

The Spiritual and Religious Identities, Beliefs, and Practices of Academic Pediatricians in the United States

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Abstract

Purpose

Physicians' spiritual and religious identities, beliefs, and practices are beginning to be explored. The objective of this study was to gather descriptive information about personal religion and spirituality from a random sample of academic American pediatricians and to compare this information with similar data from the public.

Method

In 2005, a Web-based survey of a random sample of 208 pediatrician faculty from 13 academic centers ranked by the *US News & World Report* as "honor roll" hospitals was conducted. Surveys elicited information about personal beliefs and practices as well as

their influence on decisions about patient care and clinical practice. Multiple questions were replicated from the General Social Survey to enable comparisons with the public. Descriptive statistics were generated, and logistic regression analyses were conducted on relevant variables.

Results

Nearly 88% of respondents were raised in a religious tradition, but just 67.2% claimed current religious identification. More than half (52.6%) reported praying privately; additional spiritual practices reported included relaxation techniques (38.8%), meditation (29.3%), sacred readings (26.7%), and yoga (19%). The majority of academic pediatricians

(58.6%) believed that personal spiritual or religious beliefs influenced their interactions with patients/colleagues. These odds increased 5.1-fold when academic pediatricians attended religious services monthly or more ($P < .05$).

Conclusions

Compared with the American public, a notably smaller proportion of academic pediatricians reported a personal religious identity. The majority believed spiritual and religious beliefs influenced their practice of pediatrics. Whether secular or faith-based belief systems measurably modify academic pediatric practice is unknown.

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The spiritual and religious identities, beliefs, and practices of physicians are beginning to be explored generally and as they relate to clinical relationships and decision making. A recent study found that religious physicians who for moral reasons oppose certain medical treatments such as administering sedation to dying patients are less likely to refer patients or disclose relevant information.¹ In studies about withdrawal of life support, abortion, and other issues, religion has been associated with the decisions physicians make.^{2–6} In a study of Pennsylvania internists, for example, after controlling for other independent variables, Catholic and Jewish physicians were less willing to

withdraw life support, whereas younger clinicians and those practicing in tertiary care centers were more likely to do so.⁷ Despite these findings, it is only recently that descriptive information has been gathered about the spiritual and religious identities, beliefs, and practices of physicians in the United States.⁸ A survey based on a random national sample of physicians found that 55% of surveyed physicians felt that their religious beliefs influenced their medical practice.⁹ Physicians have become aware that a patient's spiritual and religious beliefs and practices may play a role in coping with disease, medical decision making, and other health-related processes.^{10–11} Interest has also recently increased about the religious beliefs and practices of general and specialist physicians and about how these belief systems may influence how they care for patients.

Pediatricians care for nearly 100 million U.S. children, often playing an important role in the development of children and families.¹² Data exist showing that religion and spirituality seem to influence pediatricians' approaches to care. A single

institutional survey of pediatric residents and faculty showed that those with strong religious and/or spiritual orientation demonstrated more positive attitudes toward incorporating religion and spirituality into their pediatric practice.¹³ A survey of pediatricians concerning the care of critically ill newborns found that religious affiliation influenced certain treatment decisions. Catholic pediatricians, for example, were less likely than other study participants to be swayed by parental opinions.¹⁴ A multinational survey of neonatologists found that those who rated religion as extremely or fairly important were less likely to have ever withheld intensive care or withdrawn mechanical ventilation.¹⁵ Although some evidence and observations^{16,17} suggest that pediatricians' religious and spiritual backgrounds may influence, in subtle or more overt ways, their approach to patient care, little is known about their personal spiritual and religious identities, beliefs, and practices.

This study builds on previous research as the first detailed survey about personal

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religion and spirituality among *academic* pediatricians in 13 American academic medical centers. We gathered information from this subset of pediatricians because of their influential positions as teachers, researchers, clinicians, medical writers, and pediatric opinion leaders.

Method

Physicians included in this study were selected from departments of pediatrics at 13 "honor roll" hospitals, as defined by the 2004 *US News and World Report*.¹⁸ Preference was given to hospitals associated with medical schools and large research universities. The methodology to determine "honor roll" distinction combined hospital reputation, mortality data, and patient-care-related factors. When six or more specialty areas showed "exceptional breadth of excellence," the hospital placed greater than two standard deviations above the mean and was granted honor role status. The hospitals we studied were Stanford Hospital and Clinics, The Johns Hopkins Children's Center, UCLA Medical Center, the University of Michigan Medical Center, Duke University Medical Center, University of Washington Medical Center, Mayo Clinic, Cleveland Clinic, New York-Presbyterian Medical Center, Massachusetts General Hospital, Hospital of the University of Pennsylvania, University of California San Francisco Medical Center, and Barnes-Jewish Hospital.

We compiled a physician population that included every faculty-level academic general pediatrician listed on the Web pages of the departments of pediatrics in hospitals in the sample, for a total of 565 physicians. Because we were relying on a Web-based survey, that sample was then narrowed to the 458 physicians who had e-mail addresses we could access through their departments and/or hospitals. These physicians were then assigned a random number, the random numbers were sorted numerically, and 208 physicians (45% of the total sample) were selected for participation in the survey, a manageable sample size based on the resources available. The study was approved by Rice University's institutional review board. During a seven-week period from May through June 2005, an initial contact letter was sent to each participant containing a \$15

cash preincentive. Each subject received a unique identification code with which to log onto a Web site and complete the survey. After five reminder emails, the research firm commissioned to field the survey, Schulman, Ronca, and Bucuvalas, Inc., called physicians requesting participation over the phone or Web up to a total of 20 times, as is the norm in social scientific survey research.

The survey asked 34 closed-ended multiple-choice questions about spiritual and religious identities, beliefs, practices, ethics, and the intersection of religion and science in the respondent's field. Many of these questions were replicated from the University of Chicago's 1998 General Social Survey (GSS), the most recent GSS to include a detailed set of questions about religion, and report findings for several thousand participants, which enables comparisons with information about the general public.¹⁹ Analysis was conducted in two stages. First, the answers that respondents and members of the American public in the GSS gave to identical survey questions were compared using chi-square/*t* test. Missing data are noted in the tables. Second, logistic regression analyses were conducted to determine factors that might lead academic pediatricians to believe religion/spirituality influenced interactions with patients and colleagues, as measured through their degree of agreement with the statement, "My spiritual or religious beliefs have an influence on how I interact with colleagues and patients." We controlled for the following independent variables: gender, marital status (currently married/not), number of children in the household under age 18, and racial background (white/nonwhite). We measured religiosity in terms of a closed-ended survey question about religious identity which offered a wide range of possible responses which matched the options available when the same question was asked in the GSS. We collapsed these responses into religious identification as Protestant, Catholic, Jewish, other, or none. Also included was a dummy variable indicating whether respondents had attended religious services monthly or more frequently in the prior year. We excluded from the logistic regression cases that were missing data on any of the included variables. The survey data were analyzed using the SPSS version 13

statistical computer package for Windows (SPSS Inc., Chicago, Illinois).

Results

Overall, 116 pediatricians completed the survey (110 online, 6 by telephone), with a resulting response rate of 56%. Basic demographic information about survey respondents is summarized in Table 1.

Religious/spiritual identities

Table 2 describes the spiritual and religious characteristics of respondents and the American public as described in the GSS in 1998. Physician respondents numbered 116, and the number of respondents from the general public ranged from 1,284 to 2,832. Of the 87% of physician respondents raised in a religious tradition, 48 (41.4%) were

Table 1
Demographic Characteristics of Academic Pediatricians from a Multi-Institutional Study of their Religious and Spiritual Beliefs and Practices, 2005

Characteristic	No. (%)
Gender	
Male	54 (46.6)
Female	61 (52.6)
No answer	1 (0.9)
<i>Total</i>	116 (100)
Marital status	
Married	87 (75.0)
Cohabiting	7 (6.0)
Divorced	9 (7.8)
Separated	3 (2.6)
Widowed	1 (0.9)
Never married	8 (6.9)
No answer	1 (0.9)
<i>Total</i>	116 (100)
Respondent is a parent	
No children under 18	48 (41.4)
≥1 child under 18	65 (56.0)
No answer	3 (2.6)
<i>Total</i>	116 (100)
Race	
White	80 (69.0)
Black	4 (3.4)
Hispanic	6 (5.2)
Asian	18 (15.5)
Multi-racial	3 (2.6)
No answer	5 (4.3)
<i>Total</i>	116 (100)

Table 2

Religious and Spiritual Characteristics of Academic Pediatricians and the American Public, from a Multi-Institutional Study of their Religious and Spiritual Beliefs and Practices, 2005 and the General Social Survey, 1998

Characteristic	Academic pediatricians (2005), no. (%)	American public (GSS, 1998), no. (%)	Chi-square (P value)
Religious affiliation at age 16			78.54 (P < 0.001)
Protestant	48 (41.4)	684 (53.3)	
Catholic	29 (25.0)	390 (30.4)	
Jewish	18 (15.5)	23 (1.8)	
Other	7 (6.0)	37 (2.9)	
None	9 (7.8)	62 (4.8)	
No answer	5 (4.3)	88 (6.9)	
Total	116 (100)	1,284 (100)	
Importance of religion at age 16			
Very important	31 (26.7)	—	—
Somewhat important	53 (45.7)	—	—
Not very important	20 (17.2)	—	—
Not at all important	9 (7.8)	—	—
No answer	3 (2.6)	—	—
Total	116 (100)		
Current religious self-identification			161.62 (P < 0.001)
Protestant	27 (23.3)*	1,524 (53.8)*	
Catholic	23 (19.8)	705 (24.9)	
Jewish	20 (17.2)*	50 (1.8)*	
Other	8 (6.9)	122 (4.3)	
None	32 (27.6)*	396 (14.0)*	
No answer	6 (5.2)	35 (1.2)	
Total	116 (100)	2,832 (100)	
Belief in God			71.54 (P < 0.001)
Do not believe	13 (11.2)	40 (3.1)	
Do not know, no way to know	17 (14.7)	60 (4.7)	
Higher power, not God	8 (6.9)	121 (9.4)	
Believe sometimes	6 (5.2)	58 (4.5)	
Believe with doubts	24 (20.7)	181 (14.1)	
Believe, no doubts	35 (30.2)*	775 (60.4)*	
No answer	13 (11.2)	49 (3.8)	
Total	116 (100)	1,284 (100)	
View of the Bible			51.15 (P < 0.001)
Actual word of God, taken literally word for word	3 (2.6)*	358 (27.9)*	
Inspired word of God, not literal	54 (46.6)	585 (45.6)	
Ancient book of fables	41 (35.3)*	207 (16.1)*	
No answer	18 (15.5)	134 (10.4)	
Total	116 (100)	1,284 (100)	
Spirituality of respondent			8.99 (P = 0.061)
Very spiritual	14 (12.1)†	314 (21.7)†	
Moderately spiritual	43 (37.1)	571 (39.5)	
Slightly spiritual	39 (33.6)†	366 (25.3)†	
Not at all spiritual	18 (15.5)	171 (11.8)	
No answer	2 (1.7)	23 (1.6)	
Total	116 (100)	1,445 (100)	

(Table continues)

Table 2

(Continued)

Characteristic	Academic pediatricians (2005), no. (%)	American public (GSS, 1998), no. (%)	Chi-square (<i>P</i> value)
Religious service attendance			32.93 (<i>P</i> < 0.001)
2–3 times/month or more	30 (25.9)	1,139 (40.1)	
6–11 times/yr. to once/month	17 (14.7)	513 (18.1)	
1–5 times in past year	30 (25.9)	296 (10.5)	
0 times in past year	35 (30.2)	840 (29.7)	
No answer	4 (3.4)	44 (1.6)	
<i>Total</i>	116(100)	2,832 (100)	
Participation in the following in the previous six months (may choose multiple answers)			
Private meditation	34 (29.3)	—	—
Private prayer	61 (52.6)	—	—
Yoga	22 (19.0)	—	—
Relaxation techniques	45 (38.8)	—	—
Reading a sacred text	31 (26.7)	—	—
Other spiritual exercises	10 (9.7)	—	—
None	20 (19.4)	—	—
My spiritual or religious beliefs influence how I interact with patients and colleagues			
Strongly agree	21 (18.1)	—	—
Somewhat agree	47 (40.5)	—	—
Have no opinion	9 (7.8)	—	—
Somewhat disagree	13 (11.2)	—	—
Strongly disagree	23 (19.8)	—	—
No answer	3 (2.6)	—	—
<i>Total</i>	116 (100)	—	—
View of religion			14.15 (<i>P</i> < 0.003)
Very little truth in any	5 (4.3)	42 (3.3)	
Basic truths in many	98 (84.5)	894 (69.6)	
Most truth in only one	4 (3.4)	126 (9.8)	
No answer	9 (7.8)	222 (17.3)	
<i>Total</i>	116 (100)	1,284 (100)	

 * *P* < .001.

 † *P* < .05.

Percentages may not sum to 100 due to rounding.

Protestant, 29 (25.0%) were Catholic, 18 (15.5%) were Jewish, and 7 (6.0%) were other. Only 9 (7.8%) were raised without a religious tradition. When they were growing up, the majority reported that religion was very important (31, 26.7%) or somewhat important (53, 45.7%) in their family. When asked about their current religious identification, however, many academic pediatricians reported their religious preference as none (32, 27.6%), followed by Protestant (27, 23.3%), Catholic (23, 19.8%), Jewish (20, 17.2%), and other (8, 6.9%), which included one Buddhist, one respondent who reported “another Eastern religion,” one Eastern

Orthodox, two Unitarian Universalists, and one respondent who reported “other Christian religion.”

The religious identities of academic pediatricians were significantly different from those of the American public, as indicated by the GSS (Pearson chi-square 161.62, *P* < .001). Most notably, a larger proportion of academic pediatricians (32, 27.6%) than members of the broader American public (396, 14.0%) reported having no religious preference (*t* = 4.086, *df* = 2,946, *P* < .001). Further, fewer academic pediatricians were Protestant (27, 23.3%; *t* = −6.5, *df* = 2,946, *P* < .001) than were members of the

American public (1,524, 53.8% Protestant), and many more academic pediatricians were Jewish (20, 17.2%) than in the American public (50, 1.8%; *t* = 10.92, *df* = 2,946, *P* < .001).

Religious/spiritual beliefs

Although 32 (nearly 28%) academic pediatricians reported no religious preference, more than one half believed in God: 35 (30.2%) had no doubt about God's existence, 24 (20.7%) believed in God but had some doubts, 6 (5.2%) believed in God sometimes, and 8 (6.9%) believed in a higher power that is not God. Only 13 (11.2%) reported not believing in God, and 17 (14.7%) said

they did not know whether God existed and there was no way to find out. There were notable differences between the pediatricians and the American public in whether or not they believed in God (Pearson chi-square 71.54, $P < .001$). A lower proportion of academic pediatricians compared with members of the American public believed in God without doubts (30.2% pediatricians, 60.4% of the public, $t = -6.392$, $df = 1,398$, $P < .001$).

When asked about the Bible, a few similarities were observed in the responses of academic physicians and the public, but the answers each group provided also revealed markedly different views (Pearson chi-square 51.15, $P < .001$). A large proportion of both physicians (46.6%) and members of the public (45.6%) believed that the Bible is the inspired word of God but that not everything in it should be taken literally ($t = 0.205$, $df = 1,398$, $P = .839$). Nearly one third of physicians (35.3%) instead described the Bible as an “ancient book of fables recorded by man.” A much smaller portion of the public (16.1%) described the Bible this way ($t = 5.24$, $df = 1,398$, $P < .001$). Likewise, only 2.6% of physicians, compared with 27.9% of the public, described the Bible as the actual word of God and believed that it should be taken literally, word for word ($t = -6.037$, $df = 1,398$, $P < .001$).

When responding to questions about spirituality more generally, academic pediatricians and members of the public gave somewhat similar responses (Pearson chi-square = 8.99, $P = .061$). The physicians differed very little from the general public when asked to describe their level of engagement in spirituality. Specifically, 37.1% of academic pediatricians and 39.5% of the public described themselves as moderately spiritual ($t = -0.519$, $df = 1,559$, $P = .604$); 33.6% and 25.3%, respectively, as slightly spiritual ($P > .05$ ($t = 1.961$, $df = 1,559$, $P = .050$); and 15.5% and 11.8%, respectively, as not at all spiritual ($t = 1.17$, $df = 1,559$, $P = .242$). On the other hand, only 12.1% of academic pediatricians described themselves as very spiritual, compared with 21.7% of the general public ($t = -2.46$, $df = 1,559$, $P < .05$).

Table 3
Coefficients for Logistic Regression Testing Whether 97 Academic Pediatricians Think that their Religious or Spiritual Beliefs Influence Interactions with Patients and Colleagues, from a Multi-Institutional Study of their Religious and Spiritual Beliefs and Practices, 2005*

Predictors	Odds ratio (95% CI)
Female	1.075 (0.36–3.23)
Married	1.51 (0.46–4.96)
Parent	0.919 (0.31–2.73)
Non-white	1.29 (0.40–4.13)
Attends services \geq once/month	5.124 [†] (1.50–17.48)
Catholic	0.293 (0.06–1.32)
Jewish	0.843 (0.16–4.36)
Other	1.451 (0.12–18.22)
None	0.258 (0.06–1.11)
Nagelkerke R ²	0.279

* Reference categories are men, not currently married, without children, white, attend religious services less than once per month, Protestant.
[†] $P < 0.05$.

Religious/spiritual practices

As shown in Table 2, academic pediatricians and the general public seemed to attend religious services, outside of weddings, baptisms, and funerals, in different proportions (Pearson chi-square 32.93, $P < .001$). The physicians seemed to have attended less frequently than members of the general population. Only 40.6% of academic pediatricians reported attending services six or more times in the prior year compared with 58.2% of the public ($t = -3.81$, $df = 2,946$, $P < .001$).

Despite relatively low levels of traditional religious service attendance, though, academic pediatricians did report engaging in private spiritual or religious practices in the prior year. More than half (61, 52.6%) reported privately praying; other private spiritual practices included relaxation techniques (45, 38.8%), private meditation (34, 29.3%), reading a sacred text (31, 26.7%), yoga (22, 19.0%), and other spiritual exercises (10, 9.7%). Only 20 (19.4%) did not engage in any of these practices.

When asked whether their spiritual or religious beliefs influenced interactions with patients and colleagues, more than one half (68, 58.6%) of academic pediatricians believed that they do to some extent. Nine (approximately 8%) had no opinion, and 36 (31%) believed that religious and spiritual factors do not influence these interactions. To investigate

the factors that might influence these perceptions, logistic regression analysis was performed and is summarized in Table 3. Controlling for gender, marital status, parental status, racial background, and religious service attendance, the odds of pediatricians thinking their spiritual or religious beliefs influenced how they interacted with patients and colleagues were more than five times higher for those who attended religious services monthly or more in the prior year when compared with those who attended less than once a month ($P < .05$).

Discussion

Our findings about the differences between the personal religious identities and spirituality of academic pediatricians and the general public will have several implications, if they are replicated in future studies. These physicians described themselves as more spiritual than religious, much like the physicians Curlin and colleagues studied.⁹ Although a much lower proportion of academic pediatricians cited a personal religious identity compared with the public, they were quite similar to the public in how they described themselves spiritually. Of interest, both the American public and a random physician sample differed notably from the academic pediatricians we surveyed on the question of religious identity.⁹ As evident in Table 2, despite often being raised in households where religion was important, more than one in three academic pediatricians rejected a

religious identity compared with 14% of the public. Our survey questions did not address why these academics did not integrate their childhood religious identification into their adult identities. One possibility is that an academic career attracts researchers and scholars whose individual strengths may not include the emotional, spiritual, and psychological skills of caregivers who self-select to practice medicine in the community. Another is that an academic career socializes physicians in these ways. Whether frequent confrontation with suffering and dying children makes a religious or spiritually based worldview seem incompatible for some academic pediatricians awaits future study. Another interesting finding is the relatively stable proportion of Jewish identification. Given the fact that self-identification as Jewish is not only a religious but deeply held cultural identity, the stable proportions measured for childhood and adulthood were not unexpected.

The finding that the academic pediatricians who most regularly attended religious services felt religion/spirituality influenced their clinical practice stands out. Integration of one's religious/spiritual beliefs into clinical encounters may occur in relation to personal spiritual development, but our data did not include an analysis of spiritual development. Whether physicians with more secular belief systems feel that nonreligious self-identification influences their practice of medicine will be of interest in future studies.

The results of our survey of the spiritual and religious identities, beliefs, and practices of some academic pediatricians raise many questions relevant to medical education, other health care professionals, patient-centered care, and integrative medicine. We are aware of two existing programs, one offered in two medical centers, and the other ongoing in 130 hospitals nationwide. Both have been created for health care providers to facilitate spiritual and religious understanding and growth which is one part of integrative medical practice. Clinical Pastoral Education (CPE) for Health Care Providers is a fully accredited program; at the Massachusetts General Hospital it is supervised by a coauthor (A.A.Z.). Here, clinicians learn about fundamental aspects of spirituality and religiosity especially as they may apply to the care of hospitalized patients.

Two important goals of the CPE for Health Care Providers program are (1) to raise clinicians' awareness of religious and spiritual beliefs and values, as these may impact patient care and decision making, and (2) to nourish clinicians' ability to empathize with religious traditions or secular beliefs different from their own. As such, practitioners may find our data useful in assessing similarities and differences between their spiritual and religious beliefs and those of their patients. The other program, Schwartz Center Rounds, is an interdisciplinary conference regularly occurring in multiple U.S. hospitals. One patient is the focus for each discussion; an emphasis is placed on all issues related to providing compassionate care.

The survey data and analyses from our study present a first descriptive portrait of spirituality and religion in the lives of academic pediatricians, but they are limited in several ways. This sample of academic pediatricians is small, so population estimates are imprecise, as are measures of association with the broader American public. The sampling frame included only academic pediatricians at specific highly ranked institutions. These respondents may be somewhat different from academic pediatricians at other institutions and from pediatricians more broadly, making the results not easily generalized. However, as opinion leaders, teachers of pediatricians-in-training, and authors of original research and textbooks, the beliefs and practices of these pediatricians are relevant. Nonetheless, detailed study of larger numbers of pediatric generalists and subspecialists are a necessary next step in refuting or supporting the findings presented.

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Teaching and Learning Moments

Sarcoma Ceiling: Artist’s Statement

The painting featured on this month’s cover of *Academic Medicine* is by Alexandra Seibert, a student at Brecksville-Broadview Heights High School, Broadview Heights, Ohio. Alexandra created this piece for “Cleveland Clinic eXpressions™: The Intersection of Art and Science,” which uses the arts to engage high school students in the world of scientific research. The program, developed by the Cleveland Clinic Office of Civic Education Initiatives, employs project-based, peer-to-peer learning, to enable art students to interpret research conducted by classmates who have graduated from Cleveland Clinic science internships. In addition to giving students a deeper, real-world understanding of art and science, the

eXpressions program also promotes creativity, innovation, communication, and teamwork.

Alexandra Seibert’s *Sarcoma Ceiling* corresponds with a classmate’s research project entitled, “Effectiveness of psychosocial intervention in a medical oncology setting following initial cancer diagnosis.” Of her work, which was an eXpressions Red Ribbon Award recipient, Alexandra says,

I met a cancer patient in depression who experienced a feeling similar to drowning. The girl struggling to break through the surface of the water represents cancer patients fighting for their lives. The water, which should easily be broken through, represents the cancer cells because even though they are very small, they

are powerful and can claim lives quickly. The darkness, representative of depression and cancer, is taking over her body. Her beauty and strength represent the death of a patient’s valued physical attributes during treatment, and also illustrate that outward appearances can show nothing of the problems within.

For more information about the eXpressions program, please visit (www.clevelandclinic.org/expressions).

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Editor’s Note: This Teaching and Learning Moments essay was contributed as a companion to this month’s AM Cover Art selection, which appears on the cover.