

# Religion, Spirituality and Health

Research Establishing the Connections

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# Overview

1. Prevalence of religious belief
2. Role of religion in coping
3. Research on religion and mental health
4. Research on religion and physical health
5. Theoretical model explaining effects
6. Conclusions
7. Further resources

# Religious Belief in the United States

# Do you happen to be a member of a church, synagogue or mosque?

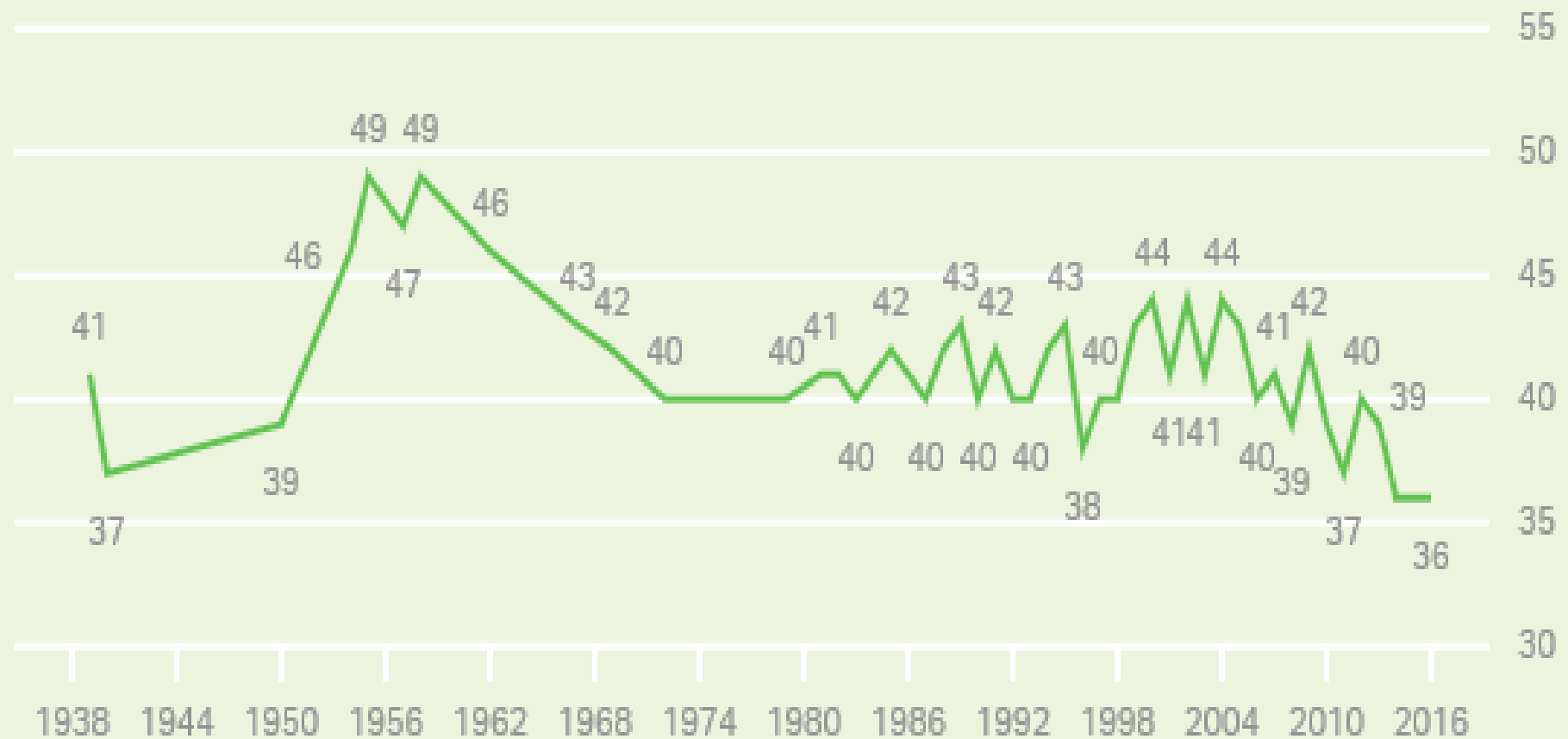
■ % Yes



GALLUP

# Did you, yourself, happen to attend church, synagogue or mosque in the last seven days, or not?

■ % Yes, attended



GALLUP

How important would you say religion is in your own life -- very important, fairly important or not very important?

■ % Very important



GALLUP

# The Z Generation (ages 13-18 in 2016) in U.S.

## Religious affiliation

9%	Engaged Christian
33%	Churched Christian
16%	Unchurched Christian
7%	Other Faith
34%	No religious affiliation
(13%	Atheist vs. 6% of all adults)

Religious beliefs very important to sense of self = 34%

Convinced that God exists = 54% (vs. 64% of adults; 71% in Pew Study)

Not possible to know that God is real = 37%

## Reasons for doubting:

29%	Good God allows too much suffering
23%	Christians are hypocrites (don't practice what preach)
<b>20%</b>	<b>Science refutes too much of the Bible</b>

Source: 2016 Barna research group: <https://www.barna.com/research>

# Research on Religion, Spirituality and Mental Health



# Religion as a Coping Behavior

1. Many persons turn to religion for comfort
2. Religion used to cope with common problems in life, especially highly stressful situations
3. Religion often used to cope with challenges such as:
  - uncertainty
  - fear
  - loss of control
  - discouragement and loss of hope

“When you have no where to go, go to your knees”

# Stress-induced Religious Coping

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**

# Religious Coping – does it help?



# Review of the Research 1887 to 2018

*Handbook of Religion and Health*  
(Oxford University Press, 2001, 2012,  
2022, forthcoming)

*Religion and Mental Health: Research  
& Clinical Applications*  
(Academic Press, 2018)

# Depression

The most common emotional disorder in the world, especially among medical patients.

Religious involvement is related to:

Less depression, faster recovery from depression

272 of 444 studies (61%)

[67% of best]

More depression (6%)

# JAMA Psychiatry

Formerly Archives of General Psychiatry



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Original Investigation | February 2014

## Neuroanatomical Correlates of Religiosity and Spirituality

### A Study in Adults at High and Low Familial Risk for Depression

Lisa Miller, PhD<sup>1,2</sup>; Ravi Bansal, PhD<sup>2,3</sup>; Priya Wickramaratne, PhD<sup>2,4,5</sup>; Xuejun Hao, PhD<sup>2,3</sup>; Craig E. Tenke, PhD<sup>6</sup>; Myrna M. Weissman, PhD<sup>2,4,5</sup>; Bradley S. Peterson, MD<sup>2,3</sup>

[\[+\] Author Affiliations](#)

JAMA Psychiatry. 2014;71(2):128-135. doi:10.1001/jamapsychiatry.2013.3067.

Text Size: [A](#) [A](#) [A](#)

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## ABSTRACT



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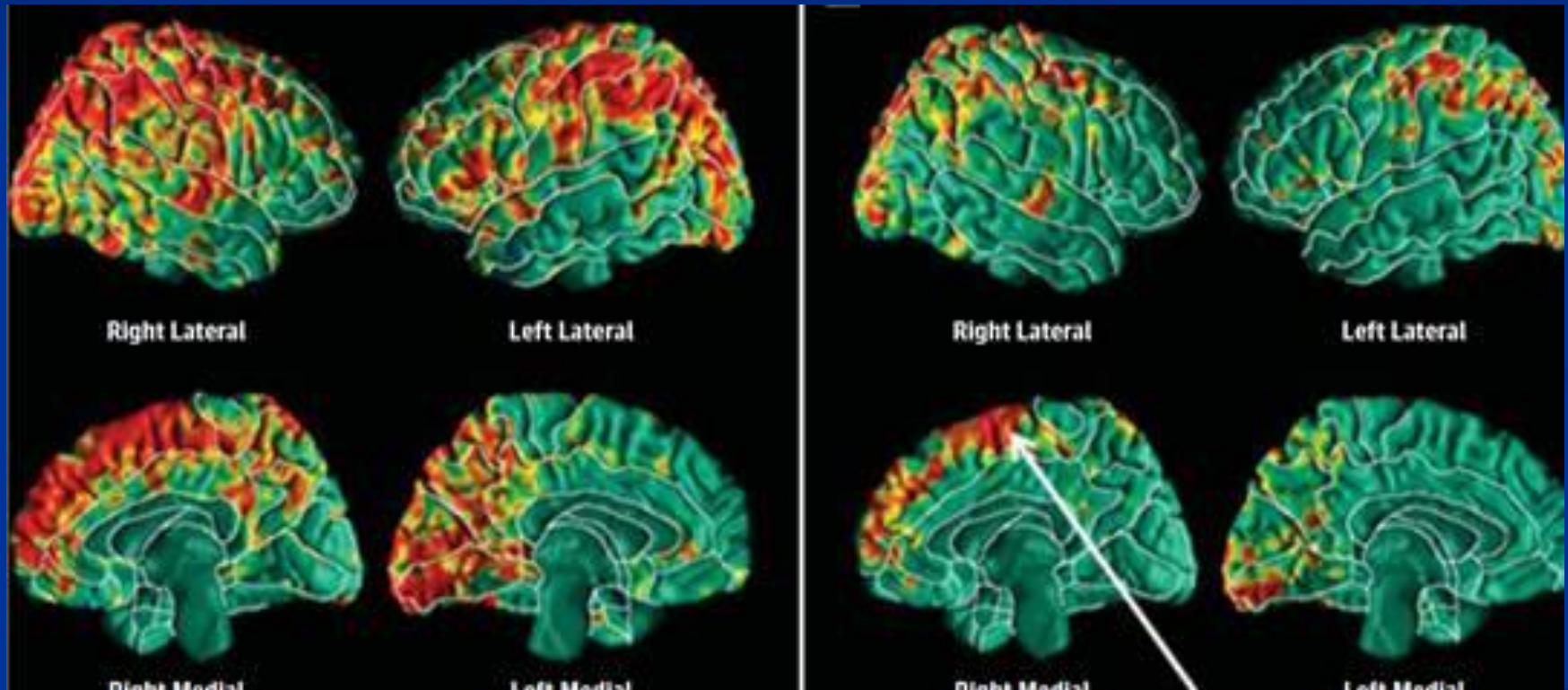


190

Sign in

# Religion/Spirituality and Cortical Thickness: A functional *MRI* Study

Areas in **red** indicate reduced cortical thickness



Religion NOT very important

Religion very important

*Citation:* Miller L et al (2014). Neuroanatomical correlates of religiosity and spirituality in adults at high and low familial risk for depression. JAMA Psychiatry 71(2):128-35

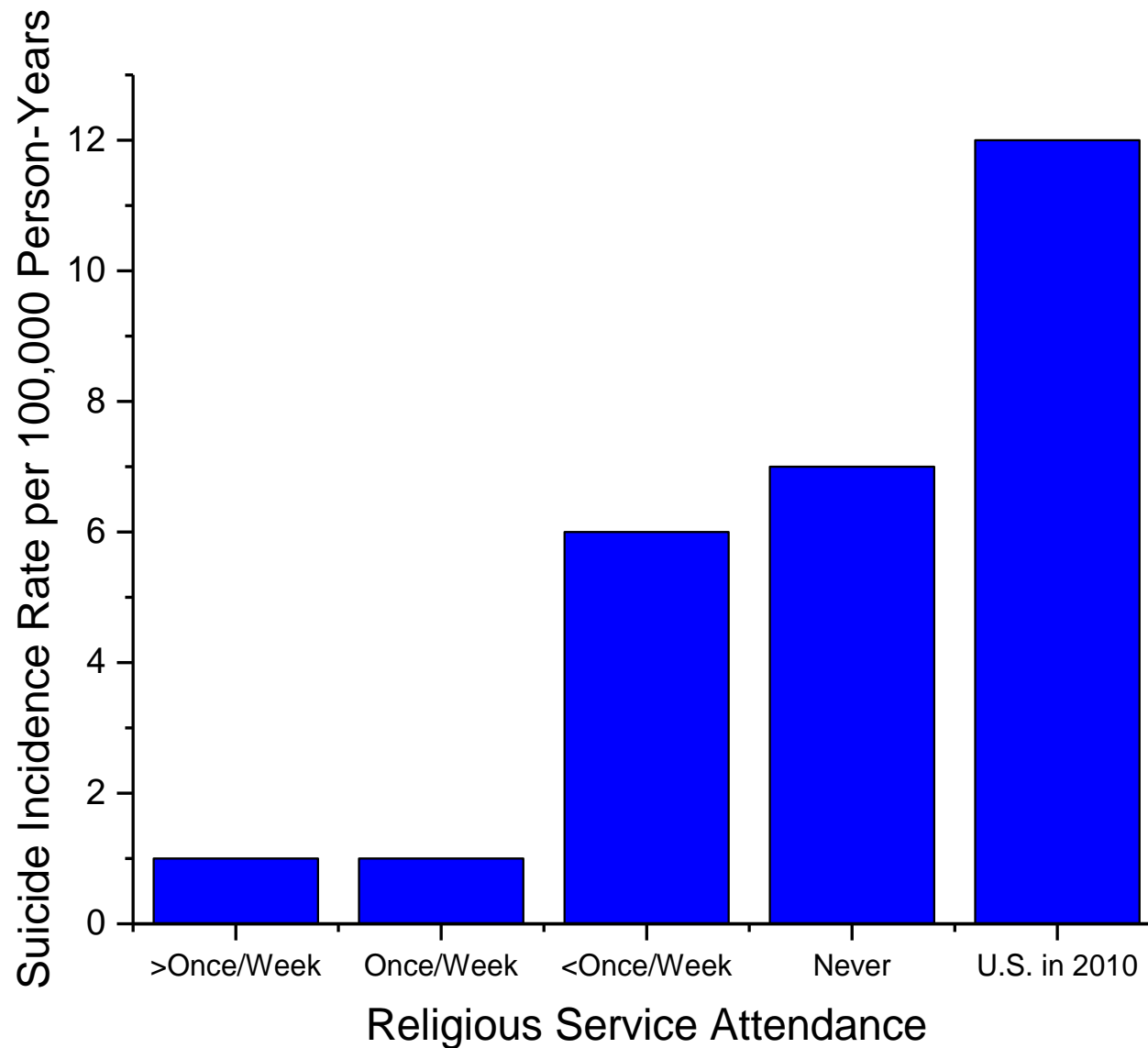
# Suicide

(systematic review)

Religious involvement is related to:

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





Nurses Health Study: 89,708 women followed from 1996 to 2010 (**HR=0.16**, 95% CI 0.06-0.46)  
VanderWeele et al (2016). JAMA Psychiatry (Archives of General Psychiatry) 73(8):845-851

# Alcohol Use/Abuse/Dependence

(systematic review)

Religious involvement is related to:

Less alcohol use / abuse / dependence  
240 of 278 studies (86%)

[90% of best designed studies]

# Illicit Drug Use

(systematic review)

Religious involvement is related to:

Less drug use / abuse / dependence

**155 of 185** studies (84%)

[86% of best designed studies]

[95% of RCT or experimental studies]

# 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 (3 of 326 studies, <1%)

# Meaning, Purpose, Hope, Optimism

(systematic review)

Religious involvement is related to:

Greater meaning and purpose

42 of 45 studies (93%)

[100% of best]

Greater hope

29 of 40 studies (73%)

Great optimism

26 of 32 studies (81%)

\*All of the above have consequences for patients' motivation for self-care and efforts toward recovery\*

# Social Support

(systematic review)

Religious involvement is related to:

- Great social support  
(61 of 74 studies) (82%)

# Delinquency and Crime

(systematic review)

At least 104 quantitative peer-reviewed studies have now been published that have examined the spirituality-delinquency/crime relationship. Of those, 82 (79%) reported inverse relationships between spiritual involvement and delinquency or crime.

Of the 60 best studies, 82% found significant inverse relationships.

Of the studies published during the past 10 years that have examined relationships between spiritual involvement and school performance (GPA or persistence to graduation), all 11 (100%) indicated that spiritual students performed significantly better.

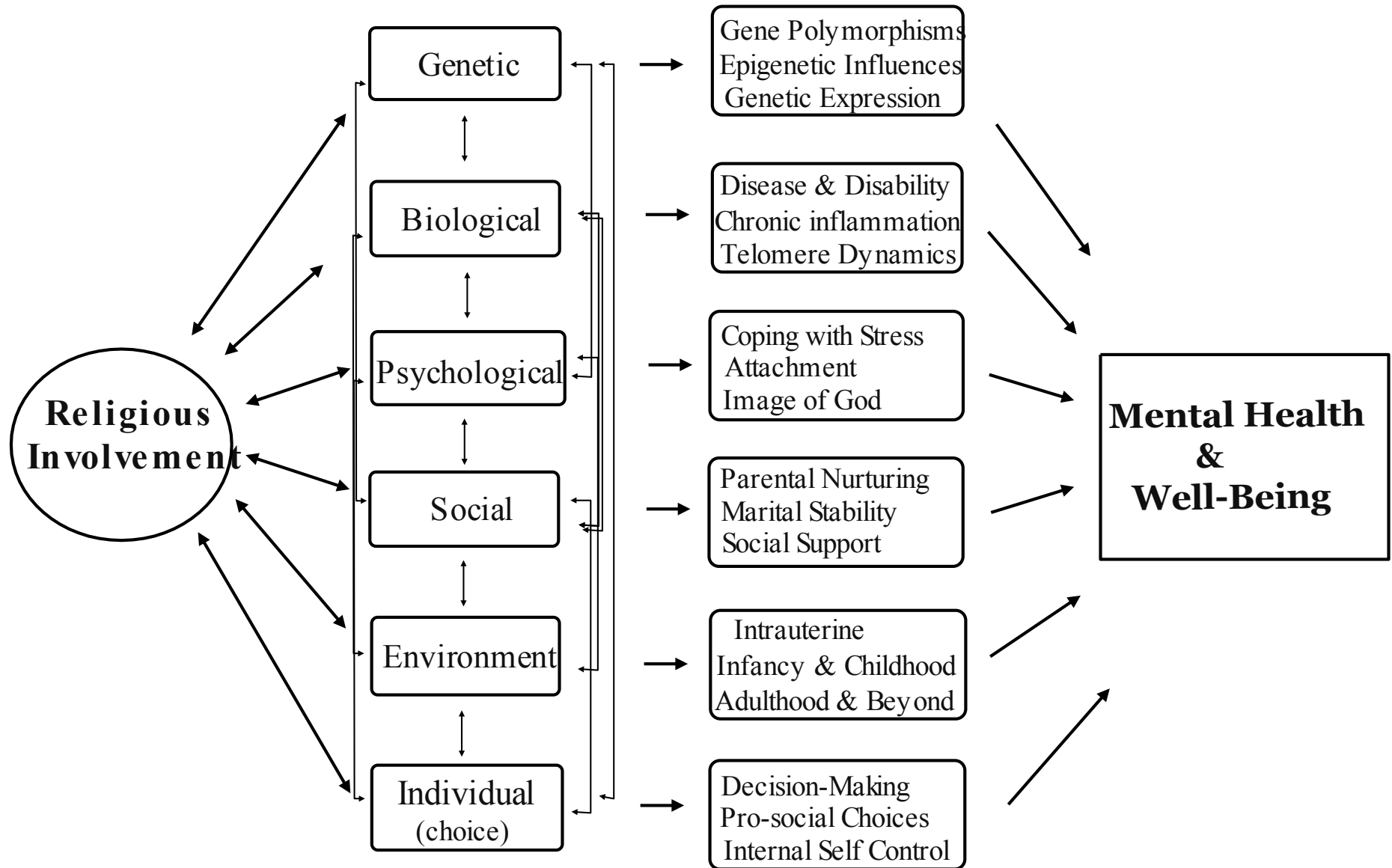
# Divorce, domestic abuse, single-parent families

(systematic review)

Religious involvement is related to:

Great marital stability - less divorce, greater satisfaction, less spousal abuse, more likely to have intact family with two parents in home (68 of 79 studies or 86%)





# Conclusions

1. Religion is commonly used to cope in response to stress, loss, or sickness
2. Religious involvement is associated with less depression, lower suicide, faster recovery from PTSD, greater happiness and emotional well-being, less substance use and abuse, and better social and marital health

# Research on Religion, Spirituality and **Physical Health**

# Research on Religion & Health Behaviors



# Exercise, Weight, Risky Behaviors

(systematic review)

Religion is related to:

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



# Cigarette smoking

(systematic review)

Religious involvement is related to:

Less cigarette smoking, especially among **the young**  
(122 of 135 studies) (90%)

# Religion and Physical Health



SCIENTIFIC  
AMERICAN

# MYSTERIES OF THE MIND

SPECIAL  
ISSUE

\$4.95

NEW AND UPDATED  
EXPLORATIONS OF  
HOW WE THINK,  
HOW WE BEHAVE  
AND WHAT WE FEEL

**Mind-Body  
Connections**

**Happiness**

**Depression**

**Dreams**

**Consciousness**

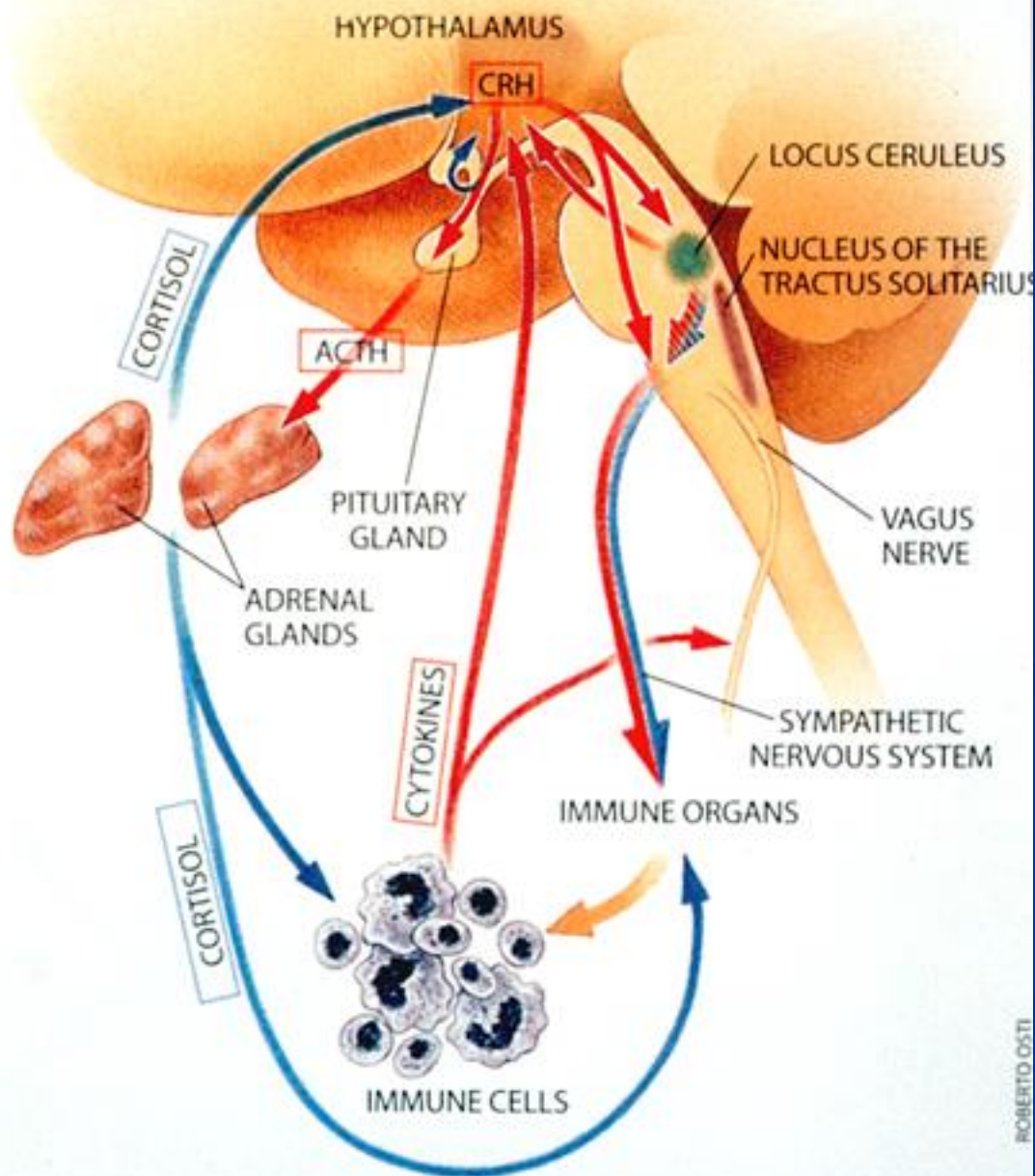
**Memory**

**Violence**

## The Mind-Body Relationship



# Interaction of the Brain and Immune System



# Immune and Endocrine Functions

(systematic review)

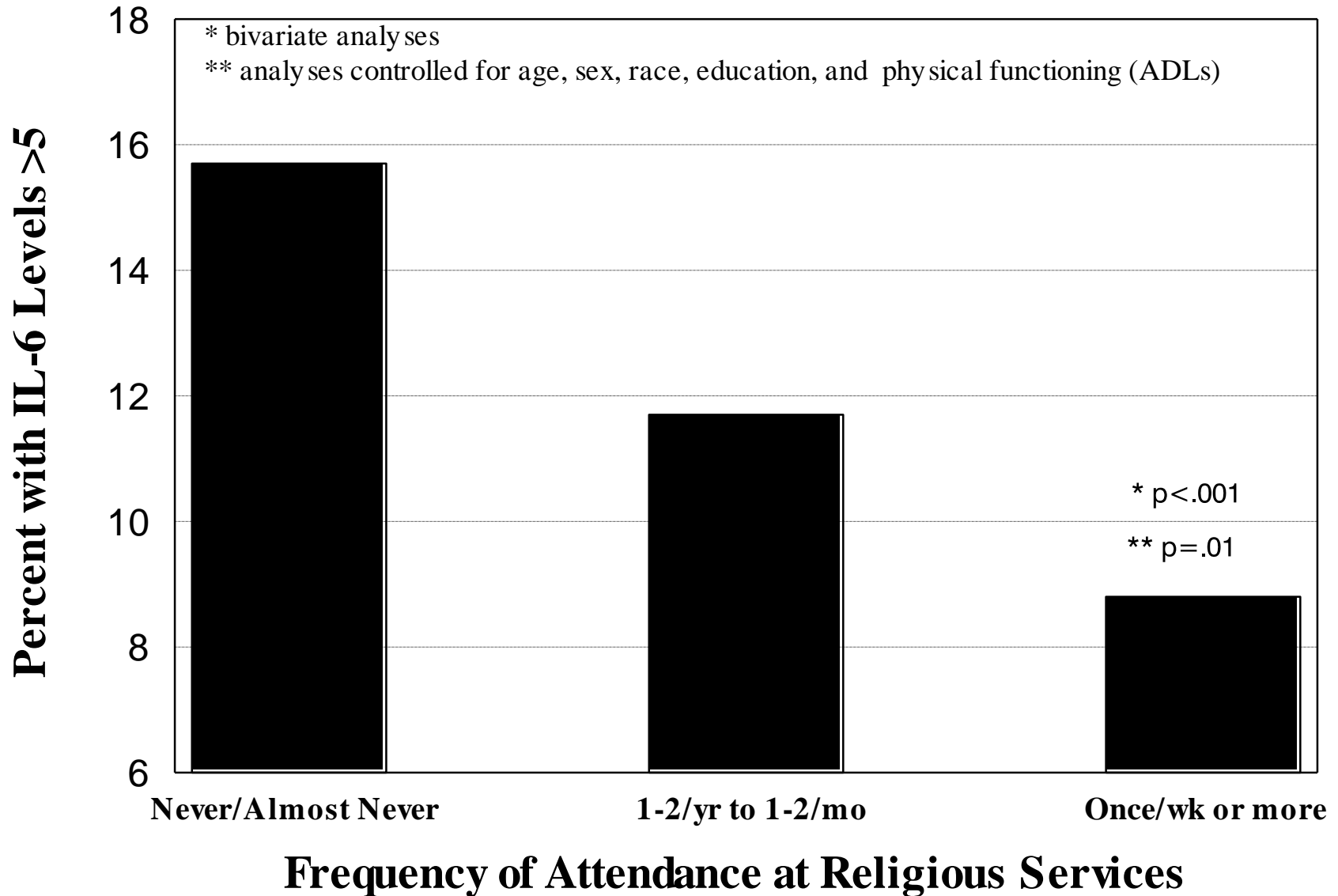
Religious involvement is related to:

Better immune functions  
(14 of 25 studies) (56%)

Better endocrine functions  
(23 of 31 studies) (74%) (majority involving meditation)

# Serum IL-6 and Attendance at Religious Services

(1675 persons age 65 or over living in North Carolina, USA)



**Citation** International Journal of Psychiatry in Medicine 1997; 27:233-250

# Replication

Attending religious services more than once weekly was a significant predictor of lower subsequent 12-year mortality and elevated IL-6 levels ( $> 3.19$  pg/mL). Mortality was lower by 68% (OR=0.32, 95% CI = 0.15-0.72;  $p < .01$ ) and **likelihood of having high IL-6 levels was reduced by 66% (OR=0.34, 95% CI = 0.16-0.73,  $p < .01$ ) among weekly attendees**, compared with those never attending religious services. Results were independent of covariates including age, sex, health behaviors, chronic illness, social support, and depression.

Lutgendorf SK, et al. Religious participation, interleukin-6, and mortality in older adults. Health Psychology 2004; 23(5):465-475

# Cardiovascular Functions

(systematic review)

Religious involvement is related to:

Lower blood pressure  
(36 of 63 studies) (57%)

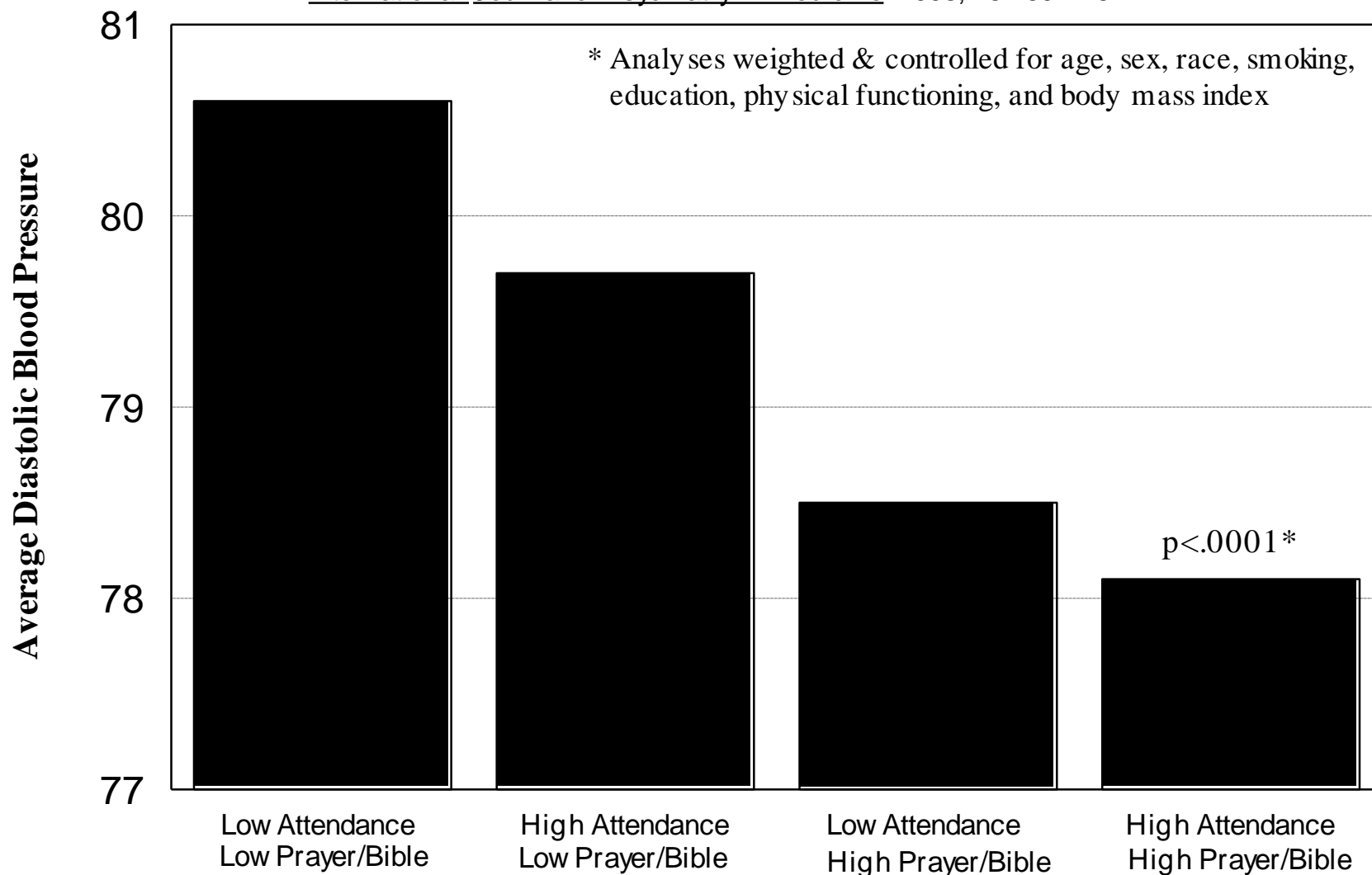
Better cardiovascular functions (CVR, HRV, CRP)  
(10 of 16 studies overall) (63%)

Less coronary artery disease  
(12 of 19 studies overall) (63%)

# Religious Activity and Diastolic Blood Pressure

(n=3,632 persons aged 65 or over)

Citation: International Journal of Psychiatry in Medicine 1998; 28:189-213

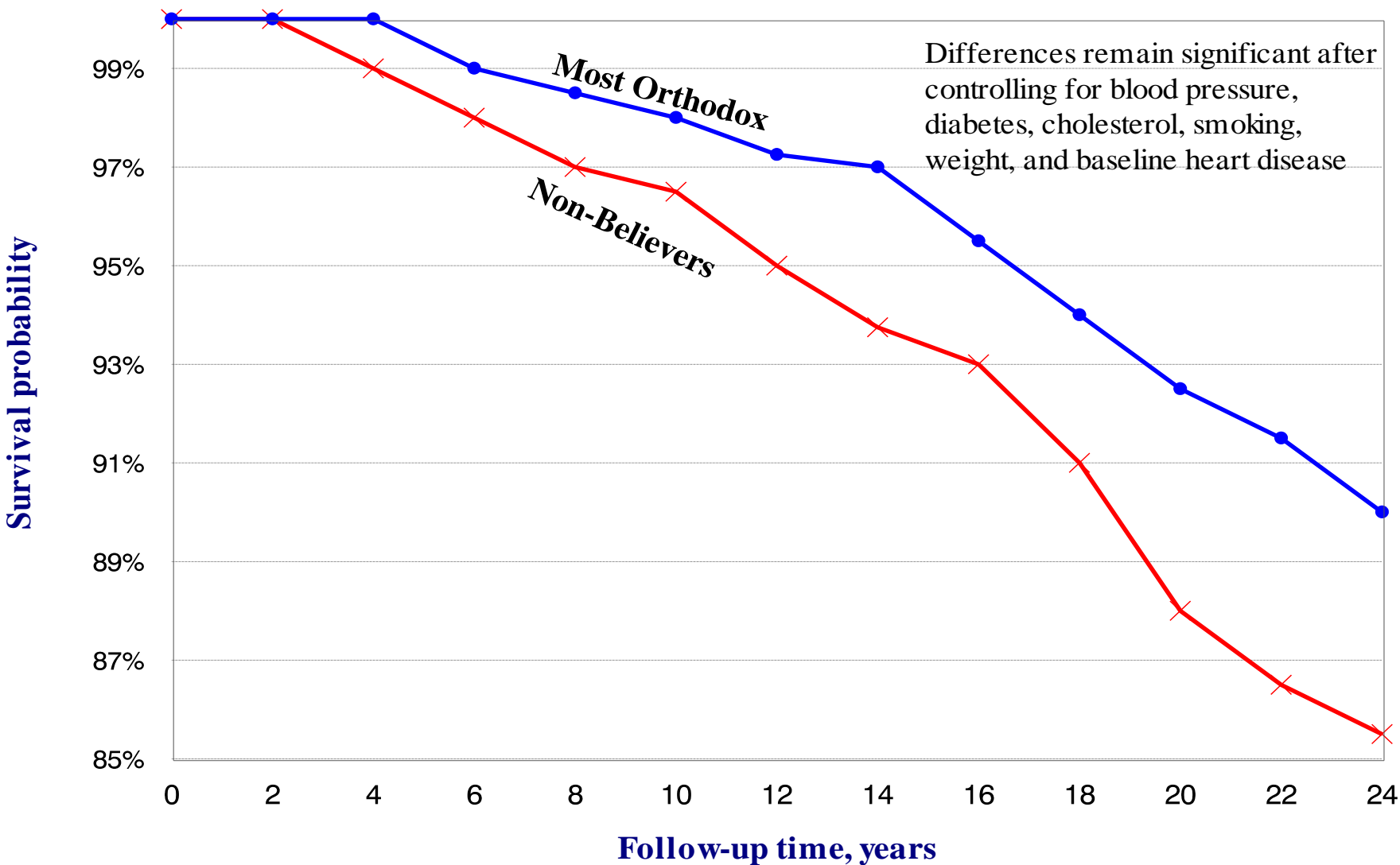


**High** = weekly or more for attendance; daily or more for prayer

**Low** = less than weekly for attendance; less than once/day for prayer

# Mortality From Heart Disease and Religious Orthodoxy

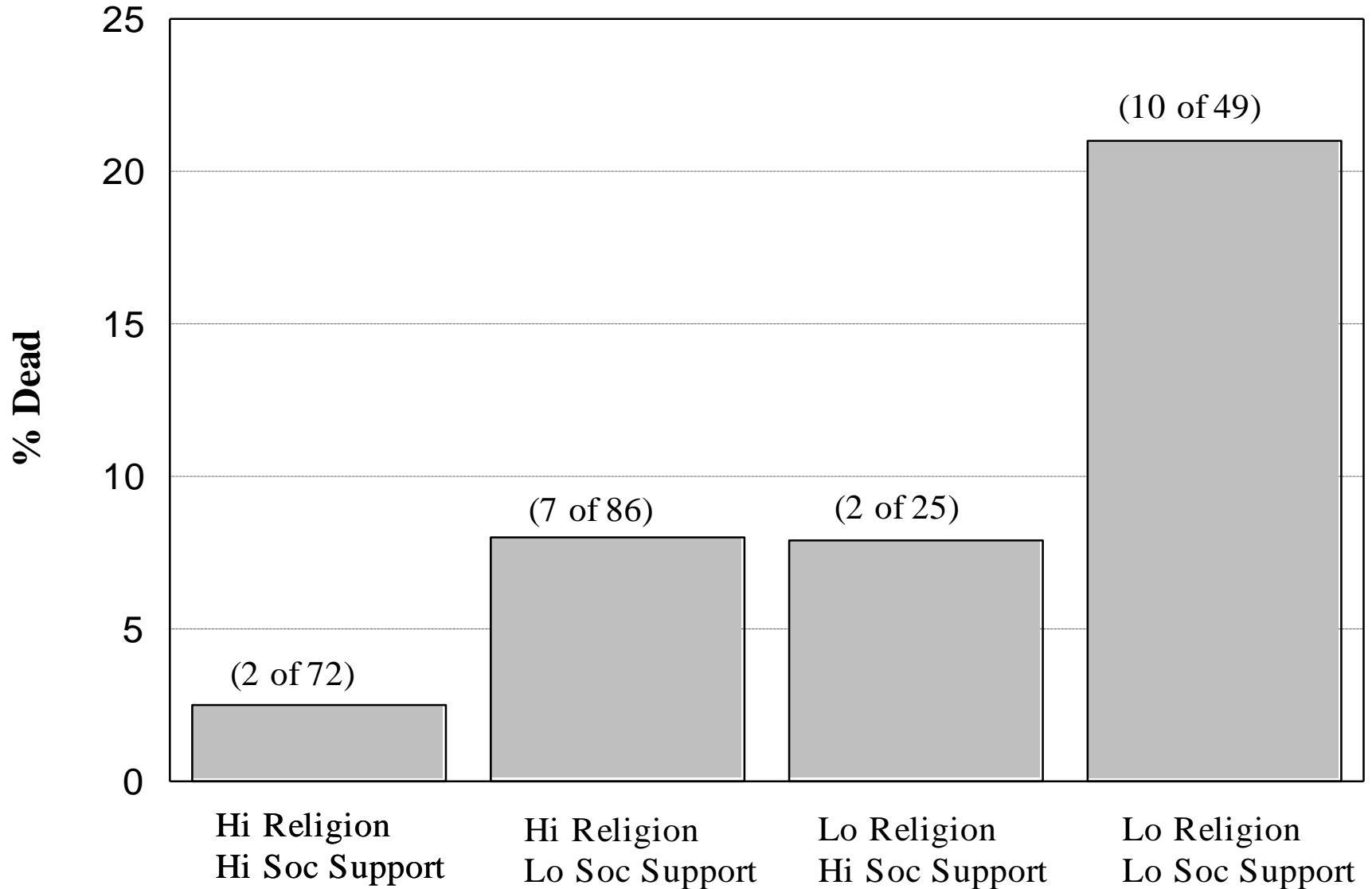
(based on 10,059 civil servants and municipal employees)



Kaplan-Meier life table curves (adapted from Goldbourt et al 1993. *Cardiology* 82:100-121)

# Six-Month Mortality After Open Heart Surgery

(232 patients at Dartmouth Medical Center, Lebanon, New Hampshire)



**Citation** Psychosomatic Medicine 1995; 57:5-15



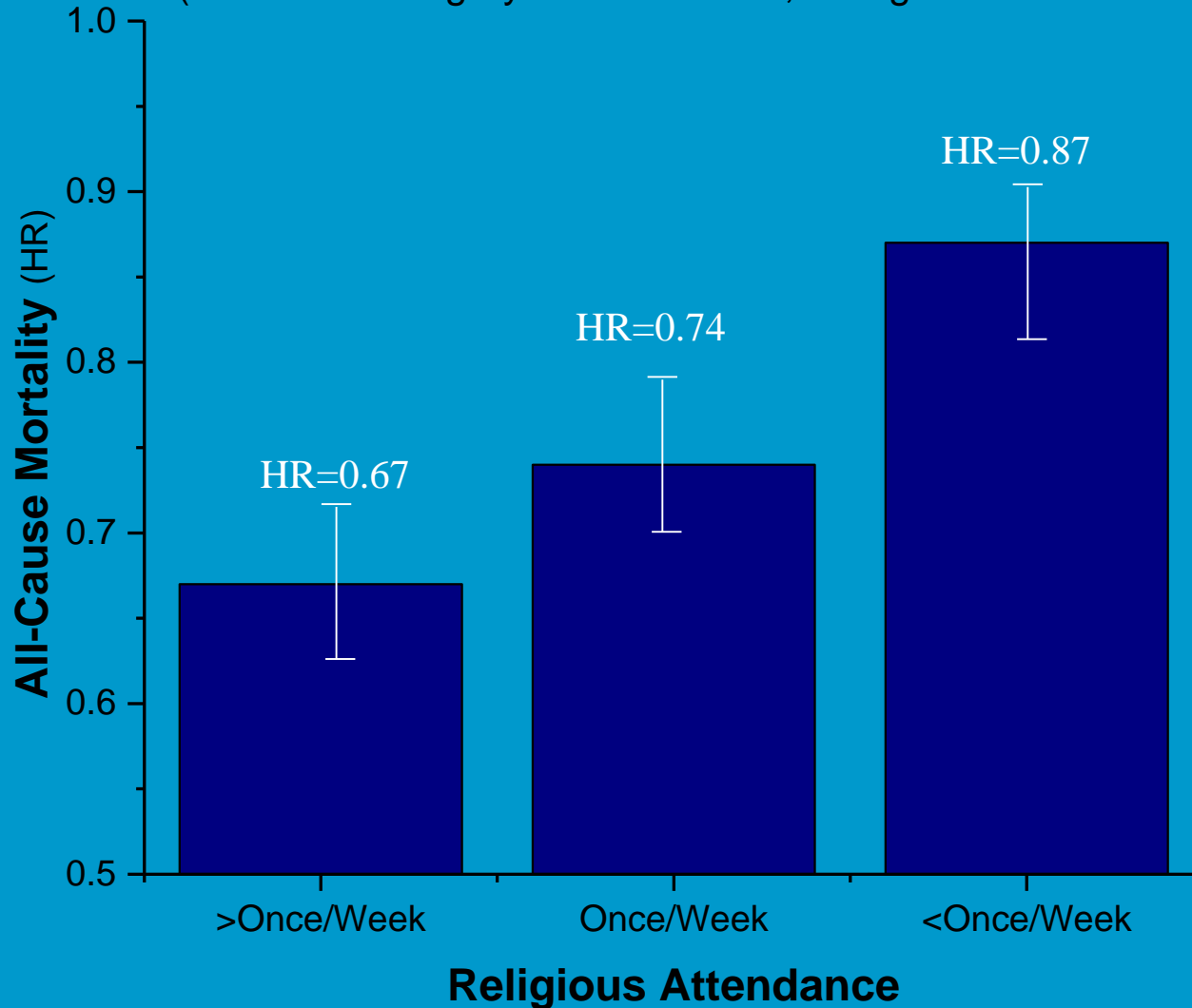
# Mortality (all-cause)

(systematic review)

Religious involvement related to:

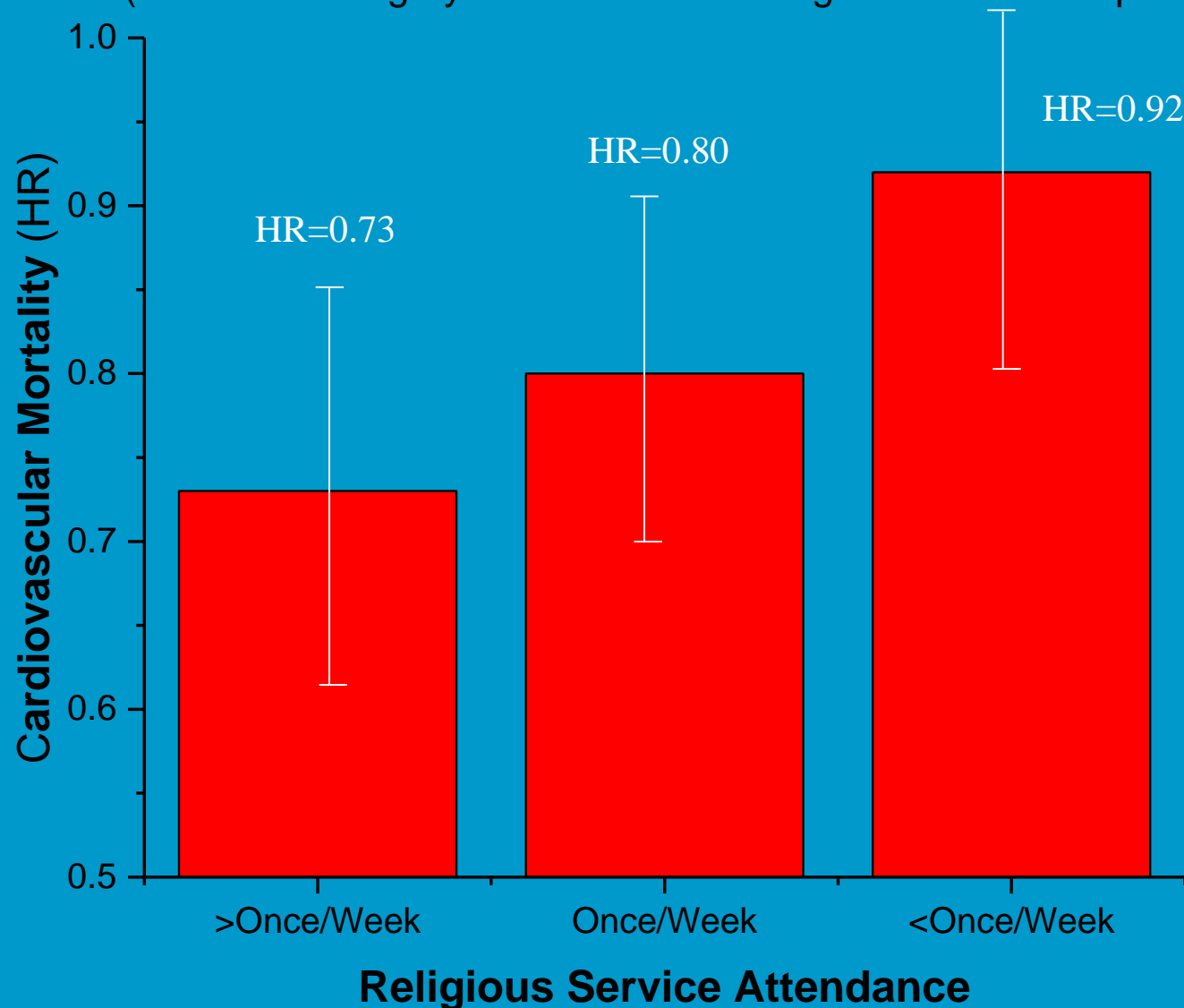
- Greater longevity in 82 of 120 studies (68%)
- Shorter longevity in 7 of 120 studies (6%)

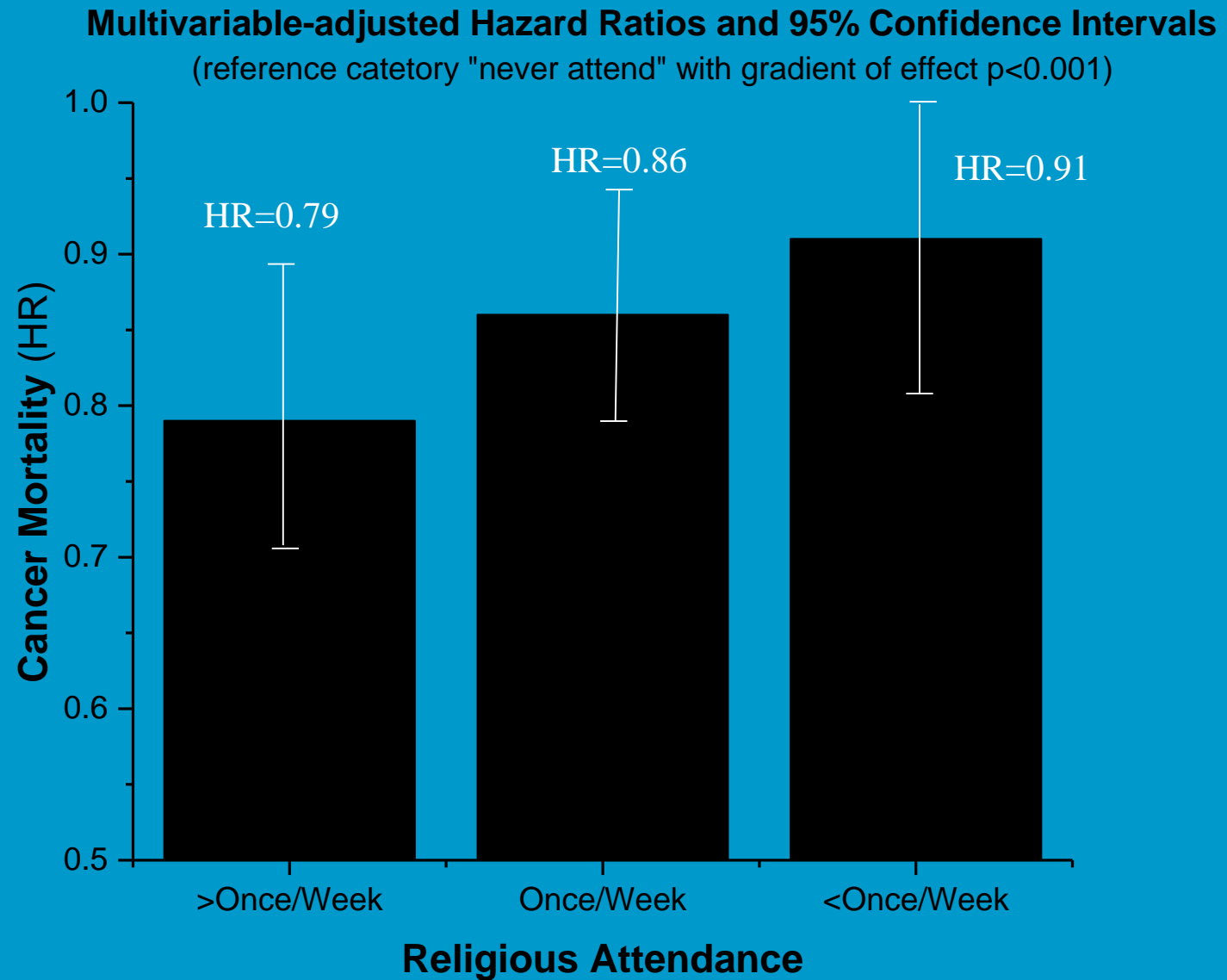
**Multivariable Adjusted Hazard Ratio with 95% Confidence Intervals**  
(reference category "never attend", with gradient of effect  $p < 0.001$ )



Nurses Health Study: 74,534 women followed from 1996-2012  
Li et al (2016). JAMA Internal Medicine 176(6):777-785

**Multivariable-Adjusted Hazard Ratios and 95% Confidence Intervals**  
(reference category "never attend" with gradient of effect  $p < 0.001$ )





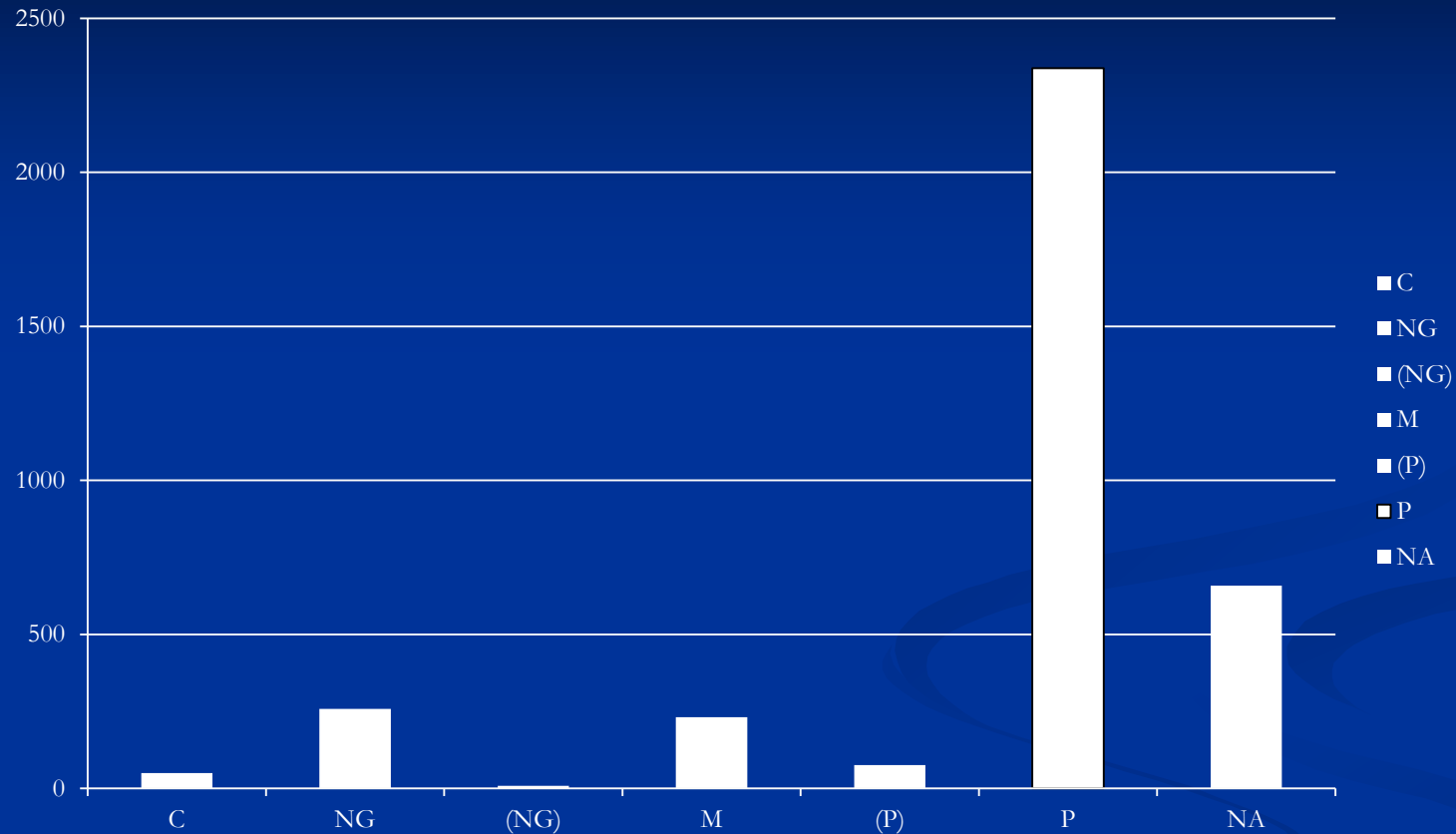
Li et al...VanderWeele (2016). JAMA Internal Medicine 176(6):777-785

# Mediation Analysis for the Religious Attendance – All-Cause Mortality Effect

Depressive Symptoms (CES-D)	11%	$p < 0.001$
Current Smoking	22%	$p < 0.001$
Optimism	9%	$p < 0.001$
Social Integration	23%	$p = 0.003$
Unexplained	35%	

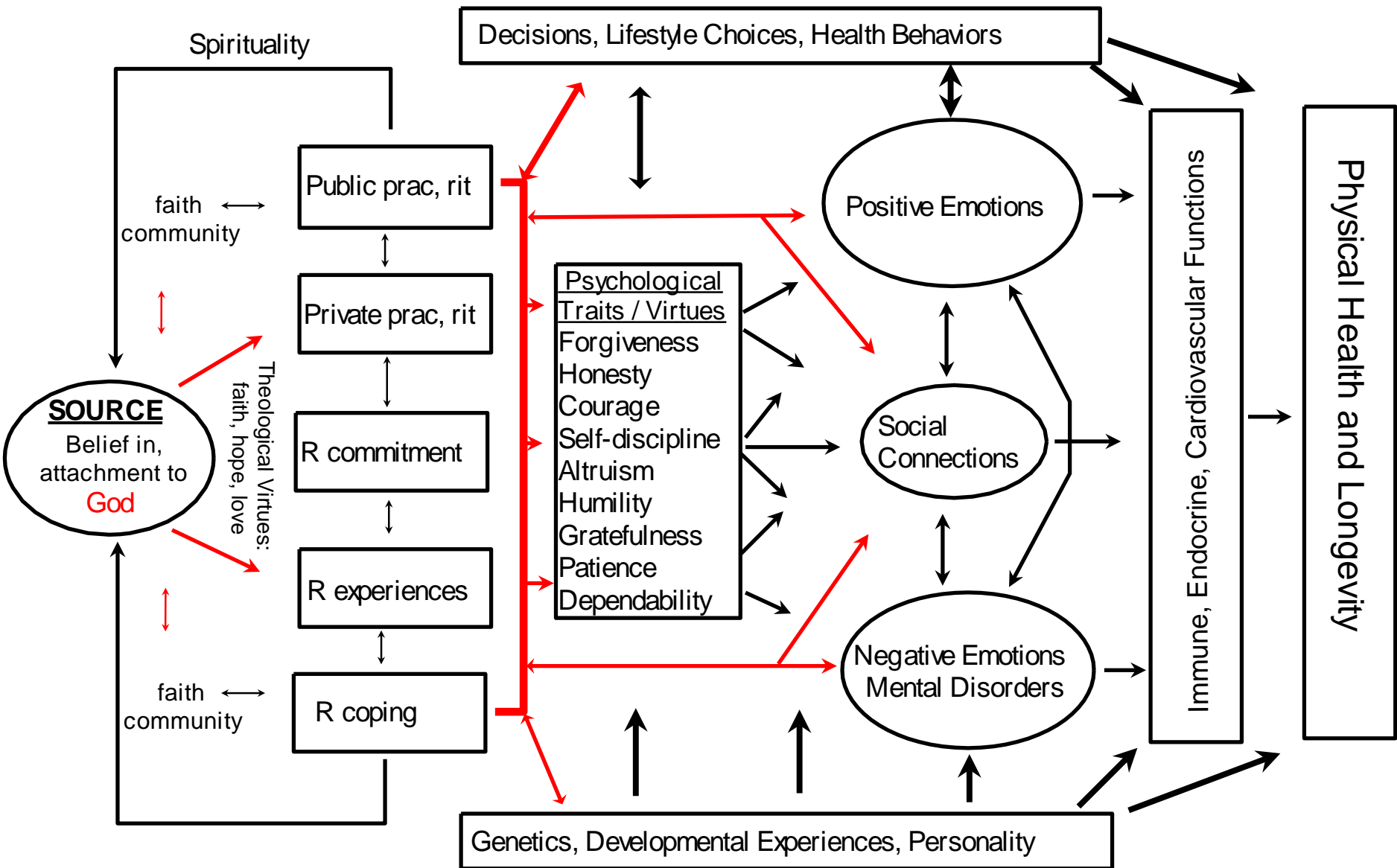
(no mediation for alcohol use, diet quality, phobic anxiety)

# The Relationship between Religion and Health: All Studies



Number of studies includes some studies counted more than once (see Appendices of 1<sup>st</sup> and 2<sup>nd</sup> editions). Prepared by Dr. Wolfgang v. Ungern-Sternberg

# Theoretical Model of Causal Pathways



\*Model for Western monotheistic religions (Christianity, Judaism, and Islam)

# Conclusions

1. Religious involvement (RI) is related to better mental, social, and behavioral health, and improves these aspects of health over time
2. As RI lessens in the U.S. and Western world (the result of increasing secularization), crime rates, alcohol & drug use, and addiction are increasing
3. RI is also related to better physical health, less functional disability, and less cognitive decline with aging
4. These findings have huge implications for public health and healthcare costs as RI becomes less common with each younger cohort.
5. The clinical applications are vast in terms of provision of mental and physical health care (I will be describing those applications during my next session at 1:30-2:30 this afternoon)



# Relevance to Loma Linda University

- Loma Linda University should be at **the forefront** of academic institutions conducting research in this area, educating health professionals about the results of that research, and advancing our knowledge about the effectiveness of integrating spirituality into patient care.
- Of all healthcare systems in the world, the Adventist Health System should be **the first** to assess and address the spiritual needs of all patients in a systematic manner, both outpatients and inpatients (as this is central to their mission).

I will be making specific recommendations with regard to research, education, and clinical applications for Loma Linda University at the session this afternoon from 4:30-5:00.

Tomorrow morning from 9:00-12:00 noon, I will be describing how researchers at LLU can proceed in achieving these goals.

# Further Resources



# Monthly FREE e-Newsletter

## CROSSROADS...

### Exploring Research on Religion, Spirituality & Health

- Summarizes latest research
- Latest news
- Resources
- Events (lectures and conferences)
- Funding opportunities

To sign up, go to website: <http://www.spiritualityandhealth.duke.edu/>

# Spirituality & Health Research

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Methods  
Measurement  
Statistics  
and Resources

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Harold G. Koenig, MD

# Summer Research Workshop

August 12-16, 2019

Durham, North Carolina

5-day intensive research workshop focus on what we know about the relationship between spirituality and health, clinical applications, how to conduct research, and how to develop an academic career in this area. Faculty includes leading spirituality-health researchers at Duke, Yale University, Emory, and elsewhere.

- Strengths and weaknesses of previous research
- Theological considerations and concerns
- Highest priority studies for future research
- Strengths and weaknesses of measures of religion/spirituality
- Designing different types of research projects
- Primer on statistical analysis of religious/spiritual variables
- 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

**Partial tuition Scholarships are available**

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



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## Welcome

The Center was founded in 1998, and is focused on conducting research, training others to conduct research, and promoting scholarly field-building activities related to religion, spirituality, and health. The Center serves as a clearinghouse for information on this topic, and seeks to support and encourage dialogue between researchers, clinicians, theologians, clergy, and others interested in the intersection.



## Mission

The five main goals of the Center are to:

- Conduct research on religion, spirituality and health
- Train those wishing to do research on this topic
- Interpret the research for clinical and societal applications
- Explore the meaning of the research for pastors and theologians
- Discuss how theological input can advance the research

## Upcoming Events

16th Annual 5-day Spirituality and Health Research Workshop (August 12-16, 2019)

Monthly Research Seminars

## Recent News

[Religion and Mental Health Review \(new\)](#)

[Resources on Moral Injury](#)

[Special Issue on Moral Injury in \*Frontiers in Psychiatry\*](#)

[2017 Mental Health and Religion Book Series](#)

[Health and Well-being in Islamic Societies](#)

[Latest Research on Spirituality and Health at Duke](#)



# Questions and Discussion