Exploring the Alternatives: Complementary Alternative Medicine Use for Eye Care in Patna

Dr. David Howard¹, Dr. Satyajit Sinha², Kristin Ow Chapman¹, and Vivian Chin¹

¹New York University School of Medicine, ²A.B. Eye Institute
The National Institutes of Health defines complementary and alternative medicine (CAM) as a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine. Conventional medicine is medicine practiced by holders of M.D. (medical doctor) or D.O. (doctor of osteopathy) degrees and by their allied health professionals.

Objective

• The purpose of this study was to collect information about the current prevalence and use of CAM treatments among an ophthalmologic patient population in Bihar, India. The study aimed to increase awareness of CAM use in order to understand how physicians could better interview and counsel their eye patients.
Bihar

• Three fourths of the population is involved in agriculture; the region historically lags behind all other states with regard to economic growth and per capita income.

• Patna is one of the three cities in Bihar to have a large hospital equipped for modern procedures.
• The literacy rate for women is 33%; the rate for men is 60%.

• The National Sample Survey Organization (NSSO) found that 32.4% of the urban population and 44.3% of the rural population live below the poverty line.

• Only 97 ophthalmologists serve a population of 82,878,796.

• 74% of blindness in Bihar is caused by cataracts.

• 14% of the blind population of Bihar is due to uncorrected refractive errors.
Methods

- Developed and administered a comprehensive survey to measure the knowledge, attitude, and practices (KAP) of CAM use while collecting demographic data.
- Volunteers administered the surveys at the A.B. Eye Institute (ABEI) with the assistance of native-speaking translators on staff at ABEI.
Results

• 135 surveys collected from 82 men and 53 women

• 11 demonstrated CAM therapies for eye health care, indicating a CAM use prevalence of 8%.

• 97% of the sample came from the paying clinic, with the rest from the free clinics.

• On initial inspection, the data seemed to show some demographic differences between CAM users and non-CAM users; however, formal data analyses demonstrated no significant sex (p=0.1099), marital status (p=0.0661), age (p=0.3085), education (p=0.2297), or income (p=0.492) differences between the groups.
Who is Encouraging and Teaching About CAM Use?

- Of those who use CAM treatments for their eye health, 64% do so before seeing physicians, with 54% claiming to do so because of encouragement from a local non-professional health specialist.
- Of CAM users, 54% hear about CAM treatments from a non-professional health care specialist and 54% of patients learn how to use the treatments from these same specialists.
Reasons for CAM Use

- 9% eye trauma
- 9% eye infection
- 27% itchiness/redness
- 45% maintaining or improving visual acuity
- Cost-wise, 46% pay less than Rs10 per dose
- Only 27% of patients consider the CAM expensive, while 36% deem it appropriate and 36% consider it inexpensive.
CAM Control and Adverse Effects

- 73% of CAM users obtain them from local pharmacies that commonly carry different treatments
- 54% perceive a significant improvement after using the alternative treatment, based on personal qualitative assessment
- 91% claim the CAM treatments have no adverse effects.
Limitations

- Translation
- Language Barriers
- Anonymity and Consent
- Populations studied
- Environment of free clinic
- CAM use for other conditions
• Overall, the survey did help document the use of CAM treatments for eye health in Patna. Further research in free clinic populations can better gauge CAM usage among those patients. Research is also needed to learn more about non-professional health care specialists consulted by the population. Further research into the perceptions of Western health care could also prove beneficial in exploring why people choose CAM therapies. CAM continues to play a role, whether detected or not, in patients’ lives and doctors must be aware of these therapies in order to provide the best management of their patients’ health.
Works Cited

- Dutta, Himansu Sekhar. KAP study on herbal medicine: In project areas of FNGOs of ISMH Project. Orissa Voluntary Health Association. 2000.
Thank You
Exploring the Alternatives: Complementary Alternative Medicine Use for Eye Care in Patna

Dr. David Howard¹, Dr. Satyajit Sinha², Kristin Ow Chapman¹, and Vivian Chin¹

¹New York University School of Medicine, ²A.B. Eye Institute

Introduction
The National Institutes of Health defines complementary and alternative medicine (CAM) as “a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine... Conventional medicine is medicine practiced by holders of M.D. (medical doctor) or D.O. (doctor of osteopathy) degrees and by their allied health professionals. ... Americans have recently chosen CAM treatments for a variety of disorders with increasing frequency, yet the use of CAM for eye care is not thoroughly studied or widely discussed in American ophthalmology and optometric disciplines. The CAM options available vary as much as the reasons for choosing them. CAM treatments for eye care range from traditional vitamins to herbal remedies to homeopathic eye drops tested by yogis. Use of CAM is increasing around the world and may interact with conventionally-prescribed care in a multitude of unforeseen ways, especially because product quality is not always regulated. While some studies have shown the patterns of CAM use in the US, most research can benefit regions where people actually consider CAM the traditional form of medicine. Exploration of the prevalence and usage of CAM therapies in all parts of the world can foster optimal management of patient health care.

Objective
The purpose of this study was to collect information about the current prevalence and use of CAM treatments among an ophthalmologic patient population in Bihar, India. The study aimed to increase awareness of CAM use in order to understand how physicians could better interview and counsel their eye patients.

Background of Bihar
The authors volunteered through the organization Unite for Sight in the city of Patna, located in the northeastern state of Bihar. Bihar differs economically and socially from the urban southern states of India. Three fourths of the population is involved in agriculture; the region historically has behind all other states with regard to economic growth and per capita income. Patna is one of the three cities in Bihar to have a large hospital equipped for modern procedures. The literacy rate for women is 33%; the rate for men is 60%. The National Sample Survey Organization (NSSO) found that 32.4% of the urban population and 44.7% of the rural population live below the poverty line. Only 97 ophthalmologists serve a population of 2,878,796. 16% of blindness in Bihar is caused by diabetic retinopathy. 14% of the blind population of Bihar is due to uncorrected refractive errors.

Methods
The authors created a comprehensive survey to measure the knowledge, attitude, and practices (KAP) of CAM use while collecting demographic data. The survey’s first fifteen questions measure demographic information and the final seventeen questions explore the particulars of the specific CAM treatment, usage, outcomes, and patient perceptions. Volunteers administered the surveys at the A.B. Eye Institute (ABEI) with the assistance of native-speaking translators on staff at ABEI. The researchers asked patients 18 years of age or older if they would be willing to take a survey after completing their visual acuity exam, before consultation with an ophthalmologist. Volunteers briefly briefed patients for their informed consent prior to participation. The data was collected during a four-week period in late-June of 2008. Researchers used the Statistical Package for the Social Sciences (SPSS) to analyze the data. Categorical data was analyzed using the chi-square test, while ordinal data was analyzed using the Mann-Whitney test using software on the VassarStats: Website for

Results
In 155 surveys collected from 82 men and 53 women, 11 demonstrated CAM therapies for eye health care, indicating a CAM use prevalence of 8%. 97% of the sample came from the paying clinic, with the rest from the free clinics. On initial inspection, the data seemed to show some demographic differences between CAM users and non-CAM users; however, formal data analysis demonstrated no significant sex (p=0.1099), marital status (p=0.0861), age (p=0.2987), education (p=0.4202), or income (p=0.4022) differences between the groups.

Discussion
Overall, the process of designing a survey, collecting data, and analyzing it, has improved our understanding of CAM use and eye health care. Although we found no significant statistical differences between the groups, the small sample size was a major factor in influencing the results. We firmly believe a larger sample size will fully delineate trends of CAM use.

The data show that a majority of Indians who use CAM modalities for eye health before seeing a physician rely on non-professional health care specialists. Non-professional health care specialists can include yoga, ayurvedic, or alternative medicine practitioners, among others. From the data, these specialists appear to have a significant effect on patient education and treatment selection.

Further research defining and investigating the impact of these health care providers would help develop effective educational tools for the population. Although the survey measured use for a broad range of conditions, all of those choosing CAM treatments did so as a preventive or therapeutic measure for normally self-limiting conditions. For example, 18% of patients used CAM treatments for eye infections and 45% used CAM to improve/preserve normal visual acuity.

Patients might also consider cost in selecting CAM options before consulting a health professional, since 72% of CAM users believe them to be appropriately-priced or inexpensive. In areas with a high rate of poverty and a healthcare system that relies on charity-clinics, cost may guide patient selection of health care treatment.

As most CAM users perceive benefits and almost all deny adverse effects, the data suggest that many patients may perceive CAM as a safe, or even preferred, form of therapy. Some populations may even harbor suspicions or bias against Western medicine and its effects; further research may clarify this factor.

Limitations
The project’s many unique challenges may have affected the results. Translation and language barriers likely influenced the collection of data. Due to the challenges of communicating through interpreters, some patients may not have understood the questions regarding CAM use. Interviewer bias and respondent bias cannot be ruled out. Cultural differences between those who developed the survey and those who took the survey may have significantly shaped both the response collection and result interpretation. In addition, though the authors had hospital to gather information from all patients, the environment of the free clinics prevented much data collection from that population, yielding a much smaller sample than originally expected. The overall sample population was thus markedly skewed in favor of paying clinic patients. (The forensic environment of the free clinics may have caused patients to ignore or decline attempts to interview them.) Lastly, the survey incidentally found that people choose CAM for a variety of other health concerns, including headaches, joint pain, fatigue, blood pressure, bruises, asthma, and diabetes.

Overall, the survey did help document the use of CAM treatments for eye health in Patna. Further research in free clinic populations can better gauge CAM usage among these populations. Research is also needed to learn more about non-professional health care specialists consulted by the population. Further research into the perceptions of Western health care could also prove beneficial in exploring why people choose CAM therapies. CAM continues to play a role, whether desired or not, in patients’ lives and doctors must be aware of these therapies in order to provide the best management of their patients.