

# Spirituality and Health

Henry Olders, MD, FRCPC  
Psychiatrist, Ste. Anne's Hospital  
Assistant Professor, Faculty of Medicine,  
McGill University

I would like to tell you a story.

It's about my wife who was diagnosed with a colon cancer in 1986.

Took up running;

set an example - I took up running too.

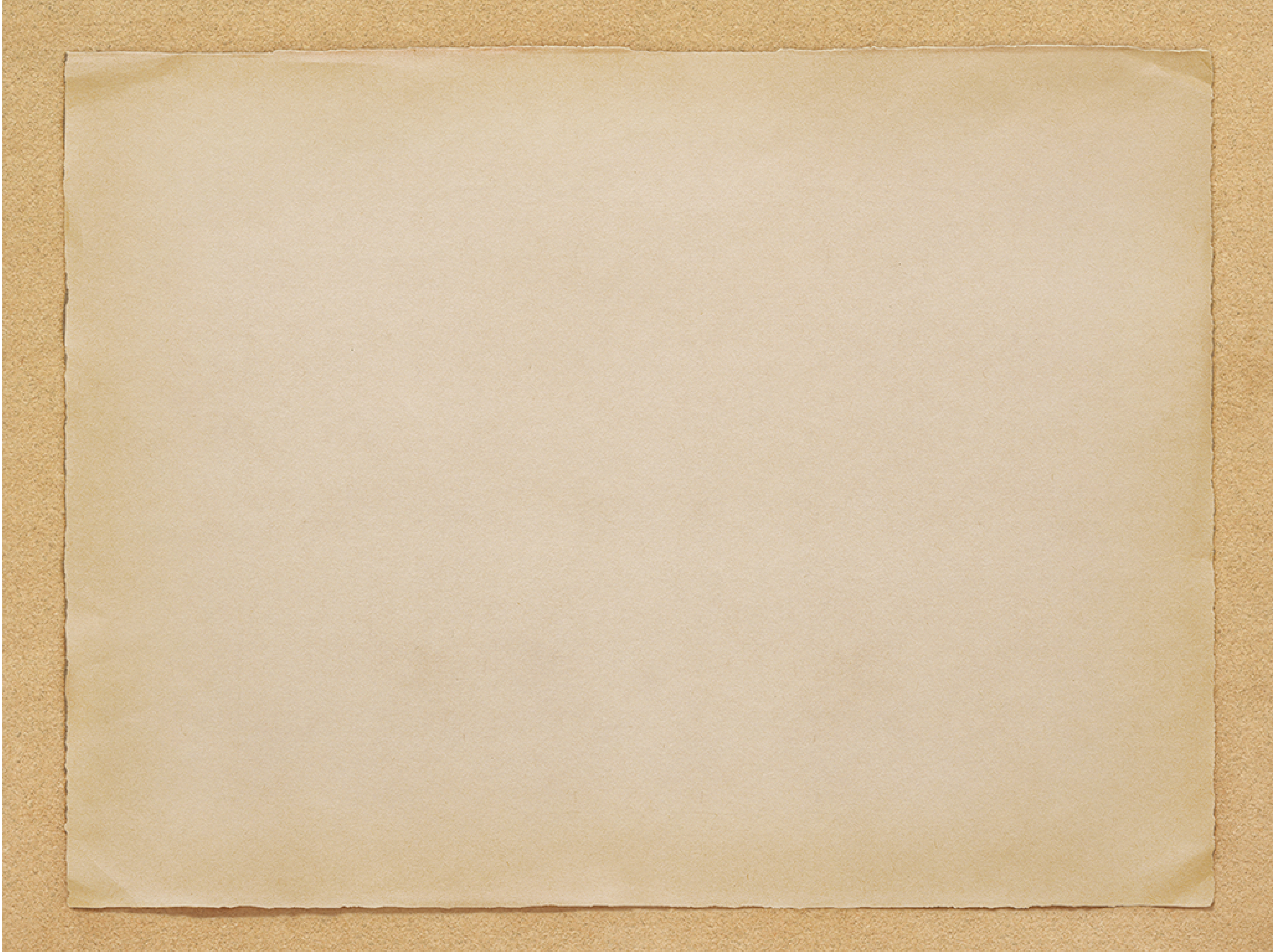
Changed her life in other ways: enrolled U. Of Montreal to get a diploma in Community Nursing, in French, with a severe hearing impairment caused by childhood measles. She was required to take a course in Statistics, and she passed with flying colours, even though mathematics had always been something she was convinced she was no good at, and avoided assiduously.

One thing she was not good at: as a nurse, she had always looked after others, and she had a lot of difficulty allowing others to look after her. Even during her last hospitalisation, she would not allow me to spend as much time with her as I wanted; she insisted that our children and my patients needed me more than she did. A part of me realised that she was looking after me and after our kids, but I was unhappy that I could not do more to look after her.

After several weeks, she slipped into a coma, her skin jaundiced from metastases in her liver. I set up a roster of friends who would come and keep her company during the hours when I had to be away. They were so grateful for the opportunity to help.

Even though we knew she was dying, her actual passing was an unexpected shock. The church was packed for her funeral, with people who had been touched by her and her capacity to look after others.





2

Several years later, my father died of stomach cancer. He chose to die at home, with the support of a doctor who made house calls and the Victorian Order of Nurses who visited daily. I arranged for time off work during his last days so I could go and stay with my parents in Brampton, Ontario and provide basic nursing care to my dad. I was happy and grateful to have the opportunity to return the love and caring he had given to me and my brothers and sisters.

These two experiences had a powerful influence on my thinking about helping others.

For eight years or so during my time at the Jewish General Hospital, I was seeing cancer patients in the Oncology Clinic there. Usually they would be referred for depression, anxiety, fatigue, or sleeping problems associated with their cancer.

After dealing with the practical, biological issues, there were often existential concerns these patients wanted to talk about.



- ◆ Crisis gives birth to opportunity
- ◆ Setting an example is much more powerful than telling people what to do
- ◆ We have an obligation to allow others to help us

Here are some of the existential issues that came up.

Learning that you have a serious life-threatening illness such as cancer is clearly a crisis in your life. But many cancer patients use this crisis as an opportunity to make significant changes in their lives, changes for the better. Because when there is a crisis, it means that something has to change. Whether that change is for the better or for the worse, is up to us. And that is why a crisis is an opportunity.

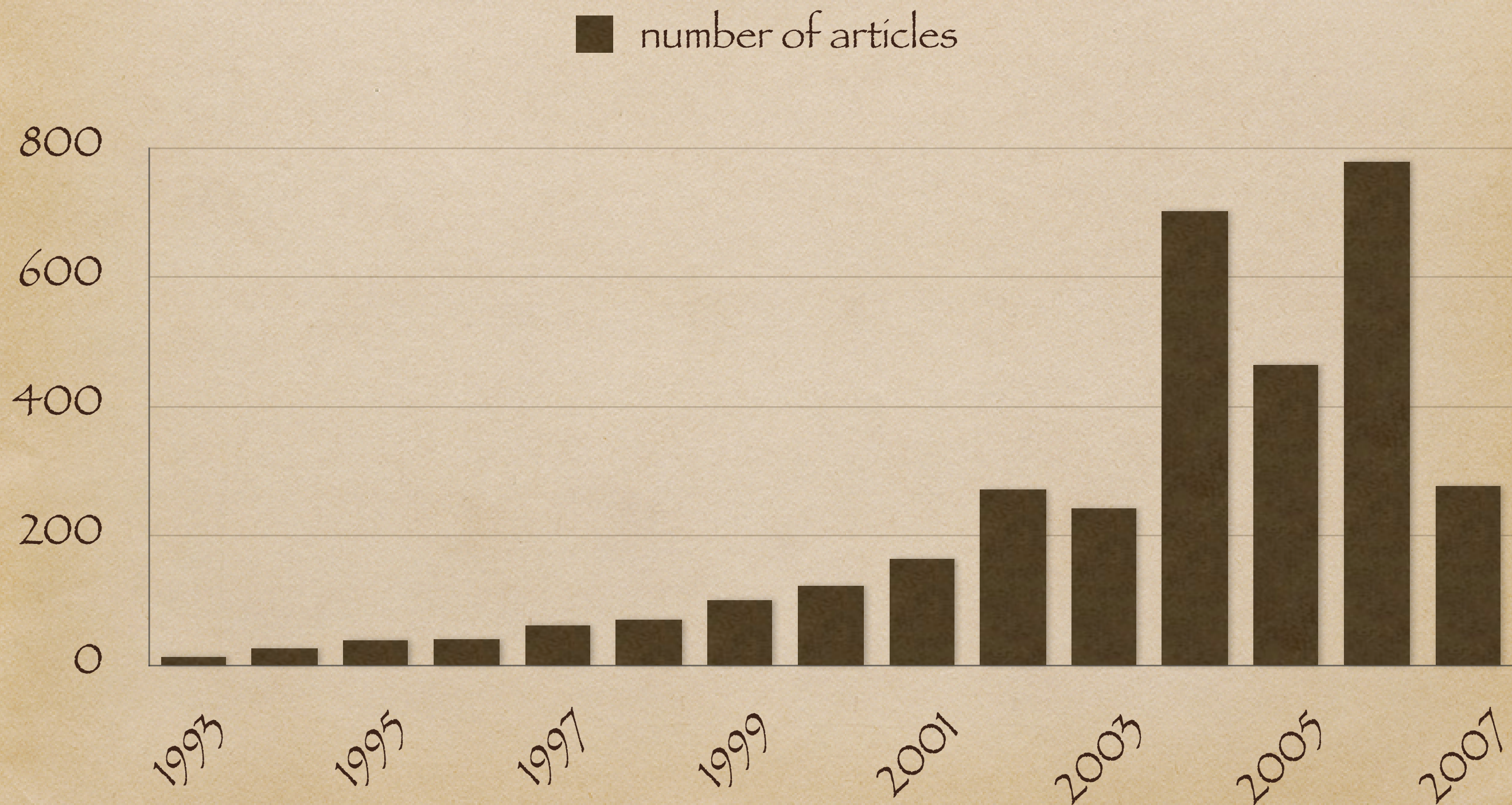
♥  
I may also tell patients that they have a responsibility, as parents, to demonstrate by their example to their children, that we can always make changes to improve our lives.

♥  
Finally, for those individuals who feel bad because their illness prevents them from helping others in the way that they're used to, I may share what I learned about helping others from my experiences with my wife and my Dad.

I ask if the person has difficulty accepting help from others. If yes, I explore their reasons for helping others. Invariably an important motivator is that the person feels good when he or she is able to do something for someone else. I gently point out that if they do not allow others to help them, they in effect are denying those people the opportunity to feel good. The patient's illness provides him or her with the opportunity and responsibility to contribute to the wellbeing of others by allowing them to help him or her in their time of need. This is a serious responsibility, and difficult to do well.



# Research on spirituality and health



Spirituality and health is a really hot topic these days.

This chart shows the number of research articles published each year from 1993 to now, based on a search using PubMed, the National Library of Medicine database, with the search terms "spirituality", "health", and the year.



# Why research spirituality & health?

- ◆ 2001 “Patients’ Charter” (Department of Health, Britain): NHS staff will be sensitive to, and respect, a person’s religious, spiritual and cultural needs at all times.





Another reason is that this idea has really gotten into the public consciousness in the western world. It's such a hot topic that there is even a bimonthly magazine devoted to it.



# Spirituality & health in the Bible

- ◆ “A merry heart does like good medicine, but a downcast spirit dries up the bones” (Proverbs 17:22)
- ◆ “A man’s spirit sustains him in sickness” (Proverbs 18:14)
- ◆ “A cheerful look brings joy to the heart, and good news gives health to the bones” (Proverbs 15:30)

What better place to start a search on spirituality and health than the Bible?  
Here are some old testament references.



- ◆ “Do not abandon yourself to sorrow. Do not torment yourself with brooding. Gladness of heart is life to a person. Joy is what gives someone length of days... Jealousy and anger shorten your days and worry brings premature age” (Sirach 30:21-25)



## & in the Koran

- ◆ “And when I am sick, then He restores me to health” (The Poets, 26.80)
- ◆ “Then eat of all the fruits and walk in the ways of your Lord submissively. There comes forth from within it a beverage of many colours, in which there is healing for men” (The Bee, 16.69)



# Folk wisdom

- ◆ The heart that loves is always young  
(Greek proverb)
- ◆ A heart in love with beauty never grows old  
(Turkish proverb)



# What is spirituality?

- ◆ there is no over-arching, inclusive description of spirituality that fits all - or even a majority of - patients or clients
- ◆ spirituality is an elastic, subjective description about a person & about the way they express their humanity:
  - ◆ may have to do with values; the transcendent; personal growth; prayer

Bash A (2004) J Clin Nurs 13:11-6



# Components of spirituality

- ◆ Transcendent dimension
- ◆ Meaning and purpose in life
- ◆ Mission in life
- ◆ Sacredness in life
- ◆ Material values
- ◆ Altruism
- ◆ Idealism
- ◆ Awareness of the tragic
- ◆ Fruits of spirituality

Byrne M. (2007) Int J  
Palliat Nurs. 13:118-24

An article by Marjory Byrne gives a number of definitions for spirituality. I particularly liked this one.

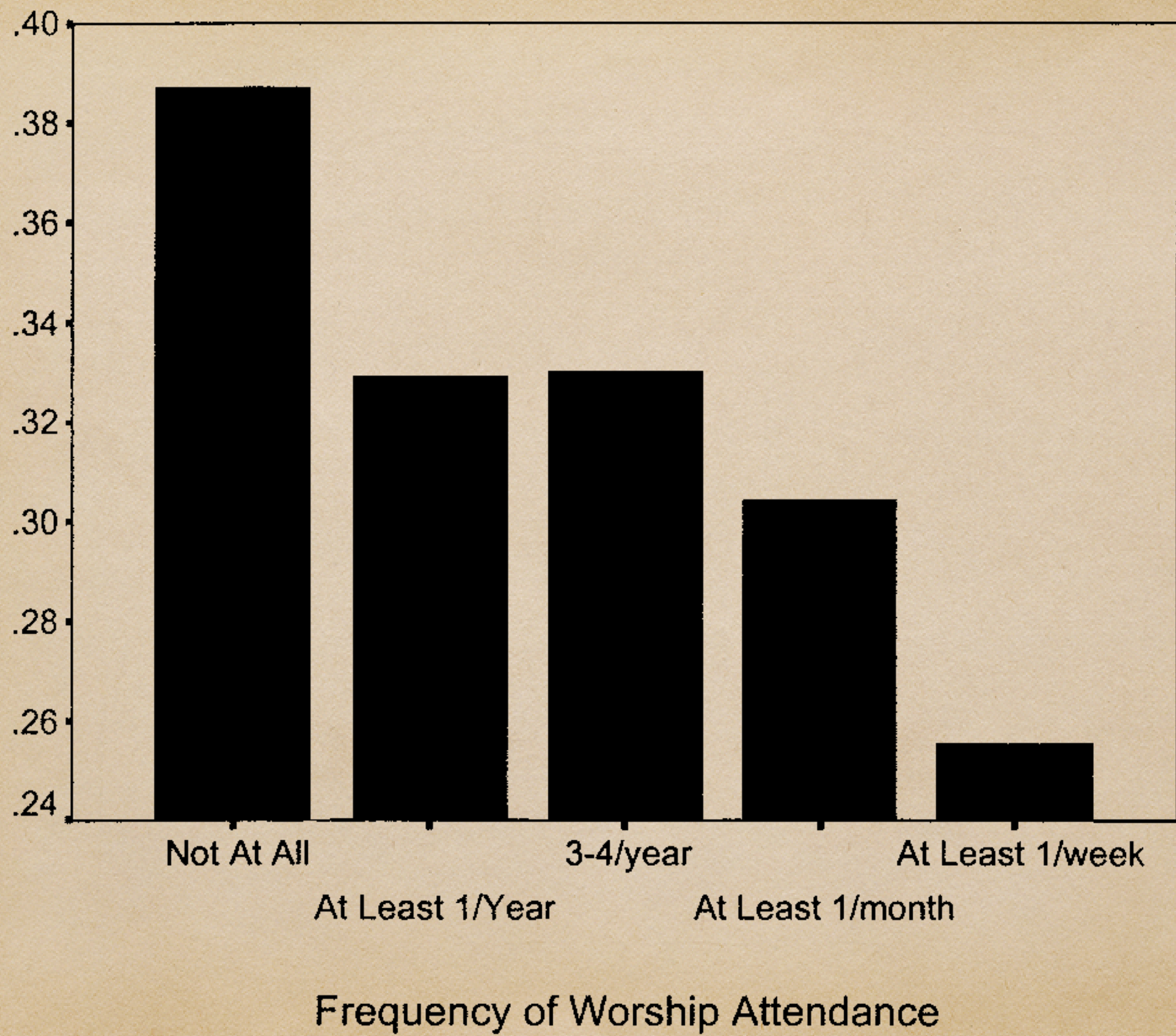
What is often missing from discussions of spirituality is our need for ritual. I use ritual to mean any customary observance or practice. Reading a bedtime story or singing a lullaby to my child.



# Canadian study: spirituality and religious involvement and depressive symptoms

- ◆ National Population Health Survey  
1996-7: 70,884 respondents aged > 15 yrs
  - ◆ Baetz et al (2004), J Nerv Ment Dis 192:818-22



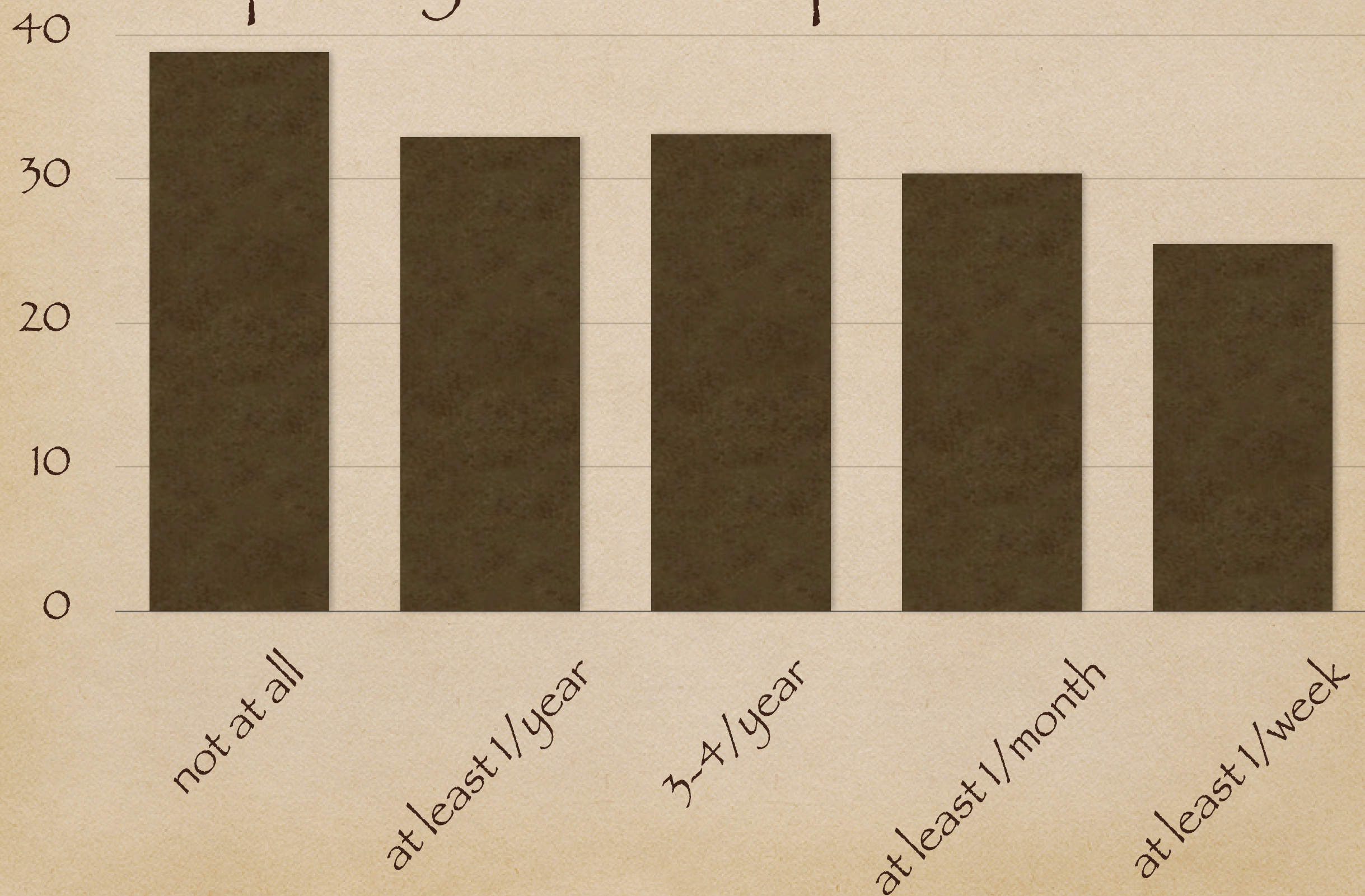


This is one of the graphs from the article. The y-axis values represent values on the CIDI depression scale. Along the bottom are the categories for frequency of attendance at church or synagogue or the equivalent. It seems pretty convincing that people who attend worship services at least weekly have much less depression than those who don't attend at all.

But I want you to take note of the y-axis once again. It doesn't start at zero, it starts at 0.24.

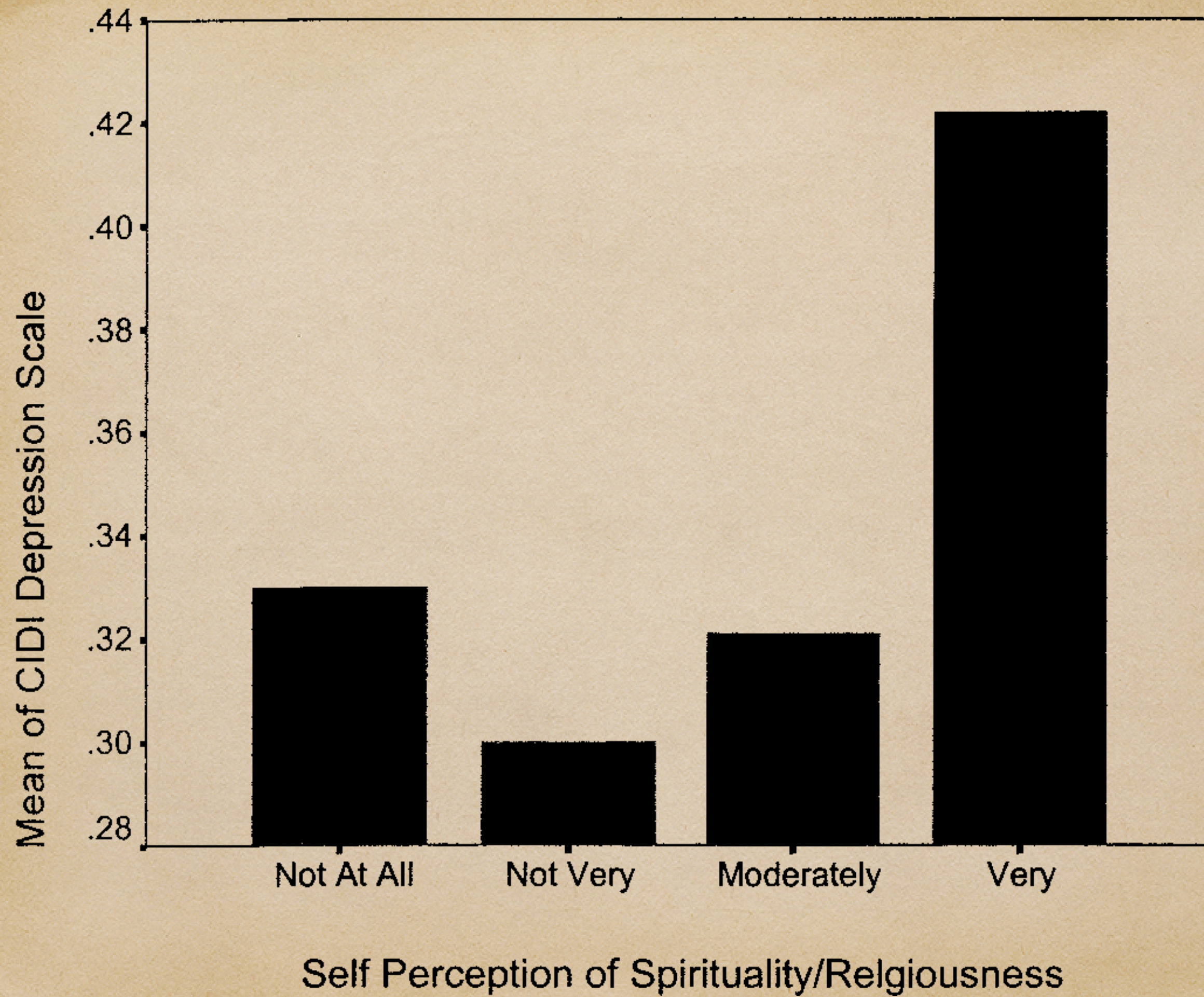


# Mean of CIDI Depression Scale, vs Frequency of Worship Attendance



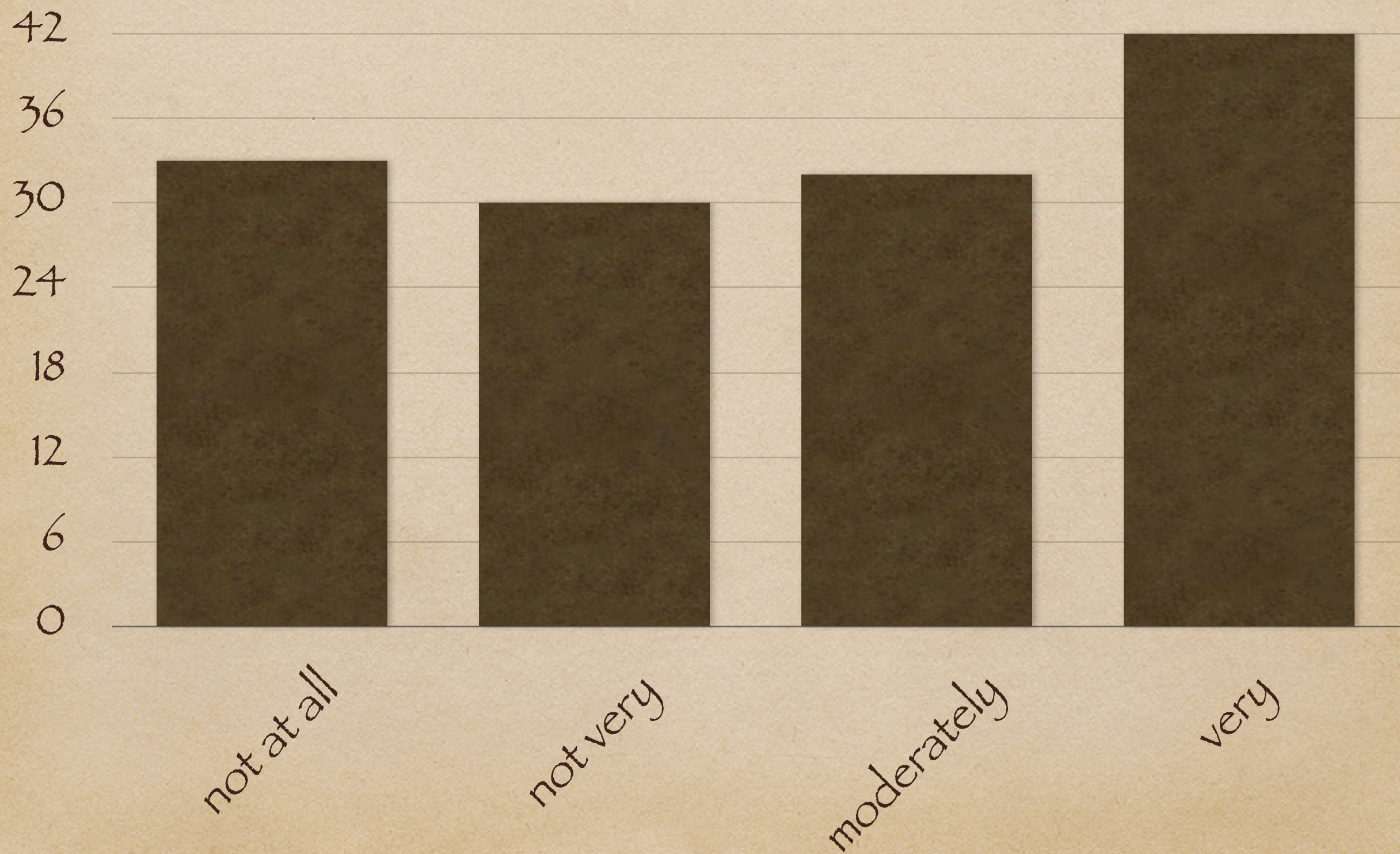
I've redrawn the graph so the depression values go from zero to 40. Now the differences appear much less impressive.







# Mean of CIDI Depression Scale, vs Self Perception of Spirituality/Religiousness



So when it's replotted, the differences seem much less striking, don't they?

It's really a question of shaping your perceptions, marketing, if you like. The researchers are trying to make a make a point.

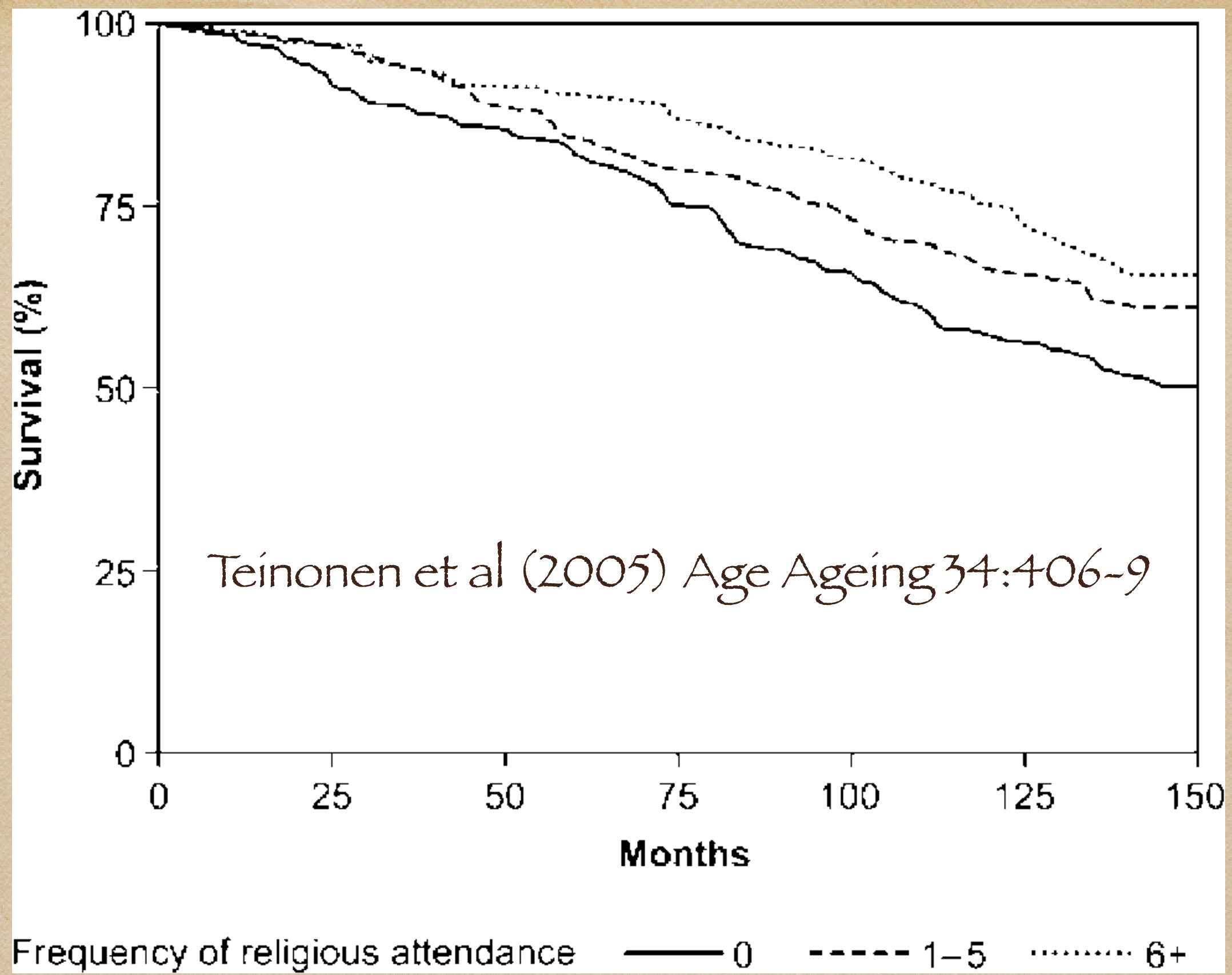
However, even if the differences are not so striking when the graphs are drawn properly, the point made remains valid: frequent worship service attendance is associated with less depression, while high degrees of self-perceived spirituality or religiousness are associated with more depression.



- ◆ Religious attendance and 12-year survival in older persons in Finland
  - ◆ USA: 43% attend religious services at least weekly; Finland: 1.1%
  - ◆ however: 47% of all Finns pray at least monthly
  - ◆ 85% of Finns belong to the Evangelical Lutheran Church
  - ◆ 91% of 15-year-olds are confirmed

Here's another study, this one on aged Finns. Again, attendance at worship services is the independent variable, and the researchers are looking for an influence on 12-year survival rates. But bear in mind that the religious demographics of this group are vastly different from those of North Americans.

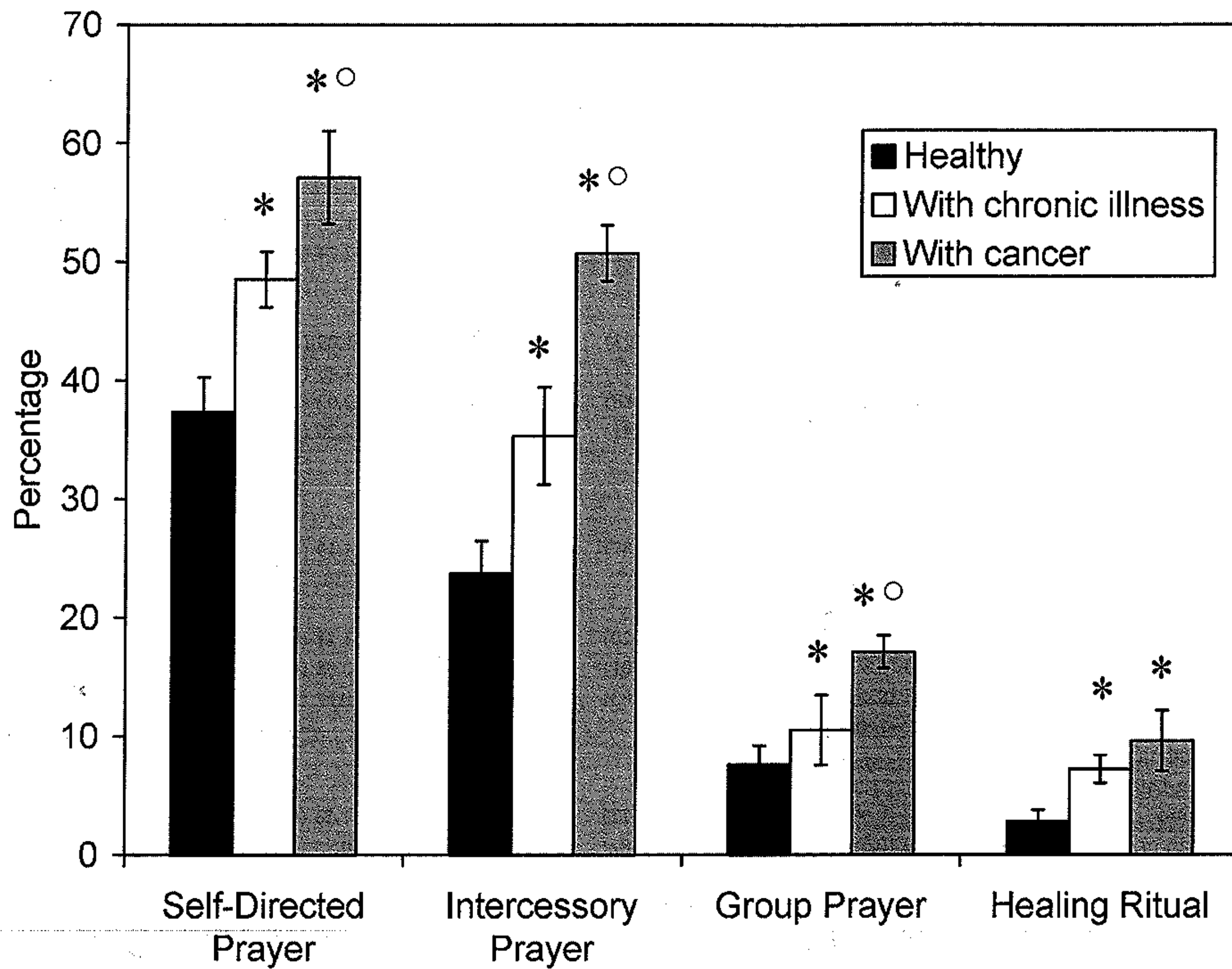




**Figure 1.** The Kaplan–Meier survival curves for women by frequency of religious attendance (times a year).

There was no association between religious attendance and mortality for men.  
 The association in women could not be explained on the basis of smoking, medication, or depression.





Ambs AH, Miller MF, et al. (2007) J Soc Integr Oncol. 5:53-60

This was a telephone survey of almost 9000 California residents, a subsample of a larger stratified sample of 55,000 residents. The subsample was chosen to include lots of cancer survivors.

The questions about prayer were:

"Have you ever prayed specifically for the purpose of your own health?"

"Have you ever asked or had others pray for your own health?"

"Have you ever participated in a prayer chain or prayer group for your own health?"

"Have you ever had a healing ritual, service, or sacrament performed for your own health, including anointing the sick, laying on of hands, healing circles, or faith healing?"



# Negative effects of religion

- ◆ Religion has been used to justify hatred, aggression, and prejudice
- ◆ Social relations can be stressful
- ◆ Failure to conform may provoke criticism
- ◆ Religious guilt can contribute to illness
- ◆ Parents' reliance on faith healing may affect children

Williams DR, Sternthal MJ. (2007) Med J Aust. 186:S47-50

There has been some research into the potential for negative effects of religion on health. It is clear that the Crusades, the Inquisition, and modern-day Jihadist struggles have been bad for some people's health. Although religious participation may foster beneficial social networks, social relations can also be a source of stress. Failure to conform to community norms may evoke open criticism by other congregation members or clergy. Feelings of religious guilt and the failure to meet religious expectations or cope with religious fears can contribute to illness. Parents' reliance on faith healing instead of appropriate medical care has led to negative outcomes and death for many children.



- ◆ An extrinsic religious orientation, negative religious coping: more depression
- ◆ Congregational criticism: increased risk of adolescent depression
- ◆ Religious doubts & struggle in medically ill patients: higher mortality risk



◆ Exclusion criteria:

1. no attempt to control for confounders
2. cross-sectional design
3. inadequate measurement of religion or spirituality or of physical health
4. no statistical analyses
5. earlier reports on the same cohort

Powell, Shahabi, Thoresen (2003) Am Psychol 58:36-52

23

Rather than going through all the relevant research myself, I looked for review articles. ♥ Here's one that was published in 2003 in the journal "American Psychologist".

This article summarizes the evidence for a linkage between religion or spirituality and physical health. Instead of a more usual meta-analysis approach, a levels-of-evidence design was used. ♥ This slide shows the reasons why studies were excluded from the analysis. ♥

For #1, basic confounders that needed to be taken into account were age, gender, and ethnicity. ♥

For #2, cross-sectional designs were excluded because a cross-sectional design cannot take into account temporal considerations; ie, the religion or spirituality should be there before the physical health measurement. ♥

#3: an inadequate measurement could be one based on a secondary measure, for example, inferring religiosity from living in a specific neighbourhood. Physical health assessment using only a self-report questionnaire would also be considered inadequate. Why? ♥

#4: what if the reported linkage was due to chance? ♥

#5: only the report with the longest follow-up was included. ♥



◆ Criteria for evaluation of included studies:

1. adequacy of control for confounders
2. imprecise measurement of religion or spirituality or of covariates
3. failure to control for multiple tests
4. post hoc observation in a subgroup
5. adequacy of control for established protective factors

Powell, Shahabi, Thoresen (2003) Am Psychol 58:36-52

For any given study that was included in the analysis, the quality of the evidence was rated using the criteria shown on this slide. Controlling for confounders such as age and gender was important; also the use of adequate ways to measure religion or spirituality.

I won't bore you with details of why #3 and 4 are important. However, #5, adequacy of control for established protective factors. What are the known protective factors for physical health?

Healthy lifestyle behaviours, social support, and depression. Healthy lifestyle includes avoidance of smoking, regular exercise, and moderate alcohol consumption.

These factors are often characteristic of religious people already. So we are basically looking for a linkage which cannot be explained by these known factors.



Hypothesis	Strength of evidence
Church/service attendance protects against death	persuasive
Religion or spirituality protects against cardiovascular disease	some
Religion or spirituality protects against cancer mortality	inadequate
Deeply religious people are protected against death	consistent failures
Religion or spirituality protects against disability	consistent failures
Religion or spirituality slows the progression of cancer	consistent failures
People who use religion to cope with difficulties live longer	inadequate
Religion or spirituality improves recovery from acute illness	consistent failures
Religion or spirituality impedes recovery from acute illness	some
Being prayed for improves physical recovery from acute illness	some

Powell, Shahabi, Thoresen (2003) Am Psychol 58:36-52

This table presents the overall results of the analysis.

The best evidence exists for church or service attendance as a protector against dying, as shown in the top row. Six out of the nine studies on healthy populations that were included in the analysis showed a relationship, on the order of a 25% reduction in mortality, after adjustment for the known risk and protective factors of healthy lifestyle, social support, and depression.

As we go through the list, we see that most of these hypotheses are not supported.

The second-last hypothesis is that religion or spirituality is actually bad for your health, in the sense that there it may impede recovery from acute illness. Surprisingly, there is some evidence supporting this hypothesis.



Hypothesis	Strength of evidence
Church/service attendance protects against death	persuasive
Religion or spirituality protects against cardiovascular disease	some
Religion or spirituality protects against cancer mortality	inadequate
Deeply religious people are protected against death	consistent failures
Religion or spirituality protects against disability	consistent failures
Religion or spirituality slows the progression of cancer	consistent failures
People who use religion to cope with difficulties live longer	inadequate
Religion or spirituality improves recovery from acute illness	consistent failures
Religion or spirituality impedes recovery from acute illness	some
Being prayed for improves physical recovery from acute illness	some

Powell, Shahabi, Thoresen (2003) *Am Psychol* 58:36-52

The last hypothesis, that being prayed for improves recovery, is a test of whether human intention can affect the physical world at a distance. Only 3 studies of this hypothesis were sufficiently well done to be included in the analysis. Two studies, of ICU patients, showed significantly better hospital course but no difference in the number of days in the ICU or in the hospital, between the prayed-for group and the control group. The third study, of AIDS patients, showed a difference in terms of medical utilization, but this difference disappeared when minority status was taken into account.



- ◆ What could account for these findings?
  - ◆ regular church/service attendance encourages meaningful social roles providing self-worth and purpose through helping
  - ◆ religious social support may be deeper and broader than in secular settings
  - ◆ experience of positive emotions in the service
  - ◆ keeping the Sabbath: rest and rejuvenation
  - ◆ role models

♥ What could account for these findings?

♥ First, the idea that helping others is a meaningful social role.

Contrast this with the more common conceptualization of social support where the emphasis is on being helped.

A study of nursing home residents showed that those given work responsibilities lived longer than those relegated to passive roles.

Here is a relevant quote from another study:

“Activities that encourage helping, such as volunteerism, are common among congregation members and have been shown to reduce mortality.”

The reality is that probably most people in the helping professions are there partially for this reason.

And this is one of the factors that I referred to at the beginning. Helping others makes us feel good.

♥ Religious social support may be deeper and broader.

Deeper in the sense of sacred experiences, or experiences that provide a global meaning to life. Broader social support in a personal crisis may include help with children, financial help, meals, emotional support, and moral support for such virtues as forgiving.

♥



- ◆ What should we do?
  - ◆ governments should require regular attendance at religious services
  - ◆ force sick people to volunteer to help others
  - ◆ every service of every religion must have revival-style hymn singing

So if we want to apply the results of this research to improve people's health, what steps should we take? I offer three suggestions:



# What I really think

- ◆ People committed to their faith:
  - ◆ eat more fish
  - ◆ are less lonely



# NATIONAL REVIEW

of MEDICINE

ESSENTIAL NEWS FOR CANADA'S PHYSICIANS

AUGUST 30, 2005 | VOLUME 2 NO. 14

## Harvard study shows that loneliness really can break a man's heart

*Socially isolated men at increased risk of heart  
disease. Can the love of a good GP help  
to mend them?*

BY JESSICA WERB



Most of us know what it feels like to be lonesome and heartbroken — that unbearable ache, the sense of isolation, the despair. But it may surprise you to learn that the descriptor "broken heart" isn't just a quaint metaphor; in fact, it's a quite literal description of the toll that loneliness can take on a human being.



Cole, S. W., L. C. Hawkey, J. M. Arevalo, C. Y. Sung, R. M. Rose, and J. T. Cacioppo (2007) *Genome Biol* 8:R189.

### **Social regulation of gene expression in human leukocytes.**

**ABSTRACT: BACKGROUND:** Social environmental influences on human health are well established in the epidemiology literature, but their functional genomic mechanisms are unclear. The present study analyzed genome-wide transcriptional activity in people who chronically experienced high versus low levels of subjective social isolation (loneliness) to assess alterations in the activity of transcription control pathways that might contribute to increased adverse health outcomes in social isolates. **RESULTS:** DNA microarray analysis identified 209 genes that were differentially expressed in circulating leukocytes from 14 high- versus low-lonely individuals, including up-regulation of genes involved in immune activation, transcription control, and cell proliferation, and down-regulation of genes supporting mature B lymphocyte function and type I interferon response. Promoter-based bioinformatic analyses showed under-expression of genes bearing anti-inflammatory glucocorticoid response elements (GREs;  $p = 0.032$ ) and over-expression of genes bearing response elements for pro-inflammatory NF- $\kappa$ B/Rel transcription factors ( $p = 0.011$ ). This reciprocal shift in pro- and anti-inflammatory signaling was not attributable to differences in circulating cortisol levels, or to other demographic, psychological, or medical characteristics. Additional transcription control pathways showing differential activity in bioinformatic analyses included the CREB/ATF, JAK/STAT, IRF1, C/EBP, Oct, and GATA pathways. **CONCLUSIONS:** These data provide the first indication that human genome-wide transcriptional activity is altered in association with a social epidemiological risk factor. Impaired transcription of glucocorticoid response genes and increased activity of pro-inflammatory transcription control pathways provide a **functional genomic explanation for elevated risk of inflammatory disease in individuals who experience chronically high levels of subjective social isolation.**



# What I really think

- ◆ People committed to their faith:
  - ◆ eat more fish
  - ◆ are less lonely
  - ◆ smoke less

Koenig HG, George LK, et al. (1998) J Gerontol A Biol Sci Med Sci. 53:M426-34

People who go to faith services regularly and engage in private religious activity are less likely to smoke, and if they do smoke, it's fewer cigarettes.





# What I really think

- ◆ People committed to their faith:
  - ◆ eat more fish
  - ◆ are less lonely
  - ◆ smoke less
  - ◆ get up early all week long

Many religious people get up early all week long. For example, as a kid in Holland, I went to school six days a week, and church on Sundays. My field of interest is sleep and depression, and you may have heard my talk about the antidepressant effect of reducing your REM sleep, which you can do by getting up early.



# What I really think

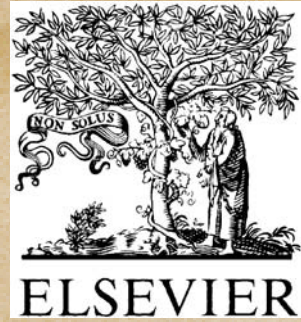
- ◆ People committed to their faith:
  - ◆ eat more fish
  - ◆ are less lonely
  - ◆ smoke less
  - ◆ get up early all week long
  - ◆ have more committed relationships

If you can commit to your faith, you are more likely to commit to marriage. Some years ago, I was asked to give a talk on the psychology of aging successfully. I looked at the literature, and concluded that there were four determinants of happiness: sufficient money, reasonable health, a project or passion, and good relationships. I firmly believe that good relationships are based on commitment.

In the absence of commitment, relationships deteriorate.

There are studies showing that marital conflict leads to ill-health: elevations in blood pressure, stress hormones, immune system dysfunction.





## The physiology of marriage: pathways to health

Theodore F. Robles<sup>a,\*</sup>, Janice K. Kiecolt-Glaser<sup>b</sup>

<sup>a</sup>*Department of Psychology, The Ohio State University, 245 Townshend Hall, 1885 Neil Avenue, Columbus, OH 43210, USA*

<sup>b</sup>*Department of Psychiatry and the Institute for Behavioral Medicine Research, College of Medicine, The Ohio State University, Columbus, OH, USA*

Received 4 April 2003; accepted 17 April 2003

### Abstract

Marriage is the central relationship for most adults and has beneficial effects for health. At the same time, troubled marriages have negative health consequences. This review outlines the physiological pathways through which marital relationships influence health based on a stress/social support model. In addition, we review recent findings suggesting that unhappy marriages are associated with morbidity and mortality. We then turn to studies of marital interaction that include assessment of physiological pathways through which marital functioning influences health: the cardiovascular, endocrine, and immune systems. Across these studies, negative and hostile behaviors during marital conflict discussions are related to elevations in cardiovascular activity, alterations in hormones related to stress, and dysregulation of immune function. Using recent conceptualizations of the physiological impact of chronic stress, we illustrate how physiological changes associated with marital functioning in these studies have long-term implications for health outcomes. Finally, we discuss future implications of current research for understanding the relationships among marital functioning, physiology, and health.

© 2003 Elsevier Inc. All rights reserved.

*Keywords:* Marriage; Interpersonal behavior; Health; Cardiovascular system; Endocrine system; Immune system; Stress

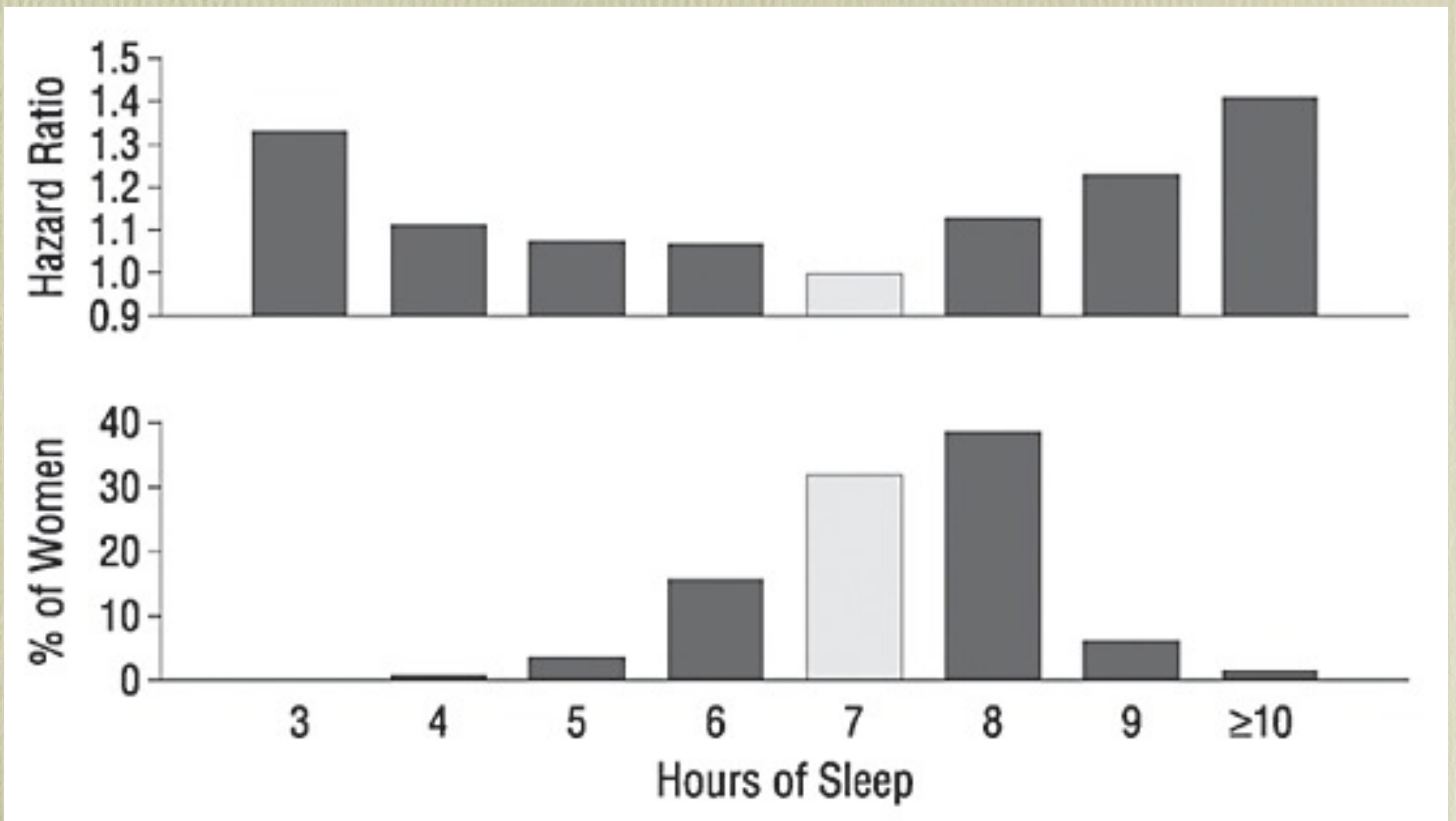


# What I really think

- ◆ People committed to their faith:
  - ◆ eat more fish
  - ◆ are less lonely
  - ◆ smoke less
  - ◆ get up early all week long
  - ◆ have more committed relationships
  - ◆ don't sleep too long or too short

Finally, sleep length. There are 3 large studies showing lowest mortality for people who sleep 7 hours, compared to those with longer or shorter sleep.





Kripke DF, Garfinkel L, Wingard DL, Klauber MR, Marler MR. Mortality associated with sleep duration and insomnia. Arch Gen Psychiatry. 2002;59:131–136.

This is a graph from one of those 3 articles. It shows what happens if you sleep either too long or too short, if you're a woman. The curve for men looks much the same.

Clearly, it is better to sleep too little than to sleep too much.



# Who has time to sleep?

Lauren Hale

---

## Abstract

**Background** Both marriage and education appear to confer a protective effect on health. Few studies have examined the extent to which both undersleeping and oversleeping explain these relationships. I examined whether marital status, educational background, and other sociodemographic variables are associated with higher-risk sleep durations.

**Methods** Over 7000 individuals aged 25–64 collected time-use diary data during a 24-h period. For both weekdays and weekend days, separate multinomial logistic regression models were estimated using three categories of sleep duration as the outcome category.

**Results** Unmarried individuals are significantly more likely to sleep a short amount on both weekdays and weekends compared to married people. Single people also are significantly more likely to sleep a long amount. People with less than a college education are significantly more likely to sleep both a short amount and a long amount on weekdays relative to the college educated.

**Conclusions** High-risk sleep durations (short sleeping and long sleeping) are positively associated with sociodemographic categories associated with poorer health. More research should investigate whether social inequalities in health can be explained in part by variation in sleep duration.

And finally, it may build additional awareness of the importance of sleep hygiene to the non-sleep research community.

## Sleep and health

The relationship between sleep duration and health is complicated, because there are many confounding factors and because causality is likely to flow in both directions. Recent studies show that 6.5–7.5 h of sleep on an average weeknight is associated with the lowest risk of all-cause mortality.<sup>1–3</sup> Controlling for demographic characteristics (e.g., age, race, education, occupation, marital status), health behaviours (e.g., exercise level, years of smoking, fat in diet), prior health conditions (e.g., body mass index, leg pain, and history of heart disease, hypertension, cancer, diabetes, stroke, bronchitis, emphysema, and kidney disease) and medication use, sleeping either a long or short amount increases the relative risk of all-cause mortality by up to 40 per cent.<sup>1</sup> The adverse effect of sleep deprivation on health may be due to disruption of circadian rhythms and impaired glucose metabolism.<sup>4–6</sup> Whether the effects of someone *regularly* sleeping 5 versus 8 h a night are physiologically similar to being sleep-deprived is not well understood. Similarly, the relationship between sleeping for a long time and health is not particularly clear.<sup>1,6</sup> Nonetheless, evidence suggests that having

Unmarried individuals are more likely to sleep either longer or shorter than 7 hours.



# What I really think

- ◆ offspring of religious couples are more likely to be religious
- ◆ also have better health if parents are committed (Troxel article)
  - ◆ Eg, less antisocial behaviour (Shepherd article)
- ◆ thus, religion is adaptive!

Not only are religious people more likely to be healthy, but so are their children.

Richard Dawkins - idea of "memes". He maintains that the most powerfully inherited trait is religious affiliation. Thus, the children may benefit from the better health that comes from being religious.

If the parents have a good relationship, their children will have better physical health (show Troxel article)

Why should they have better health?

Many possibilities: some are encapsulated in the idea of antisocial lifestyle, with substance abuse, drunk driving, fighting after drinking, sexual promiscuity, heavy smoking. Show Shepherd article.

The bottom line: Evolution probably favours religion.



# Things to avoid:

- ◆ “Prescribing” religious beliefs or activities
- ◆ Imposing our beliefs on patients
- ◆ Initiating prayer
- ◆ In-depth religious counselling

D'Souza R. (2007) Med J Aust. 186:S57-9



# Things to do:

- ◆ Acknowledge and respect patients' spiritual lives
- ◆ Take a spiritual history if indicated (eg people with life-threatening illness)

D'Souza R. (2007) Med J Aust. 186:S57-9



# Taking a spiritual history

- ◆ Is faith (religion, spirituality) important to you?
- ◆ Has faith been important to you at other times in your life?
- ◆ Do you have someone to talk to about religious matters?
- ◆ Would you like to explore religious, spiritual matters with someone?

Lo B, Quill T, et al. (1999) Ann Intern Med. 130:744-49







## **What Are the Costs of Marital Conflict and Dissolution to Children's Physical Health?**

**Wendy M. Troxel<sup>1</sup> and Karen A. Matthews<sup>2,3</sup>**

---

Do parental marital conflict and dissolution influence the risk trajectory of children's physical health risk? This paper reviews evidence addressing this question in the context of understanding how early environmental adversities may trigger a succession of risks that lead to poor health in childhood and greater risk for chronic health problems in adulthood. We first review existing evidence linking marital conflict and dissolution to offspring's physical health outcomes. Next, we provide evidence supporting biopsychosocial pathways that may link marital conflict and dissolution with accelerated health risk trajectories across the lifespan. Specifically, we posit that consequential to the stresses associated with marital conflict and disruption, parenting practices are compromised, leading to offspring deficits in affective, behavioral, and cognitive domains. These deficits, in turn, are hypothesized to increase health risk through poor health behaviors and by altering physiological stress-response systems, including neuroendocrine, cardiovascular, and neurotransmitter functioning. On the basis of the available direct evidence and theoretically plausible pathways, it appears that there is a cost of marital conflict and disruption to children's health; however, more comprehensive investigations are needed to further elucidate this relationship. In the final section, we address limitations in the current literature and identify research that is needed to better evaluate the association between marital conflict and dissolution and children's physical health.

---

**KEY WORDS:** marital conflict; divorce; children's health.

In the context of "healthy" development, the... and positivity of the parents. Moreover, marital dis...



# Impact of antisocial lifestyle on health

Back

Jonathan Shepherd, David Farrington and John Potts

## Abstract

**Background** Antisocial lifestyle includes a range of related behaviours which constitute threats to health. Links between health outcomes and particular behaviours have been investigated, but the overall impact on health is largely unknown. In part, this reflects lack of longitudinal studies designed to link offending and other antisocial behaviour, injury and illness.

**Methods** Injury and illness data were collected prospectively in the longitudinal Cambridge Study of Delinquent Development (CSDD) for the age ranges 16–18 and 27–32. These data were translated into Read clinical codes, version 3.1 and categorized. Three hypotheses underpinned this investigation: that links between (i) convictions and injury and between (ii) childhood predictors of delinquency and injury at age 16–18 would be maintained at age 27–32; that (iii) antisocial behaviour at age 16–18 would be linked to injury at age 27–32; and that (iv) observed links between antisocial behaviour and decreased illness at age 16–18 would be reversed by age 27–32.

**Results** Childhood predictors of teenage offending predicted injury and cardiovascular and psychological illness at age 27–32. Delinquency predicted road, home and self injury and psychological disorder, but was associated with less illness and hospital admission. Measures of antisocial behaviour at age 18 which most strongly predicted illness/injury at age 32 were drunk driving, fighting after drinking, sexual promiscuity and heavy smoking. Relationships at age 16–18 between heavy alcohol consumption and less infection and less organic illness remained at age 27–32. Links common to both

Prospective longitudinal data on both offending and morbidity are available however, from the Cambridge Study of Delinquent Development (CSDD) and have been studied to find out how illness and injury relate to concurrent offending, whether offending predicts illness and injury or vice versa and whether relations persist after adjustment for childhood predictors of offending.<sup>1</sup> When information about injuries and illnesses between ages 16 and 18 was set against information on offending and other types of antisocial behaviour, it was found that males who were injured, especially in assaults, tended to be convicted, to be violent, to have unskilled manual jobs and to be generally antisocial. Surprisingly, respiratory tract illnesses were negatively related to convictions and antisocial behaviour in general. However, illicit drug users were significantly likely to be ill. Adult convictions were predicted by childhood troublesome behaviour, daring/hyperactivity, low IQ/attainment, a convicted parent, family disruption/poor supervision and poverty. Assault injuries and respiratory tract illnesses did not predict adult convictions independently of these childhood factors. This first longitudinal study of offending and health concluded that injury is one symptom of an antisocial personality which arises in childhood and persists into adulthood and therefore, that measures that lead to a reduction in offending (like pre-school education and early family support) should also lead to a reduction in concurrent injuries. It was concluded that the