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Who Beliefs in Alternative Medicine?

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Abstract

This study examined individual correlates of beliefs in the efficacy of alternative and complementary medicine (CAM). In all, 2126 adults were tested, and the results showed six significant correlates, including sex, political ideology, religious beliefs, and self-esteem (SE). Strongest correlates were belief on Life after Death ($r = 0.32$), Religiousness ($r = 0.28$) and Optimism ($r = 0.20$). A regression that accounted for 17% of the variance indicated that females more than males; more religious rather than less religious, more politically conservative rather than liberal; more those who believed rather than did not believe in the afterlife; and those who rated themselves as more rather than less optimistic believe in the efficacy of CAM. Age, degree status, and SE were not significantly related to beliefs about CAM. Limitations are acknowledged.

Keywords

Efficacy, Sex, Religion, Politics, Optimism

1. Introduction

It has been suggested that the two most interesting questions about CAM are first: "What is the evidence for the efficacy of the different treatments? and second: "Why, in the face of evidence that some clearly do not "work" except by possible placebo effects, do people still choose them?" [1]. Many studies in attempting to ask the second question have contrasted patients of conventional/scientific medicine to attempt to answer this question [2]. This study examines the demographic, ideological and self-evaluation correlations of the extent to which people believe in the efficacy of CAM. In this article, we explored in greater detail the role of religious beliefs and self-rated optimism as correlates of belief in CAM.

Singh and Ernst [3] in the book Trick or Treatment, evaluated 40 complementary techniques and were scathing in their findings. They found that scientific

evidence for the efficacy of these methods was lacking, and that the methods were not just ineffective but positively dangerous in some cases. Other widely available books, such as Suckers: How Alternative Medicine Makes Fools of Us All by Shapiro [4] follow a similar line.

Whilst there are differences between which treatments people choose, there seem to be consistent findings in who and why they choose CAM. Women more than men, older (middle-aged) more than younger, and better off and better-educated people tend to choose CAM [1] [5] [6]. Furnham [6] noted that people shop for health: they want a cure without side effects or pain. They may also choose CAM because they have chronic illnesses or conditions that they have difficulty living with. Many people say they choose CAM because they are disappointed by the traditional orthodox consultation and to learn more about self-care (fitness, wellness and prevention). Many believe in the holistic message. Orthodox medicine is seen as narrow and disease-orientated, which aims to destroy, demolish or suppress "sickening forces", through such things as chemical therapies and surgery. Clearly many people prefer an emphasis on natural restorative processes on how to strengthen the vitalising health-promoting forces. The emphasis is quite different—illness vs. wellness. CAM is often seen as restorative, balancing, natural, and preventative, and it fits in with the particular zeitgeist.

There are patterns and a higher probability that particular types of people are likely to seek out, use, and benefit from CAM [6]-[8]. First, demography: CAM patients are more likely to be: women rather than men; aged 30 - 40 rather than older or younger; middle rather than working class; well-educated; and urban rather than rural. Next, Medical History: Patients seeking CAM have chronic rather than acute problems, and their health problems are often non-specific or have psychological components. Third Beliefs, Attitudes and Values: CAM practitioners tap into the zeitgeist of people's beliefs about health. Many patients seem to be sympathetic with green issues environmentalism, one-world-ism and anti-materialism. CAM patients appear to be particularly interested in the "life of the mind". They certainly believe the maxim of "a healthy mind in a healthy body".

In a recent study of 599 participants and 21 predictors of the belief in CAM found a combination of predictors explained 20% of the variance in CAM belief (predictors: ontological confusions, the failure to correctly identify the category that the object(s) belongs to and therefore misconstrue the nature of the real relationship between them) spiritual epistemology (the nature, origin, and limits of spiritual knowledge), agreeableness, death anxiety, gender) [9]. They noted: "individuals with CAM beliefs were mainly women who tended to confuse ontological categories, acquired knowledge from religious and/or spiritual experiences, had a higher level of death anxiety, and were more agreeable which means, among other things, being lenient in judging others" (p8). They concluded that individuals believing in CAM have cognitive biases and certain individual differences which make them perceive the world differently.

2. This Study

This study focused on three sets of variables related to CAM. First, demography namely age, education and gender have all been shown to relate to belief in, and use of, CAM. Second, we had three ideological/belief variables: political beliefs (left/right wing), religious beliefs and the belief of life after death. We also have two other self-rated variables namely optimism and a measure of self-esteem, both of which have been shown to be related to various other factors [10]. We expected each of these variables to be significantly correlated with a belief in CAM. More importantly, we sought through a regression to determine the relative power of each of the variables in explaining the belief in the efficacy of CAM. It is part replicative and partly new with a large representative N.

3. Method

3.1. Participants

There were 2126 participants, 1066 males and 1052 females. This offers a confidence level of 99%. They ranged in age from 18-74 years old, with a modal age of 36. In all 1190 were graduates (56%). In all 1242 said they did not believe in the afterlife while 875 said that they did. With regard to their religious beliefs (1 = Not at All to 9 = Very), they scored a mean of 2.07 (SD = 2.67). They rated their political views from (1) Very Conservative to (9) Very Liberal, with a mean of 5.88 (SD = 1.83). They rated "I am an optimist" from (10) Agree to (1) Disagree, with a mean of 5.71 (SD = 1.96).

3.2. Measures

Belief in CAM. Asked if they agreed that "alternative medicine works" on a 9 point agree (9) to disagree (1) scale the mean score was 4.04 (SD = 2.23). This was sufficiently normally distributed.

Self-Esteem [11]. This comprised of four other factors on a scale from 1-100: Physical Attractiveness (M = 57.48; SD = 19.56), Physical Health (M = 66.66, SD = 20.36), Intelligence (IQ) (M = 72.11, SD = 14.37) and Emotional Intelligence (M = 68.60, SD = 20.38). The Alpha for these four items was .72, and they were summed together forming a variable labelled Self-Esteem.

3.3 Procedure

Data was collected on-line through Prolific. Prolific was chosen over similar participant recruitment sites due to its high data quality and survey participant pre-screening features [12] [13]. All participants were healthy, employed adults who completed anonymous, non-invasive questionnaires, entirely voluntarily. They are always at liberty to stop at any point and not answer any particular question. Participants were compensated for their time at a minimum of (£5/hour). Data were pooled from a number of surveys distributed between 2021 and 2022.

4. Results

First, we correlated the variables of interest and then ran a multiple regression with Belief in CAM as the outcome variable.

Table 1. Descriptive statistics and correlations between variables.

	M	SD	1	2	3	4	5	6	7	8
1. Belief in CAMs	4.04	2.33								
2. Sex	1.50	0.51	0.191**							
3. Age	33.12	61.21	−0.002	−0.009						
4. Degree	0.76	0.62	−0.006	0.056**	0.037					
5. Religiousness	2.07	2.68	0.277**	0.048*	−0.010	−0.029				
6. Life After Death	0.41	0.49	0.317**	0.118**	0.012	−0.020	0.509**			
7. Liberalism	5.88	1.83	−0.126**	0.124**	0.005	0.005	−0.209**	−0.155**		
8. Optimism	5.71	1.96	0.202**	0.037	0.043*	0.018	0.161**	0.160**	0.017	
9. Self Eval.	264.42	55.34	0.096**	−0.067**	−0.009	−0.096**	0.154**	0.072**	0.036	0.351**

**p < 0.01, *p < 0.05.

Table 2. Regression of predictor demographics onto alt med.

	β	SE	*β Std.*	*t*	*p*
Constant	1.729	0.314		5.507	0.000
Sex	0.778	0.094	0.170	8.280	0.000
Age	0.000	0.001	−0.007	−0.372	0.710
Degree	−0.013	0.076	−0.003	−0.169	0.866
Religiousness	0.104	0.021	0.119	4.980	0.000
Life After Death	0.921	0.112	0.195	8.238	0.000
Liberalism	−0.119	0.026	−0.095	−4.543	0.000
Optimism	0.161	0.026	0.136	6.262	0.000
Self-Evaluations	0.001	0.001	0.030	1.365	0.173
R^2 (Adj. R^2)			.169 (.165)		
F			52.569		
p			<.001		

Table 1 shows the correlations between the variables. In all six were significant and indicated that those who were more religious, less politically liberal, more optimistic, higher self-esteem, and a belief in the afterlife rated CAM as more effective. The highest correlation was between the extent to which participants believed in the afterlife and their perception of the efficacy of alternative medicine ($r = 0.32$). Whilst females believed significantly more than males ($r = 0.19$) in the efficacy of education neither age nor education were related to that belief

We then computed various regressions using CAM as the criterion variable.

Table 2 shows that five of the variables were significant accounting for 17% of the variance. The two largest Betas were sex ($\beta = 0.78$) and a belief in the afterlife ($\beta = 0.92$). Overall, women who believed the afterlife and were more religious, optimistic, and politically conservative were more likely to rate CAM as more efficacious. Three of the variables failed to be significant: participant's age, education, and self-esteem.

5. Discussion

These results confirmed those in many other studies [9], notably that gender, as well as religious and political beliefs are systematically and explicably linked to belief in CAM. In short, women more than men, and those who are more religious and politically conservative are likely to accept the claims of CAM.

With regard to our three demographic variables only sex was significant in accordance with the hypotheses and previous literature. Neither age nor education were significantly associated with belief in CAM efficacy. It is perhaps most surprising that education was not significant, but this may be in the way it was measured: graduate vs non-graduate. Had we had a more robust measure of level of education achieved it may have been significant, showing that education is associated more with beliefs in science. This is essentially a restriction of range problem. Equally, the platform we used does not have many working-class people, so this group, which uses CAM less, was under-represented.

Relatively few studies in this area have looked at personal ideology (religious and political beliefs) as it relates to CAM [14]. We showed both were important correlates. Interestingly the correlation between self-rated religiousness and a belief in CAM was $r = 0.50$ suggesting that many religious people did also believe in CAM. What is striking about the regression is the factor that was most closely related to beliefs about CAM was a belief in the afterlife. As one may predict the correlation between being religious and a belief in the afterlife was high ($r = 0.51$) it is interesting that the latter factor was a more powerful predictor and that the two belief variables were independent measures of CAM endorsement.

Perhaps the most original finding in this study was the relatively strong relationship between self-rated optimism and the belief in CAM. Some may see this as naivety that only optimistic people could believe in the efficacy of CAM given the lack of evidence. Equally, if optimism is the opposite of fatalism, it may be that optimists are happy to pin their hopes on any new treatment.

6. Limitations

While we had a large sample in this study, we had a number of limitations, particularly in details that we did not have. These included respondents' self-assessed health, and most importantly their experience of CAM. We can assume that if people did not believe in its efficacy in any form (biologically/physically vs placebo) they would not use it. However, we did not differentiate between different branches of CAM such as acupuncture, homeopathy and herbalism and it is

possible that people believe some are much more efficacious than other. Also, many of our measures were single item measures. Although "…most research published on single-item measures shows that they are often as valid and reliable as their multi-item counterparts" ([15], p. 4).

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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