

## Problems with Alternative Medicines in the Health Care Setting: From Nurses' Experience

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**Abstract:** This paper examines the problems with and advantages of alternative medicines from the experience of nurses. A survey was developed asking nurses concerning their experience with alternative medicines. Their experience shows that there are some problems areas; such as, increased bleeding associated with certain herbal medicine. Meanwhile, many of the respondents felt that certain herbal medicines were effective. The basic conclusion is that certain practices may be helpful, but more regulation and study are required.

**Key words:** health care; alternative medicine; nurses

**JEL codes:** I10, I11

### 1. Introduction

Alternative medicines are becoming more common in today's society. Approximately 38% of all adults in the United States use some type of complementary and alternative medicine (CAM) in 2007 according to a National Health Interview Survey (Barnes et al., 2008). The expenditures amounted to \$33.9 billion in the previous twelve months (Nahin et al., 2009). CAM accounts for approximately 1.5% of the total health care expenditures (\$2.2 trillion) and 11.2% of total out-of-pocket expenditures (total \$286.6 billion) (Office of the Actuary, 2007). The majority of the out-of-pocket costs went to the purchase of non-vitamin items, such as fish oil, glucosamine, and Echinacea. Americans spent \$11.9 billion on acupuncturists, chiropractors, massage therapists, etc. (Office of the Actuary, 2007).

People have questioned the effectiveness of alternative medicines. In fact, many argue that alternative medicines should be held to the same clinical effectiveness standards as conventional medicine (Arias, 2005). Adding herbal medicines to a multiple drug therapy has the risks of possible herb-drug interactions (Ernst, 2002). There are also side effects which may not be known to the user (Maranton et al., 2005). In addition, only 20% of health care providers consider herbal and alternative medicines to be safe (Maranton et al., 2005). Jibrin (2010) points out that there are no safety regulations for dietary supplements. His argument is that health care reform should address this issue.

Consumer Reports (September, 2012) reported on the dangers of vitamins and supplements. They came up with a list of 10 dangers, as follows:

- (1) Supplements are not risk-free.

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The FDA reported from 2007 and 2012 more than 10,300 serious outcomes, including deaths, hospitalizations, serious injuries, emergency room visits, etc.

(2) Some supplements are really prescription drugs.

Dietary supplements spiked with prescription drugs are the largest threat to safety. Many of the supplements contain same active ingredient as a prescription drug. For example, some supplements contain sildenafil which is basically Viagra.

(3) You can overdose on vitamins and mineral.

Large dose of certain vitamins (e.g., A or D) can cause problems and interfere with prescription drugs.

(4) You can't depend on warning labels.

FDA doesn't require warning labels. Ginkgo biloba can interfere with blood thinners, but a warning is rarely issued.

(5) None are proven to cure major diseases.

The Federal Trade Commission, which monitors advertising, has brought legal challenges to claims being made.

(6) Buy with caution from botanicas.

Reports left the investigators concerned about product quality and identity. No evidence of providing warnings.

(7) Heart and cancer protection: not proven.

Research is lacking on whether Omega-3 pills and antioxidants reduce the risk of heart disease or cancer.

(8) Betcha can't guess this commonly reported problem.

Choking is a serious problem.

(9) Some natural products are anything but.

Vitamin pills are sometimes synthetically produced.

(10) You may not need supplements at all.

You may be getting all of the requirements through correct diet, including nuts, fruits, vegetables, etc.

People utilizing alternative medicines rarely tell their physicians, less than 40% (Arias, 2005). This is quite a low percentage given the possible side effects that exist. It is suggested that physicians need to ask about the use of alternative medicines, especially herbal and dietary supplements (Bressler, 2005). When asked, more than one-half of physicians stated that they would encourage patients to discuss their use of alternative medicines (Arias, 2005). On the other hand, physicians know very little about herbal supplements and alternative medicines. Training on these matters should be incorporated into medical education programs (Maranton et al., 2005). In a survey of pharmacists, the results showed that most pharmacists did not have adequate training of alternative medicines and also did not regularly document the use of herbal medicine by their patients (Dolder et al., 2003). Herbal therapy has been promoted as a possible treatment for Attention Deficit Hyperactivity Disorder (ADHD). A study was done which showed some improvement, but the study was not scientific (Reddy & Devi, 2007). Certain herbs are good sources of antioxidants without the side effects of other sources (Ali et al., 2008).

The overall purpose of this paper is to determine the impact that alternative medicines have. Health care providers (in this case, nurses) were asked their opinions of the effectiveness of alternative medicines, along with any interactions or adverse effects.

## 2. Analysis of Data

A survey was administered to 94 individuals in the United States. The nurses are students in a nurse anesthesia program. All of these individuals were required to have prior nursing experience, including critical care nursing. There were 36 males and 58 females in the sample. The average number of years' experience was 6.94. Table 1 provides data on the ages. The vast majority of the individuals were young.

**Table 1** Ages of Respondents

Age Group	Number	Percent
21-30	55	58.5
31-40	28	29.8
41-50	9	9.6
51-60	2	2.1
Total	94	100.0

### 2.1 Experience with Alternative Medicines

The first questions were related to experience with various types of alternative medicines. The types were acupuncture, aroma therapy, herbal healing, Chinese or Ayurvedic, and others. The respondents were asked whether they had any experience with any of the above techniques. Table 2 provides the responses.

**Table 2** Experience with Alternative Medicines

Type of Alternative Medicine	Yes	% Yes	No	% No
Acupuncture	4	4.3	90	95.7
Aroma Therapy	9	9.6	85	90.4
Herbal Healing	21	22.3	73	77.7
Chinese or Ayurvedic	5	5.3	89	94.7
Other	8	8.9	82	91.1

One can see that most of the individuals had little experience with alternative medicines. Herbal healing was the largest with 22.3% of the individuals having experience. The other experiences were chiropractic, massage, music, and religious.

Next, the respondents were asked how effective they thought the different types of alternative medicine were. Table 3 provides the responses. Very effective was scored as a one and very ineffective was a five.

**Table 3** Effectiveness of Alternative Medicines

Effectiveness	Very Effective	Somewhat Effective	Neutral	Somewhat Ineffective	Very Ineffective	Mean Std. Dev.
Acupuncture	3 11.1%	10 37.0%	14 51.9%	0 0.0%	0 0.0%	2.41 0.69
Aroma Therapy	0 0.0%	9 28.1%	17 53.1%	5 15.6%	1 3.1%	2.94 0.76
Herbal Healing	5 12.8%	17 43.6%	14 35.9%	3 7.7%	0 0.0%	2.38 0.82
Chinese or Ayurvedic	1 3.7%	5 18.5%	20 74.1%	1 3.7%	0 0.0%	2.78 0.58
Other	2 13.35	4 26.7%	9 60.0%	0 0.0%	0 0.0%	2.47 0.74

Of the people that had experience with the various alternative medicines, there were some differences in their perceptions of effectiveness. Most respondents felt that the alternative medicines were somewhat effective. The method perceived as the most effective was herbal healing. The least effective was aroma therapy. In each case, the type of alternative medicine was perceived as being somewhere from somewhat effective to neutral.

**Table 4 Adverse Impact on Conventional Treatments**

Adverse Impact on Conventional Treatment	Yes	% Yes	No	% No
Conventional (Western) Medicine	16	17.6%	75	82.4%
Surgical Procedures	12	13.2%	79	86.8%
Anesthesia Administration	9	9.9%	82	90.1%
Other	4	4.3%	87	95.6%

There is some evidence to suggest an adverse impact on medical procedures. The highest percentage is with conventional treatment at 17.6%. The respondents saw 12 occasions where alternative medicines interfered with surgical procedures and 9 cases of adverse impact on anesthesia. This suggests that one should be careful, if involved in other types of treatment. Other adverse impacts were mostly with delaying conventional treatment, due to receiving alternative treatments. This resulted in death in one case.

Next, the respondents were asked to rate the effectiveness of different types of herbal medicines. The results are given in Table 5. The results were scored from 1, very effective, to 5, very ineffective.

**Table 5 Effectiveness of Herbal Medicines**

Effectiveness	Very Effective	Somewhat Effective	Neutral	Somewhat Ineffective	Very Ineffective	Mean Std. Dev.
Basic Vitamins	25 28.7%	47 54.0%	14 16.1%	1 1.1%	0 0.0%	1.90 0.70
Fish Oil	29 34.1%	38 44.7%	17 20.0%	0 0.0%	1 1.2%	1.89 0.80
Eye Vitamins	6 7.1%	19 22.6%	57 67.9%	1 1.2%	1 1.2%	2.67 0.68
Other Herbs (e.g., Ginseng, Gingko Biloba)	9 10.7%	35 41.7%	37 44.0%	2 2.4%	1 1.2%	2.42 0.76

The majority of the respondents felt that basic vitamins (82.7%), fish oil (78.8%), and other herbs (52.4%) were either very effective or somewhat effective. In contrast, only 29.8% of the respondents felt that eye vitamins were either very effective or somewhat effective.

The adverse impacts of herbal medicines are given in Table 6. The adverse impact was asked with respect to conventional medicines, surgical procedures, anesthesia administration, and others.

**Table 6 Adverse Impact of Herbal Medicines**

Adverse Impact on Conventional Treatment	Yes	% Yes	No	% No
Conventional (Western) Medicine	16	18.2%	72	81.8%
Surgical Procedures	18	20.5%	70	79.5%
Anesthesia Administration	13	14.8%	75	85.2%
Other	3	3.4%	84	96.6%

**Table 7** Types of Adverse Impacts Suggested

Type of Adverse Impact	Times Suggested	Percent of Total Responses
Bleeding	14	56%
Did Not Seek Treatment Until Late	2	8%
Interaction with other medications	2	8%
Interaction with Anesthesia	2	8%
Liver and kidney problems	2	8%
Increased heart rate and blood pressure	1	4%
Affected intubation	1	4%
Death	1	4%
Total	25	100%

Bleeding appears to be the most frequent adverse impact. This is consistent with other literature; particularly, Consumers Reports which suggests that herbal medicines can interact with blood thinners.

### 3. Conclusions

The main purpose of this paper is to examine the opinions of a class of healthcare providers (nurses) in relation to the use of different types of alternative medicine. Many of the nurses had no experience with the different types of alternative medicine. Respondents had the most experience with herbal medicines.

When asked about effectiveness, nurses listed herbal healing as the most effective, followed by acupuncture, aroma therapy, and Chinese or Ayurvedic. The use of herbal medicine is probably the most utilized by consumers. Nurses felt that there were adverse interactions with other types of treatment, including conventional medicine and surgical procedures. Most nurses felt that basic vitamins, fish oil, and other herbs were somewhat effective. These individuals were neutral to eye vitamins. They felt that these treatments did interfere with other treatments. The major side effect was bleeding, which has been previously reported (Stanger et al., 2012).

A lot of money is spent on alternative medicine in the United States. The amount of money spent is growing. There are many doubts about the effectiveness of these treatments. Other healthcare providers have the same doubts as nurses. While the sample for this paper is relatively small, I would suggest that the same results would hold for a larger sample. I would also suggest that physicians would be less enthusiastic about the value of these treatments. One can do more training on herbal remedies and alternative medicines. Some medical education programs now include alternative medicine as part of the training. Pharmacists are beginning to receive education about the interactions of herbal medicines with traditional medications. This will be helpful, but not the panacea.

The results of this study mirror the problems suggested by the literature. What can be done? There are several suggestions that need to be done. The ten items suggested as problems areas in Consumer Reports (2012) can be addressed as follows:

- (1) Alternative medicines should be tested for curing certain ailments, diseases, etc. These tests should be similar to tests for regular pharmaceuticals. These would list the possible side effects and the possible interactions.
- (2) If the product contains the active ingredients of a prescription medicine, then this medicine should also require a prescription. In addition, the facilities that manufacture those drugs should be under the same restrictions as all medical manufacturing facilities.
- (3) All vitamins, herbs, etc. should be manufactured in accordance with certain rules and regulations for quality. All claims of "natural" would have to be substantiated by proof.

(4) All alternative treatments (acupuncture, chiropractic treatments, etc.) would have to be able to prove their claims with scientific evidence.

If these items were implemented, then alternative medicine would be seen on a par with Western medicine. These medicines and practices would be justified as legitimate. This probably will not happen, since this would involve a lot of time and money. The alternative medicine industry would see this as an infringement on their livelihood. This would be seen as bending to the wishes of conventional medicine.

Alternative medicine is here to stay. The best that can be hoped for is that individuals will advise their physicians of their use of alternative medicines (herbs, treatments, etc.). Hopefully, this will alleviate any unwanted interactions that may be dangerous. In addition, medical and pharmacy schools should make sure that all doctors receive some level of education in the use of alternative medicines and possible side effects.

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