 

# ATTITUDES AND KNOWLEDGE OF NURSES' TOWARDS REFERRING PATIENTS TO COMPLEMENTARY AND ALTERNATIVE MEDICINE PRACTITIONERS, USING THE STATE OF MISSISSIPPI AS A MODEL

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## ABSTRACT

There is a growing consumer demand for complementary and alternative therapies (CAM) and health care professionals must be knowledgeable to advise their patients. The discipline of nursing is rooted in many holistic processes but the role of providing such or referring patients to CAM services has not been fully defined. Nurses are the members of the healthcare team who often initiate such a conversation with patients about CAM, and therefore the specific training and knowledge of CAM needs to be determined. Understanding the baseline knowledge and beliefs related to CAM will determine if adequate education is lacking and therefore a barrier to implementing CAM practices in the acute care setting. For a starting point, this descriptive study explores Mississippi nurses' attitude and knowledge on CAM instruction in school curriculia or during professional continued education programs. This descriptive study with a sample size of 116 participants representing 16 higher education institutions was conducted during the Mississippi Nurses Association's Annual Meetings & Conventions. The findings of this study demonstrated that 80% of nurses felt that their higher education institution did not provide adequate education on CAM. Fifty three percent reported taking some course that cover a component of CAM, and 72.41% reported never referring patients to CAM practitioners. Our findings highlighted the fact that Mississippi nurses feel more comfortable referring patients to CAM practitioners when feeling knowledgeable. This study shine light on that nurses cannot recommend CAM therapies if they are not familiar with the benefits or risks associated with CAM and adequate educational programs need to be addressed at level of nursing curricula at the university and professional organizations level to develop continued education opportunities that fit the continuously changing healthcare system.

**Keywords:** Complementary & Alternative Medicine, Nurses (CAM) & Complementary and Alternative Medicine, Complementary & Alternative Medicine Education in Nursing School

## Introduction

Complementary and alternative medicine (CAM) is characterized by its focus on the whole person as a unique individual, and it differs from traditional medicine by focusing on the energy of the body and its influence on assembling the body's own resources to heal itself. A major emphasis is placed on the treatment of the underlying causes of the disease process, rather than managing the symptoms of the disease. Many of the techniques used are the subject of debatable conversations and have not been validated by controlled studies or the FDA [1]. The 2007 National Health Interview Survey (NHIS) reported that adults in the United States spent $33.9 billion out of pocket on visits to CAM practitioners and purchases of CAM products, classes, and material. Nearly two-thirds of the total out of pocket costs that adults spent on CAM in 2007 was for self-care purchases of CAM products, classes, and materials during the past 12 months ($22.0 billion) compared with about one-third spent on practitioner visits ($11.9 billion). A total of 44% of all out-of-pocket costs for CAM was spent on the purchase of non-vitamin, non-mineral, natural products. The survey found that 38.1 million adults made an estimated 354.2 million visits to CAM practitioner, at an estimated out-of-pocket cost of $11.9 billion dollars. The majority of visits to CAM practitioners and out of pocket costs spent on CAM practitioners during the past 12 months were associated with manipulative and body-based therapies. On average, adults in the United States had out of pocket cost of $121.92 per person for visits to CAM providers. Some of the highest per-person, out-of-pocket costs were associated with visits to practitioners of naturopathy and chelation therapy, while one of the lowest per-person, out-of-pocket costs was associated with visits to practitioners of chiropractic or osteopathic manipulation therapy, and non-vitamin, non-mineral, natural products ($14.8 billion) accounted for most out-of-pocket dollars spent on CAM self-care purchases [2]. Numerous studies

 

validate the use of CAM for a variety of health issues and symptom management. Complementary therapies empower the patient to actively participate in their care and provide nurses the opportunity to provide more holistic patient care.

For many Mississippi counties the only medical services provided are provided by nurses. As a result, most patients have a standing history of being more interpersonal with their nurses, therefore having a feeling of comfort to share such information as CAM use with nurses. The objective of this study was to identify the attitudes' and knowledge of MS nurses towards CAM. The null hypothesis proposed in this study states that there is a lack of congruence between nurses' beliefs and knowledge of CAM and incorporation of CAM into nursing practice or referring patients to CAM practitioners.

# MATERIALS AND METHODS

**Population:** This study was a proactive quantitative survey that was conducted among active nurses in Mississippi (MS). The survey was developed to acquire information regarding nurses' beliefs, knowledge, and attitudes of education on CAM during their instructional training and in post professional settings. A detailed 31-question survey was constructed and administered to MS nurses whom attended MS Nurses Association yearly Conventions & Meetings throughout FY 2016 & 2017. Application for Internal Review Board (IRB) approval was granted by the University of Mississippi Medical Center (approved on November 29, 2016.)

**Mechanism of Survey Delivery:** Three regional events were utilized to administer the survey. First, with assistance and approval from the Mississippi Nurses Association, a booth was set-up on the first day of their annual event. Volunteer participants had the opportunity to register for a number of drawings in which survey participants had an opportunity to win a variety of CAM services donated by CAM practitioners within and around the state. Participants were provided with a number ticket upon completing the survey of which was later used to select the prize winner at the end of collection day. The definition of CAM was provided in the survey's introductory letter, which also served as a waiver. Participants were also provided with a district map so that their location of employment could be located based on the MS Nurses Association districts definitions. Surveys were conducted via paper based or lab-top computer. Option two was also provided using an invite email link during the conventions where participants were forwarded a link immediately and allowed to complete the survey at any given time. The completion page of the survey was required at the research booth for participants to receive an entry for the drawings. The majority of the survey questions were closed-ended; while a few questions allowed participants to write an additional comments or information. The second and third events utilized for data collection were the MS Annual Nurses Summit and the Annual Nurses' Practitioners Conference. The MS Annual Nurses Summit was held in Jackson Mississippi at the Jackson Convention Center on February 2017. The Annual Nurses' Practitioners Conference was held in Oxford, MS at the Oxford Conference Center on April 2017.

**Data Analysis:** Demographic data were collected (age, ethnicity, nursing education level, nursing specialty, and years of practice) and descriptive statistics were used for analysis. Descriptive statistics were used for data presentations including percentages for demographic data and CAM survey data. CAM survey data was analyzed a a group mean score and further analyzed into subscales for categories of knowledge and attitude.

# RESULTS

**Demographics:** According to the Mississippi Nursing Association approximately 1500 nurses and students attend the annual meeting (700 are students) and 1200 that attend the summits (should be noted that the majority were students). A total of 116 nurses (met the criteria) and completed the survey, which represented a 15% response rate. This represents a convenience sample of registered nurses from across MS. The survey respondents were primarily female (96.55%) and ranged in age from 21 to over 60, with the highest participation among the age group of 30-39 (32.76%) (Figure 1). The majority of participants is this studied identified as Caucasian or white (50%) or Black/African American (47.41%), followed by Asian (2.59%), and with one participant identifying as Latino (Figure 2). Figure 3 demonstrates the years of nursing practice, and shows 70% of the nurses participating in the survey had greater than 10 years of nursing practice and an even distribution of nurses in the 0-4 years (13.91%) and 5-10 years (15.65%) of nursing practice. The majority of nurses (41.74%) participating in the survey selected other as a nursing specialty, while 14.78% identified as with psychiatry and 11.30% identified as medical/surgical nurses (Table 1).

 

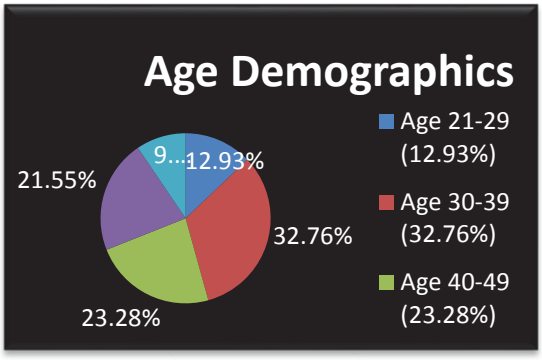


Figure 1: Participants Age Demographics

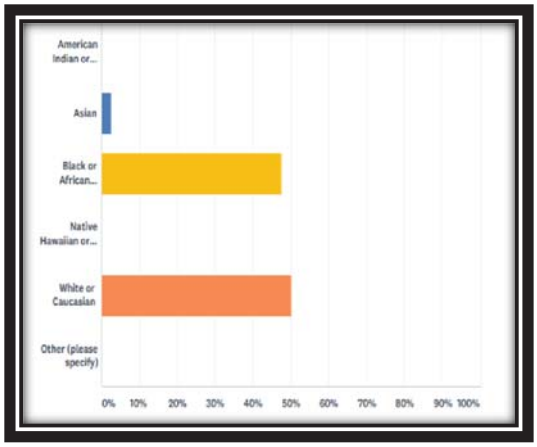


Figure 2: Participants Race Demographics

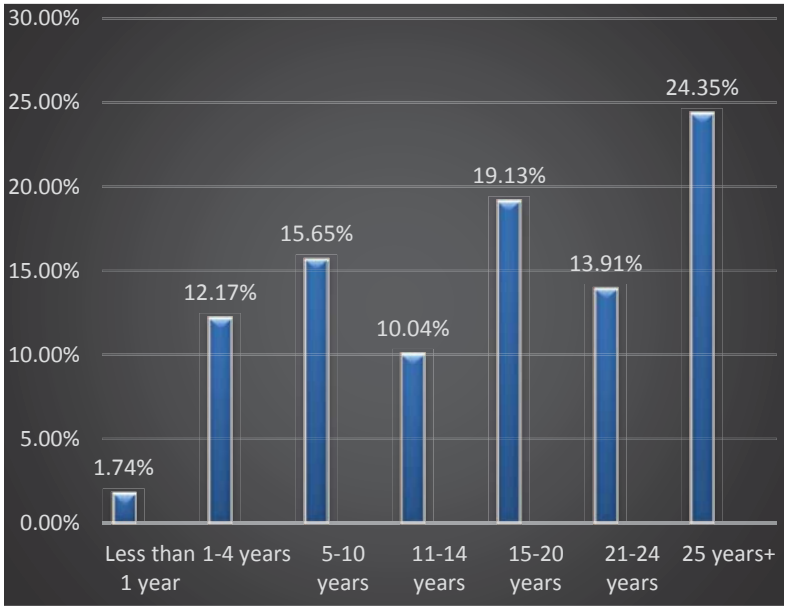


Figure 3: Percentage of Years of Work Experience Among Participants

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Table 1: Participants Working Areas

| Area of Nursing | Total | Percentage |
|---|---|---|
| OR/PACU | 2 | 1.74% |
| Critical Care | 6 | 5.22% |
| Medical/Surgical | 13 | 11.30% |
| ER/Trauma | 4 | 3.48% |
| Management | 4 | 3.48% |
| Telemetry/PCU | 2 | 1.74% |
| Geriatrics/LTC | 3 | 2.61% |
| Psychiatry | 17 | 14.78% |
| Home Health/Hospice | 2 | 1.74% |
| Women's Health/Labor | 3 | 2.61% |

 

| | | |
|---|---|---|
| **Pediatrics/PICU** | 5 | 4.35% |
| **Oncology** | 0 | 0.0% |
| **NICU/Neonatal** | 2 | 1.74% |
| **Rehab** | 4 | 3.48% |
| **Other** | 48 | 41.74% |
| **N/A** | 1 | 0.87% |
| **Total** | 116 | 100% |

**Knowledge:** Among the participants, 99/116 (84.34%) attended a higher education institution in the state of Mississippi, while 17/116 (14.68%) attended institutions out of Mississippi. The results revealed that over half (53.04%) of surveyed participants reported taking courses during their education journey with a CAM education component, and 39.13% have indicated that their curricula lacked courses with a CAM education component. A total of 7.83% stated that they were not sure or not remembering if any course was taken that covered a CAM education component. For questions addressing adequately prepared 80% of the survey participants reported not feeling adequately educated on CAM within their chosen nursing programs, for both in and out of state educated participants. In exploring the possibilities of ever attending a lecture, workshop or seminar on any form of CAM, a total of 80/116 (68.97%) reported never having done so and 36/116 (31.03%) reported attending a variety of lectures/seminars on CAM (Table 2). When evaluated by age, it is interesting to note that the nurses >50 years of age felt that they had knowledge of CAM compared with the other age groups.

When asked how important they felt that CAM education among nurses? The majority of participants (97.39%) felt it was important (with choices being very important, important, somewhat important, not important, no interest). Eighty seven percent of surveyed participants supported the ideal of providing additional training to nurses to become CAM educators. Of the participants at large percentage, 72.41% did report future plans of continuing their education.

A Chi Square test was conducted to identify if associations exist between nurses' feelings of institutions providing adequate education on CAM and nurses feeling comfortable talking to patients about CAM. With a $P$=0.007, there was an association between nurses' feelings of institutions providing adequate education and nurses feeling comfortable talking to patients about CAM. Data analysis (Chi Square) was also conducted to identify if associations exist between nurse attending a higher education institution in the state of Mississippi and nurses feeling comfortable talking to patients about CAM. With a $P$=0.875, there were associations between attending a higher education institution in Mississippi and feeling comfortable talking to patients about CAM.

**Table 2: Reported findings on participants input by age groups on "If participants have attended a Lecture or Seminar on any form of CAM?"**

| Age Groups | Lecture/Seminar on CAM | Lack of Lecture/ Seminar on CAM | Total |
|---|---|---|---|
| **20-29** | 2.59% | 10.34% | 12.93% |
| **30-39** | 6.05% | 26.72% | 32.77% |
| **40-49** | 5.17% | 18.10% | 23.27% |
| **50-59** | 12.07% | 9.48% | 21.55% |
| **60+** | 6.9% | 2.59% | 9.49 |
| **All Ages** | 31.03% | 68.97% | 100% |

 

**Beliefs:** Survey questions asking specifically about CAM therapy including prayer that were discussed or recommended to patients showed that majority of the participating nurses have discussed or recommended the following types of CAM: Prayer/Spiritual practice (48.08%), Exercise Planning (46.15%), Massage Therapy (42.31%), and Chiropractic (27.88%). The least recommended services among Mississippi nurses included Touch Therapy (0.96%), Reflexology (1.92%, and Biofeedback (2.88%). Other recommended services were Herbal Medicine (20.19%), Yoga (18.27%), Meditation (16.35%), Music Therapy (15.38%), Acupressure (13.46%), Art Therapy (7.69%), Animal-Assisted Therapy (6.73%), Hydrotherapy (6.73%), Aromatherapy (3.85%), and Tai Chi (3.85%). Approximately 30% of the nurses reported never discussion CAM. When asked if they felt patients would be receptive to CAM When asked if they feel that patients are receptive to the use of CAM, 59.65% reported that patients are and 40.98% felt patients were not receptive of was not sure of patients' receptiveness towards CAM (Figure 4). Even though the patients are receptive to CAM and the nurses report having discussed CAM modalities with patients 72.41% reported never referring patients to CAM practitioners.

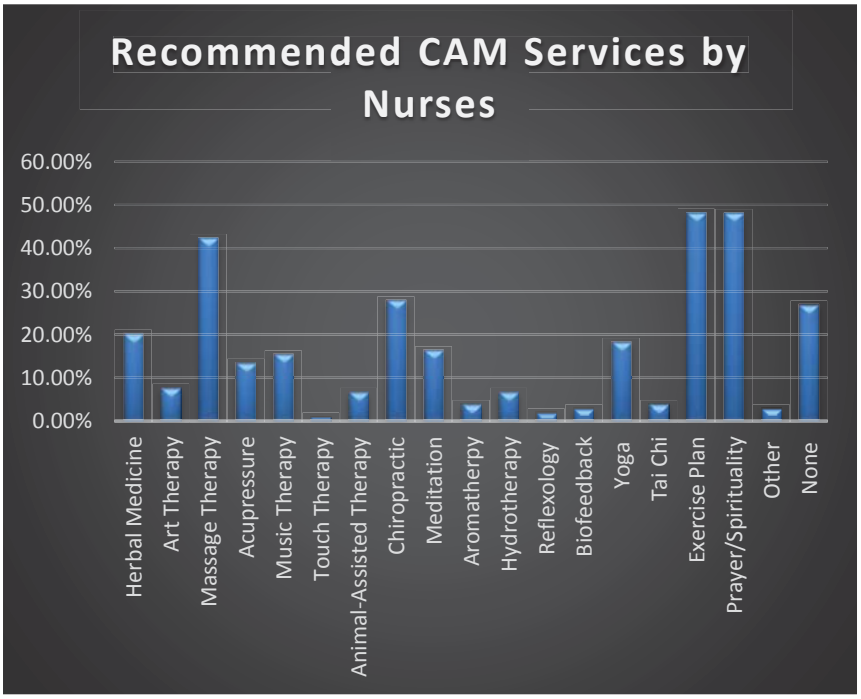


Figure 4: CAM Services Recommended to Patients by Nurses

Our null hypothesis states that there is a lack of congruence between nurses' beliefs and knowledge of CAM and incorporation of CAM into nursing practice or referring patients to CAM practitioners. Chi Square was performed to identify associations which may exist between nurses referring patients to CAM practitioners and nurses' feeling comfortable talking to patients regarding CAM, and the data supports rejection of the null hypothesis ($p=0.000$). In addition, most nurses (88.60%) did report feeling that CAM is safe when practiced by a trained professional but 72.41% reported never referring patients to CAM providers. When asked about their personal desire to integrate CAM and Traditional Medicine, 91.23% desire the integration of the two.

## DISCUSSION

As demands for CAM grows, services being addressed by nurses in the medical community will need to be enforced. To address the gap between what CAM consumers are utilizing and what the medical community has to offer, the need to include CAM therapy as part of clinical practice as well as training nursing through curriculum changes and continuing education offerings is questionable [1]. In our findings, we found that over half participating nurses feel that CAM is safe when used correctly, but the majority do not refer patients to CAM practitioners. Data obtained from this study highly suggest that nurses' level of comfort with CAM plays a role in the nurses' motivation to refer

 

patients to CAM. We see that over half of the participating nurses would recommend CAM to patients, but less than half refer patients to actual CAM practitioners.

It is obvious that when people are confronted with illness, particularly chronic illness, they tend to engage in any means to eliminate the pain including the use of CAM. Recent research findings have validated CAM as an effective treatment of stress, anxiety, and other symptoms. Many patients report turning to prayer for direction regarding treatment decisions and disease management. In one study conducted by NCCAM, they examined the use of CAM in a population of 31,000 people in the United States. Research from this NCCAM study showed that 36% of people use some form of CAM. When prayer was included in the definition of CAM, the statistic increased to 62% [3].

Results from our study support the use of prayer being the most highly used (76%) and the most highly recommended (48.8%) CAM among Mississippi nurses. Compared to the other practices in the NCCAM study, such as yoga and tai chi, prayer was also the most popular alternative form of therapy [4]. Exercise/physical activity alone has proven to change several healthcare conditions just by simple incorporating an exercise regime into a lifestyle without a regular exercise regime. Exercise has also been the root of multiple health benefits in anthropometric measures, aerobic capacity, QOL, and depressive symptoms among patients with psychiatric disorders [5]. Massage therapy has truly been one CAM that has made a mainstream appearance in today's healthcare system, with many facilities now providing massage service as a treatment modality. In our study massage therapy was the third highest (42.31%) recommended CAM therapies among Mississippi nurses. The use of herbs is particularly stronger for use than any other supplements. Our study identifies that Herbal Medicine/Supplements were not as frequently recommended (20.19%) to patients by nurses.

This study also reveals a nurses' population, using Mississippi as a model, feeling comfortable making CAM referral when having knowledge of the particular CAM service being recommended. Nurses who participated in this survey expressed a significant positive feeling towards learning more about CAM knowledge and plans of continuing education in the future. They showed an interest in being able to provide more advice to their patients on CAM modalities. The limitations of this specific study include the small sample size in comparison to the large number of nurses practicing in the state, as well as, the low male response rate. Future research should be conducted with a larger sample size from various states and include the nurses' level of knowledge for each CAM modality. Future research should also investigate patient's feelings regarding communication on CAM use to their healthcare providers (nurses or physicians).

## Conclusion

This study suggests that there is a need to revisit nursing schools and nursing continued education curriculums to fit the continuously changing healthcare system and the popularity of CAM among patients. Our findings demonstrate the fact that Mississippi nurses feel more comfortable referring patients to CAM practitioners when they feel knowledgeable about the CAM modality. Findings also highlighted the associations between the feelings of unpreparedness among Mississippi nurses and attending a higher education institution in the state of Mississippi. Such findings could and should pave the way of higher education institutions directions in program curricula planning and professional organizations curricula develop for continued education conferences, to better serve a continually evolving healthcare system.

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## DISCLOSURES

The authors do not have any financial or conflicts of interest to disclose.

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