



RESEARCH ARTICLE

TRADITIONALISM, PROFESSIONAL IDENTITY, AND THE ATTITUDES OF ACADEMICS AND PHYSICIANS IN INDIA TOWARD ALTERNATIVE MEDICINE

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ABSTRACT

We hypothesized that attitudes of professionals and academics towards traditional practices would be the result of three interacting factors: professional identity and ideals; individuals' traditionalism (as expressed in religiosity); and social-historical givens. An Internet survey of 1,100 Indian academics in 130 institutions assessed their attitudes towards several forms of complementary and alternative medicine (CAM) and towards the official recognition of such practices. The findings showed that Ayurveda, a traditional system of indigenous medicine, enjoyed high acceptance among Indian academics; 90% of respondents said they approved of university degree courses in Ayurvedic medicine. Half of Indian scientists also thought that homeopathy was efficacious. Multivariate analysis showed that these attitudes were correlated with academic discipline, belief, religiosity and demographics. Belief in God increased the likelihood of support for the efficacy of homeopathy. Similarly, academics who regard themselves as "spiritual" were more likely to support homeopathy. As expected, professing no religion reduced the probability of supporting homeopathy by half as compared to those who self-identified as Hindus. The most important factor determining the level of support for homeopathy was academic discipline. Engineers were three times as likely as physicians and academics in the health professions to endorse homeopathy.

Key words: India, CAM, academics, Medical education, Ayurveda, Homeopathy.

INTRODUCTION

The reported attitudes of medical practitioners and scientists towards complementary and alternative medicine (CAM) vary across cultures and professional groups, leading us to assume that particular historical circumstances should be taken into account when trying to explain the ways various practices are introduced and received. Astin *et al.* (1998) reviewed the literature on attitudes of physicians in industrialized nations towards "alternative therapies," and found that physicians' beliefs in the efficacy of complementary and alternative medicine (CAM) ranged widely, and that chiropractic and acupuncture enjoyed higher acceptance rates than homeopathy and herbal treatments. Various surveys in North America found that physicians are more skeptical about CAM techniques than other health care professionals (Sewitch *et al.* 2008). Studies of medical school faculty in the United States showed that they have been less accepting of CAM treatment than practicing physicians, and faculty members with an M.D. or a D.D.S. degree have been less accepting than those with other degrees (Dougherty, Touger-Decker, and Maillet 2000; Levine, Weber-Levine, and Mayberry 2003). Professional identity clearly has an impact on attitudes, with individuals whose daily efforts contribute to progress in biomedicine being always aware of the need to maintain boundaries. The question of personal traditionalism and religiosity in relation

to attitudes toward CAM practices has not been studied. Little is known about the attitudes of academic researchers and physicians in developing countries. Some of the practices discussed under the rubric of "alternative medicine" in industrialized countries may be subsumed under the headings of *indigenous medicine* or folk medicine in developing countries, such as India (Kleinman 1984). This exploratory study looks at the views of Indian academic scientists and physicians toward traditional and alternative forms of medicine, in relation to professional identity and traditionalism.

Traditional Medicine Systems in India

Historically, India has been a largely agrarian society and every village has had its traditional healer who attends to the local population. Only recently has there been any significant availability of Western biomedicine. An anonymous British medical expert offered a comprehensive review of indigenous systems of medicine in India in the *British Medical Journal* in 1923 (Indigenous systems of medicine in India: Ayurveda, Siddha, Unani, 1923). The report cited a 1921 study of the state of Madras that found that for a population of 42 million people there were about 21,000 practitioners of Indian medical systems and about 3,000 practitioners of European medicine. Ayurveda, which comes from the Sanskrit word 'ayur' (life) and 'veda' (science or knowledge), is the most widely used indigenous system of medicine in India. This tradition can be traced back to the ancient Vedas, the Atharvaveda in particular

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(Chopra 2003). Ayurveda, like many traditional medical practices, focuses on the symptoms and external manifestation of the disease rather than the underlying illness. Ayurveda also recognizes that there are conditions that are acute and may require invasive and surgical procedures. Ayurvedic medicine is being taught in degree-granting institutions and has been officially recognized and supported by the Indian government since the 1970s (Brass 1972). A 2001-2002 survey conducted by the Institute for Research in Medical Statistics (ICMR) in New Delhi on the utilization of traditional Indian medicine and homeopathy, covering over 33,000 households in 19 states in India, found that about one-third (32%) of people preferred these systems for common ailments. What was interesting is that only 18% of people who had serious ailments preferred traditional medicine. Ayurveda was preferred by about 19% in case of common ailments and 5% in case of serious ailments while homeopathy was preferred by 13% of people in common and 11% of serious ailments (Singh, Yadav and Pandey 2005).

The reasons cited for preferring the traditional medicine were 'no side effect' and low cost of treatment, yet slow progress was the main reason among those not using indigenous systems of medicine (ISM). Despite the view that Ayurvedic practice is benign and Ayurvedic medicines not harmful, a recent report found that about 20% of Ayurvedic products manufactured in South Asia and sold in the U.S. contained potentially harmful levels of lead, mercury and/or arsenic (Saper *et al.* 2004). The thoroughly Western system of homeopathy has attained significant popularity in India. It is widely believed that homeopathy was brought to India about 1810 when some German missionaries landed in Bengal and started treating the local population with Homeopathic medicine. Homeopathy spread rapidly to the south of India, where the surgeon Samuel Brooking established a Homeopathic Hospital at Tanjore in 1847. In 1885, the first homeopathic medical college was founded in Calcutta. In 1973, the government of India established uniform criteria for the education in homeopathy at the diploma and graduate levels. At last count there are over 200 homeopathic medical colleges in India at various levels, ranging from basic diploma to postgraduate courses and PhD's.

The status of homeopathy in India is reminiscent of the legitimacy it enjoys in Brazil, another developing country (Dinges 2002). The Indian government also recognizes and regulates two other traditional systems, one known as Unani, with about 100 colleges, and the other known as the Siddha system. These practices are broadly accepted by the general Indian population because of their long history and established place in the culture. The strong backing by the public in turn helps explain the government's support for complementary and alternative medicine. This is in contrast to the situation in the West and in the United States, where such treatments are largely outside the mainstream of medicine and given scant attention by the government (despite the activities of the National Center for Complementary and Alternative Medicine within the National Institutes of Health). Our hypothesis has been that attitudes of professionals and academics towards traditional practices will be the result of three interacting factors: first, professional identity and professional ideals, second, individual traditionalism (as expressed in religiosity), and finally social-historical givens.

Data and Methodology

The findings presented here are drawn from a web-based survey of 1,100 Indian academic scientists (Ph.D.s) from 130 universities and research institutes who completed the *Worldviews and Opinions of Scientists Survey-India 2007-08* conducted by the Institute for the Study of Secularism in Society and Culture (ISSSC) of Trinity College in Hartford, Connecticut, in cooperation with the Center for Inquiry India between August 2007 and January 2008 (Keysar and Kosmin, 2008). The survey instrument invited respondents to participate "In an international research project designed to explore the beliefs and values of scientific professionals." All the respondents were assured that participation was completely voluntary. No incentives of any kind were offered and no support or encouragement was sought from the scientists' own institutions. E-mail addresses were obtained from open access listings of colleges and universities. This large national study of Indian scientists is the first of its kind. It achieved a completion response rate of about 15%, and covered a wide spectrum of scientific disciplines, an important variable in the analysis of the worldviews of the scientists.

Support for University Programs in Ayurvedic Medicine

In the survey we asked the respondents, "Do you approve or disapprove of university degree in Ayurvedic medicine?" The respondents overwhelmingly approve "strongly" or "somewhat" university degree courses in Ayurvedic medicine (90%). However, those in medicine, veterinary medicine, and other health fields are the least likely among Indian academics to support Ayurvedic medicine. As shown in Figure 1, only 40% of them "approve strongly" of giving academic recognition to Ayurvedic medicine by offering university training. By comparison, 69% of the respondents in the life sciences and 65% of engineers "approve strongly" such academic courses. We were able to identify 60 respondents who were holders of an M.D. Among them the rate of approval for Ayurveda was only 73%, as compared to the 90% approval rate among all academics.

Do you approve or disapprove of university degree courses in Ayurvedic medicine?

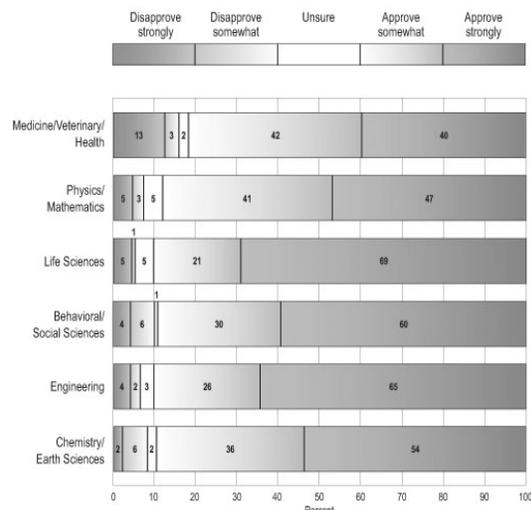


Figure 1. ISSSC International Survey India 2007-08 (N=1,100)

Views on the Efficacy of Alternative Therapies

Overall, 50% of Indian academic scientists think homeopathy is efficacious. Their belief in the efficacy of most other traditional therapies and technologies is far weaker. Less than 20% of respondents endorse faith healing, Vaastu, and astrology. The least favored practices, endorsed by only a few academics, are amulets and dowsing.

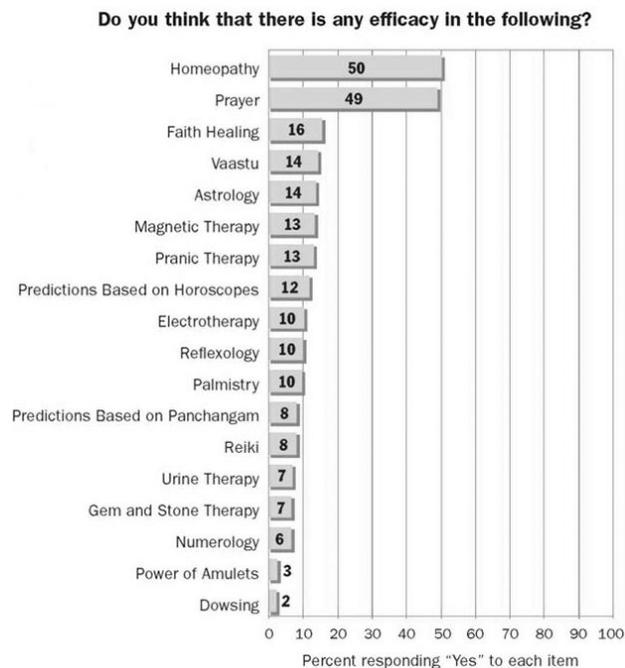


Figure 2. ISSSC International Survey India 2007-08 (N=1,100)

Medical educators are the least favorable toward homeopathy. While 58% of Indian engineers and social scientists believe in the certain efficacy and 35% in possible efficacy of homeopathy, among Indian academics with an M.D., 39% and 44% respectively reported such beliefs.

Multivariate Analysis – Views on the Efficacy of Homeopathy

To investigate the beliefs of academics and physicians in more detail, it is necessary to choose a question on which they are roughly evenly divided and probe the possible reasons for this division. This is clearly not possible with questions involving Ayurvedic medicine (which draws very strong support) or dowsing (almost complete rejection). Thus, it was decided to conduct a logistic regression analysis on the homeopathy question, on which they were evenly split. The logistic regression helps determine the net effect of each variable on the support for homeopathy when all other variables are kept constant, while the explanatory power of the model is measured by the R^2 . The dependent variable is support for the efficacy of homeopathy. Respondents who responded "yes" to the question: "Do you think there is any efficacy in homeopathy?" score 1 while others score 0. The independent variables are gender, age, discipline, religious identification¹, religious vs. secular outlook, belief in God², and the extent of being "spiritual"³. The relationship between the independent variables and level of support for homeopathy are presented in Table 1 as odds ratios, which express the relative odds of an

occurrence of the event (positive support) compared to the reference category.

Table 1. The Efficacy of Homeopathy

Logistic Model	Odds-Ratio	
Male	0.713	
Age		
40-54	0.75	
Over 55	0.728	
Scientific Discipline		
Medicine/Health	0.288	****
Soc Science	1.001	
Life Science	0.55	**
Phys/Mathematics	0.69	*
Chemistry/Earth	0.571	**
Religion		
Other Religion	1.111	
No Religion	0.483	***
Outlook Secular	1.017	
Belief in God	0.84	****
Spiritual	0.844	****
Constant	8.004	****
N =	840	
$R^2 =$	0.15	
* < .10; ** < .05; *** < .01; **** < .001		

Reference categories are as follow: for gender - female; for age - under 40; for scientific discipline - engineering; for religion - Hindu; for outlook - religious

We find that among Indian academics, belief in the existence of God increases the likelihood of support for the efficacy of homeopathy. Similarly, academics who regard themselves as "spiritual" are more likely to support homeopathy. As expected, having no religious affiliation reduces the probability of supporting homeopathy by half as compared to those who self-identified as Hindus. The most important factor playing a role in determining the level of support for homeopathy seems to be professional identity, as reflected in academic discipline. Physicians and academics in the health professions are three times less inclined to endorse homeopathy as compared to engineers. This finding is highly statistically significant. Taken together, the socio-demographic characteristics and beliefs of the academic scientists were helpful in explaining 15% of the variation in support for homeopathy.

DISCUSSION

Given India's unique history as a developing nation, the interaction between biomedicine and traditional or alternative practices within the Indian context should be very different than in a Western context. What we find is that Indian academics as a group display a significant level of acceptance for some traditional and alternative practices, specifically Ayurveda and homeopathy. Moreover, the level of acceptance for these practices is lower among academics in the health disciplines, and this level of support is slightly lower among those with medical training and an M.D. degree. In this respect, Indian medical educators are similar to their United States colleagues, despite the overall cultural differences. The intriguing finding is not that Indian M.D.'s are less supportive of homeopathy and Ayurveda than are other academics. That is to be expected. It is rather how many are supportive of them. Economically, they are rival healing methods. Clinically, they lack any evidence of efficacy. Doctors have reason to be concerned that someone with a serious illness who relies on homeopathy could suffer serious consequences.

What, then, explains the relatively strong support? It may be that Indian physicians do not want to be perceived as bullies who insist on their way of doing things. Or they have a soft spot in their hearts for the practices used in their own families and villages. We have to keep in mind the cultural context. This is a unique historical-cultural situation, in which several traditional, indigenous, systems which are often considered as alternative or complimentary to biomedicine, namely Ayurveda, homeopathy, yoga, Siddha, and Unnani, enjoy such status and support in India, as to make them parallel, not alternative, systems. The recognition given to these systems and their growing acceptance and institutionalization over the past half-century occurred simultaneously with significant advances in the quality and availability of biomedicine, which is still beyond the financial reach of many. The special symbolic role of traditional curative systems has been noted.

The coming of Western medicine to India led to "...a revisionist posture of indigenous medicine as a way by which the ruled might reassert their cultural and political identity and autonomy" (Rosengren 1980: 231). And thus, "Ayurvedic medicine in India ...is sustained and perpetuated ...on the strength of its being there with certain historic and structural supports" (Rosengren 1980: 231). Such co-existence of different systems, sometimes referred to as a pluralist medical system (Leslie 1980), is found in several Asian nations in addition to India, such as Sri-Lanka (Waxler 1984), where the situation is identical to that in India, Nepal, Malaysia, Taiwan, China, and South Korea (Cho 2000) where the Hanbang system enjoys a status parallel to that of Ayurveda. As Astin *et al.* (1998) suggested, historical and cultural differences in the particular mix of "alternative" or indigenous techniques offered are tied to their level of acceptance by professionals. It is the cultural traditions and personal beliefs, rather than actual knowledge about efficacy that determines the acceptability of certain "alternative" or indigenous practices. Thus, a survey of German physicians found that 45% practiced homeopathy and 78% used herbal medicine (Himmel, Schulte and Kochen 1993). A very different picture, reflecting unique historical conditions, emerges from surveys in other nations.

Physicians in Britain, Canada, Australia, or the United States, are unlikely to engage in practices so common in Germany (White, Resch, and Ernst 1997). What emerges from our findings is a surprising similarity between India and Germany in the acceptance of homeopathy (and herbal preparations?). This seems to be based upon the historical accident which led to the relatively early introduction of this Western idea into the Indian sub-continent. We may hypothesize that in the early 19th century homeopathy had the cachet of being a Western innovation, and thus was viewed as part and parcel of advancing modernity and science. Any further consideration of the place of alternative practices in the respective health systems of Germany and India should also take into account the overall efficacy of the two national health systems. In a 2007 ranking of 222 nations and territories, Germany was 32nd in life expectancy (78.95), while India was 145th (68.59) (The World Fact Book –CIA, 2007). It is clear that the Indian pluralist system does not deliver the same services to the population as the German pluralist system. Among Indian scientists and physicians, views about alternative and complementary medicine reveal a conflict between cultural givens and the academic norms of critical

thinking and reliance on the best evidence. Frankenberg (1981:115) suggested that the commitment to biomedicine in India is tied to "an urban, male, technological, curative and individualistic world view" (p. 115). This is demonstrated in our multivariate analysis above. The scientists who approach Ayurveda and homeopathy critically have a more secular worldview or are committed to the biomedicine paradigm. Positive attitudes towards these two CAM practices are associated with favorable views of traditional culture and with increased religiosity. Thus, we have shown that religious traditionalism does have an impact on individual attitudes, as expected (cf. Beit-Hallahmi and Argyle, 1997). A supernaturalist worldview turns out to be positively related to support for traditional healing practices. Professional identity, as indicated by discipline and training, and a commitment to biomedicine, operate in opposition to traditionalism. Further research could examine the interaction between traditionalism and professional identity in other cultures.

Notes

1. What is your current religion, if any?
2. *What do you believe about God?* Continuous: (1) I know God exists; (6) I don't believe in God
3. *To what extent do you think of yourself as "spiritual?"* Continuous: (1) Very Much; (7) Not at all

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