health

## Partner With Us

[Matching 1:1 Contributions](#)

## Upcoming Events

[Summer Workshops](#)

## Recent News

**Annual Meeting Presentations, View Videos**  
[2008](#)  
[2009](#)  
[2010](#)

**STH Seminars, View Videos**

**9th Annual David B. Larson Memorial Lecture**

# Summer Research Workshop

July 16-20 and August 13-17, 2012

Durham, North Carolina

5-day intensive research workshops focus on what we know about the relationship between spirituality and health, applications, how to conduct research and develop an academic career in this area. Leading spirituality-health researchers at Duke, UMSC, and elsewhere will give presentations:

- Previous research on spirituality and health
- Strengths and weaknesses of previous research
- Applying findings to clinical practice
- Theological considerations and concerns
- Highest priority studies for future research
- Strengths and weaknesses of spirituality measures
- Designing different types of research projects
- Carrying out and managing a research project
- Writing a grant to NIH or private foundations
- Where to obtain funding for research in this area
- Writing a research paper for publication; getting it published
- Presenting research to professional and public audiences; working with the media

**If interested, contact Harold G. Koenig: [koenig@geri.duke.edu](mailto:koenig@geri.duke.edu)**

# Discussion

till 10:00