An Examination of the Correlation Between Negative Health Outcomes and Christian Religious Affiliation Using Global Information Systems (GIS) Mapping Technology

Abstract

Although significant anecdotal evidence suggests that religion, through its theology and practice, can be extremely harmful and traumatic, there have been no large-scale medical studies examining the harmful nature of religion outside of the world of cults. Using Global Information Systems (GIS) mapping techniques we examined the correlation between adverse health effects and affiliation with Christian churches that have a higher percentage of toxic religious theology. We looked at six American states that represented a diverse swath of American culture and religious practice: TX, MS, MN, VT, OH, IN. Our maps correlated health data related to Diabetes, Heart Disease, Obesity, Child Well-Being, and Depression with level of church affiliation in Evangelical Protestant, Catholic, Mainline Protestant, and Unaffiliated (no affiliation) churches. Our results showed a correlation between negative health outcomes and level of affiliation in Evangelical Protestant denominations (the highest level of potentially toxic religious practice) across all health categories, with the exception of Heart Disease in VT. Depression correlated inversely with Evangelical affiliation which was expected given that toxic practice discourages mental health treatment. We believe this result supports the anecdotal evidence for an epidemic of negative health effects due to religious trauma and toxic theology. We hope that these results will call greater attention to this issue in the medical community and can be used to advocate for the support of significant medical research in this area.

Introduction

Religion plays a positive role in the lives of millions.[i] However significant anecdotal evidence also suggests that religion, through its theology and practice, can be extremely harmful and traumatic.[ii] Yet despite the large number of personal stories, recovery groups, online conversations, and, more recently, book publications[iii], there have been no significant medical studies examining the harmful nature of religion outside of the world of cults.[iv] When medical practitioners take a patient's history they do not ask about harmful religious experiences. No screening test exists for religious trauma.[v] Yet this is a health problem that potentially effects millions of people in the United States alone.[vi] Imagine if there was an unknown bacteria which was causing a similar level of harm, what resources would be leveraged to fight such a disease?

The reasons for this seeming lack of interest by medical and psychological communities are unclear, yet it probably stems from our cultural assumptions that religion is both good and sacrosanct: it should not be messed with. In the movie Spotlight[vii] reporters from the Boston Globe who broke the Catholic Church priest sex scandal are continually mystified by the silence and denial of so many people, including parents of abused children, in the face of these crimes. In many ways, our silence today in the face of religious trauma, is a similar phenomenon. Although we do acknowledge the problem of the most extreme forms of religious abuse, what we call cults, our society is much less likely to want to engage more 'mainstream' religion in an examination of harm.

Yet even the most socially acceptable religious practice contains many elements that can be toxic and cause trauma, particularly to young children. Some of the hall-

marks of toxic theology include: images of a violent God, threats of torture in Hell, a focus on the basic badness of humanity, condemnation of certain people (for example LGBTQ folks).[viii] Some of these theological positions can be found in religious communities that consider themselves to be 'nice' or even 'progressive,' and they are rampant in the more fundamentalist religious communities which comprise a significant percentage of American religious life.[ix]

Given both the pervasive nature of the anecdotal evidence for religious trauma, and the lack of research engagement, we have decided to begin an exploration of this issue using Global Information Systems (GIS) mapping, a new and powerful tool that allows for the examination of trends between data sets that have not otherwise been correlated. Our hypothesis is that if toxic theology is indeed damaging to the health and wellbeing of many people, then it should be possible to see correlations between adverse health effects and more toxic religious practice. While such correlation doesn't show causation, our hope is that results confirming this hypothesis will encourage further research into what may be the most significant unrecognized public health issue of our time.

Methods

Creating GIS maps requires obtaining data sets from reliable sources that match your research objectives. We decided to examine data collected by the Pew Center,[x] a well respected research institute that does a variety of surveys related to religious life in

the United States, and the Centers for Disease Control, the United States governmental agency in charge of disease research and prevention. We made several important decisions regarding our data sets:

- We decided to look at Christian religious practice, particularly the relative level of affiliation in Evangelical Protestant Churches. These are churches that are most likely to have the highest level of traumatic theological practice and proclamation.[xi]

- We decided to pick six states to enter into the mapping software: MN, VT, OH, IN, TX, MS. These six states are representative of a variety of regions, population distributions, and urban/rural mixtures. Although this choice was arbitrary, given our limited time and funding for this study, we believe these six states are a good representation of the US as a whole and serve as a good starting place for this work. Furthermore we chose these states for their geographic and population distribution prior to looking at any data to avoid bias in our results.

- We decided to look at data sets for health outcomes that we felt accurately represented the actual distribution of health outcomes within the state. These were: Obesity[xii], Diabetes[xiii], Heart Disease[xiv], and Child Well-Being[xv]. The first three are crude prevalence measurements derived by asking people about their health conditions, and the last is an amalgam of multiple measures related to children's health.

- We also included state data on Depression[xvi], which is also a crude prevalence measure: asking people if they had ever been told they were depressed.

- This method of asking people about a diagnostic report of depression will naturally create data sets that are highly influenced by culture, stigma related to mental health, access to mental health services, and religious teaching. Such a data set

stands in contrast to the physical crude prevalence measures because in our culture it is very natural, and much more common, for people to go to the doctor and have their blood pressure, weight, and blood sugar measurements taken. Since Evangelical Churches tend to teach people to avoid secular mental health services, we would expect to find almost opposite results for the Depression map compared to the other health indicators as people try to hide their mental illness.[xvii] We will see that this is in fact the result we obtained.

Once the data was gathered, we imported the health outcome data into the ESRI ArcMap mapping software.[xviii] This involves taking the tabular health outcome data and joining these data to their respective states within the mapping software, giving spatial reference. We then displayed health outcome data relative to their U.S. median values (below, at, or above the median value) for Diabetes (10%), Obesity (29.8%), and Heart Disease (6.1%). Depression data were displayed as their respective percentages and Child Well-Being data were displayed as the overall state ranking from 1 to 50. We applied the same method to import religious affiliation data and superimposed these data as histograms onto their respective states.

Results

Figure 1 shows the level of religious practice within each of our six target states. Evangelical Protestant affiliation ranges from 11% for VT to 41% for MS, while the levels of the religiously Unaffiliated (no church attendance) mirror this trend with VT at 37% and MS at 14%. The two Rust Belt states of IN and OH are in the middle of the field

with TX and MN rounding out the top and bottom of the chart. This distribution is what one might expect knowing the cultural and religious backgrounds of the various regions of the US: the "Bible Belt" being more religiously conservative with New England having a more liberal religious tradition, and the Midwest is somewhat in between.

Figures 2-4 are maps showing the relationship between religious affiliation and Obesity, Diabetes, and Heart Disease respectively. With the exception of Heart Disease in VT, an increase in Evangelical Protestant affiliation correlates with a more negative health outcome.

Figure 5 is a map showing the relationship between the state Child Well-Being ranking and religious affiliation. Again, there is a correlation between increased Evangelical Protestant affiliation and negative child well-being. This correlation is even more dramatic than the health outcomes. The states in the top ten in child well-being, MN and VT have the least Evangelical Protestant affiliation, while the states with the most Evangelical Protestant affiliation, MS and TX, rank in the bottom ten in child well-being. OH and IN, with an intermediate level of Evangelical Protestant affiliation, are right in the middle of the rankings.

Figure 6 is a map of the relationship between Depression levels and religious affiliation. As mentioned above (see Methods), the Depression data represents self-report where people were asked the question, "Have you ever been told you have a form of depression?"[xix] In order to answer in the affirmative, a person would have to have been to a healthcare practitioner who would be assessing or treating for depression. Evangelical Protestant Churches often discourage such treatment or assessment either overtly or covertly resulting in even more stigma against mental health issues than in

society as a whole.[xx] Church members can be told to turn to Jesus for help with problems and that secular mental healthcare is not of much value. Such teachings tend to promote shame in members and encourage them to hide their mental health issues. Thus we might expect that states with high Evangelical Protestant affiliation would show lower rates of Depression using such a survey method. This is indeed what we see in the map. MS and TX have the lowest depression scores while VT, a state with a very high Unaffiliated population and thus one which might be more open to mental health treatment, has the highest score among our six states.

Discussion

Although well known in popular discussion, religious trauma is almost completely invisible to the medical profession. Our hope with this study is to address this void by examining correlations between negative health outcomes and religious affiliation using GIS mapping techniques. Our stated hypothesis is that if religious trauma is a significant health issue then we should see a correlation between negative health outcomes and forms of religious affiliation that would expose more people to toxic religion. Our results clearly show such a correlation in the data sets we examined.

Negative outcomes in Obesity, Diabetes, Heart Disease, and Child Well Being ratings, all correlated well with an increase in Evangelical Protestant affiliation. The one exception was Heart Disease in VT. It is quite possible that this can be accounted for by the small, older population of the state as well as by increased detection due to the excellent healthcare coverage available there. In addition, a lack of Depression reporting also correlated as expected with increased Evangelical affiliation.

Religious trauma comes about largely through the mechanisms of shame and fear of an invisible, powerful, wrathful God.[xxi] It can also occur through direct abuse by religious leaders and church members in highly authoritarian environments.[xxii] In communities that are full of negative teachings about humanity and the cosmic tortures of Hell, children are terrified and traumatized. Such trauma, like any other childhood trauma, can have a variety of life-long effects. Mental illness such as PTSD, depression, and anxiety are some of the results as are behaviors such as suicide, relationship dysfunction, and poor self-care.[xxiii] We also know that trauma can result in a host of physical illnesses mediated by a disordered stress response and the cascade of hormone imbalances that result.[xxiv] Yet although we know a great deal about these negative effects as they arise from traumas such as sexual abuse, our medical professionals rarely, if ever, think of toxic theology as a source of primary trauma.

Our results, simple as they are, validate the anecdotal evidence of the negative health impacts of toxic theology. In the states where people are more likely to be exposed to such theology we see poorer health outcomes and poorer child well-being as might be expected. While these negative results do not indicate causation, it should at least stimulate interest in more research. Religion and religious teachings are powerful influences in our view of ourselves and the world. Even if the negative outcomes also correlate with other social indicators such as poverty or education, it is not inconceivable that negative religious teachings are a root cause of all of these other social ills as well.[xxv]

Such research could take the form of more detailed GIS mapping, for example using county health data. If indeed abusive religion was a causative factor in poor

health we should see even higher correlations as we look at more detailed demographic data. Research also needs to be done directly using medical records, as has been conducted for the Adverse Childhood Events (ACE) scores.[xxvi] ACE studies clearly showed a relationship between Adverse Childhood Events and poorer health outcomes and yet religious trauma has never been included as an ACE. Work in this area would be extremely helpful in advancing our understanding of the impact of toxic theology on our health.

Another possible avenue for research would be in the area of violence against women. If asked, men who are in treatment for battering will describe how their fundamentalist upbringing helped them to justify their violence against their wives and girlfriends.[xxvii] They were taught that a male God violently punishes the disobedient and that the man is the head of the household. From these teachings they drew the conclusion that they were justified in violently punishing their disobedient wives. Yet again, this is an area in which no research has been conducted.

Finally, detailed research could be conducted to show which aspects of religious teachings were most harmful to children. Already The Child Friendly Faith Project has put forward curriculum who's goal is to teach how religion can be presented in positive ways to children.[xxviii] Further research would be valuable to parents and religious professionals who are interested in manifesting the healthy aspects of religion while minimizing or eliminating the negative aspects. Research has already contributed to creating positive outcomes in parenting techniques and teaching in schools, why not extend this work to religion?

Should a body of research begin to document the negative health effects of toxic theology it would also prove invaluable to healthcare practitioners. Asking about such a theological background could become a standard question in history taking and the cause of a variety of chronic conditions might be correctly diagnosed. If religious trauma is as widespread as we and others believe, then it is possible that many many people who's chronic conditions are resistant to treatment might simply be the victim of missed diagnosis which, if corrected and discovered, could be properly treated. At the Penny George Institute for Health and Healing, where one of our authors works as a spiritual director, we are already seeing examples of such positive outcomes.[xxix]

We look forward to the time when anyone who works with, or interacts with children and adults can understand much more about both the positive and negative effects of religious activity and respond to the negative effects in a helpful manner.

Acknowledgments

We would like to acknowledge: Debra Bell, Rebecca Diaz, Corene Everett, Trey Everett, Daniel Wolpert, Andrew Wymer, the planning group for the MICAH (micahprays.org) conference: Recovery from Religion: PTSD, Toxic Theology, and the Road to Healing, which took place in Minneapolis MN in April of 2016. This was the first ever conference completely dedicated to the topic of Religious Trauma. The planning group has continued to meet since then. Both the conference and our ongoing conversation has generated the interest and momentum that led to the development and production of this paper.

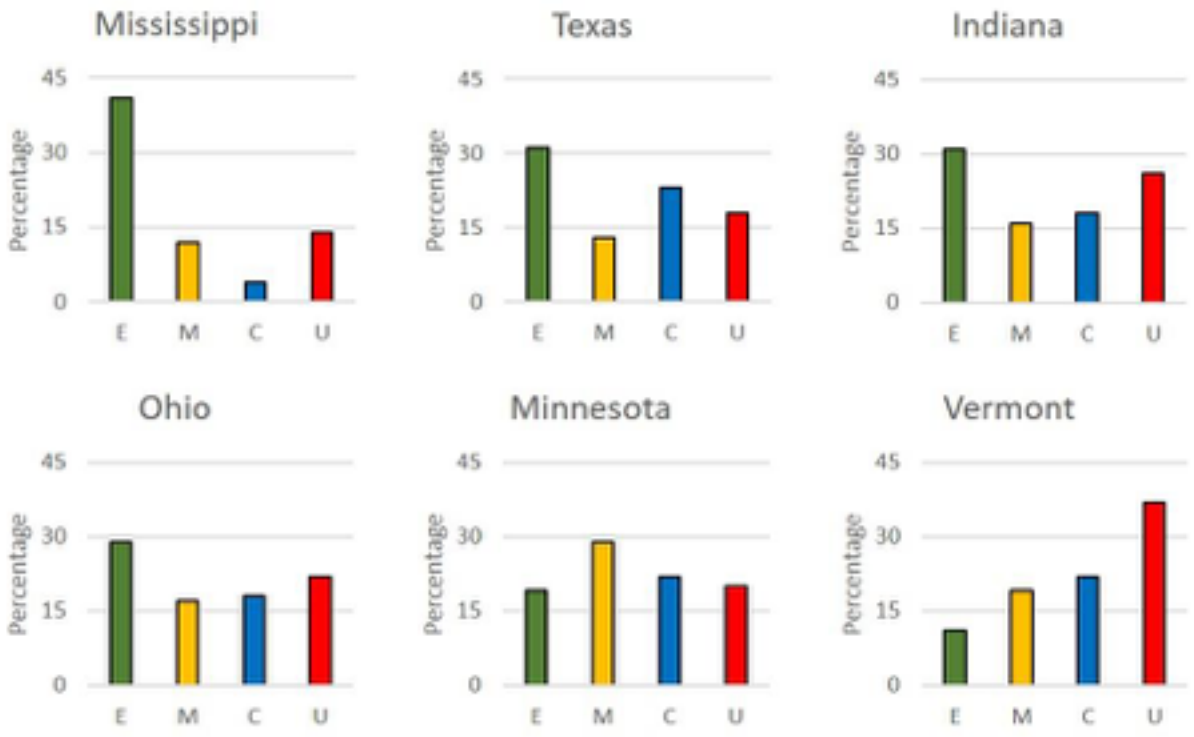

Figure 1: Shows the percentage of religious affiliation within each state. E = Evangelical Protestant, M = Mainstream Protestant, C = Catholic, U = Unaffiliated with any Christian Denomination

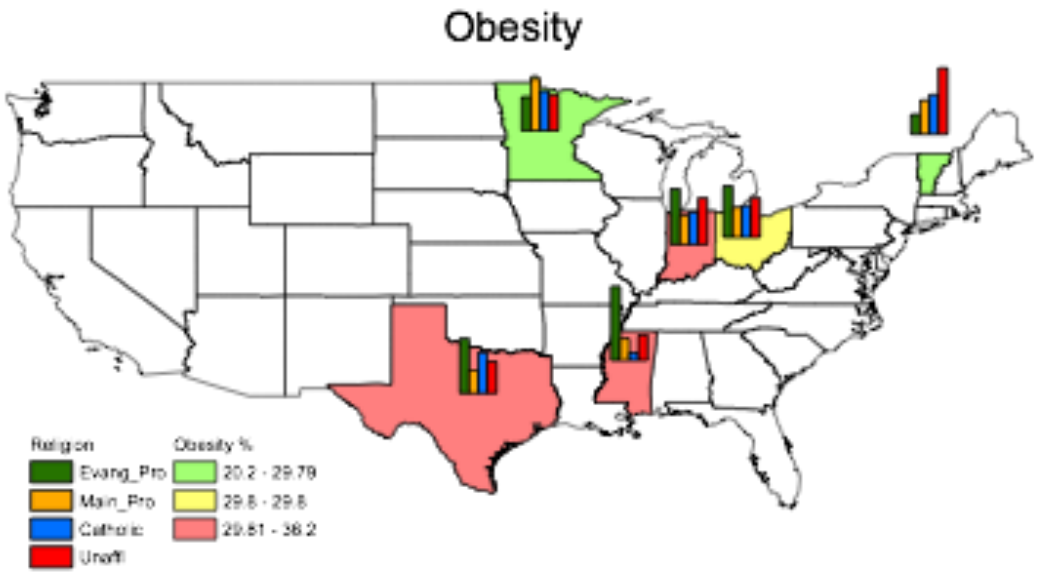

Figure 2: Shows the relationship between Church Affiliation and Obesity in the selected states.

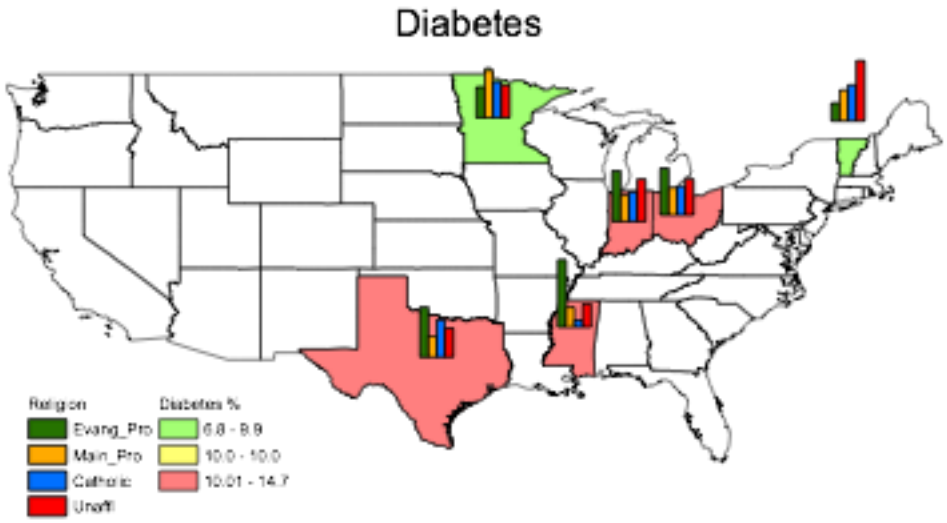

Figure 3: Shows the relationship between Church Affiliation and Diabetes in the selected states.

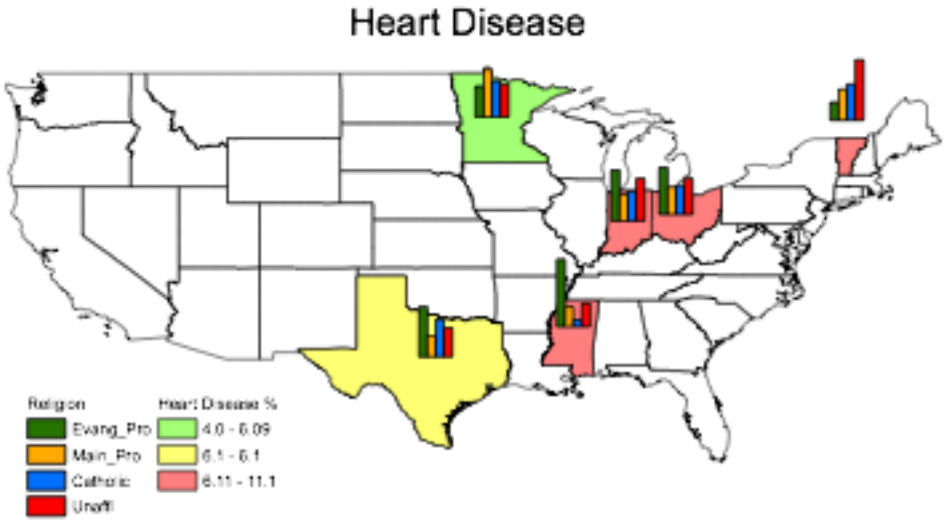

Figure 4 : Shows the relationship between Church Affiliation and Heart Disease in the selected states.

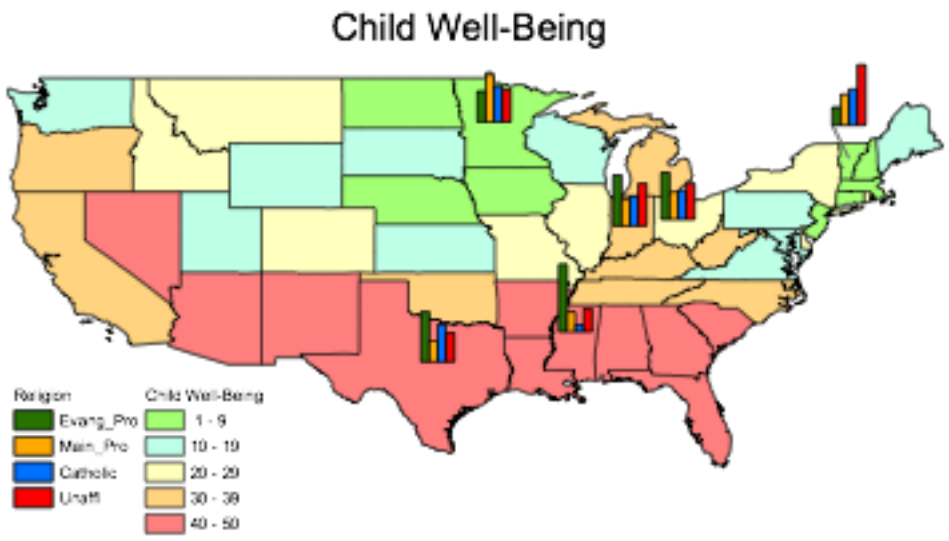

Figure 5: Shows the relationship between Church Affiliation and Child Well-Being Rankings in the selected states. Also shown are the Child Well Being rankings for all of the Continental US. Note the low rankings across all of the so-called “Bible Belt.”

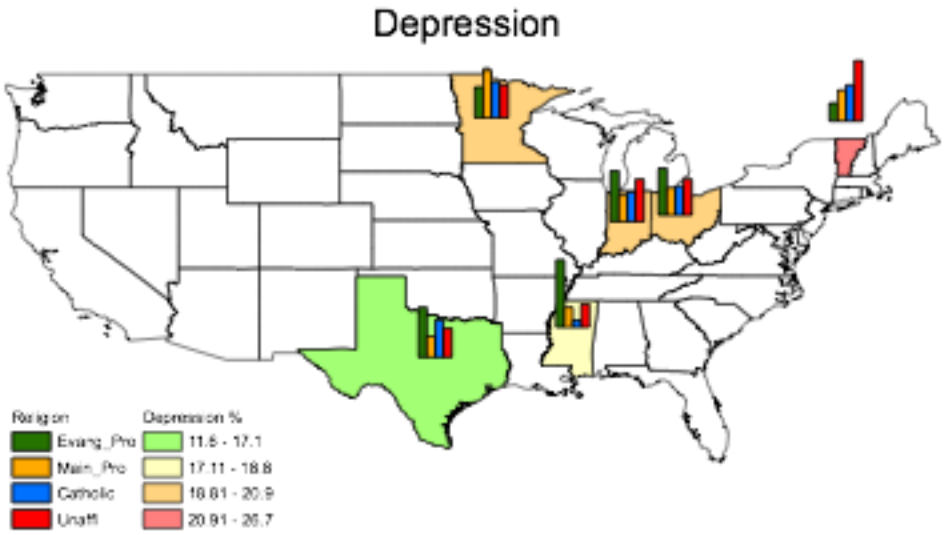

Figure 6: Shows the relationship between Church Affiliation and Depression in the selected states. Note the inverse relationship between Evangelical Protestant affiliation and Depression scores.

[i] For example, up to 80% of people have claimed that religion helps them cope with illness and 75% have reported praying for others who are sick. Dujardin RC: *Faith in medicine,* Detroit Free Press, p 7D., and McNichol T: When religion and medicine meet: the new faith in medicine, 1996, USA Weekend, p 4.

[ii] A cursory Google search for Religious Trauma yields over 20 million of results, many of these are references to support groups and personal stories.

[iii] Three recent publications/reprints of books on the subject are: Winell M. *Leaving the Fold.* Berkeley, CA: Apocrphile Press; 2007, Heimlich J. *Breaking Their Will.* Amherst, NY: Prometheus Books; 2011, Pasquale T. *Sacred Wounds.* St. Louis, MO: Chalice Press; 2015.

[iv] Personal communication with Harold Koenig M.D., one of the leading researchers in the field of religion and health, June 24, 2016.. Also see: Peteet J, Lu F, Narrow W. eds. *Religious and Spiritual Issues in Psychiatric Diagnosis: A Research Agenda for DSM-V.* Arlington, VA: American Psychiatric Association; 2011, for a comprehensive discussion of research on religion and psychiatric diagnosis.

[v] In Chapter 114 of the 4th Edition of Rakel D. *Integrative Medicine,* due to be published in April 2017, Plotnikoff G, Wolpert D, Dandurand D, review current screening tests for positive religious affiliations. No such tests exist for negative religious experiences. In personal communication with Marcela Ot'alora, a principal investigator in an FDA study for PTSD treatment she described that although they screened for many causes of PTSD there was nothing available to screen for religious trauma and that this cause had not even been in consideration for primary trauma. On review of the study participant's history, her team found that perhaps 20% of the participants had religious trauma as their primary trauma (April 2016). Religious trauma is not a diagnostic category in the DSM.

[vi] 25% of the US population belong to Evangelical Protestant denominations and almost 21% belong to the Catholic Church. Religious Landscape Study Web site. http://www.pewforum.org/religious-landscape-study/ Accessed February 15, 2017. These are the denominations with the highest level of toxic theology, but are by no means the only Churches with such issues. The percentages correlate to approximately 161 million people. If even 5% of them have been traumatized by their religious experience, this means that over 8 million people have been effected.

[vii] *Spotlight*, 2015. Directed by Tom McCarthy. Written by Josh Singer and Tom McCarthy.

[viii] For excellent descriptions of the hallmarks of toxic theology and abusive religion see: Heimlich J. *Breaking Their Will.* Amherst, NY: Prometheus Books; 2011, Chapter 3, and Winell M. *Leaving the Fold.* Berkeley, CA: Apocrphile Press; 2007, Chapter 4.

[ix] See note 6 above. Evangelical Protestant Churches and Catholic Churches are by no means the only groups who promote these toxic religious views. Almost every Christian Church proclaims at least one of the negative theologies listed.

[x] "U.S. Religious Landscape Study, 2014." Pew Research Center, Washington, D.C. (accessed February 8, 2017). http://www.pewforum.org/religious-landscape-study/

[xi] In the United States, self-proclaimed Evangelical Protestant Churches are ones who's statements of faith adhere closely to the Seven 'Fundamentals' of Christianity, a list that was created in 1920. These Fundamentalist Churches are ones that are most likely to have theology and practice that can become toxic. Seven Absolutely Essential Doctrines of Christianity Web site. http://www.feasite.org/torrey_seven_essential_doctrines Published March 18, 2015. Accessed February 22, 2017.

[xii] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data [online]. 2015. [accessed Dec 10, 2016]. URL: https://www.cdc.gov/brfss/brfssprevalence/.

[xiii] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data [online]. 2015. [accessed Feb 23, 2017]. URL: https://www.cdc.gov/brfss/brfssprevalence/.

[xiv] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data [online]. 2015. [accessed Feb 23, 2017]. URL: https://www.cdc.gov/brfss/brfssprevalence/.

[xv] The New Kid's Count Index by the Annie E. Casey Foundation Web site. http://www.aecf.org/resources/the-new-kids-count-index/ Published July 1, 2012. Accessed February 22, 2017.

[xvi] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data [online]. 2015. [accessed Feb 23, 2017]. URL: https://www.cdc.gov/brfss/brfssprevalence/.

[xvii] Heimlich J. *Breaking Their Will.* Amherst, NY: Prometheus Books; 2011, does an excellent job of detailing the many ways in which proper care and treatment of mental and physical problems can be neglected. See especially Part 4, Sin of Denial, Religious Child Medical Neglect, p. 217-324.

[xviii] ESRI 2016. ArcGIS Desktop: Release 10.4.1. Redlands, CA: Environmental Systems Research Institute. http://www.esri.com/

[xix] Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. BRFSS Prevalence & Trends Data [online]. 2015. [accessed Feb 23, 2017]. URL: https://www.cdc.gov/brfss/brfssprevalence/.

[xx] See note 17 above. Also, for example, see https://www.reviveourhearts.com/radio/revive-our-hearts/motherhood-and-community-1/ (accessed February 27, 2017), a website that encourages mothers with postpartum depression to simply pray to God and appreciate their role as child bearers.

[xxi] See Pasquale T. *Sacred Wounds.* St. Louis, MO: Chalice Press; 2015, for excellent descriptions of the shame/fear dynamic.

[xxii] Heimlich J. *Breaking Their Will.* Amherst, NY: Prometheus Books; 2011, 46-64. This chapter contains excellent descriptions of the specific nature and negative effects of authoritarianism in religious communities.

[xxiii] Winell M. *Leaving the Fold.* Berkeley, CA: Apocrphile Press; 2007, 15-27.

[xxiv] American Psychological Association. Stress Effects on the Body Web site. http://www.apa.org/helpcenter/stress-body.aspx. Accessed February 22, 2017.

[xxv] In her brilliant, yet largely unknown work, *Killers of the Dream,* Lillian Smith shows how a toxic brew of racism and sexism, undergirded by Fundamentalist Christianity, formed Southern culture as we know it today. Smith L. *Killers of the Dream.* New York, NY: W. W. Norton and Company; 1994 edition.

[xxvi] Felitti VJ1, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med.* 1998 May; 14(4):245-58.

[xxvii] Personal communication between Daniel Wolpert and clients in a treatment program for batters. Every member of one support group claimed that their fundamentalist upbringing helped them justify their violent behavior. Even when spousal abuse isn't physically violent, emotional abuse fostered by such theology is also common and is another possible, important, area for research.

[xxviii] The Child Friendly Faith Project Designation Program Web sitehttp://childfriendlyfaith.org/what-is-the-cffp-designation-program/. Accessed February 22, 2017.

[xxix] Daniel Wolpert is a spiritual director at the Penny George Institute for Health and Healing. http://www.allina-health.org/Penny-George-Institute-for-Health-and-Healing/. Recent work with clients suffering from Religious Trauma has resulted in resolution of some life-long medical problems.