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The cost of professionalization: a case study of osteopathic medicine in the united states

Rochelle Harris

University of South Florida

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The Cost of Professionalization: A Case Study Of
Osteopathic Medicine In the United States

by

Rochelle Harris

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Anthropology
College of Arts and Sciences
University of South Florida

Major Professor: Michael V. Angrosino, Ph.D.
Jay Sokolovsky, Ph. D.
Nancy Romero-Daza, Ph.D.
Gregory Paveza, Ph.D.
Michael Weitzner, MD.

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DEFINITION OF TERMS

The following terms are explained to convey the operational definition that is used in this research investigation:

Allopathic medicine (also referred to as *Biomedicine, Western, Cosmopolitan, Modern, Orthodox, and Conventional*): the dominant system of medicine practiced in the United States that approaches the body and its disease as essentially physical systems.

Alternative medicine: the use of therapies as substitutes for biomedical treatment.

Complementary medicine: the use of alternative medicine in conjunction with biomedicine.

Graduate medical education or postgraduate education: programs that provide training in the medical specialties and subspecialties; that is, internship and residency programs for physicians who have already graduated from medical school.

Holistic medicine: the art and science of healing that addresses the whole person – body, mind, and spirit. The practice of holistic medicine integrates conventional and alternative therapies to prevent and treat diseases to promote optimal health.

Integrative medicine: a system of medicine that integrates biomedicine with Complimentary and Alternative Medicine (CAM).

Osteopathic medicine: a form of alternative medicine that is based on the premise that the body's musculoskeletal system enables it to function properly and to resist disease by empowering the immune system.

Primary care: the specialties of medicine that most often act as the first point of contact with the patient, including family medicine, general internal medicine, pediatrics, and obstetrics and gynecology.

Professionalization: the process of creating identifiable structures of knowledge, expertise, work, labor markets, with distinctive norms, practices, ideologies, and organizational forms (Barnes, 2003). Included in this process are regulating the educational process and related training, forming professional associations and developing a code of ethics, securing credentialing and licensing, and exercising internal control of the group over its members' practices (including peer review).

The Cost of Professionalization: A Case Study of Osteopathic
Medicine in the United States

Rochelle Harris

ABSTRACT

The purpose of this study was to investigate the co-optation of the heterodox medical system of osteopathic medicine by the hegemonic medical system of biomedicine and its impact on the practice of osteopathic medicine in America. The study particularly explored students (n=20), practitioners (n=5), and faculty (n=5) regarding their views of osteopathic medicine. The process of professionalization of osteopathic medicine has caused DOs to become more akin to MDs, which may have led to an identity crisis within the profession. This case study took place at a private osteopathic medical school in the Southeastern U.S. A content analysis of the interviews, direct observations, and curriculum analysis was conducted to answer the qualitative research questions in this study. The qualitative research questions required in-depth interviews, direct observation, survey questionnaires and analysis of curriculum. The quantitative analysis portion was done using Chi-square analysis. Statistical findings from the quantitative research questions of the analysis supported the qualitative conclusions. The results of the supported study related literature on students, practitioners, and faculty views of osteopathic medicine. However, overall the sample was equally divided regarding the view that osteopathic medicine was not distinctive from allopathic medicine.

Chapter One: Introduction

For much of its nearly 125-year history, the osteopathic profession has had an uneasy, sometimes bitter, relationship with the M.D. community (Guglielmo 1998). For many years, doctors of medicine (M.D.s) looked upon doctors of osteopathy (D.O.s) as cultists practicing a pseudoscientific form of medicine according to the osteopathic principles laid out in 1874 by founder Andrew Taylor Still. As a result of being shut out by the MD community, D.O.s started their own schools, hospitals, and practices, including their own version of the AMA - the American Association for the Advancement of Osteopathy, renamed the American Osteopathic Association (AOA) in 1901. Thus, D.O.s and M.D.s inhabited two parallel and, in many ways, distinct spheres of American medicine.

In the 1930s, however, D.O.s began to adopt more and more allopathic practices and standards in order to have a greater scope of practice and to achieve parity with M.D.s with respect to the minimum standards governing undergraduate and graduate education (Gevitz 1994). As a result, in an effort to professionalize themselves, osteopathic physicians underwent a co-optation and absorption by organized biomedicine on the one hand and preservation of therapeutic and organizational distinctiveness on the other (Baer 2001).

A study by New (1958) revealed that osteopathic practitioners and medical students faced a dilemma concerning their identity. They wanted to be

considered complete medical practitioners, but at the same time wanted to be seen as different from M.D.s. In the mid-1960s, D.O.s were permitted to join the American Medical Association (AMA) (Guglielmo 1998). However, as Eckberg (1987) observed, osteopathic physicians continued to exhibit the identity dilemma that New (1958) had detected almost thirty years earlier.

Even though osteopathic medicine has gained a measure of legitimacy as a parallel medical system to biomedicine, the field continues to struggle with identity issues. The number of colleges of osteopathic medicine has grown substantially, and about 8,000 D.O.s (or twenty percent of their total) belong to the AMA (Shepard 2001). Yet questions about the uniqueness of osteopathic medicine and its practitioners still persist. This study focuses on whether the osteopathic profession is really in danger of losing its distinctive character.

When reviewing the literature for my research, I wanted to look at as much anthropological literature on the subject of professionalization and osteopathic medicine that I could find. Much of the anthropological literature focused on complementary and alternative medicine, holistic medicine and biomedicine. The main contributions to the medical anthropological literature were contributed by Hans Baer (2001; 2004). He has written many articles and two books on the biomedicine and alternative healing systems in America, which specifically describe the issues relating to Osteopathic medicine in America.

In Chapter Four, as well as other chapters throughout this dissertation, specific medical anthropological contributions are described as well as how this study can contribute to the paucity in the medical anthropological literature. Most of the

literature pertaining to professionalization and osteopathic medicine lies in the medical sociological literature.

Statement of the Problem

While few biomedical physicians function within osteopathic settings, osteopathic physicians frequently practice in biomedical ones. As a result, the osteopathic medical profession has adapted the culture of the hegemonic, or dominant, medical system in the United States. The process of professionalization of osteopathic medicine has caused D.O.'s to become more like M.D.s, which has created an identity crisis within the profession.

Research Purpose

The purpose of this research study is to examine how the co-optation of the heterodox or alternative medical system of osteopathic medicine by the hegemonic or dominant medical belief system of biomedicine has impacted the practice of osteopathic medicine in the United States, specifically in Florida. The study seeks to identify those who choose to study osteopathic medicine and ask why. It is also concerned with what osteopathic medicine has to offer through its curriculum, and how this training affects osteopathic practice.

Research Questions

The research study is designed to answer the following questions:

1. What are the influences that lead students to choose osteopathic training?

2. What holistic courses are offered in osteopathic medical training?
3. To what extent do D.O.'s practice holistic medicine?
4. What training in osteopathic medical school influences the practice of osteopathic medicine?

Significance of the Study

This study is an important contribution to the existing body of medical literature on the evolution of a heterodox medical system – osteopathy – as a profession and its co-optation by traditional medicine. More research and study regarding the various aspects of training and practice of osteopathic physicians is needed. Expanded knowledge in this area will influence how osteopathic students are recruited by medical schools, what courses are offered to the students, and how the professional training and philosophy of osteopathic medicine will impact the practice of osteopathic medicine in the future. This study provides osteopathic medical schools with a greater understanding of why their students choose to train in osteopathic medicine, how their training has helped them achieve their goals, and how their training and goals influence their practice of medicine.

Conceptual Framework

The sociological theory of “profession” contributes significantly to this research study. The concept of profession has a political history, and there is substantial debate in the literature over the definition of the term. Initially the

meaning of “profession” originated from a religious vow (Kimball 1992).

Protestant reformers extended the term to include not only monastics and priests but also their own laity and clergy. Over time, profession came to mean “vocation” (Kimball 1992) and retained an idealized aura of altruism and selfless service.

Professionals have been defined by a set of traits, including specialized skills and training, esoteric knowledge, limited membership associations, codes of ethics, a service orientation, income by fees rather than wages, and recognition of their authority by the larger society (Davis-Floyd and St. John 1998). Leicht and Fennell (2001) noted that professions can be understood as institutions that “represent identifiable structures of knowledge, expertise, work, and labor markets, with distinctive norms, practices, ideologies, and organizational forms.” Barnes (2003) provided a more thorough explanation.

“Profession” can refer to the conventions by which people recognize a given expertise, including knowledge and related skills. It can include measures taken to: elevate the status of a particular group; regulate the educational process and related training; form professional associations and a code of ethics; secure credentialing and licensing, by the state; exercise internal control of the group over its members’ practices (including peer review); retain the exclusive right to perform this form of work, along with the power to handicap or exclude competitors (including making it illegal to practice otherwise); and promote measures to advance the economic interests of practitioners. Professions can be understood as institutions that “represent identifiable structures of knowledge, expertise, and work, labor markets, with distinctive norms, practices, ideologies, and organizational forms (p.263).

Many social scientists have constructed an ideal type that is used as a measure of the degree of professionalization achieved by different occupational groups. Other scholars view professionalization as the degree to which an

occupational group has exclusive access to a particular type of work and the power to delegate related work to subordinate occupations (Larson 1979).

Within the holistic health movement, a drive toward professionalization has been ongoing as schools of alternative medicine and organizations of alternative practitioners seek to obtain legitimacy. Legitimacy generally comes in the form of state licensing or certification or via recognition from an accrediting agency, including agencies specific to the alternative medical system. Friedson (1994) observed that the patterns of seeking legitimacy and attaining professional stature of professionalization of alternative medical systems may illustrate, on the one hand, that the dominance of traditional organized biomedicine is limited. On the other hand, these patterns may also reflect the growing accommodation of alternative practitioners, including holistic health care practitioners, of the biomedical model of organization and social control. Gallagher, Humphrey, and Micozzi (2001) pointed out that professionalism may come at too high a price. In an effort to achieve professional parity with M.D.s, D.O.'s have become too much like M.D.s. In the process, distinctive practices like osteopathic manipulative treatment (OMT) are being lost. Perceived barriers to the use of OMT, individual attitudes toward OMT, specialist versus generalist orientation, and post-graduate training environment have been implicated as important explanatory factors for the declining utilization of OMT (Johnson and Kurtz 2001). This dissertation contributes to the notion that D.O.'s actually may be contributing to their own co-optation by traditional medicine (Baer 2004).

Larson (1979) argued that professionalization "is aimed at monopoly: monopoly of opportunities in a market of services or labor, and inseparably, monopoly of status and work privileges in an occupational hierarchy." However, as Morton and Morton (1996) observed, Larson's view, as applied to the practice of medicine, assumes that biomedicine is dominant over other forms of medicine and ignores the struggle of heterodox medical practitioners (such as osteopaths) for greater autonomy. However, the authors noted that biomedical physicians have come to realize that they are losing many of their most affluent patients to alternative practitioners, and many have begun to incorporate alternative therapies into their own regimens of treatment. Kotarba (1983) noted that while some holistic M.D.s subscribe to the philosophical underpinnings of various alternative medical systems, others adopt their techniques without subscribing to the ideology of the holistic health movement.

Jonas (1998) observed that "in the 1980s, holistic medicine came to be appropriated by a commercial movement that brought together biomedical practitioners who advocated the use of various unorthodox interventions (massage, dietary treatments, herbalism, acupuncture and so forth) and mind-body techniques that had not been widely applied in primary care with a variety of alternative practitioners." Gordon (1984), a holistic MD and proponent of holistic health centers, warned that there is a danger that these centers "will continue to be primarily a luxury for the wealthy, that their doctrine of self-help and individual responsibility will be perverted to the public neglect."

Baer (1999) believed that despite the claim on the part of holistic health proponents that they wish to contribute to a process of demedicalization by shifting responsibility for health care from the physician to the patient, the growing emphasis on the holistic model within biomedicine may actually be contributing to further medicalization in U.S. society. Lowenberg and Davis (1994) observed, "holistic health practice ultimately extends the control of medical definitions and even gate keeping to incorporate far wider arenas of lifestyle, spirituality, work and family" (p.592). The authors also noted that although holistic medicine may prompt its clients to undergo lifestyle changes, various scholars have argued that holistic medicine inadvertently downplays the political, economic and social origins of illness.

Professionalism and Status

Weber's (1978) concept of "profession" included the "status group," whose members share certain readily definable criteria: style of life, formal education, and prestige. Accordingly, osteopathic physicians form a status group whose lifestyle commitments (to holistic medicine, OMT, general practice) have played roles in keeping its members from sharing the status of allopathic medicine (Weber 1978). Therefore, as Page and Clelland (1978) pointed out, one would expect status groups to proliferate and regular conflict to occur most often in areas where prestige and lifestyle commitments (or practice) are at issue.

The current dilemma of D.O.'s represents a clash between prestige and differences in professional "styles of life" (i.e., "practice") with M.D.s. Even with the narrowing of differences between the two branches of medicine, D.O.'s have

not achieved the level of prestige of M.D.s (Gevitz 1982). Weber observed in 1974 that there appeared to be three sources of their prestige deficits. First, they deviated from the model of professional achievement that was dominant in medicine, such as adhering to specialties that require the greatest technical proficiency and offer the greatest chances for heroic action in ordinary practice (Bloom 1973; Shortell 1974). Second, they continued to use Osteopathic Manipulation Therapy OMT to some extent. Third, osteopathic medicine's "holistic" orientation was sometimes tied to accusations that it is a "cult."

A mid-70s study of the relative prestige rankings of the allied health professions ranked D.O.'s toward the bottom of forty-one top professions (Shortell 1974). M.D.s and patients each ranked them thirty-seventh, while graduate business students ranked them thirty-first. The only three professions D.O.'s outranked for all three groups were practical nurses, nurses aides and chiropractors. Another study from the mid-70s showed that a large proportion of D.O.'s did not believe they had high prestige and believed that D.O.'s themselves looked down on the profession (Leahy 1975). In general they believed the public did not understand them, that they faced prejudice, and that the DO degree reduced their income. Most preferred a different degree (most commonly the MD) or a combination of degrees. The percentage preferring only the DO degree was lower than in the early 70s (Leahy 1975).

As noted by Guglielmo (1998) and Gallagher, Humphrey and Micozzi (2001), this dilemma continues to the present day. While D.O.'s have been able to model their practice after that of M.D.s, they may have yielded some of their

commitment to a unique identity and style of practice and become an indistinguishable part of mainstream medicine.

Abbott (1988) developed a comprehensive sociological theory to account for the origin, growth, division, fusion, and disappearance of professions, which is relevant to the health-related professions as they compete with each other over “workplace jurisdictions.” Defining professional power as “the ability to retain jurisdiction when system forces imply that a profession ought to have lost it,” (p.18) he argued that jurisdictional invasion generally begins in the workplace, then moves to the public mind, and then into the law. Abbott notes how long it usually takes for the system to reach equilibrium after a jurisdictional challenge. Jurisdictions, he explains, are renegotiated in workplaces over two to three-year periods, in the public’s mind, over ten to twenty-year periods, and in the law, over twenty to fifty year periods. Abbott’s propositions fit the field of osteopathy quite well and can be used together with the author’s classification of health professions to help understand shifts in the relative positions of health professions. The experience of osteopathic medicine is an illustration of the variety of tactics and strategies used by organized medicine to remain dominant and to set societal priorities.

Abbott (1988) also noted that professions are organized into an interacting system in which they compete for power. Professions compete with one another and between themselves and bureaucracies for jurisdiction over work. Abbott (1988) contends that "Control of knowledge and its application means dominating outsiders who attack that control." In his view, the jurisdictional claims made by

members of a profession as they assert their authority or strive to gain status are inextricably linked to the claims of others. Professions grow when there are niches in the system into which they can grow (Burt 1992). They change when other professions challenge them by threatening their control over particular kinds of work. The success of a profession in occupying a jurisdiction reflects the struggles of its competitors as much as the profession's own efforts. Abbott (1988) sees the history of professions as the history of recurring battles over turf, and the key events in this history are those that create new jurisdictional boundaries or abolish old ones. He argues that a profession "cannot occupy a jurisdiction without either finding it vacant or fighting for it." Kasovac (1999) has referred to these opportunities as "filling of vacancy chains. "

In the case of healthcare, treating all the health occupations and professions as a system points to the importance of competition between countervailing powers over jurisdiction. Contesting groups such as CAM practitioners, i.e. osteopaths, can only gain professional legitimacy if they can appropriate healthcare jurisdictions vacated or left unprotected by others. In this struggle, the medical profession (allopaths) still holds the most powerful position. Medicine's claims to scientific knowledge and the claims of the allied professions working in conjunction with medicine have won legal and social recognition and a commanding market position. Friedson (1986) has argued that if a profession is to "accomplish" itself, it "cannot fail to include taking into account the conceptions of members of other occupations with whom interaction takes place, and negotiating with them some workable agreement." Osteopathic medicine did not

always "negotiate" with other professional groups, which has served to create a questionable professional identity.

Any discussion of a unique professional identity must consider professional values, or what an organization believes to be preferable or desirable. Professional values are purportedly honed by professional education, socialization, and work experiences (Abbott 1988). Values represent the underlying philosophy, specific attitudes, and opinions that lead to actions or behavior (Meddin 1975). Northrup (1966) effectively explicated the values of osteopathic medicine as essentially a medical philosophy that encompassed key underlying principles: conceptualizing the body as a unit, recognizing the self-healing and self-regulating qualities of the body, acknowledging the reciprocal relationship of body structure and function, and basing medical treatment upon a rational application of these principles. The persistent difficulty that the osteopathic profession experiences with being considered a separate identifiable profession often is attributed to low public awareness of osteopathic philosophy and principles (Kasovac 1999).

Anthropological Framework of Professions

Writing from an anthropological perspective, Last (1990) states that "profession" has a set of meanings wider than those used in sociology. Even within sociology, after nearly a century, the range of definitions remains large and the debate over them continues. Last's theory of professions deals with medicine, the way it is organized, and the way systems of knowledge are

structured. Last (1990) seeks a comparison between medicine as it is practiced in different cultures. The author notes that among professions, medicine is an extreme case. It is more regulated and more exposed to public scrutiny, and it has stricter social closure and more particular privileges in courts of law. Medicine has become increasingly specialized, with numerous health-related services seeking similar forms of organization and regulation to become professional. It has also retained an unusually high status (Becker 1970; Larson 1977; Friedson 1986; Johnson 1972; Dingwall and Lewis 1983; Jacob 1988).

According to Last (1990), the wider anthropology of medical professions include an extended self-conscious grouping of healers with defined criteria for membership (whether through licensing, certification, or registration). An expertise over which it takes primary control and that claims to be more than a craft and has in addition an esoteric, theoretical basis.

Included in this theory of professionalization are three elements. First, professions of medicine function primarily within a national medical culture, with certain professions claiming for themselves a universal validity. These claims are significant in the struggles over professional recognition and dominance within the national culture. But despite the claims, all systems of medicine are in varying measure culture specific (Last 1990).

Second, these national medical cultures are partly the product of a nation's ruling political philosophy and partly the product of the ways people express their health needs and find solutions for them (Last 1990). Yet popular support, from patients and their kin, is also a crucial factor in formulating the

diverse medical subculture labeled indigenous or traditional medicine (the term conventionally used to replace “native medicine” and “folk medicine” includes practices that may not, in fact, be traditional). These two perspectives of professionalization, the author notes, are usually at odds with one another.

Third, professionalization is one solution to the dilemma of traditional medical practitioners in the face of unequal competition from other systems of medicine (Last 1990). Professionalization requires being organized in a form, recognized and respected within the national culture that can best represent the interests of practitioners and their patients (Chambers 1986).

Last (1990) notes that the concept of a national medical culture denotes an arena in which competition between medical systems takes place, with professionalism as one factor in that competition. Professions of alternative medicine, such as osteopathy, may be recognized by government and the public alike as a formal system of therapy, with a set curriculum taught in special colleges or as a special subject. This model seeks to modify, through strict and detailed regulation at the state level, a free medical market (Friedson 1986; Starr 1982; Navarro 1986).

Last argues that professionalization is one of the solutions to the dilemmas healers face in confronting competition from alternative medical systems, particularly from biomedicine. His argument links the profession of medicine to the structure of the state and to cultural ideologies. Thus, national medical cultures are the products of dominant political philosophies, as well as cultural responses to health care needs. Competition from biomedicine represents a

serious threat to the existence of indigenous medicine. Last (1990) states that organizing healers professionally is one policy alternative for maintaining their viability in health care delivery systems increasingly dominated by biomedicine. This has been one of the struggles within the osteopathic medical profession.

Chapter Two: Relevant Literature

The Rise of Biomedical Hegemony

Biomedicine is the formal name for the health care system in which the primary practitioners earn the degree of M.D. It is also called allopathy. These names emphasize aspects of this system's explanatory model. Other names, such as western, cosmopolitan, modern, orthodox, and conventional, emphasize biomedicine's expanded or dominant position.

The power to define what is regular and culturally sanctioned as normative has persisted throughout the history of western medical sciences (Conrad and Schneider 1992; Foucault 1973; Rothstein 1972). The exercise of this power was apparent during the medically eclectic environment of the nineteenth century, when the rise of the allopaths was accompanied by their labeling of other healing sects and traditions as irregular and unorthodox (Ehrenreich and English 1978; Loustau and Sobo 1997). Thus, biomedicine was the system or the "ethnomedicine in American society that has been controlled and promoted by upper-and upper-middle class European Americans (Hahn and Kleinman 1983).

Janiger and Goldberg (1993) noted that to a certain extent, the dominance of allopathic medicine was justified. Many diseases that had plagued the world, including cholera, typhoid fever, diphtheria, and smallpox, were brought under control through allopathy. These successes, along with new instrumentation for

diagnosis and treatment, led to the increasing status of and control by the allopathic medical system vis-à-vis health care in general in the western world. Funding for clinics, hospitals, and research was directed almost exclusively toward organizations that were part of the mainstream (Janiger and Goldberg 1993).

Medical Anthropological Literature

Larson (1979), on the other hand, noted that professions such as biomedicine and law are able to control the production of knowledge and are able to translate “symbolic capital” into dominance over competing occupational groups, including alternative health practitioners. Thus, non-biomedical health care modalities were relegated to the fringes of American culture, while scientific medicine was positioned at the center. The pre-eminence of scientific medicine was reinforced by a report published in 1910 by the Carnegie Foundation for the Advancement of Teaching entitled “Medical Education in the United States” (Janiger and Goldberg 1993). The report became known as the Flexner Report, which recommended a system of standardized training, licensing, and regulation to accredit schools and bring order to the indiscriminate medical system that had evolved (Janiger and Goldberg 1993). Schools that did not meet the Flexner standards were not accredited, and nearly half of the medical schools in the United States closed (Janiger and Goldberg 1993).

While biomedicine remained the hegemonic medical system throughout the twentieth century, other healing modalities continued in selected multiethnic neighborhoods and rural communities. In the 1960s, non-biomedical therapies

moved to a position of more prominence as widespread interest emerged in counter-cultures that emphasized alternative healing movements. Throughout the 1970s, 1980s and early 1990s, the prevalent terms applied to such movements included holistic, alternative, and unorthodox medicine (Gevitz 1988).

Until the 1990s, alternative healing was considered an option whereas mainstream medicine and its practices were always strongly recommended. Yet in the early 1990s, alternative medicine became partially legitimized as a more mainstream option through the establishment of the federal government's Office of Alternative Medicine (later renamed the National Center of Complimentary and Alternative Medicine) in the National Institutes of Health. In 1992 Congress mandated the establishment of the Office of Alternative Medicine within the National Institutes of Health (NIH), which helped legitimize Alternative medicine. (Baer 2004). The acronym CAM has subsequently been adopted by the National Institutes of Health to refer to complimentary and alternative medicine (Muscat 1999).

As more doctors, nurses, and other health care practitioners became interested in non-biomedical therapeutics, an accepted position for non-biomedical modalities emerged through their labeling as complimentary. As a result, some alternative therapies could now be envisioned as adjuncts to biomedicine, instead of unsanctioned replacements (Gallagher, Humphrey and Micozzi 2001). This acceptance of the subordinate position of complimentary therapies was typically contingent on certain conditions, such as licensing requirements and empirical studies in the scientific, peer-reviewed literature

(Spencer and Jacobs 1999). Even so, funding for such studies still lagged behind that of conventional medical research (Horn, Altoff and Nachatalo 2001).

Non-biomedical practices were further legitimized in the late 1990s, when the term “integrative” came into widespread use. However, the term integrative and its meanings may vary depending on who is employing the concept. Gordon (1996) and Werbach (1986) claimed that the central principle of the integrative model is the act of tailoring the most beneficial treatment or healing plan specifically to each individual patient.

Cant and Sharma (1999) observed that integrative medicine is a loosely used term that can refer to any situation in which alternative and orthodox medical practitioners interact beyond the level of simple interpersonal referral. According to the authors, the practice of integrative medicine will not truly occur until institutions such as hospitals cease to view doctors who practice orthodox medicine as primary and doctors who practice alternative medicine as secondary.

Professionalization of Osteopathic Medicine

The struggles among emerging medical sects consumed much of the time of osteopathic medicine and other non-traditional approaches that were developed in the late nineteenth century in response to perceived inadequacies of traditional medicine in the United States (Gevitz 1982). During this turbulent time, Andrew Taylor Still, a rural Missouri allopath, rejected the prevailing medicine of his day, in particular its reliance on drugs, vaccines, serums, and

modalities such as electrotherapy, radiology, and hydrotherapy. His disenchantment with regular medicine occurred when it failed to prevent the death of three of his children from meningitis.

Still conceptualized and began teaching a more mechanistic approach to healing (Starr 1982). He developed an approach to care that he called “osteopathy.” By employing hands-on therapy to correct the body’s structural abnormalities (manipulation therapy), Still believed physicians could enhance the body’s natural tendency toward health and self-healing (Guglielmo 1998). Still’s idea of manual manipulation realigned the vertebrae, which would correct the structural imbalances and alleviate the diseases ostensibly caused by the misalignment (Starr 1982). In addition to a mechanistic component, his system also had a metaphysical component in that he viewed osteopathy as “God’s law” and the body as a God-given machine.

Still was unsuccessful in his initial attempts to incorporate his concepts into mainstream medicine. He therefore established his own medical school in 1892 to train osteopathic practitioners. The school was named Kirksville College of Osteopathic Medicine, located in Kirksville, Missouri. It still exists today. This action ultimately led to the creation of a distinctive, independent medical profession, originally known as osteopathy, later called osteopathic medicine (Gevitz 1982).

The early history of U.S. osteopathy, which does not exist today, involved spirited debates between the “lesion osteopaths,” who favored close adherence to the principles delineated by Still, and the “broad osteopaths,” who favored

incorporating elements from regular medicine as well as other medical systems such as naturopathy and electrotherapy (Gevitz 1982). At roughly the same time that regular medicine was evolving into biomedicine, a system based heavily upon germ theory and controlled scientific research, osteopathy began to accommodate itself to more traditional medical practices. Although still objected to surgery except as a last resort, the Committee of Education of the American Osteopathic Association (AOA) decided to keep surgery as an option. In 1902, stating, "Surgery is very closely related to osteopathy. Osteopathic cases sometimes require a little surgery, while nearly all surgical operations would be profitably supplemented by osteopathic treatment" (Gallagher, Humphrey and Micozzi 2001). Gradually, osteopaths adopted other biomedical practices, including the administration of drugs, vaccines, and antibiotics.

By the 1930s, forty percent of osteopathy in the United States had evolved into osteopathic medicine and surgery, or a parallel medical system with a ninety percent emphasis on primary care (Gallagher, Humphrey and Micozzi 2001). As a result of this evolution, D.O.'s began to refer to themselves as osteopathic physicians rather than osteopaths (Gevitz 1982).

The osteopathic profession began to create its own hospitals in the early 1930s and established the American Osteopathic Hospital Association in 1934. However, as time went on, few American osteopathic physicians specialized in OMT, despite its being the central modality in the system that Still developed. Instead, most used OMT as an adjunct or therapeutic modality, (secondary therapy) or not at all. As the majority of biomedical physicians decided to change

from primary care or family practice for various specialties, many osteopathic physicians found a niche as primary care providers (Gevitz 1982).

The evolution of the osteopathic profession has been a long and arduous process, resisting and responding to internal and external pressures.

Consequently, divisions emerged quickly in the fledgling profession (Starr 1982).

As noted previously, Still was adamantly opposed to using any form of drug treatments, whereas others wished to embrace conventional medical advances, including drugs available to contemporary medicine (Starr 1982). In addition, osteopathic medicine came about at a time in which the AMA controlled nearly all U.S. medical activities (Guglielmo 1998). As a result, osteopathic physicians had to fight to solidify their own professional identity and to achieve professional credibility distinct from allopaths. These efforts ultimately led to full practice opportunities with license to diagnose, prescribe medications, and perform surgery in all fifty states (Gallagher Humphrey, and Micozzi 2001; Gevitz 1982; Peterson 1997; Starr 1982).

Although much conflict arose between osteopathic medicine and allopathic medicine, especially as the popularity and success of D.O.'s began to attract clientele away from practicing M.D.s. In an attempt to gain legitimacy by allopaths, osteopaths frequently allowed composite boards and permitted education control from state medical and educational authorities in the attempt to gain accreditation (Gallagher, Humphrey and Micozzi 2001).

Today, there is evidence of the effectiveness of osteopathic medicine, and what D.O.'s have known for decades has been confirmed by recent studies.

For example, a study in the New England Journal of Medicine (Johnson 1999, cited by AOA, 2003) researched the effectiveness of OMT in treating lower back pain. The twelve-week study divided patients into two groups: one group was treated with the conventional hot/cold pack, physical therapy, and anti-inflammatory medication; the other group received OMT and standard care. Both groups showed improvement, however the patients receiving OMT required less medication and physical therapy. Consequently, the total cost of care was also reduced.

Complementary and Alternative Medicine

Complementary and alternative medicine (CAM) therapies incorporate a broad spectrum of practices and beliefs (Dyer 1996). Historically they may be described as “medical interventions not taught widely at U.S. medical schools or generally available at U.S. hospitals” (Eisenberg et al. 1998).

There is a growing recognition that CAM instruction, which includes osteopathic medicine, is an important and needed aspect of medical education due to the increasing number of students enrolled in osteopathic medicine programs (Wetzel, Eisenberg and Kaptchuk 1998). For example, in 1997, the New York College of Osteopathic Medicine had 4,604 applicants for an entering class of 220, up from 4,376 the previous year. About 65 percent of NYCOM graduates go into primary care medicine, including general and family practice, internal medicine and pediatrics (Goldberg 1998). By 1997, more than 60 percent of U.S. medical schools offered CAM instruction to their students in the form of

elective courses or core curriculum lectures (Battaharya 2000; Wetzel, Eisenberg and Kaptchuk 1998).

The continued interest in studying CAM in medical schools has created an explosion of educational offerings for postgraduate trainees and practicing clinicians (Berman et al. 1998; Blumberg et al. 1995). Wayne State University introduced a senior elective course in 1994 called "Introduction to Alternative Medicine" (Laken and Cosovic 1995). Wetzel, Eisenberg and Kaptchuk's (1998) survey of 125 U.S. medical schools provided the most up-to-date information regarding CAM courses in medical schools. Seventy-five of the 117 survey respondents, in 2003, reported that CAM topics were included in at least one required course, an increase from twenty-six schools reported in 1995. Wetzel, Humphrey and Micozzi (1998) concluded that there is heterogeneity and diversity in content, format, and requirements among courses in complimentary and alternative medicine in the U.S. medical schools.

Jonas (1998) observed that certain disciplines may be more easily integrated because of congruencies in education and training (e.g., chiropractic and naturopathic). Similar challenges arise when faced with integrating any CAM practice into the field of allopathic medicine (Jonas 1998). This is definitely in line with what is happening in osteopathic training practices. The integration is a response to a more informed patient population or a necessary progression toward practice cohesion is in question (Wetzel, Humphrey and Micozzi 1998). Thus, while integration may not be an expedient process, it is increasingly occurring and appears inevitable (Wetzel, Humphrey and Micozzi 1998).

It should be noted, however, that there is limited academic literature that addresses instruction (Kligler et al. 2000). Questions have arisen about whether CAM should be taught and, if so, how it should be taught. There is a need for a consistent educational approach and further development of teaching strategies (Beyerstein 2001; Cohen 2000; Grollman 2001; Marcus 2001).

The increased focus on CAM curricula reflects the increased usage of alternative therapy. Eisenberg et al. (1998) found that over 40 percent of the population of Caucasian females used at least one alternative therapy and that over 60 percent of these people did not inform their physician of their alternative therapy use. The study also concluded that visits to alternative therapists exceeded visits to primary care physicians and the total out-of-pocket expenditures associated with alternative therapies exceeded twenty-seven billion dollars (Eisenberg et al. 1993/1998).

A study by Landmark Healthcare in 1997 showed more than four in ten adults surveyed had used some form of alternative care within the past twelve months, and two-thirds of the respondents called the availability of such care an important factor in choosing a health plan (Rauber 1998). A major outcome from patient demand for CAM is that the medical profession has taken a closer look at therapies outside of the conventional medical system (Barnes et al. 1999).

In an attempt to determine whether alternative therapies work and how they can be used with conventional medicine, the National Institutes of Health established the Office of Alternative Medicine (OAM) in 1992 (Eisenberg, Humphrey and Micozzi 1998). OAM and its successor organization, the National

Center for Complementary and Alternative Medicine (NCCAM, established in 1999), have been directed by biomedical physicians and have enjoyed substantial increases in funding each year. While the advisory boards of both bodies have tended to be dominated by biomedical physicians and researchers, NCCAM includes two naturopathic physicians, two massage therapists, an acupuncturist, and a chiropractor. Eleven of the thirteen NCCAM-funded specialty research centers are situated at biomedical institutions, the exceptions being at Bastyr University (a naturopathic school) in Seattle, Washington, and the Palmer Center for Chiropractic Research in Davenport, Iowa.

Holistic Health Movement

The holistic health movement as a popular phenomenon first appeared on the West Coast in the early 1970s and quickly became intertwined with New Ageism as it expanded to other parts of the United States as well as other countries, particularly in Western Europe (Baer 1999). Interest in holistic health began as a consumer-driven movement prompted by dissatisfaction among professionals and alternative medical practitioners with the bureaucratic aspects of biomedicine. The holistic health movement prompted various laypeople to obtain training in a wide array of alternative therapies, including herbalism, homeopathy, acupuncture, bodywork, psychic healing, and lay midwifery (Baer 1999). Various biomedical and osteopathic physicians and especially nurses began to express an interest in alternative therapies (Baer 1999).

Since that time, an increasing number of biomedical physicians have turned their attention to the holistic health movement (Davis-Floyd and St. John 1998). According to Baer (1999), this change is due as much to physicians subscribing to the philosophies of alternative medicine as it is to a realization that the bread-and-butter patients of biomedicine, those with disposable incomes, could afford to pay for alternative therapies out of their own pockets. In 1978, 220 physicians formed the American Holistic Medical Association. The American Holistic Nurses' Association was established in 1981. Andrew Weil, a Harvard-trained family physician at the University of Arizona Medical Center, and Deepak Chopra, an Indian MD who has introduced the U.S. public to Ayurvedic medicine, have written numerous best-sellers and have emerged as the most visible public spokespersons for holistic medicine. According to Collinge (1995), "practitioners who were originally trained in other traditions [including biomedicine] now use naturopathic principles often describe their work as 'natural' medicine rather than 'naturopathic' medicine."

Numerous biomedical schools, including those at Harvard, Tufts, Georgetown, and Louisville, as well as many hospitals, have incorporated alternative therapies into their programs of study or health services. As of 1996, thirty-seven biomedical schools —almost one-third of all schools nationwide— offered courses in alternative medicine (Morton and Morton 1996). The Association of American Medical Schools report of the Medical School Objectives Project was released in 1998 (AAMS, 1998). The report calls attention to the importance of physicians being “sufficiently knowledgeable about both traditional

and nontraditional modes of care to provide intelligent guidance to their patients” (AAMS, 1998). As the curriculum evolves at medical schools, it is important to include complementary and alternative medicine education. The provision of this need has been random at best. It is true that the development of these courses is in its infancy and is in need of some direction. The development of these courses has been left up to individual schools and is based on individual professors’ interests and experiences as well as students. It is also dependent on local cultural values and the availability of resources of practitioners to teach or demonstrate the therapies.

Biomedical physicians and other biomedically-oriented scientists have established a number of journals devoted to alternative medicine. Marc S. Micozzi, M.D., Ph.D., of the National Museum of Health and Medicine in Washington, D.C. serves as the editor-in-chief of *The Journal of Alternative and Complementary Medicine*, and Andrew Weil serves as the editor-in-chief of *Integrative Medicine*. The American Association of Public Health has established a special primary interest group on alternative medicine whose members are both health practitioners and researchers (Gesler and Gordon 1998). The Program in Integrative Medicine at the University of Arizona provides continuing medical education and two-year fellowships for M.D.s and D.O.’s who have completed residencies in primary-care specialties (Goldstein 1999).

Many holistic M.D.’s and D.O.’s refer to their approach as "integrative medicine," although this term has increasingly been replaced by the terms complementary and alternative medicine (CAM) (Baer 1999). Most CAM or

integrative health centers tend to be directed by one or more biomedical physicians who oversee the activities of a variety of alternative practitioners. Furthermore, an increasing number of HMOs, hospitals, and insurance companies are expressing an interest in CAM, not so much because it offers heterodox paradigms but, rather, to satisfy upper and upper-middle-class patients and for cost containment. In a matter of a few decades, it appears that biomedicine has quickly come to transform holistic health from a popular movement to a CAM in which heterodox therapies of various sorts often function as adjuncts to more high-tech approaches. This transformation represents the ability of capitalist institutions to co-opt progressive movements.

Both osteopathic and allopathic medical systems now claim to be comprehensive in their approaches to health care (Gevitz 1988). Despite the growing interest of biomedical and osteopathic physicians in holistic health, Alster (1989) observed that physicians were latecomers to alternative medicine, succeeding the nurses, occupational therapists, and physical therapists who expressed an interest in holistic health well before physicians.

Current Osteopathic Practice

Practitioners of U.S. osteopathic medicine have employed a number of strategies to differentiate themselves from biomedical physicians. D.O.'s have been urging greater emphasis on OMT as a treatment and have increased research on its efficacy. The AOA has engaged in extensive public relations efforts to underscore that osteopathic physicians are authentic physicians and

that osteopathic medicine constitutes a comprehensive and holistic form of health care.

Two questions still remain. The first asks whether osteopathic physicians will be treated as peers by their holistic-oriented biomedical colleagues or as second-class physicians, as they sometimes have been in the past. The second questions whether osteopathic physicians in collaborative relationships with biomedical physicians in clinical and even research settings face the danger of being co-opted by biomedicine.

Gevitz (1994) asserted that the practice of osteopathic medicine continues to suffer from what he termed “osteopathic invisibility syndrome” in that the general public is generally unaware of the profession. In fact, many patients have difficulty distinguishing between the two types of medicine. A survey by Riley (1980) found that a substantial majority of the respondents did not perceive any difference between D.O.’s and M.D.’s in terms of practice, although they tended to regard biomedicine more favorably than osteopathic medicine. That perception, according to Gevitz (1994), has not changed appreciably since the time that survey was conducted. Gevitz (1994) noted that osteopathic schools need to encourage research more than they have in the past, including on OMT, so that the osteopathic profession can better differentiate itself from biomedicine.

Howell (2001) claimed that there is an identity crisis within the osteopathic profession itself:

Osteopathy was originally created as a radical alternative to what was seen as a failing medical system. Its success at moving into the mainstream may have come at a cost – the loss of identity. Most people – including physicians – know very little about the field (most people know

more about chiropractic). Many people – even osteopaths – question what osteopathy has to offer that is distinctive (p.1468).

Loustaunau and Sobo (1997) noted the competitive and wary relationship that exists between biomedical and alternative practitioners and recognized the possibility of co-optation. "Sometimes," they wrote, "plans to bring competing systems under control may be initiated only in order to bring more people into the biomedical system proper with no real understanding of what other systems may offer in terms of care and treatment." According to Miller (1998), American osteopathy continues to face an identity dilemma concerning whether or not it constitutes a distinct medical system with a need for separate organizational structures, such as professional associations, colleges, and hospitals. Baer (2001) pointed out that osteopathic physicians frequently practice in biomedical settings. Osteopathic hospitals, which tend to be smaller than their biomedical counterparts, are having difficulty filling their residencies because they are forced to offer residents salaries lower than those at biomedical hospitals.

Young D.O.'s face pressures to view themselves as similar to M.D.s. Yet another aspect of the concern that osteopathy may be co-opted by the biomedical field exists. Jordan J. Cohen (2000), president of the Association of American Medical Colleges, posed one of the most significant challenges to the profession when he stated that the primary issue is not whether D.O.'s or M.D.'s are more devoted to primary care or holistic medicine; rather, the real issue dividing the two professions, Cohen said, is the appropriateness of OMT. According to Cohen, the MD community has "no quarrel over the utility of the

manipulative method" for disorders and injuries of the musculoskeletal system.

The problem arises "when it comes to the issue of applying manipulative therapy to treat other systemic diseases." At this point, allopathic physicians become skeptical (Guglielmo 1998).

Chapter Three: Method

Research Approach

Creswell (1994) discussed two research paradigms: qualitative and quantitative. Quantitative researchers assert that both the natural and social sciences strive for testable and confirmable theories that explain phenomena. Qualitative researchers, however, reject the idea that social life can be studied with the same methods as the natural physical sciences, and they feel that human behavior is always bound to the context in which it occurs. They believe that behavior should be studied in a manner that could be described as subjective.

In addition, qualitative research is primarily concerned with collecting and analyzing information (Leedy 1997). It focuses on finding and exploring as many details as possible. As explained by Blaxter, Huges and Tight (1996), the objective of qualitative research is to achieve depth rather than breadth. Quantitative research, on the other hand, is concerned with the collection and analysis of data in numeric form. This type of empirical methodology emphasizes relatively large-scale data collection to examine or prove social reality by employing statistical analysis (Rea and Parker 1997).

Thus, according to Creswell (1994), a qualitative study is defined as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture formed with words that report detailed views. A quantitative study, on the other hand, is an inquiry into a social or human problem based on testing a theory composed of hypotheses, which are, in turn,

composed of variables that are measured with numbers and analyzed with statistical procedures to determine whether the predictive generalizations of the theory are true.

There are a number of approaches employed in qualitative research, such as participatory observation, survey, experiments, and case studies (Yin 1994). The case study method has several advantages. Yin (1994) has listed these as follows: the discovery of hidden forms of behavior, the exploration of causal mechanisms linking phenomena, the revelation of a critical case, and the explanation of variations.

Case study research provides a way of studying human events and actions in their natural surroundings and attempts to capture the experiences of people in their everyday circumstances. Additionally, Gall, Borg, and Gall (1996) noted that a case study allows a researcher to explore a single entity or phenomenon (“the case”) over a period of time and in the context of a particular activity, such as a program, event, process, institution, or social group. A case study also enables the researcher to collect detailed information by using a variety of data collection procedures. Case studies can be conducted at low cost because only one person is needed to perform the necessary observations and interpretations of data.

Gall, Borg, and Gall (1996) also noted that qualitative researchers use the case study approach as a guide to their research. By concentrating on a singular phenomenon, individual, community or institution, the researcher aims to uncover the manifest interaction of significant factors characteristic of this phenomenon,

individual, community, or institution. In addition, the researcher is able to capture various nuances, patterns, and more latent elements that other research approaches might overlook. The case study method, the authors noted, tends to focus on holistic description and explanation. Moreover, generally any phenomenon can be studied by case study methods (Gall, Borg and Gall 1996).

This study uses both a qualitative and quantitative methodology, as well as a single case study approach. Creswell (1994) suggested that a case study be limited to a single case study rather than multiple case studies because the study of more than one case dilutes the overall analysis. The more cases an individual studies, the greater the lack of depth in any single case.

Types of Case Studies

Stake (1994, 1995) suggests that researchers have different purposes for studying cases. He suggests that case studies can be classified into three different types: intrinsic, instrumental, and collective.

Intrinsic case studies are not undertaken primarily because they represent other cases or illustrate some particular trait, characteristic, or problem. Rather, it is because of its uniqueness or ordinariness that a case becomes interesting (Stake 1994). The role of the researcher is not to understand or test abstract theory or to develop new theoretical explanations. Instead, the intention is to better understand intrinsic aspects of the particular child, patient, criminal, organization, or whatever the case may be.

Other types of case studies include instrumental case studies, which provide insights into an issue or refine a theoretical explanation (Stake 1994). In

these situations, the case actually becomes of secondary importance. It will serve only a supportive role, a background against which the actual research interests will play out. Instrumental case studies often are investigated in depth, and all aspects and activities are detailed – though not simply to elaborate the case per se. Instead, the intention is to assist the researcher to better understand some external theoretical question or problem. Instrumental case studies may or may not be viewed as typical of other cases. However, the choice of a particular case for study is made because the investigator believes that his or her understanding about some other research interest will be advanced.

Stake (1994) also points out that since researchers often have multiple interests, no solid line can be drawn between intrinsic and instrumental case studies. In fact, he states, a kind of “zone of combined purpose separates them” (Stake 1994).

Collective case studies, another type of case study, involve the extensive study of several instrumental cases. The selection of these cases is intended to allow better understanding or perhaps enhance the ability to theorize about a broader context.

Case Study Design Types

There are several appropriate designs for case studies according to Yin (1994) and Winston (1997). These include exploratory, explanatory, and descriptive case studies.

Exploratory Case Studies

When conducting exploratory case studies, fieldwork and data collection may be undertaken before defining a research question. This type of study may be seen as a prelude to a large social scientific study. Nonetheless, the study must have some type of organizational framework that has been designed prior to beginning the research. This sort of exploratory study may be useful as a pilot study, for example, when planning a larger, more comprehensive investigation.

Explanatory Case Studies

Explanatory case studies are useful when conducting causal studies. Particularly in complex studies of organizations or communities, one might desire to employ multivariate cases to examine a plurality of influences. This might be accomplished using a pattern-matching technique suggested by Yin and Moore (1988). Pattern watching is a situation in which several pieces of information from the same case may be related to some theoretical proposition.

Descriptive Case Studies

Descriptive case explorations require that the investigator present a descriptive theory, which establishes the overall framework for the investigator to follow throughout the study. What is implied by this approach is the formation and identification of a viable theoretical orientation before enunciating research questions. The investigator must also determine before beginning the research exactly what the unit of analysis in the study will be.

In creating formal designs for case-study investigations, Yin (1994) recommends five component elements:

- Study questions
- Study propositions (if any are being used) or theoretical framework
- Identification of the unit(s) of analysis
- The logical linking of the data to the propositions (or theory)
- The criteria for interpreting the findings

A study's questions are generally directed toward how and why considerations. The articulation and definition of these considerations are the first task of the researcher. Sometimes, the study's propositions derive from these how and why questions and assist in developing a theoretical focus. Not all studies will have propositions. An exploratory study, rather than having propositions, may have a stated purpose or criteria that will provide guidance and a kind of operating framework for the case study to follow. The unit of analysis defines what the case study is focusing on (what the case is), such as an individual, a group, an organization, a city, and so forth. Linkages between the data and the propositions (or theory) and the criteria for interpreting the findings, according to Yin (1994), typically are the least developed aspects of case studies.

The objectives that Stake (1994) delineated for collecting data are most appropriate for this case study on osteopathic medicine. This case study is a descriptive, instrumental, single case study of osteopathic medicine at one osteopathic medical school. The rationale for choosing this type of case study was because Nova Southeastern College of Osteopathic Medicine was the only osteopathic school in Florida. This case study was instrumental in nature because this research provided an insight into the issues of the

professionalization of osteopathic medicine. The case actually becomes of secondary importance and served only as a supportive role, a background against which the actual research interests will play out. Instrumental case studies often are investigated in depth, and all aspects and activities are detailed – though not simply to elaborate the case per se. Instead, the intention is to assist the researcher to better understand some external theoretical question or problem. Instrumental case studies may or may not be viewed as typical of other cases. However, the choice of a particular case for study is made because the investigator believes that his or her understanding about some other research interest will be advanced (Stake 1994).

Research Method

In order to collect information pertinent to the purpose and objectives of the study, the research design and method draws on past and current studies, reports, and related material. I present definitions of major factors influencing the practice and professionalization of osteopathic medicine in the literature review. Data were obtained from a self-administered attitudes questionnaire, unstructured in-depth interviews, direct observation, and a review of twenty osteopathic medical school curricula.

Specifically, my research methods consisted of four distinct and sequential steps:

Step 1: I conducted a review of the literature, the secondary data of the study, to identify the major factors regarding the professionalization of

osteopathic medicine and current practice of osteopathy. I included in this review those materials deemed most important and relevant to the research.

Step 2: I incorporated the major factors identified from the literature review into the self-administered survey questionnaire. I also included them in the in-depth unstructured interviews. Survey items have been approved through the Internal Review Board (IRB) process at both the University of South Florida and Nova Southeastern University College of Osteopathic Medicine (NSUCOM) and verified by the chair of my dissertation committee and my field supervisor at NSUCOM.

Step 3: I distributed questionnaires to two hundred first year and two hundred third year osteopathic medical students. I then gathered and analyzed the questionnaire data.

Step 4: On the basis of the questionnaire data, results of the in-depth interviews, classroom observations, and analysis of curricula of osteopathic schools, I answered the research questions and summarized them. From the summary of the study findings, content analysis of interviews, survey analysis, I drew conclusions and made recommendations for further study.

The study utilized unstructured, in-depth interviews direct and participant observation, and a survey /questionnaire. Combining several such data collection strategies provided data triangulation (Berg 2001:28), confirming and cross-checking the accuracy of data obtained from one source with data collected from other, different sources (LeCompte and Schensul 1999:131), in hopes that the

multiple sources all converge to support a particular theory (Leedy and Ormond 2001:105).

The methods selected provided the data to answer the research questions:

1. What are the influences that lead students to choose osteopathic training?
2. What holistic courses are offered in osteopathic medical training?
3. To what extent do D.O.'s practice holistic medicine?
4. What training in osteopathic medical school influences the practice of osteopathic medicine?

Research Site

The site of my study is Nova Southeastern University College of Osteopathic Medicine (NSUCOM) located in Ft. Lauderdale, Florida. I chose this site because Nova Southeastern is the only osteopathic medical school in Florida. Nova Southeastern College of Osteopathic Medicine has approximately 200 students in each of the three years of medical training offered.

Sampling

The study involved first-year medical students (200) who had just finished the training program and third-year medical students (200) who at this point in their medical education have studied and used osteopathic manipulation therapy with patients. Five faculty members at NSUCOM were also interviewed in the Ft. Lauderdale area. I sought the viewpoints of students, faculty and practitioners. The rationale for interviewing faculty members at Nova

Southeastern College of Osteopathic Medicine was that I felt they could add a lot of insight into the future of the profession and how it was changing. I also included five practitioners because I wanted to explore their perspectives on the actual practice of osteopathic medicine compared to the student and faculty points of view.

The sampling procedure for faculty members was based on a list of faculty that was given to me by my field supervisor at NSUCOM. I chose the first five faculty members that agreed to the interviews. The number of practitioners (n=5) and faculty members (n=5) was arbitrary. The same procedure was followed for the practitioners who were interviewed.

Participant Recruitment

Participant recruitment was based on students who had studied OMT and students who had studied and practiced OMT on patients. I recruited first year students because they had finished a year of OMT lecture and lab but had not practiced OMT on patients. I recruited third year students because they had practiced OMT on patients for a year. I eliminated second year students because they had not practiced OMT on patients. Fourth year students were eliminated because they were all over the country doing their residencies and it would have been quite difficult to contact them.

Convenience sampling was employed with both faculty members and practitioners. They were randomly chosen from a list of twenty DO's in Ft. Lauderdale and West Palm Beach, Florida. I interviewed the first five

practitioners who agreed to the interview, which included one practitioner I had known as a pharmaceutical representative.

Recruitment of first year medical student participants was conducted by face-to-face contact during their OPP class (Osteopathic Principles and Practice Class). The class was provided with a verbal introduction of the research study by the researcher's field supervisor. Once students agreed to participate in the study they were provided with survey questionnaires and informed consents. The results included eleven first year students, which were then contacted by phone in order of their signatures on the informed consent, and set a time to meet with them for the interview in the library study room. I met the majority of the students in the library and conducted the taped interview in a study room signed out by the student. Each interview began with the student reading and signing an informed consent and lasted between sixty and ninety minutes. Consideration was given to non-random and random selection of participants to prevent any bias in participant selection. Convenience sampling was employed for key participants in unstructured in-depth interviews and survey questionnaires.

Participant recruitment for the survey/questionnaire was extended to all first and third year students by the approval of the faculty members at Nova. The survey questionnaires for third year students were left with the director of clinical education to be picked up and completed on a voluntary basis. I entered the testing room and described the research and let the third year students know where the questionnaires and informed consents were located within the classroom. The third year students were instructed to pick them up and fill out the

questionnaire if interested. I remained outside of the classroom to collect the finished surveys. The survey questionnaires were returned and completed while the researcher waited outside the classroom. The rate of returned survey questionnaires from students was 40 percent.

For the in-depth interviews, first-year and third-year students were recruited before and after their OPP class. The method of recruitment was voluntary.

Third-year students were recruited outside their test site on NSUCOM campus. This method was employed because all of the third year students were doing hospital rotations full time and only came to campus for tests once a month. I was given time by the test coordinator to explain the study. I remained outside the classroom with a voluntary interview sign-up sheet. I requested a name and phone number if they were interested. Twenty-three third year students signed up for interviews. I contacted fifteen students before I had the ten respondents necessary for the interviews. Six interviews were conducted in the NSUCOM library study room and four interviews were conducted at Columbia Hospital where some of the third-year students were doing hospital rotations. These four interviews were conducted in the medical student library of the hospital. Each interview began with the reading and signing of the informed consent.

Instrumentation

Self-Administered Questionnaire

The survey questionnaire approach is the most common way to generate and collect primary data (Babbie 1998). The survey questionnaire in this study was a self-administered questionnaire that I developed. There are a number of advantages to using a self-administered questionnaire (Appendix A). According to Bernard (1995), self-administered questionnaires allow a single researcher to gather data from a large, representative sample of respondents at relatively low cost. All the respondents get the same questions, which minimizes bias. More complex questions can be asked in surveys than in a personal interview. Respondents will report socially undesirable behaviors and traits more willingly in self-administered questionnaires and telephone interviews than they will in face-to-face interviews (Bernard, 1995). Anonymity tends to give the respondent a sense of security that produces more personal information with ease (Sudman and Bradburn 1983). In terms of reliability, survey research, by presenting all subjects with a standardized stimulus, goes a long way toward eliminating unreliable observations made by the researcher (Babbie 1990). Moreover, careful wording of the questions can also reduce significantly the subject's own unreliability (Babbie 1990). Thus, the advantages of a self-administered questionnaire over an in-depth interview include, in sum, economy, speed, lack of interviewer bias, and the possibility of anonymity and privacy to encourage more candid responses (Babbie 1990).

Survey research is considered to be the best method available to social scientists interested in collecting data to describe a population that is too large to observe directly (Babbie 1990). Surveys are flexible because many questions can be asked on a given topic, giving the researcher considerable flexibility in his or her analysis (Babbie 1990). The survey questionnaire in this study helped to reach a larger proportion of students and has become an integral part of the goal and final analysis of the research questions in this study.

The survey questions were presented in a matrix question format. This format has a number of distinct advantages. First, it uses space efficiently. Second, respondents will probably find it faster to complete a set of questions presented in this way. In addition, this format may increase the ability of both researcher and respondent to compare responses given for different questions (Babbie 1990). Since respondents can quickly review their answers to earlier items in the set, they might choose between “strongly agree” and “agree” on a given statement by comparing the strength of their agreement with an earlier response in the set. The amount of invalid responses can be reduced by alternating statements that represent different orientations and by making all statements clear and short (Babbie 1990).

The order of questions in my surveys began with the most interesting and non-threatening. According to Babbie (1990), this is the best way to begin self-administered questionnaires because the potential respondents will glance over the first set of questions and will want to answer them. Demographic information was placed at the beginning of the survey. Students were asked their age,

gender, and ethnicity. Since the survey questions were the same for both first and third year students, I coded them. First-year surveys were coded as Survey A and the third-year surveys were coded as Survey C (Appendix A).

Reliability and Validity

Two important criteria are used for evaluating questionnaire measurements: reliability and validity (Zikmund 1991). Reliability is comprised of the dimensions of repeatability and internal consistency. According to Zikmund (1991:78), “Reliability applies to a measure when similar results are obtained over time and across situations... [It] is the degree to which measures are free from error and therefore yield consistent results.” But a reliable test is not necessarily valid. “Validity addresses the problem of whether a measure – for example, an attitude measure – measures what it is supposed to measure” (Zikmund 1991:78).

My committee chair, field supervisor, and the IRB committees at NSUCOM and the University of South Florida determined the validity of my survey by approving each survey item. Because this study constitutes the first application of the survey, test-retest reliability cannot be established. The reliability of the survey was not of concern, however, because it was used to predict criteria or factors of measurement.

A number of features protected the validity of this study. First, the combination of sources and methods provides triangulation of data. Bogdan and Biklen (1998) defined triangulation as “verification of the facts using more than a

single source, because multiple sources lead to a fuller understanding of the phenomenon one is studying” (p. 104). In addition, according to Maxwell (1996), triangulation reduces the risk of bias or limitations inherent in a particular method and allows the researcher to better assess the validity and generalizations of explanations developed. Thus, I used multiple types of diverse and redundant evidence in this study to check the reliability and validity of the findings.

Data Collection

I conducted a qualitative and quantitative study using triangulation. I collected information from four sources: (a) self-administered survey questionnaires, (b) one-on-one interviews conducted with participants, (c) direct observation by the researcher, and (d) analysis of curricula.

Self-administered Survey Questionnaire

I gave the survey to 200 first-year and 200 third-year osteopathic medical students at Nova Southeastern College of Osteopathic Medicine. 97 of the first year and 76 of the second year surveys were returned. The questionnaire was left for the respondent to complete and I was present to pick it up. The instructions clearly explained how to answer the questionnaire and included the researcher’s contact information if the participant had questions. Each section of questions included a short statement explaining its content and purpose. Respondents were instructed to indicate their answers by placing a check mark or an X in the box beside the appropriate answer. A cover letter with full explanation of the purpose of the study and directions for collection of the

finished questionnaire by the appropriate faculty member was included. I personally picked up all completed surveys.

In-Depth Interviews

I also conducted a series of one to two interviews, one basic interview and one in-depth unstructured interview with 10 participants from the first-year class of students and one basic and one in-depth unstructured interview with 10 participants from the third-year class of students. In the course of conducting this research study, I met 3 third-year students who were OMT fellows. OMT fellows are different than regular third-year students because they take their third year of instruction and concentrate on osteopathic manipulation techniques for the entire year. This additional year is added on to their four years of medical school. They do not start their rotations until their fourth and fifth years of school. There were four interviews with the OMT fellows as well as the ten third-year student interviews. There were either one or two in-depth unstructured interviews with five practitioners and five faculty members. The selection process was self – selection. My field supervisor supplied a list of potential faculty and practitioner participants. I called the faculty members and practitioners from the lists provided and the first respondents willing to participate in the interview process were selected. I conducted all of the interviews in each faculty member's office with one exception – one was conducted in a private reserved room in the osteopathic college. During the initial contact by phone, I gave the study participants a general history on the research project. At this time, I also scheduled participants for their first in-depth interview that was conducted at their offices. The interviews

lasted between sixty and ninety minutes. These in-depth interview questions that are attached served as a guide and were not to be directed at the respondents as if one were reading the questionnaire (Appendix B students; Appendix C faculty; Appendix D practitioners).

An in-depth interview is a dialogue between a skilled interviewer and an interviewee. Its goal is to elicit rich, detailed material that can be used in analysis (Denzin and Lincoln 1994; Lofland and Lofland 1995). Such interviews are best conducted face to face, although in some situations telephone interviewing can be successful. Multiple in-depth interviewing, as was used in this study, was more accurate than single interviews because of the opportunity to ask additional questions and to get corrective feedback on previously obtained information.

In-depth interviews are characterized by extensive probing and open-ended questions. Typically, the researcher prepares an interview guide that includes a list of questions or issues that are to be explored. The guide also suggests probes for following up on key topics. The guide helps the interviewer pace the interview and makes interviewing more systematic and comprehensive. Lofland and Lofland (1995) provided rules for preparing interview guides, doing the interview with the guide, and writing up the interview.

The dynamics of interviewing are similar to a guided conversation. The interviewer becomes an attentive listener who shapes the process into a familiar and comfortable form of social engagement—a conversation—and the quality of the information obtained is largely dependent on the interviewer's skills and personality (Patton, 1990). In contrast to a good conversation, however, an in-

depth interview is not intended to be a two-way form of communication and sharing. The key to being a good interviewer is being a good listener and questioner. It is not the role of the interviewer to put forth his or her opinions, perceptions, or feelings (Patton 1990).

In-depth interviews are particularly appropriate when detailed information is sought from busy, high-status respondents, and where highly sensitive subject matter is under discussion (Seidman 1991).

In-depth interviews have advantages as well as disadvantages. On the positive side, they usually yield the richest data, details, and new insights, they permit face-to-face contact with respondents, they provide opportunity to explore topics in depth, they afford the ability to experience the affective as well as cognitive aspects of responses, they allow the interviewer to explain or help clarify questions, increasing the likelihood of useful responses, and they allow the interviewer to be flexible in administering the interview to particular individuals or circumstances. However, they are expensive and time-consuming and require well-qualified, highly trained interviewers. Moreover, the interviewee may distort information through recall error, selective perceptions, or the desire to please the interviewer (Seidman 1991). Flexibility can result in inconsistencies across interviews, and the volume of information is often too large, leading to burdensome transcription and reduction of data (Seidman 1991). The researcher kept the aforementioned in mind when using in-depth interviews as a data collection technique.

The duration of each interview was between one to one and half hours, depending on the availability of the respondent. All interviews were taped. Informed consent was required of participants before any interviews took place.

Direct Observation

I observed two Osteopathic Practice and Philosophy (OPP) classes to gain an understanding of the type of training osteopathic medical students receive at different levels and to verify that the class being observed fulfilled the described curriculum goals and principles. I concentrated on two areas of the curriculum for observation: (1) Osteopathic manipulation training classes (OMT), and (2) practice and philosophy classes (OPP). As an observational protocol, I took field notes to record the observations and description of classrooms, activities, and so on.

I attended the OMT class every Tuesday and Thursday morning for an hour each. I arrived early so that I might interact with the students in an informal manner. It was quite obvious to the students that I was an observer due to the difference in my attire. All of the students wore scrubs, while I wore street clothes. This ritual enabled me to make quite a few friends and gain help in accomplishing my goals.

I followed the same procedure in the OMT classes. I came early to the class and talked with the students while they waited to get into the lab room. I always sat in the back of the room so as not to be in the way. Also, I could get a view of the entire class from the rear of the classroom. Many times after the first week of my research, students sought me out and asked me how my research

was going. They were always very helpful and asked me consistently if they could help me in any way.

After awhile, I felt that I was an accepted part of their experience. This enabled me to fulfill my responsibilities as an applied researcher. I saw students in the library, hallways, and lunchroom and we often stopped to talk. Quite a few times, students approached me in the lunchroom and asked if they could sit with me. I learned a lot about why they were in osteopathic school in an informal manner, rather than learning through in-depth interviews only.

I observed twenty-four Osteopathic Philosophy and Practice (OPP) lectures and twenty-four Osteopathic Manipulation therapy (OMT) lab classes. This number is based on four classes twice a week for six months. A typical OPP lecture class started with the professor coming in and beginning the lecture. Each observation was one hour twice a week for the OPP class and two hours twice a week for the OMT lab class. The content of my field notes consisted of the topic of the lecture, content of the lecture, descriptions of interactions of students with each other and with faculty, routine of the class, questions asked, and attitudes of students toward faculty, me and other students. I also noted observations concerning seating. Even though students were not assigned seats they tended to sit in the same seats each class. I also noted the posture of the class members, in other words, if the students were relaxed, tense, and so on. I observed and noted cultural or gender clusters to see if these were relevant issues.

The observations I noted in the OMT lab were similar. I noted who the faculty assistants were and where they placed themselves before and after the class. Also, I paid particular attention to the level of concentration and actual “practice” of manipulation expected of the students once they were on their own. I noted if they remembered the manipulation by heart, followed the text descriptions or asked a faculty member for help. I recorded these events on a regular basis. Also it was interesting to me to see how many of the students watched the practice manipulation on the TV monitor or if they just looked at the platform in front of the room and watched manually (without the TV monitor).

Analysis of Curriculum

There were two parts to the curriculum analysis. The first part was an in-depth look at the curriculum of NSUCOM from 1993 -2004. I attained this information from the catalogs that were stored in the admissions office of NSUCOM. The second part of this analysis entailed examining the curricula of the other nineteen osteopathic medical schools. I gathered the information from the American Osteopathic Medical Association web site where links to each school were found. The curricula content was compared and analyzed to determine the extent to which CAM instruction is included in individual curricula.

I initially gathered the web site information for all twenty osteopathic schools from the AOA web site. Then I went to each school’s web site individually and copied the courses offered in that particular osteopathic school. I followed this same procedure for all twenty osteopathic schools. Once I had gathered the curriculum from all twenty schools, I was able to proceed with an

analysis by comparing the number of years OPP and OMT were offered and how many CAM courses were offered. I based both the analysis of NSUCOM's curriculum and the analysis of the other nineteen osteopathic schools on the following criteria: (1) description of courses, (2) course hours required, and (3) course hours if elective. Then I proceeded to tally the number of CAM courses per school and came up with a definitive number of CAM courses broken down by subject area and amount of hours offered. I followed this same procedure for the OPP courses and OMT courses at all twenty osteopathic schools. Based on these same criteria, I did an intensive analysis of NSUCOM's curriculum.

Data Interpretation and Analysis

For the survey questionnaire, the statistical analysis method employed by this researcher was to test and compare individual item perception data of why students chose DO school, their attitudes toward holistic medicine, and their goals as practicing physicians. According to Babbie (1998), descriptive statistics is a method for presenting quantitative descriptions in a manageable form. Because research often involves collecting large masses of data, descriptive statistics involves the reduction of data from unmanageable details to manageable summaries.

A content analysis was performed to assess responses from open-ended questions. Key themes or factors in these questions were tallied according to frequency. To analyze the information provided by the interviews, I searched for themes. Responses were grouped into appropriate categories, as determined

by type of response, and coded. I then performed a content analysis of the responses to open-ended questions. This included tallying key themes or factors according to frequency. If three responses relate to the same key word(s), the theme received a rating of three.

According to Patton (1990), content analysis methods may be applied to virtually any form of communication. An important step in analyzing content is to determine the unit of analysis. Units can be determined by identifying key variables in the investigation and then developing operational definitions, as was the case in this study. The themes noted from the interviews were also compared to data included in the literature on alternative medicine and osteopathic medicine.

The interviews were taped, indexed and coded. The tape recorder had an index counter. There was a master index and individual indexes for each tape. The index had four headings: narrator's initials, tape side, tape counter number, and topics. As the narrator began to answer a different question or take a different slant to the answer, I wrote down the tape side counter number and the new topic heading, as well as a detailed account of the topic heading. When I decided to quote the narrator, I transcribed the sentence. I manually compiled a master index. I made two copies of each index. I cut out horizontal slivers, each one describing a topic discussed with side and number and narrator's initials and separated them from the others on the page to prevent loss of relevant information. I then cut out each entry and placed it in the correct subject category. I then alphabetized the headings and typed a master index to the tape

collection. Once this task was completed, I only had to look at the master index to see which narrator said something under any of the topics with the tape side and tape counter with a brief description of what was said. This enabled me to decide which tapes and which segments to review. The index included the narrator's name, the interviewer's name, place, date, number of tapes and number of sides and length of tape. The first number was the side number and the second number was the tape counter number. Initials, side of the tape, whether A or B, and counter numbers were indexed according to the topic of discussion.

My comments accompanied each tape and were transcribed on an information sheet. In addition to the interviewer's comments, the information sheet included the title of the project, the general topic of the interview, the interviewer's name, and the narrator's first name, age, ethnicity, marital status. A face sheet was placed over the fact sheet as a title page. The interviewer's notes included circumstances of the interview and place of the interview. The themes were based on the interview questions.

Protection of Human Subjects

All research is subject to approval by the Institutional Review Board (IRB) of the University of South Florida, as well as that of Nova Southeastern College of Osteopathic Medicine. All participants were informed of the goals and methods of the research and participated only after an informed consent form was signed (Appendix E). Participants were assured that all information collected in the study

would be held in the strictest confidence, and only aggregated statistical information would be used for analysis. The names and the responses of the participants were not disclosed. Participants were asked not to sign their names to any completed forms to ensure anonymity. However, upon request, the results are available to the student and faculty participants and to appropriate faculty at Nova with the permission of the researcher's field supervisor.

Ethical Considerations

If a participant disclosed information that was outside the limits of confidentiality – for example, if the nature of their comments was not addressed in the Letter of Informed Consent, the interview was stopped and a decision was made if the interview should proceed. If the disclosure interfered or was detrimental to the study – for instance, if a participant disclosed that he/she had decided not to pursue osteopathic medicine, the participant was informed that he/she would not be part of the study and was thanked for his/her time.

Limitations of the Study

The conclusions of the study will be limited by the amount of information and data discovered in the documents, reports, and studies comprising the literature review. It is important to note that inherent limitations also exist in using a case study to provide evidence. But according to Babbie (1998), similar limitations inhibit the validation of findings of any study or research project, whatever the method. Another limitation concerns the use of self-administered

questionnaires. The researcher has no control over the interpretation of the questions asked in the questionnaires. In addition, even if the questionnaire is returned, the researcher cannot be certain if the intended respondent is the person who filled out the questionnaire (Sudman and Bradburn 1982).

Because in-depth interviews involve personal interaction, cooperation is essential. Interviewees may be unwilling to or uncomfortable with sharing information that the interviewer expects to explore or gather. In-depth interviewing is also limited in that the researcher may impose her own values through the phrasing of the questions or interpretation of the data. Accordingly, an attempt was made to maintain a perspective of critical subjectivity, which has been defined by Reason (1994) as “a quality of awareness in which we do not suppress our primary experience; nor do we allow ourselves to be swept away and overwhelmed by it; rather, we raise it to consciousness and use it as part of the inquiry process.”

In using questionnaires and surveys, the researcher limits herself to relying on the honesty and accuracy of respondents' responses. Some of the limitations of self-administered questionnaires are that the researcher has no control over the interpretation of the questions (Sudman and Bradburn 1982).

A final limitation relates to generalizability, or the degree to which the results of a study are expected to occur in other places (Marshall and Rossman 1995). The results of this study may not be generalizable to the larger population of osteopathic medical students.

Chapter Four: Data Analysis

Introduction

Previous chapters introduced the statement of the problem, reviewed the literature pertinent to the topic of the investigation, and described the methodology that was employed to collect and analyze the data. The purpose of this chapter is to present and analyze the data, discussing each of the major themes identified in the project. Review of these data revealed that many of the interviews touched on similar topics and themes having to do with the experiences of students, faculty and practitioners of professional osteopathy. Excerpts from the narrative data were used to support the analysis and provide a brief profile of some of the participants. Pseudonyms are used instead of actual names in order to keep the identities of people who provided interviews confidential.

Following a description of the sample demographics, this chapter is divided into two major sections: qualitative and quantitative analysis. The qualitative portion is presented following the sample demographics and includes a content analysis of the interviews, direct observations, and a curriculum analysis. The quantitative portion comes next and includes the survey questionnaire description and analysis.

Sample Demographics

Standard demographic data were collected on all subjects. Data categories included age, ethnicity, gender, and year in osteopathic medical school (Table 1). As noted in Table 1, a higher response rate was obtained from first-year students as compared to third-year students. Specifically, 49 percent (n = 97) of first-year students completed and returned surveys as compared to 37 percent (n = 76) of third-year students. Thus, first year students represented 56 percent of the sample and third-year students comprised 44 percent. Average ages were comparable, with only a two-year difference between groups (twenty-five to twenty-seven years). The majority of students in both groups were Caucasian (71 percent and 62 percent) and more third-year students were male (n = 42 or 55 percent) as compared to first-year students (n = 45 or 44 percent). Percentages of ethnic participants in both groups were similar.

Table 1: Sample Demographics

Variable	%	N=173
Response rate:		
First year medical students	56	97
Third year medical students	44	76
Demographic Profile of First-Year Students:		
Average age		25 years
Female	55	53
Male	45	44
Caucasian	71	67

Asian	14	17
Hispanic	8	9
African American	2	2
Other	2	2

Demographic Profile of Third-Year Students:

Average age		27 years
Female	45	34
Male	55	42
Caucasian	62	47
Asian	7	15
Hispanic	4	7
African American	2	2
Other.	1	5

Table 2: Sample Demographics Interview Respondents

Democratic Profile of First Year Students

	%	n
Average Age		26 years
		10
Male	50	5
Female	50	5
Caucasian	80	8
	%	n
Asian	10	1
African American	10	1

Democratic Profile of Third Year Students

	%	n
Average Age		27 years
		10
Male	60	6
Female	40	4
Caucasian	90	9
African American	10	1

Demographic Profile of Practitioners

	%	n
Average Age		42 years
		5
Male	90	4
Female	10	1
Caucasian	100	5

Demographic Profile of Faculty	%	n
Average Age		40 years
Male	60	3
Female	40	2
Caucasian	80	4
African American	20	1

Qualitative Analysis

Content Analysis

Overview

I conducted a series of one to two interviews, one basic interview and one in-depth unstructured interview with ten participants from the first year class of students and one basic and one in-depth unstructured interview with ten participants from the third year class of students. There were also one to two in-depth unstructured interviews with five practitioners and five faculty members. The selection process for these respondents was by self-selection. Phone calls were made by the researcher from a list of faculty on staff at Nova. The first five respondents willing to participate in the interview were selected. All of the interviews were conducted in each faculty member's office with one exception – one interview was conducted in a private reserved room in the osteopathic college. The interviews were about the reasons the respondents had chosen osteopathic medicine and if they were going to or did practice OMT, and their opinions about the professionalization of osteopathic medicine. The interviews lasted between sixty and ninety minutes. The in-depth interview questions, included in Appendix B, served as a guide only and were not necessarily asked word for word.

Student interviews were conducted in the Nova Southeastern College of Osteopathic Medical School Library study rooms. The south side of the library is designated strictly for a group of secluded study rooms. The study rooms,

secluded and self-contained, served as ideal venues to conduct the in-depth interviews.

Four faculty interviews were conducted in faculty offices located in the main NSUCOM building on campus. One of the interviews was conducted in the NSUCOM clinic, which is adjacent to the main building that houses faculty offices, library, and lecture classrooms. The practitioner interviews were conducted in individual practitioners' offices. Four of the offices were in the Ft. Lauderdale area and one was in West Palm Beach, Florida. Four of the physicians' specialties were family practice and one specialty was cardiology.

The present investigation explored reasons students pursue osteopathic medical training and how this training affects osteopathic practice. The study was designed to answer research questions about the influences that drive students to choose osteopathic training, differences in training and curriculum, and the future of osteopathic medicine. As previously noted, a content analysis was performed on the data collected from interviews of four groups of respondents. These included: first-year students, third-year students, faculty members, and practitioners.

A critical step in analyzing content was to determine the units of analysis. Units were determined by identifying key variables in the research questions and survey instrument, then examining the interview content. Themes identified in the interviews were also compared to information included in the literature on alternative and osteopathic medicine. The discussion of the themes is separated into three parts, students, faculty, and practitioners and follow on the next page.

Simple Response Interview Questions

Discussion of Student Responses

Prior to attending osteopathic medical school, half or 5 out of 10 of the first and third year student respondents had previously applied to both osteopathic and allopathic medical schools. This was true for all groups except practitioners. Also, half of the interviewees indicated an interest in practicing OMT when they enter their respective practices. More third year students also indicated an interest in practicing OMT compared to first year students. Looking at gender, a higher percent of female students (37 percent) were willing to incorporate OMT into their practice than male students (23 percent) because they believed OMT to be an effective treatment modality. There were no statistically valid differences among ethnic groups in regard to practicing OMT. All four groups were comparable (less than .05 difference). A total of 70 percent of students envision an osteopathic residency, yet again, more third year students agreed with this question than first year students.

Finally, 33 percent of first year students and 33 percent of third year students were undecided regarding the future of osteopathic medicine – that is, whether osteopathic and allopathic medicine would or would not merge. Twenty percent of the first year and 40 percent of the third year students felt that they would merge, 40 percent of first year and 30 percent of third year students felt that the two would not merge.

A twenty-eight year old female Caucasian third year student stated,

I always thought I would attend a real medical school and ended up in osteopathic school because I didn't get accepted to allopathic medical school. Don't get me wrong, now that I am here I realize that it is basically the same education. A lot of people are not aware of that.

Simple Response Interview Questions

Faculty

Prior to attending osteopathic medical school three of the faculty interviewed had previously applied to both osteopathic and allopathic medical schools. One sixty-six year old Caucasian male faculty member said,

It was very interesting because at the time I chose to attend I knew very little about osteopathic medicine, my first round of applications to medical school were only to M.D. schools. I didn't get accepted my first round. Applying the second time around, my future mother-in-law was working at an osteopathic hospital across the street from the school and she told me about osteopathic medicine and I shadowed a doctor for one day and then decided that I would apply there as well to go to medical school.

Also, two faculty members practiced OMT. They have a dual role as faculty members because they also worked in the medical school clinics where OMT is part of their practice. A total of two faculty members interviewed perceived a stigma attached to the osteopathic profession and three did not perceive a stigma attached to the osteopathic profession. A forty-seven year old male Caucasian family practitioner who has been practicing osteopathic medicine for the past twenty-one years. He graduated from Southeastern College of Osteopathic Medicine, which is now NSUCOM. He is part of a group practice

affiliated with NSUCOM and is the only physician in his practice to use OMT with his patients. He responded:

The stigma to practice OMT still exists for the most part which is why I am the only staff member in my practice of four D.O.'s who continue to practice OMT.

Two of the faculty interviewed was undecided regarding the future of osteopathic medicine – that is, whether osteopathic and allopathic medicine would or would not merge. The faculty was split on whether the two would merge. Three of them felt that the two types of medicine would merge, and the other two felt it would not merge. A thirty-seven year old African American female professor responded,

I think they've fought long and hard for this profession and they will probably stay distinct. I've met M.D.s who want to learn how to do manipulation but just how, because they see the added advantage. Another respondent commented "The difference is profound and voluminous. Osteopathic medicine is a holistic type of medicine where our founder A.T. Still developed a philosophy that has become quite vogue in America today, certainly making osteopathic physicians in my opinion much more equipped to deal with the current health care crisis, lack of care, etc. without merging or becoming M.D. s.

The majority of faculty members practiced OMT as part of the clinic practice at NSUCOM. When asked if there was a difference in medical training between osteopathic and allopathic schools, a forty-nine year old Caucasian female practicing for twenty-five years said,

I think there is very little difference between allopathic medical school and osteopathic medical school, I think that there's a lot of philosophical diatribes you receive from lots of different individuals about what the differences are and having been a physician for twenty-five years inclusive of being a Dean for

about fourteen years I know the diatribes well. A humanistic approach, I think we like to say that the difference is that the osteopathic treats the patient and the allopathic treats the disease process and I think at that time you could tell you could put them in a room and you could say this person is probably an osteopath and this person is probably not.

Simple Response Interview Questions

Practitioners

Prior to attending osteopathic medical school, two out of the five practitioners interviewed had previously applied to both osteopathic and allopathic medical schools. Also, two out of the five practitioners practiced OMT. Four respondents did an allopathic residency and one respondent did an osteopathic residency. Four of the practitioners interviewed perceived a stigma attached to the osteopathic profession. They felt that they were not perceived by patients as being as effective as allopathic physicians. They did, however feel that a majority of allopathic physicians they came in contact with in the hospital where they practiced felt that they were just as good. A seventy-eight year old, Caucasian male, who has been in family practice for forty-five years responded:

Years ago when we practiced in our own hospitals we didn't have any thing to do with allopathic physicians. Now days, we practice side by side with them, as I do in this practice. Things have changed tremendously. They can see that we are similar.

Practitioner Interviewee

However, two of the practitioners interviewed applied to osteopathic school as a first choice compared to three of the practitioners interviewed who applied to osteopathic school as a "back door" into medicine. The most important contribution osteopathic medicine made to their practice was the holistic

philosophy which relates directly to the way they treat their patients. Even though practitioners did not practice OMT, they still felt that they treated their patient holistically. One forty-eight year old, Caucasian, family practitioner said of alternative medicine practitioners generally, “they knew their patient, they were not just a disease to them.”

The degree to which practitioners use various techniques may be influenced by many organizational factors, including the educational continuum to which they have been exposed, time available for treating patients requiring OMT, physically and philosophically supportive facilities for OMT, and reasonable reimbursement for the time and effort to provide OMT for selected patients. However, data from this study suggest that the physician’s sense of competence and comfort level with his or her own abilities may be a key factor in determining whether OMT is the treatment of choice as opposed to non-manipulative options. One female, Caucasian has been practicing osteopathic medicine for thirteen years. She graduated from Kansas City College of Osteopathic Medicine. She had originally applied to allopathic schools and was accepted to a school in the Mexico. She was working at the time in a hospital and met a D.O. who introduced her to the idea of osteopathic school. It was a second choice for her but she is really glad that she ended up as an osteopathic physician. Another female Caucasian practitioner is forty-three and does not practice OMT because “we don’t have the time to do that and we don’t have the facility. We don’t have manipulation tables, there’s no room to set up a table in here.”

A forty-seven year old Caucasian family practitioner, who has been practicing for sixteen years, also commented. At the time of his interview, his wife was attending NSUCOM. When I interviewed him, he said, “I am the only physician in town that practices OMT. Most of my patients are referrals for OMT. I have an OMT table and I keep up with new courses offered at workshops during AOA meetings. Even my two partners don’t practice OMT and they were classmates of mine. We had the same training.”

One of the practitioners was undecided regarding the future of osteopathic medicine – that is, whether osteopathic and allopathic medicine would or would not merge. Two felt that they would merge, two of practitioners felt that the two would not merge. One respondent, a sixty-year-old Caucasian male family practitioner, who had been practicing for twenty-one years, said:

I think we’re at a crossroads because we’re losing training facilities, osteopathic hospitals are closing, more than 50 percent of the osteopathic students have to be going into allopathic training sites, if we don’t have osteopathic trainers at that site to integrate osteopathic medicine and manipulation and philosophy with the laboratory diagnosis then I think we’re going to lose an entire generation and eventually the government may say there’s no need for separate types of schools and it will just blend into one. However, I think if we show the difference that osteopathic medicine makes a difference, which we’re trying to do now and I think that will be a separate and distinct field of medicine with its own rewards.

A seventy-eight year old family practitioner who had been practicing medicine for twenty-two years. He did an osteopathic residency, which was the only residency available to osteopathic physicians at the time. He stated the future of osteopathic medicine lies with the training, specifically the type of residency.

The problem is that osteopathic students of today don't have the same training I did or the same types of teachers I did that big time hands on showing people how to do it and getting the feedback plus these people who go to the field if they train with me they see it. If they train with other physicians who graduated through an allopathic residency they won't even do osteopathic manipulative therapy, so that's lost, that whole group of DO's allopathic trained are now training somebody else.

The fact that there was such an even split between students, faculty and practitioners in ideas about osteopathic and allopathic medicine merging illustrates the confusion and uncertainty that permeates the osteopathic profession. Regardless of whether a first year student, just starting out in training, a third year student, who is already treating patients, or a seasoned faculty member or practitioner who has been practicing in the profession from five to forty-five years, the results were the same.

Major Themes and Categories

With regard to major themes and categories within the interview questions and responses, a total of seven emerged. These include the following: reasons why students chose osteopathic training, differences between osteopathic and allopathic training, curriculum differences, philosophical differences, most beneficial courses of training for practice, curriculum needs (recommended changes), and the future of osteopathic medicine.

Tables 5, 6, and 7 provide a simple tally of the number of frequencies each category and or theme identified by students were individually reported. The data is ranked in order from most to least mentioned. Interviewees often provided more than one response to many of the categories and themes. Therefore, the frequencies exceed the total number of interviewees. Percentages

of frequency were also computed for comparative purposes. A discussion of the themes follows the tables.

Table 5 Themes and Categories: Frequency of Choice: Students (n = 20)

Theme/Category	Frequency	%
Reasons that students chose osteopathic training		
location (weather, family, convenience, opportunity)	15	75
other person (friend, family, doctor, etc.) influenced me	14	70
couldn't get into allopathic medical schools	7	35
only place I wanted to go (always wanted, my background)	6	30
osteopathic philosophy, theories, ideas	5	25
back door into medical school (or provided alternative)	5	25
mom was osteopathic nurse; family member was DO	3	15
focus on rural medicine	2	10
differences between osteopathic and allopathic training		
holistic, humanistic, and/or OMT philosophy	20	100
little/no difference, especially during first 2 yrs	9	45
hands on/critical feedback on patient interactions	5	25
training (OMT classes)	5	25
whole person focus- treat patient systemically, not organ specific	3	15

more practical integration of skills	2	10
training is less scientific/detail oriented	1	5
osteopathic has more clinical focus	1	5
curriculum differences		
inclusion of OMT/OMM/OPP	17	85
holistic approach emphasis	7	35
very little (no) difference	6	30
osteopathic is manipulative	4	20
more class time for longer hours	2	10
more integration of skills	2	10
emphasis on psychosocial classes	2	10
philosophical differences		
holistic approach	22	110
treating the whole person/whole body	10	50
humanistic	8	40
OMT (“feel and touch”) philosophy	6	30
concept of integration	4	20
most beneficial courses to train for practice		
OMT	12	60
physiology	5	25
other (surg/medical rotations, pharmacy, basic core)	4	20
gross anatomy	3	15
various types of lectures	3	15

hands on lab	3	15
suggested curriculum needs/improvements		
additional classes (histo-pathology, philosophy, alternative medicine, genetics, scientific, hands on, cultural issues, different world philosophies, laboratory clinical. other courses)	11	55
more/advanced OMT	8	40
standardization of curriculum across schools	5	25
more preceptors/facilitators that practice OMT	3	15
reduce crossover in classes	3	15
more small group learning with cases	3	15
establish training clinics in some hospital sites	3	15
more integration with traditional medicine courses	2	10
more student friendly curriculum; acceptance of student ideas	2	10
basic sciences should be under osteopathic domain	1	.05
improved lectures	1	.05
future of osteopathic medicine		
uncertain (nebulous, blurring/dimming of lines)	10	50
integration (assimilation, merging)	7	35
losing identity	7	35

Table 6 Themes and Categories: Frequency of Choice: Faculty (n = 5)

Theme/Category	Frequency	%
Reasons that faculty chose osteopathic training		
other person (friend, family, doctor, etc.) influenced me	3	60
couldn't get into allopathic medical schools	2	40
only place I wanted to go (always wanted, my background)	2	40
osteopathic philosophy, theories, ideas	5	100
back door into medical school (or provided alternative)	4	80
focus on rural medicine	4	80
differences between osteopathic and allopathic training		
holistic, humanistic, and/or OMT philosophy	5	100
little/no difference, especially during first 2 yrs	4	80
hands on/critical feedback on patient interactions	5	100
training (OMT classes)	5	100
whole person focus- treat patient systemically, not organ specific	5	100
more practical integration of skills	5	100
training is less scientific/detail oriented	1	20
osteopathic has more clinical focus	1	20

curriculum differences

inclusion of OMT/OMM/OPP	5	100
holistic approach emphasis	5	100
very little (no) difference	4	80
osteopathic is manipulative	5	100
more class time for longer hours	1	20
more integration of skills	2	40
emphasis on psychosocial classes	1	20

philosophical differences

holistic approach	5	100
treating the whole person/whole body	5	100
humanistic	5	100
OMT (“feel and touch”) philosophy	5	100
concept of integration	3	60

most beneficial courses to train for practice

OMT	4	80
physiology	5	100
other (surg/medical rotations, pharmacy, basic core)	4	80
gross anatomy	3	60
various types of lectures	3	60
hands on lab	3	60

suggested curriculum needs/improvements

additional classes (histo-pathology, philosophy, alternative

medicine, genetics, scientific, hands on, cultural issues, different world philosophies, laboratory clinical. other courses)	2	40
more/advanced OMT	2	40
standardization of curriculum across schools	4	80
more preceptors/facilitators that practice OMT	3	80
reduce crossover in classes	0	
more small group learning with cases	0	
establish training clinics in some hospital sites	3	80
more integration with traditional medicine courses	2	40
more student friendly curriculum; acceptance of student ideas	0	
basic sciences should be under osteopathic domain	0	
improved lectures	1	20
future of osteopathic medicine		
uncertain (nebulous, blurring/dimming of lines)	3	80
integration (assimilation, merging)	4	80
losing identity	2	40
will remain distinct if keeps to philosophical approach	5	100

Table 7 Themes and Categories: Frequency of Choice: Practitioners (n = 5)

Theme/Category	Frequency	%
Reasons that practitioners chose osteopathic training		
other person (friend, family, doctor, etc.) influenced me	3	60
couldn't get into allopathic medical schools	4	80
only place I wanted to go (always wanted, my background)	2	40
osteopathic philosophy, theories, ideas	4	80
back door into medical school (or provided alternative)	4	80
focus on rural medicine	1	20
differences between osteopathic and allopathic training		
holistic, humanistic, and/or OMT philosophy	5	100
little/no difference, especially during first 2 yrs	4	80
hands on/critical feedback on patient interactions	5	100
training (OMT classes)	5	100
whole person focus- treat patient systemically, not organ specific	5	100
more practical integration of skills	5	100
training is less scientific/detail oriented	1	20
osteopathic has more clinical focus	0	

curriculum differences

inclusion of OMT/OMM/OPP	5	100
holistic approach emphasis	5	100
very little (no) difference	4	80
osteopathic is manipulative	5	100
more class time for longer hours	1	20
more integration of skills	2	40
emphasis on psychosocial classes	0	

philosophical differences

holistic approach	5	100
treating the whole person/whole body	5	100
humanistic	5	100
OMT (“feel and touch”) philosophy	5	100
concept of integration	2	40

most beneficial courses to train for practice

OMT	2	40
physiology	5	100
other (surg/medical rotations, pharmacy, basic core)	4	80
gross anatomy	5	100
various types of lectures	5	100
hands on lab	2	20

suggested curriculum needs/improvements

additional classes (histo-pathology, philosophy, alternative

medicine, genetics, scientific, hands on, cultural issues, different world philosophies, laboratory clinical. other courses)	1	20
more/advanced OMT	1	20
standardization of curriculum across schools	3	60
more preceptors/facilitators that practice OMT	1	20
reduce crossover in classes	0	
more small group learning with cases	0	
establish training clinics in some hospital sites	4	80
more integration with traditional medicine courses	3	60
more student friendly curriculum; acceptance of student ideas	0	
basic sciences should be under osteopathic domain	0	
improved lectures	0	
future of osteopathic medicine		
uncertain (nebulous, blurring/dimming of lines)	2	40
integration (assimilation, merging)	4	80
losing identity	2	40
will remain distinct if keeps to philosophical approach	5	100

Discussion and Student Interviewee Quotes

The major reason that students chose osteopathic training was because they were aware of the holistic philosophy that osteopathic medical training offered. Whether a family member was a D.O., or they had been a patient of an osteopathic practitioner, they had been exposed to osteopathic medicine prior to applying to medical school. In particular, when deciding on the osteopathic medical school to attend, 75 percent chose NSUCOM because of convenience to a family member or friend, convenience of location as they were already residing in South Florida and the mild weather conditions of the Ft. Lauderdale area. Sue is Asian, twenty-four years old and a first year student. She is from New York and decided to go to osteopathic school as a second choice. She chose NSUCOM because of its proximity to her family but she did apply to schools in New York and Philadelphia.

New (1958), Gevitz (1982), and Albrecht and Levy (1982) noted that the majority of students used osteopathic medicine as a “back door” into medicine. Contrary to their findings, twenty-five percent of the students interviewed applied to osteopathic school as a first choice compared to seventy five percent (n= 250) of the students interviewed who applied to osteopathic school as a “back door” into medicine. The results of this study showed that choosing osteopathic medicine was a first choice. Even though a significant number of students did choose osteopathic medicine as a “back door” option, it was not the majority. Many of the students who chose osteopathic medicine as a first choice were influenced by a medical career prior to applying to medical school. A thirty-seven

year old Caucasian in his first year only applied to osteopathic medical school.

He was a physical therapist prior to attending NSUCOM said:

I read a lot about the history and the origins of osteopathic medicine and how the structure and function interrelationship was so very important to the approach to treatment and that's what drew me to osteopathic treatment. I am a very visual type person, conceptual, philosophical if you will. Those applications really interested me and I wanted to do something more than just prescribe medication and I felt I had a gift with my hands and it turns out that I am very proficient in OMT.

Again, it appears that the holistic philosophy of osteopathic medicine is one of the main reasons students chose osteopathic school because 100 percent of the student respondents felt that the biggest and most significant differences between osteopathic and allopathic training was the holistic philosophy. Fifty percent of the students felt that the "hands on" philosophy that OMT provides was the major difference.

A twenty-eight year old, Caucasian and a first year student, applied and was accepted to both allopathic and osteopathic medical schools. She decided on osteopathic because,

the only D.O. I knew was my current physician who was a resident in family medicine and the first thing I noticed from him was that you had to wait in his office for an hour to an hour and a half every time I had an appointment because everybody wanted to see him and he took so long with his patients. The first time I got into an office with him he actually asked me questions about me and talked to me about my history. Every physician I had seen prior to that was all about let's get her in and fix her do whatever we need and get her out. So just to be talked to and have to wait so long was worth it. It was the difference in philosophies. Osteopaths treat the whole person, mind, body and soul.

Eighty-five percent of the students agreed that the biggest differences in curriculum were OMT and OPP classes as well as the holistic approach

emphasized (combined interviews n=20 and surveys n=173). This was also true of physicians as well as faculty members.

A twenty-nine year old third year Caucasian male chose osteopathic school as a second choice. But he stated,

once you're in it you really gain and appreciate osteopathy, you don't really understand the differences until you're in it." When asked about the differences between allopathic and osteopathic curriculum he said "the difference is the OPP class which teaches us the holistic philosophy.

With regard to patient knowledge – that is, ignorance - about the profession, the majority of student respondents (twelve out of twenty students) agreed. Several recommended the initiation of publicity campaigns to improve the profession's image and increase general public awareness.

A forty-three year old, male Caucasian, third year student stated, that the fault was the profession itself – that is, that the profession needed to better market osteopathic medicine to the public.

A twenty-nine year old Caucasian male noted that the public simply is not aware of any difference. He said,

Yes sure I've come across a lot of patients in clinic who ask me exactly what a DO is, especially if I'm working at a hospital where there are mostly MD's patients will look at your badge and they look at your name tag and ask you what a DO is, absolutely.

Regarding the stigma associated with the profession, students acknowledged that there was a perception of inferiority and a feeling of skepticism in the profession's ability to provide meaningful treatment. "D.O.'s are perceived as secondary doctors," stated, a forty-seven year old, female Caucasian respondent. Another twenty-six year old Asian, male, third year student said, "Physicians still consider osteopathic physicians as inferior." As a

result of these perceptions on the part of others (family, friends, public, other professionals, etc.), a Caucasian twenty-four year old first year student said “he was sorry he even attended osteopathic school.”

As pertained to the future of osteopathic medicine, a number of interviewees noted that the profession was at a “crossroads” at this point in time. Lack of osteopathic residency training sites and professional identity were described as problems. A thirty-one year old, Hispanic first-year student commented,

I think that we could be in trouble if people don't realize that it's important to us to be distinguished for what we are and don't just identify us with manipulation.

Respondents (n=15) stated that assimilation was quite likely because the lines were getting blurred. In fact, more (n=15) saw assimilation and loss of identity than those who believed the profession would remain a distinct and separate entity. A thirty-six year old male third year student stated that D.O.'s had become too much like M.D.'s in recent years. He said,

In an effort to achieve professional parity with M.D.'s, D.O.'s have become too much like M.D.'s. In the process, distinctive practices like osteopathic manipulative treatment (OMT) are being lost. In fact, D.O.'s may actually be contributing to their own adoption by traditional medicine as a result of becoming too much alike.

Others saw a more positive future. A number of comments were received from interviews in this respect. Some of these interview responses are as follows:

“I think we're growing and I think more and more patients are becoming aware, just because the word has gotten out more...”

“More and more people will accept osteopathic medicine and allopathic itself will want to merge with osteopathic versus us trying to go there.”

“I think it’s going to survive. I think it will be consistent as long as you have people who are interested...”

“I don’t think that allopaths will absorb osteopathy. I think as a profession it will remain separate mostly because the professional machinery is in place and it’s very hard to change that sort of thing and osteopathy is growing worldwide.”

But other respondents did not agree. Some were undecided. For example, one twenty-six year old Caucasian female student commented, “I don’t know if they are going to hold on. I don’t know if the future of D.O.’s is really going to hold on to the ideals of if they’re going to blend with allopathic...some schools don’t want to teach it...so I think there’s an internal struggle that’s going to happen...maybe the future will end up with blending.”

A number of other respondents, on the other hand, were more positive. This point of view is best summed up by the words and comments of one third-year student who was a Caucasian male, twenty-eight years old. He answered:

I think it’s basically going to be the same as it is today where you’re going to have a certain percentage of people graduating from osteopathic schools that will be performing osteopathic manipulative medicine and integrating it into their practice of medicine and viewing themselves as using this marginal type of healing in addition to conventional ways of medicine...a certain amount of other graduates [will say to themselves] hey, I do have a DO degree, but I’m going to be a doctor like an MD...[will be] a separate distinction between those who want to be separate...more OMT involved and more of this complimentary medicine to those who really think it’s going to be something that’s going to help them...

With regard to osteopathic philosophy, students defined the term in similar ways. Of those, eighteen of the twenty students noted that it was the humanistic or holistic method that employed a whole body or body system approach. For a large number of interviewees, this was the reason why they were attending osteopathic school and intend to carry forward in the profession in one medical

category or another. According to one twenty-nine year old, Caucasian female third-year student, "I think osteopathic medicine is the way to go about practicing holistic medicine just by the nature of what osteopathic medicine in theory is; I think it opens doors to that and if you're really open to that in your mind it's the way to go."

First year students were more positive about becoming a D.O. than third year students because of the philosophical differences between osteopathic and allopathic medicine. Also, many third year and first year students lacked confidence in their OMT abilities, possibly as a result of the need for more hands-on courses and more advanced OMT training.

Other respondents stated that Nova Southeastern was the only osteopathic program to which they applied and that they had always wanted to attend an osteopathic school. In their view, OMT was an efficacious treatment modality, even though lay people associate the use of manipulation therapy with chiropractic medicine.

The majority of students had prior knowledge of what OMT was about before attending school and perceived osteopathic medical training to be as efficacious as allopathic. One twenty-six year old third-year female Asian student voiced the feelings and sentiments of a number of other students. "Sure, I knew about OMT prior to going into osteopathic medicine. I read books. I read the autobiography of A. T. Still, the founder of osteopathic medicine. I did as much as I could to gain an appropriate knowledge base of osteopathic medicine before enrolling in the school."

A number of suggestions about curriculum changes and improvements were offered by respondents. One interesting comment from a thirty-two year old Caucasian third-year student was related to a combinational approach. "...perhaps more integration," he suggested. He further explained, "We take traditional medicine courses and then we take osteopathic courses. I would like to see it mixed such that when we discuss osteopathic training in relation to the systems in the body, the lecture could be integrated with that teaching, rather than presented as a separate course."

Another comment was received from a twenty-four year old Caucasian first-year student. She suggested the following:

I think it would have been interesting before the onset of medical school having like an OMT boot camp where everybody for a week goes to like a rural camping ground and we do just OMT and that would have been a bonding experience for the class. It would have really psychologically prepared you for this experience...

Curriculum Analysis

Nova Southeastern University of Osteopathic Medicine

This section answers the research question on holistic (CAM) courses offered in osteopathic medical schools in addition to osteopathic manipulation technique (OMT) and Osteopathic Principles and Practice (OPP). First there is an analysis of the curriculum history from 1995 to 2004 of NSUCOM. The section following analyzes the remaining nineteen osteopathic medical school curricula.

NSUCOM was originally a small osteopathic medical school called Southeastern. Southeastern University of the Health Sciences was Florida's first private, not-for-profit institution of higher learning entirely dedicated to health care

education. In 1995 Nova University and Southeastern merged becoming Nova Southeastern University College of Osteopathic Medicine. It was established by a group of osteopathic physicians who wanted to establish a college of osteopathic medicine in Florida.

The results of the curriculum analysis shows that from 1995, NSUCOM offered two OPP courses in the first and second years of medical school for a total of four courses and twelve credit hours. The course format is one hour of OPP lecture and two hours of OMT lab twice a week with demonstration by both faculty and guest lecturers. There is also an eight credit hour OPP elective offered in the fourth year. As far as CAM courses offered, there was .05 credit hour required course called Alternative Medicine offered in the second year which started in 1997. There were no required readings, required papers, or examinations. Topics covered in the course included an introduction, naturopathy, herbal medicine, Ayurveda, homeopathy, functional medicine, and traditional Chinese medicine.

The curriculum at NSUCOM has basically remained the same from 1995 to 2004. In 1997 one CAM course was added called the Introduction to Complementary and Alternative Medicine, IDC 6705. The following is the course description located in the catalog: concepts and practices of alternative and complimentary medicine. It is offered for 0.5 credit hours in the first semester core courses, second year of medical school (Appendix F).

The curricula of the remaining nineteen osteopathic medical schools were gathered by the researcher, from the American Osteopathic Medical Association

web site (www.aoa.org) where links to each school were found. The curriculum content was compared and analyzed to determine the extent to which CAM courses were included in individual curricula.

The overall results showed that holistic (CAM material) was presented in required courses sponsored by clinical departments. Courses were most likely taught in the first two years of medical school, and involved fewer than twenty contact hours of instruction. The medical schools also used lectures as the primary instructional format. The holistic (CAM) courses listed at osteopathic medical schools were taught within the second year. Many of the courses were described as a survey course designed to introduce students to a broad array of popular CAM topics, such as acupuncture, herbs and botanicals, spirituality, dietary therapy, and homeopathy. The topics most often taught were acupuncture, spirituality, dietary therapy, and homeopathy. All twenty osteopathic colleges of medicine offered OMT and OPP courses in the first and second years of training. Only eight osteopathic medical schools listed additional CAM courses.

Individual Results

The Arizona College of Osteopathic Medicine, a College of Midwestern University, has two courses dedicated to complementary and alternative medicine. The two courses, Acupuncture and Herbal Medicine, are both electives. The Acupuncture course awards five credit hours per quarter and is taken during the first two years of medical school. Herbal medicine is a ten credit hour course per quarter taken during the second year of medical school.

Kirksville College of Osteopathic Medicine offers two courses that have CAM content. Biochemistry has two contact hours regarding herbal medicine and the new views of the function and health effects of vitamins. Urology has one contact hour regarding complementary medicine in urology. Lake Erie College of Osteopathic Medicine, on the other hand, offers a course on spirituality, medicine and ethics, which is taken in the second year of medical school. It is a course where students explore spiritual beliefs and their impact on the holistic health of the patient.

Michigan State University College of Osteopathic Medicine has an elective course called Acupuncture, which is taken during the second year of medical school. It is a demonstration course presented by faculty and it offers no academic credit.

Oklahoma State University College of Osteopathic Medicine has a required one credit hour course called Multicultural Health. Fifty percent of the course content is devoted to complementary and alternative medicine. There are required readings in CAM as well as CAM topics on exams. The course is taken during the second year of medical school. The first half teaches the diversity of beliefs that physicians will encounter after medical school and provides the students with strategies for working with people of different cultures and backgrounds. The second half of the course reviews the different alternative medicine approaches. The course provides an overview of CAM therapies with a comparison to osteopathic therapy. The CAM therapies include traditional

Chinese medicine, homeopathy, naturopathic medicine, herbal medicine, mind-body medicine and spirituality, and manual healing.

The University of New England College Of Osteopathic Medicine offers one course called Integrative Medicine. It requires thirty hours of coursework per year and is offered during the first two years of medical school. Academic credit is not given, as it is an elective course. One hundred percent of the course content is related to CAM therapies.

The University of Health Sciences College of Osteopathic Medicine University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine offers one CAM course in the second year of medical school. It is called Mind, Spirit and Behavior, which is a non-credit course for three weeks.

In conclusion, the topic, number of courses, credit hours per course and whether they were required or not varied at all twenty schools. The only similarity between all of the twenty curricula, including NSUCOM, was the requirement of OPP and OMT courses.

Direct Observation/Curriculum

The researcher observed two Osteopathic Principles and Practice lecture classes and the OMT lab course to gain an understanding of the type of training osteopathic medical students received at different levels and to verify that the class being observed fulfilled the described curriculum goals and principles. The researcher concentrated on two areas of the curriculum for observation (1) Osteopathic Principle and Practice lecture (OPP), and (2) the Osteopathic Manipulation Therapy (OMT) laboratory. As an observational protocol, the

researcher took field notes to record the observations and description of classrooms, activities, and other similar areas of concern. The observations for each class are described in separate sections below.

Osteopathic Manipulation Lecture

The lecture was held in a large, modern, well-lit auditorium style classroom. There was a platform and podium in the front of the room, where the lecturer stood. The audio-visual equipment was state of the art. The seats were well cushioned and attached to one another with an adjustable desk that could be used to take notes. Each lecture held 200 first year students.

The lecture was mandatory and well attended. Before the lecture, the lecturer placed a handout with lecture notes for the students on one of the front tables in the classroom. During each lecture class, a student would be responsible to go around the lecture room to make sure all of the attendees signed the attendance sheet.

The lecture was taught by different members of the NSUCOM faculty, all of whom had doctorate degrees in sociology. The lecture always started promptly at nine a.m. The first lecture this researcher attended addressed the subject "Osteopathy - future perspectives and the impending catastrophe" and was taught by a sociology professor who specialized in osteopathic medicine. I noted that all of the OPP classes were taught by non-osteopaths, non-physicians. The rationale for a sociology professor teaching the OPP class was that he did his Ph.D. research on Osteopathic Medicine specifically, Principles and Practice. The Osteopathic Manipulation Lab was taught by a physical therapist that had a

Ph.D. in osteopathic manipulation techniques. All of the classes were taught by individuals with a long tenure at Nova Southeastern Osteopathic School of Medicine.

This particular lecture made many references to the idea that a “person is the product of dynamic interactions between body, mind, and spirit.” Many ideas were presented during this particular lecture. These lectures contributed to the standard philosophy backed by extensive literature on the past and future of the osteopathic profession. Many of the students “buy into” this philosophy for many reasons. Some come to osteopathic medical school with the “back door” mentality. But, as mentioned and observed in two interviews, it is the principles of OMT more than the practice of OMT that remains in the minds of students during school and many years later. As seen in the in-depth interviews with practitioners who have been away from the “womb” of osteopathic philosophical nurturing, it is still the holistic philosophy that practitioners put forth as the primary difference between osteopathic and allopathic professions.

On the subject of “expanding the role of OMT” during this same lecture, one of the professors said that OMT is not a treatment of disease but of the individual’s ability to deal with disease. It should be noted that no one during this class made any comments or asked any questions. The presenter gained the full attention of the whole class. He also said, “it’s not how you treat your patients with medicine or manipulation; it’s how you respect them.”

Osteopathic Principles and Practice classes consist of the development of the osteopathic approach to systemic diseases. The OPP class stresses the

neuro-physiological aspects of muscle dysfunction and pain mechanisms. Of the twenty-four OPP classes this researcher attended, the majority of classes highlighted the importance of how the patient is treated. This difference in the osteopathic professions' philosophy is reported in the literature: "Shift emphasis to healthcare not disease." One statement was made in the last OPP class by a fifty-nine year old Caucasian male professor. "You people need to think about it...you will be right there... contributors prepared with your philosophy and how to use the philosophy."

This statement again emphasizes one of the most important pieces of the osteopathic philosophy, which according to this research study, is the most important difference found in the ideas of osteopathic physicians and allopathic physicians.

Another aspect of osteopathic philosophy, observed during the OPP class, is that health comes from within, not from the doctor. In this context, health is not the doctor's responsibility but the patient's. As noted by one female family practitioner in her 40's, "The doctor is simply the teacher and facilitator of health."

Another respondent said,

Recognize that health is not the absence of clinical disease but optimal function of physical, spiritual and psychological aspects. Do not violate these functions. Recognize that a doctor does not treat a disease, but a person who has a disease.

The osteopathic philosophy of treating somatic dysfunctions with OMT is interrelated with the holistic philosophy that is taught in the OPP lab and is therefore considered as one unit. For example, an OPP lecture is followed by the OMT lab. The OMT lab consisted of a review of the range of motion as well as an overview of a test the following week. One of the main points brought out

by the lecturer, was that “OMT must be done how it feels, not just visually.” This researcher attended twenty OMT lab classes.

Johnson and Kurtz (2001) suggested that the key factor in determining whether OMT is the treatment of choice, as opposed to non-manipulative options, is the physician's sense of competence and comfort level. The results in this study agree. Students felt uncomfortable with OMT during their first year in medical school and said they would never practice OMT. If more OMT classes were provided to students throughout the first three years of medical school they would feel more secure in practicing OMT once they graduated. This finding has obvious implications for osteopathic medical school curriculums to increase the amount of OMT courses offered to students.

Osteopathic Manipulation Lab

The osteopathic manipulation lab was located in the library building on the second floor. The room was extremely large, well lit, and consisted of fifty manipulation tables. A TV monitor was mounted above each grouping of tables so that students who were too far back could easily see the demonstration. There was a manipulation table on a platform in the front of the room where the instructor did the demonstrations. There was also a separate room in the back where the controls were kept during the demonstrations for the TV monitors.

The OMT lab gave the researcher a chance to observe actual manipulation techniques as well as student instruction. The researcher would always sit in a chair in the back of the enormous lab so that she could watch each individual pair of students practice manipulation techniques on one another

and at the same time observe the faculty interacting with the students. The lecturer always gave a clear description of what was going to be accomplished during the lab class. A student volunteer stood in front of the lab with the lecturer. They were both on a higher platform so that all students could see the manipulation technique practiced first on the volunteer. Then each student was assigned that manipulation to practice on one another. Five faculty members were disbursed throughout the lab so that they could answer questions and help instruct students with the manipulation technique. Once everyone had done the manipulation on their partner, the lecturer would demonstrate another technique on a student volunteer and the same format would follow. Students would remain with the same partner throughout the lab class and would practice each manipulation after the lecturer was through with the demonstration and any preliminary questions had been answered from the students.

Each student came to class dressed comfortably in gym clothes as opposed to the scrubs worn during the day. Each student had a technique handbook with full explanation of each technique and the page number was always given at the beginning of class. Every group of four tables had an overhead television monitor where the demonstration on the student volunteer could be watched in closer detail. This technology is rare in most osteopathic medical schools.

During each lab class, which lasted for two hours, there was an opportunity for the researcher to interact with many of the first year students because of its informal nature. Many of the students greeted me and were quite

inquisitive about the field notes I was taking. It was during this class that I was able to interact with many of the students who I had not interviewed. I learned that many of the students felt uncomfortable about manipulation because they felt that two labs a week was not enough. They only practiced manipulation on relatives or their roommates because they were afraid of doing the manipulation incorrectly and hurting someone. Some of them mentioned that it didn't matter to them how many OMT classes they took because the specialty they would pursue would not require this technique. Many of them openly admitted to just coming to class because they had to, not because they enjoyed it. Overall, the students really wanted to learn OMT but feared that they would never be able to practice it because they would be doing an allopathic residency.

In accordance with the study question on what training influences the practice of osteopathic medicine. It was my observation that a combination of the holistic philosophy presented in the OPP class and the manipulation techniques in the OMT lab is what influences the training of osteopathic physicians.

Quantitative Analysis: Data Presentation

Overview

For the survey questionnaire, a descriptive statistical analysis method was employed by the researcher to test and compare individual item perception data on why students chose D.O. school, their attitudes toward holistic medicine, and their goals as practicing physicians. The questionnaire was developed by the

researcher. Survey questions focused on the reasons these students chose D.O. school, their attitudes toward holistic medicine, and their goals as practicing physicians. The quantitative portion of the data analysis was compiled using the Statistical Package for the Social Sciences (SPSS). The researcher first placed the information in a table in SPSS and next computed a mean, sum, and distribution.

Chi-square was used for data analysis. Chi-square reveals differences, if any, between the two groups on individual or groups of questionnaire items. It is the most popular and widely used nonparametric test of significance and is particularly useful in tests involving data such as that which is provided in this study (Madrigan 1998). When chi-square is used, there is a different distribution for each number of degrees of freedom, which is defined as the number of categories in the classification, minus one (Madrigan 1998). The numbers in each cell, depending upon the number of degrees of freedom, must be of sufficient size to ensure that the chi-square test is appropriate. Each expected frequency should be at least five in size when the degrees of freedom are equal to one (Madrigan 1998). The basics of Chi-square analysis consist of the creation of a cross-tabulation or contingency table. This table is made up of rows and columns dependent upon the # of factors a given variable has. The chi-square test of significance is useful as a tool to determine whether or not it is worth the researcher's effort to interpret a contingency table. A significant result of this test means that the cells of a contingency table should be interpreted. A non-significant test means that no effects were discovered and chance could explain

the observed differences in the cells. In this case, an interpretation of the cell frequencies is not useful.

Data Analysis: Results of Chi-Square Analysis:

Table 1 on the following pages provides the results from the chi-square analysis.

A discussion of the results of the chi-square results follow.

Quantitative Data Analysis: Survey Questions 1-30

Table 1

Results of Chi-Square Tests on Items (#1 - #30)

Year	SA ^a	A	N	D	SD	? ²
1. Osteopathic Medical School Training is what I thought it would be.						
First year (n=96)	11(11) ^b	63(66)	14(15)	6(6)	2(2)	6.9
Third year (n=76)	12 (16)	41(55)	10(13)	12(16)	0(0)	
2. Osteopathic Medical training will prepare me to be a holistic physician.						
First year	25(26)	52(54)	14(14)	5(5)	1(1)	2.7
Third year	19(25)	38(50)	9(12)	9(12)	1(1)	
3. I entered osteopathic medicine because of its holistic philosophy.						
First year	35(36)	37(38)	14(15)	5(5)	6(6)	4.0
Third year	22(29)	34(45)	10(13)	8(10)	2(3)	
4. I am well prepared in my training to integrate OMT in my practice.						
First year	4(4)	31(32)	31(32)	23(24)	8(8)	3.2
Third year	6(8)	22(29)	23(31)	20(27)	4(5)	
5. Insufficient training limits my current OMT practice.						
First year	6(6)	24(25)	35(37)	27(28)	4(4)	5.8
Third year	8(10)	22(29)	16(21)	24(32)	6(8)	

6. I need better OMT role models during my training.						
First year	6(6)	11(11)	16(17)	45(47)	18(19)	22.2**
Third year	14(18)	24(32)	12(16)	20(26)	6(8)	
7. I am satisfied with the amount of OMT in curriculum.						
First year	7(7) ^b	59(61)	22(23)	7(7)	2(2)	6.6
Third year	7(9)	36(48)	16(21)	14(18)	3(4)	
8. Lack of faculty support affects the amount of OMT I will use in my practice.						
First year	1(1)	16(17)	17(17)	46(47)	17(18)	11.3*
Third year	3(4)	17(22)	24(32)	27(35)	5(7)	
9. I will practice OMT when I practice medicine.						
First year	20(21)	33(34)	34(35)	4(4)	6(6)	4.4
Third year	9(12)	21(28)	35(46)	4(5)	7(9)	
10. Difference in personal philosophy will limit my OMT practice.						
First year	1(1)	11(11)	21(22)	44(45)	20(21)	1.6
Third year	1(1)	2(11)	21(28)	35(46)	11(14) Ethnicity	
11. Allopathic school was my first choice when applying to medical schools.						
First year	13(18)	20(21)	6(6)	30(31)	27(28)	6.7
Third year	10(13)	19(25)	9(12)	28(37)	10(13)	
12. I did not get accepted to allopathic medical school.						
First year	13(13)	24(25)	10(10)	21(22)	29(30)	7.6
Third year	10(13)	23(30)	6(8)	26(34)	11(15)	
13. I am glad I chose osteopathic medicine.						
First year	39(40)	37(38)	17(18)	4(4)	0(0)	10.0*
Third year	22(29)	36(47)	8(11)	6(8)	4(5)	
14. I lack confidence in my OMT abilities.						
First year	12(12)	40(41)	23(24)	21(22)	1(1)	14.1**
Third year	4(5)	22(29)	13(17)	33(44)	4(5)	

15. I believe OMT is an efficacious treatment modality.

First year	36(38)	53(55)	5(5)	2(2)	0(0)	5.9
Third year	22(29)	40(53)	8(11)	5(7)	1(1)	

16. The public associates manipulation therapy with chiropractic medicine.

First year	26(27)	61(63)	8(8)	1(1)	1(1)	3.3
Third year	25(33)	48(63)	3(4)	0(0)	0(0)	

17. I function as a role model for student trainees in the use of OMT.

First year	3(3) ^b	21(22)	36(37)	30(31)	7(7)	1.4
Third year	5(7)	17(22)	25(33)	23(30)	6(8)	

18. I want to do an allopathic residency.

First year	8(8)	17(18)	49(52)	12(13)	9(9)	12.3*
Third year	20(26)	15(20)	25(33)	11(14)	5(7)	

19. Nova Southeastern was my first choice.

First year	35(37)	33(34)	5(5)	19(20)	4(4)	3.0
Third year	20(26)	26(34)	4(5)	22(29)	4(5)	

20. Nova Southeastern was the only osteopathic program I applied to.

First year	10(11)	7(7)	0(0)	41(43)	37(39)	12.4**
Third year	15(20)	16(21)	0(0)	28(37)	17(22)	

21. I knew what OMT was before I attended medical school.

First year	27(28) ^b	43(45)	4(4)	18(19)	4(4)	7.8
Third year	12 (16)	40(52)	5(7)	19(25)	0(0)	

Year	SA ^a	A	N	D	SD	? ²
22. Osteopathic medical training is perceived as efficacious as allopathic.						
First year	18(19)	29(30)	22(23)	24(25)	3(3)	3.1
Third year	10(13)	26(34)	15(20)	19(25)	6(8)	
23. I consider my medical training to be scientifically based.						
First year	26(27)	54(56)	14(15)	2(2)	0(0)	6.3
Third year	15(20)	49(64)	7(9)	2(3)	3(4)	
24. Osteopathic and allopathic medical training are the same.						
First year	20(21)	0(0)	5(5)	0(0)	71(74)	7.5*
Third year	27(35)	0(0)	8(11)	0(0)	41(54)	
25. Philosophy of osteopathy is different than that of allopathic medicine.						
First year	91(95)	0(0)	3(3)	0(0)	2(2)	7.9*
Third year	62(82)	0(0)	6(8)	0(0)	8(10)	
26. Osteopathic medical training needs to include more OMT courses for students to feel more comfortable with the practice of OMT.						
First year	36(38)	0(0)	26(27)	0(0)	34(35)	3.1
Third year	33(43)	0(0)	12(16)	0(0)	31(41)	
27. Osteopathic physicians treat the person not the disease.						
First year	82(86) ^b	0(0)	9(9)	0(0)	5(5)	11.0**
Third year	51(67)	0(0)	22(29)	0(0)	3(4)	
28. The practice of medicine in the future will be a combination of both allopathic and osteopathic philosophies.						
First year	76(79)	0(0)	16(17)	0(0)	4(4)	1.8
Third year	54(71)	0(0)	16(21)	0(0)	6(8)	
29. Osteopathic medicine will always be distinguishable from allopathic.						
First year	46(48)	1(1)	32(33)	0(0)	7(18)	1.8
Third year	33(44)	0(0)	24(32)	0(0)	18(24)	

30. Most osteopathic medical school curriculums are the same.

First year	21(22)	0(0)	53(55)	0(0)	22(23)	10.0**
Third year	31(41)	0(0)	38(50)	0(0)	7(9)	

^a SD = strongly disagree, D = disagree, N = neutral, A = agree, SA = strongly agree ^b The values represent the counts in each cell with the percent of the total group in parentheses.

Discussion of Data Analysis: Items 1-30

Specifically, I will discuss item six (I need better OMT role models during my training) and item eight (Lack of faculty support affects the OMT amount I will use in my practice). For item six, a higher percent of third year students (50 percent) agreed that they needed better OMT models during their training and a higher percent of first year students disagreed (66 percent). Regarding item eight, a higher percent of first year students agreed that lack of faculty support affects the OMT amount they will use in their practice. A higher percentage of third year students were neutral.

No differences in items 1-10 only were found between first and third year students with respect to the remainder of items included in this section of the analysis. A large majority of both first and third year students strongly agree or agree with these items: item one - OMS training is as expected, item two - training will prepare them to be holistic as a physician, and item three – they entered osteopathy because of it holistic philosophy.

A majority of both first and third year students strongly agree or agree with item seven (satisfied with amount of OMT in curriculum). For item nine, which asked if students would practice OMT when they practiced medicine, the majority

for both first and third years were distributed between strongly agree, agree, and neutral. Both first and third year students had no clear position on the following items (even distribution between agree, neutral, and disagree): item four - prepared to integrate OMT into practice, and item five – insufficient training limits current OMT practice. Also, a majority of both first and third year students (gender and ethnic groups) disagreed with item ten, which stated that a difference in personal philosophy will limit my OMT practice. There were no differences with gender (Table A) or ethnicity (Table B) found for items one through ten included in Tables A and B below.

Table A Gender q 1-10

N=173		F (n=87)		M (n=86)							
Differences %		q1	q2	q3	q4	q5	q6	q7	q8	q9	q10
F		6.8	4.7	3.4	3.2	2.8	4.2	1.1	7.1	6.5	4.6
M		6.7	4.6	2.9	3.3	2.9	3.8	.98	6.8	6.1	4.8

Table B Ethnicity

C (n=144)		A(n=24)		H(n=16)		AA(n=4)		other (n=4)			
Differences %		q1	q2	q3	q4	q5	q6	q7	q8	q9	q10
C		6.9	4.0	2.7	3.2	2.5	4.0	2.7	7.5	6.6	4.4
A		7.6	4.2	3.1	3.1	2.0	3.9	2.1	7.2	5.9	4.1
H		6.3	4.0	3.0	2.9	1.75	3.1	2.0	6.9	5.1	4.0
AA		5.9	3.9	2.9	3.0	2.1	3.7	2.0	6.4	6.0	3.9

The second set of items on the questionnaire (eleven through twenty) focused on identification of differences between osteopathic and allopathic medical training among first and third-year students. Table 4 presents the results of the analysis. Four items were found to be significant as a result of chi-square analysis. These included items thirteen, fourteen, eighteen, and twenty. As indicated in the table for item thirteen, a higher percentage of both third and first year students agreed that they were glad they chose osteopathy. The difference

between the two groups was that a higher percent of third year students disagreed (13 percent) as compared to first year students (4 percent).

For item fourteen, a higher percentage (53 percent) of first year students agreed that they lacked confidence in their OMT abilities. A higher percent of third year disagreed, as pertains to item eighteen, a higher percent of first year students were neutral about wanting to do an allopathic residency. A higher percentage of third year students agreed. Finally, for item twenty, the majority of first year students (82 percent) disagreed that the Nova Southeastern was the only osteopathy program to which they applied as compared to third year students (59 percent). A higher percent of third year (46 percent) students agreed.

No differences were found between first and third year students on items fifteen (OMT is efficacious treatment modality), sixteen (public associates manipulation therapy with chiropractic), and nineteen (Nova Southeastern was their first choice). A high majority (more than 70 percent) of both first and third year students agreed.

The highest percent of both first and third year students disagreed with items eleven and twelve on the questionnaire. Allopathic school was not their first choice (item eleven) and they did get accepted to allopathic medical school. With regard to item seventeen, students in both groups were either neutral or disagreed that they functioned as a role model for student trainees in the use of OMT. No significant differences with gender and were found for items 11-20 as represented in Tables C and D.

Table C Gender (q 11-20)

N=173		F (n=87)		M (n=86)						
Differences %	q11	q12	q13	q14	q15	q16	q17	q18	q19	q20
F	7.6	6.7	7.4	3.2	6.1	7.0	5.9	3.3	1.4	7.8
M	7.4	6.6	6.9	3.0	5.9	6.8	5.8	2.8	1.6	8.0

Table D Ethnicity (q 11-20)

C (n=144)		A(n=24)		H(n=16)		AA(n=4)		other (n=4)		
Differences %	q11	q12	q13	q14	q15	q16	q17	q18	q19	q20
C	6.7	7.6	7.5	3.9	6.0	7.6	5.6	3.1	1.1	7.4
A	6.4	7.2	7.3	3.1	6.9	6.9	5.1	3.2	.97	7.9
H	6.2	7.0	7.0	3.7	6.5	7.1	5.9	3.9	.95	7.6
AA	6.8	6.9	7.9	3.0	6.3	7.7	5.2	3.8	.90	7.4

The final group of items on the survey questionnaire pertained to holistic philosophy of osteopathic medicine (items 21 to 30). As indicated, four items were found to be significant. Specifically for item twenty-four, the majority of both first and third year students disagreed that osteopathic and allopathic medical training are the same. However, a higher percent of third year students agreed (35 percent). As pertained to item twenty-five, a large majority of both first and third year student agreed that the philosophy of osteopathy is different from that of allopathic, but a higher percent of third year students disagreed with this statement (10 percent). Item twenty-two, which asks if osteopathic medical training is perceived as efficacious as allopathic, more males (43 percent) agreed than females (25 percent).

Item twenty-seven asked if osteopathic physicians treat the person, not the disease, and a majority of both first and third year student agreed. Still, a substantial number of students (29 percent) were neutral in this regard. For item thirty, which asks if most osteopathic medical school curriculums were roughly

the same, about half of both first and third year student were neutral. A higher percent of third students agreed (41 percent).

No differences were found between first and third year students with regard to item twenty-one, which asks if they knew what OMT was about before attending medical school. The majority (more than 70 percent) of both first and third year students agreed. The same was true for responses to item twenty-three – that is, no differences were found and the majority agreed that medical training was considered to be scientifically based. The majority (about 70 percent) of first and third year students also agreed that the future practice of medicine will be a combination of both allopathic and osteopathic philosophies (item twenty-eight).

A higher percentage of both first and third year students agreed (about 45 percent) that osteopathic medicine will always be distinguishable from allopathic (item twenty-nine). However, first and third year students held no clear position on the following two items (there was an even distribution among agree, neutral, and disagree):

item twenty-two – osteopathic medical training is perceived a efficacious as allopathic, and

item twenty-six – osteopathic training needs to include more OMT courses for students to feel more comfortable with practice of OMT. No significant differences for gender or ethnicity occurred for items twenty-one through thirty.

No significant differences were found pertaining to gender (Table E) and ethnicity (Table F) which follow on the next page.

Table E Gender (q 21-30)

	q21	q22	q23	q24	q25	q26	q27	q28	q29	q30
N=173										
F (n=87)	3.1	6.4	7.8	6.3	3.3	1.4	3.0	1.1	4.4	7.1
M (n=86)	2.9	6.7	8.1	6.6	3.1	.98	3.2	1.3	4.6	7.3

Table F Ethnicity (q 21-30)

	q21	q22	q23	q24	q25	q26	q27	q28	q29	q30
C (n=144)										
A (n=24)	3.3	6.9	7.5	5.5	3.8	2.6	3.1	1.0	4.7	6.9
H (n=16)	3.6	6.7	7.7	5.3	3.6	2.8	3.0	1.1	4.5	6.7
AA (n=4)	2.9	6.5	7.1	5.5	3.3	2.5	2.9	1.4	4.8	6.4
other (n=4)	3.1	6.6	6.9	5.1	3.0	2.1	2.2	1.0	4.6	6.9

Data Analysis: Summary

Significant differences in responses were found for several survey questions. Question six (I need better OMT role models during my training) was identified as the first significant difference between the two student groups. First year students were neutral; third year students strongly disagreed.

Responses to question twenty (Nova Southeastern was the only osteopathic program I applied to) were identified as the next significant difference between the two student groups. Specifically, first year students agreed and third year students were neutral.

Responses to question twenty-four (osteopathic and allopathic medical training are the same) were also found to be significantly different. First year students agreed and third year students were neutral. It was clear from the differences that first-year students were not yet able to discern the difference between the two disciplines, but by the time they reached the third year of their

studies, they could differentiate and identify the distinctions. This finding was also supported in the interviews.

Finally, responses to question twenty-nine (Osteopathic medicine will always be distinguishable from allopathic medicine) were significantly different. First year student's disagreed and third year students were neutral.

More females (38 percent) than males (23 percent) strongly agreed with item four (I am well prepared in my training to integrate OMT in my practice). A higher percent of females (40 percent) for item fifteen (I believe OMT is an efficacious treatment modality) strongly agreed than males (22 percent). For item nineteen (Nova Southeastern was my first choice), a higher percent of males (31 percent) disagreed than females (17 percent).

Of interest was the fact that the average student (when first and third year students, gender and ethnic groups were combined) did not find that osteopathic medical school training was what he or she thought it would be. The average respondent also agreed that the practice of medicine in the future would be a combination of both allopathic and osteopathic philosophies. More discussion is included in the next and final chapter.

To obtain an overall profile of the student groups combined, averages for both classes on questions one through thirty were also separated. The data presented in Table 7 below places responses by the categories of disagrees, strongly disagree, neutral, agree, and strongly agree. Responses are also separated by the actual statement. As indicated, there were no entries for the choice of strongly agree.

Table 7 Class Statement Response (Both Student Groups)

Category	Statement
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Disagree

1. Osteopathic Medical School Training is what I thought it would be.
2. Osteopathic Medical training will prepare me to be a holistic physician.
3. I entered osteopathic medicine because of its holistic philosophy.
7. I am satisfied with the amount of OMT in curriculum.
13. I am glad I chose osteopathic medicine.
15. I believe OMT is an efficacious treatment modality.
16. The public associates manipulation therapy with chiropractic medicine.
19. Nova Southeastern was my first choice.
21. I knew what OMT was about before I attended medical school..
23. I consider my medical training to be scientifically based.
26. Osteopathic medical training needs to include more OMT courses for students to feel more comfortable with the practice of OMT.
29. Osteopathic medicine will always be distinguishable from allopathic.

Strongly Disagree

25. Philosophy of osteopathy is different than that of allopathic medicine.
30. Most osteopathic medical school curriculums are the same.

Neutral

- 4. I am well prepared in my training to integrate OMT in my practice.
- 5. Insufficient training limits my current OMT practice.
- 6. I need better OMT role models during my training.
- 8. Lack of faculty support affects the OMT amount I will use in my practice.
- 9. I will practice OMT when I practice medicine.
- 11. Allopathic school was my first choice when applying to medical schools.
- 12. I did not get accepted to allopathic medical school.
- 14. I lack confidence in my OMT abilities.
- 17. I function as a role model for student trainees in the use of OMT.
- 18. I want to do an allopathic residency.
- 22. Osteopathic medical training is perceived as efficacious as allopathic.

Category	Statement
----------	-----------

Agree

- 10. Difference in personal philosophy will limit my OMT practice.
- 20. Nova Southeastern was the only osteopathic program I applied to.
- 24. Osteopathic and allopathic medical training are the same.
- 27. Osteopathic physicians treat the person not the disease.
- 28. The practice of medicine in the future will be a combination of both allopathic and osteopathic philosophies.

Chapter Conclusions

The purpose of this chapter is to present and analyze the data collected through interviews and observations. Interview data clearly related to topics concerned with experiences of students, faculty and practitioners in the professional training in the osteopathic profession.

Demographics of the sample were described in the first section. More first-year students participated in the study as compared to third-year students. The majority of students in both groups were Caucasian, but the majority of third-year students were male. Percentages of ethnic participants in both groups were similar. Gender differences were comparable for all items.

A content analysis of the interviews, direct observations, and curriculum analysis was conducted to meet the objectives of the qualitative portion of the study. A number of interesting findings resulted and are discussed in more detail in the next chapter. Chi-square analysis was conducted to meet the objectives of the quantitative portion. It includes the survey questionnaire description and the analysis. Statistical findings from the quantitative portion of the analysis supported qualitative conclusions. These are also discussed in more detail in the next chapter which concludes the study.

Chapter Five: Discussion and Conclusions

Introduction

This study focused on the identity crisis faced by the osteopathic medical profession in the United States. Theoretical models document the growing accommodation of alternative practitioners, including holistic health care practitioners, to the biomedical model of organization and social control (Friedson 1994). The concept of profession, according to Weber (1978) can be defined as the status group whose members share certain readily definable criteria: style of life, formal education, and prestige. This study focused on one osteopathic medical school to gain a greater understanding of the reasons why students choose to train in osteopathic medicine and how their training has helped them attain their goals and influence their practice of medicine.

In this research, the use of in-depth, unstructured interviews, direct observations, survey questionnaires, curriculum analysis, and the theory of professionalization provided a framework allowing for theme identification and analysis of student, faculty and practitioner experience during medical training.

In this chapter, the research questions are reviewed as a guide for the discussion of the findings.

Previous portions of this dissertation presented different aspects of the study. The purpose of this chapter is to bring together these aspects or chapters into a unified whole. Specifically, this chapter examines the overall structure of the original research questions, explaining how and why some of the major themes that emerged from the actual research did not follow in the same direction as the research questions. Of secondary but equal concern, this chapter examines the reasons for the digressions. The major themes of the study may be listed as follows:

- reasons why students choose osteopathic training,
- differences between osteopathic and allopathic training,
- curriculum differences,
- philosophical differences,
- most beneficial courses of training for practice,
- curriculum needs (recommended changes), and
- the future of osteopathic medicine.

Discussion of Findings

The Influences that Drive Students to Choose Osteopathic Medicine

Research Question One

The first research question focused on the influences that drive students to choose osteopathic training. The initial implications for this research question were driven by the literature that stated that students who choose osteopathic medicine do so because they cannot get into allopathic medical school and that allopathic medical school is in fact their first choice. New (1958) and Gevitz (1982) referred to this second choice phenomena into medical school as a “back door” into medicine. The results of this study found two types of groups that entered osteopathic medical school. One group entered osteopathic school as a first choice and the second group entered osteopathic school by the “back door”. The groups differed significantly concerning preparation for and commitment to an osteopathic medical career; adherence to osteopathic tenets; evaluation of quality of education; plans for future training; and career plans. Both groups, however, reported a lack of coherence and integration of osteopathic medical principles and practices in their education. Another study by Aguwa and Liechty (2001) found that those entering by the “back door” were less likely to use OMT on patients. Eckberg (1987) noted that those physicians who applied to osteopathic medical school as a “back door” into medicine were less likely to identify with classical osteopathic attitudes. These physicians were also less

likely to be committed to primary care medicine, and less likely to remain tied to the profession during their practice careers.

Fifty percent of the students surveyed in this study did choose osteopathic medical school as a “back door” into medical school (Table 6). However, unlike previous studies, the respondents who entered medical school as a “back door” into medicine did identify with OMT and classical osteopathic attitudes. As a matter of fact, all of the respondents in this study identified with classical attitudes of patient care, including practitioners and faculty members.

Osteopathic principles and practice (OPP) is a worldview taught in the first two years of osteopathic medical school. It is comprised of a core set of facts, theories, and values that are built upon the osteopathic concept. The osteopathic concept asserts that: 1) the body is a unit; 2) the body has its own self-protecting and self-regulating mechanisms; 3) structure and function are reciprocally interrelated; and 4) rational medical treatment is based upon these concepts.

Fifty percent of respondents in this study applied to osteopathic medical school only, which is a significant finding (Table 6). Other studies found the majority of students applying to osteopathic school as a second choice. The major reason reported for applying to osteopathic school was the “holistic approach” to medicine. This finding is contrary to a previous study (Johnson and Kurtz 2001) that reported OMT as the key identifiable feature of the osteopathic profession. The holistic approach refers to treating the whole person. One hundred percent of respondents, in the study, said that the holistic philosophy was the most influential force that would or did influence their practice. The

treatment of patients as a whole person – including mind, body and spirit – translates into extra time spent with patients, really getting to know their patients as people, and not thinking of them as a disease state that needs to be cured. The philosophy taught in osteopathic medical training stayed with students, as was shown by practitioners and faculty members regardless of whether they practiced OMT or not. This finding is important since the holistic philosophy is the one factor in this study that distinguished osteopathic medicine from the dominant medical subsystem, allopathic medicine. The respondents were passionate about the holistic philosophy but confused about the practice of OMT, which has been reported as the main distinguishing difference of allopathic and osteopathic practice.

Another major reason student chose osteopathic school is that they had an influential friend, family member, or osteopathic physician whom they consulted, and this individual told them about the difference in how patients are treated by D.O.'s and M.D.'s. Because of the lack of information afforded future medical student applicants, students learn about osteopathic medicine from friends, family members, or by D.O.'s themselves. Respondents stated that they valued the way a D.O. treated them as opposed to the way they had been treated by M.D.'s.

Sixty percent (n=12) of the students felt osteopathic medical training afforded them an “extra tool in their medical kit” by providing them the option to practice OMT instead of prescribing drugs if they chose. This, students stated, was not the case in allopathic medical school. Students, practitioners and faculty

respondents liked the idea that OMT was an option, whether they would ever use it or not. Three out of five practitioners interviewed did not practice OMT because of time constraints or lack of opportunity due to their specialty. First year students did not feel secure enough in their ability to practice OMT and faculty members practiced OMT only if they were working in the NSUCOM clinics. Third year students felt more secure in practicing OMT but had done rotations in allopathic hospitals where OMT was not generally available to patients. Graduates choose allopathic residencies because of the crucial lack of available osteopathic residencies.

Since this was a case study, a number of details from interview recordings added insights to the data collected. It was clear from the content analysis that students most often chose NSUCOM over the other nineteen osteopathic schools because of location, a family member or friend lived in South Florida. Family members living near NSUCOM made the transition easier for a number of students. Warm weather was another major factor in choosing NSUCOM. Convenience and opportunities in rural medicine training were other reasons. Specialty areas in rural medicine does not exist in allopathic medical school. Ten percent of the students said that they would practice rural medicine. Furthermore, NSUCOM has state of the art equipment, a holistic philosophy, and OMT, which students had learned about during their initial interviews at NSUCOM.

As discussed in Chapter Four, another reason students chose to go to osteopathic school was because they had always wanted to go to medical school. Many (n=12) of the students interviewed said that they did not see a real

difference between allopathic and osteopathic medical school. They felt that both were scientific but that they liked the holistic philosophy that osteopathic medicine offered.

A number of students admitted that osteopathic training was the only thing they wanted and it suited their respective backgrounds. These students were referring to previous experiences working in medicine. Joan, a thirty-eight year old first year Caucasian female was married to a D.O. She had three children, had been a nurse for twelve years, and had decided to become a doctor. “The reason that I chose osteopathic medicine was because I saw a difference between the way my doctors treated their patients and the way my husband treated his patients. They treated their patients as a disease and he treated his patients like a person. He knew his patients’ names. He treated their mind, body and spirit. I didn’t see this with the doctors I worked for.”

Holistic Courses Offered in Osteopathic Medical Training

Research Question Two

The second research question addressed the holistic courses offered in osteopathic medical school. This study finds that osteopathic training is considered a “holistic” form of medical training, a philosophy where the whole person is treated, mind, body, and spirit. A total of 44 percent of the respondents in the present investigation felt that osteopathic medicine offered a holistic approach to medical training.

OMT classes were considered as holistic by the student respondents with a “hands on,” less scientific approach to medical training than allopathic medical

training offers. According to the curriculum analysis that was done in twenty schools, only a few offered CAM courses. NSUCOM in particular offered one course, Introduction to Alternative Medicine, which has not changed in ten years. Saxon et al. (2004) pointed out that osteopathic medical schools are lacking in CAM courses because osteopathic medical schools view themselves as teaching holistic medicine, which incorporates the mind, body and spirit into the treatment of patients. Saxon's point was validated in this study. Faculty members, practitioners and students agreed during OPP (osteopathic principles and practice) class that the osteopathic philosophy is a holistic medical approach to treating patients. Also, OMT is considered a CAM course because it is an alternative method of treatment to allopathic medicine. Three of the faculty members interviewed stated that M.D.s have taken OMT training at the NSUCOM clinic. OMT is considered "hands on" medicine. A thirty-seven year old African American male in his first year of medical school said, "I love the fact that we practice hands on medicine. Allopathic doctors are afraid to touch their patients. That's what I think patients want... to be touched."

All of the twenty osteopathic medical schools offered OMT and OPP classes to their students. Both first and third year students were asked if they could remember any CAM courses they had taken, and what they thought of them. Only two students said that they could remember a CAM course. A third year twenty-seven year old Caucasian male remarked, "Oh yeah, I do remember a CAM course but it was taught by one of our regular faculty members. It was an elective and most everyone didn't attend. I remember her going over

acupuncture and that's about it." Other students remembered the course and said that it was a required course but it was only one hour of credit. There were disparities in opinions about CAM courses among student respondents. A twenty-four year old Asian female first year student remarked, "That course was really interesting but I just can't remember exactly what it was about."

The major differences between osteopathic and allopathic training pertained to the holistic and humanistic philosophy and the inclusion of OMT, but little or no other differences in training were clearly evident in the first three years. Students also noted that osteopathic training focused on a more practical integration of skills.

Type of Training that Influences the Practice of Osteopathic Medicine

Research Question Three

The third question addressed the types of training in osteopathic medical school that influence the practice of osteopathic medicine. The aspect of osteopathic training that most influenced osteopathic practice was found to be the inclusion of OMT//OPP in the curriculum. Further factors cited by students were the osteopathic medical training's emphasis on the holistic approach, the integration of skills, and emphasis on psychosocial classes.

Johnson and Kurtz (2001) view OMT as the ultimate distinguishing feature of the osteopathic profession, but expressed concern regarding the long-term trend of decreasing utilization of OMT within the profession (Gevitz 1982; Johnson et al. 2001). With regard to OMT, a disconnect seemed to exist, in the present study, between the value students placed on learning OMT and the lack

of OMT use among practitioners. Ambivalence clearly existed among all groups in this study regarding the attitudes toward OMT. Almost all of the respondents (students, practitioners and faculty) agreed that OMT was an efficacious treatment and they believed it to be an important modality in their profession. Even so, 75 percent of the practitioners in this study do not use OMT because of time constraints, insecurity in their knowledge of the practice of OMT, and their position in a specialized area of practice. Students stated that they will not use OMT because they felt insecure in practicing OMT, because they lacked space to practice OMT during training, and because of the high probability of doing an allopathic residency where they will not practice OMT. Eighty-five percent felt that the practice specialty they chose will not be conducive to practicing OMT.

**Most beneficial courses of training and curriculum needs
(suggested changes)**

Baer (2004) stated that osteopathic medical schools offered the same science courses as allopathic schools in an attempt to gain legitimacy. Of all the courses offered by the training program, however, respondents agreed that the most beneficial was the OMT training. Physiology, surgical/medical rotations, and basic core classes were also cited as beneficial, in addition to hands on laboratory work. Students as well as faculty and practitioners suggested that NSUCOM's curriculum be changed to include additional classes in such areas as histo-pathology, philosophy, alternative medicine, genetics, cultural issues, as well as various types of laboratory and clinical courses.

Students in both sample subject groups requested more advanced OMT training in addition to a standardization of curriculum across schools. It was the practitioners and faculty members, however, who most strongly suggested standardization of curriculum. Faculty members also suggested that basic sciences be taught within the osteopathic domain.

Some students thought that the school should reduce crossover between classes and restructure classes into smaller group learning with cases. Others believed the school should establish training clinics in some hospital sites and integrate courses with more traditional medicine training. Improved lectures and the inclusion of more preceptors and facilitators that practice OMT were also areas cited for improvement.

The Extent D.O.'s Practice Holistic Medicine and The Future of Osteopathic Medicine

Research Question Four

The fourth question addressed the extent to which osteopathic physicians practice holistic medicine which influences future practice. The only consistency regarding the future of osteopathic medicine was that the majority (seventy-five percent) of all respondents were uncertain. One of the key identifiable features of osteopathic medicine, OMT, is becoming a lost art among practitioners. The diminished use of OMT begins with medical students too insecure in its usage to practice these skills. Due to the paucity of osteopathic residency programs, even those students who want to practice OMT lose their interest when they do an allopathic residency, as allopathic residencies do not offer the opportunity to

practice OMT. Osteopathic school curricula have replicated science courses offered by allopathic schools (Baer 2001). OMT is being replaced by the recommendation of medications. Most graduates from osteopathic school do not want to practice family medicine, which was the niche that Still, its founder, had carved for the osteopathic profession. The uncertainty of osteopathy's future is going to depend on going back to basics and educating patients as well as students on the specific benefits that the osteopathic profession has to offer.

A number of subjects perceived a blurring of the line of demarcation between osteopathic and allopathic medicine. Some cited integration in the form of assimilation and merging with allopathy as the future direction of osteopathic medicine. Most respondents saw osteopathic medicine as losing its identity, however, others had different opinions. Several students and faculty members agreed that the area of osteopathic medicine would continue to remain a distinctly different practice as long as practitioners and the medical training kept to its holistic philosophical approach.

Professional Identity

Any discussion of a unique professional identity must consider professional values, or what an organization believes to be preferable or desirable. Professional values are purportedly honed by professional education, socialization, and work experiences (Abbott 1988). Values represent the underlying philosophy, specific attitudes, and opinions that lead to actions or behavior (Meddin 1975). Northrup (1966) effectively defined the values of

osteopathic medicine as essentially a medical philosophy that encompassed these key underlying principles: conceptualizing the body as a unit, recognizing the self-healing and self-regulation qualities of the body, acknowledging the reciprocal relationship of body structure and function, and basing medical treatment upon a rational application of these principles.

Three quarters of student respondents affirmed that philosophical differences distinguished their profession from that of allopathic medicine. It is safe to say that just about every candidate for admission to an osteopathic college could reiterate the distinguishing features of osteopathic philosophy in an interview, however, it is difficult to explain why osteopathic physician respondents to interviews had far less certainty regarding osteopathic distinction, perhaps because they function as allopaths when they are out into practice.

More than half of all practitioners and faculty, in response to the interviews chose holism as a philosophical concept distinguishing osteopathic from allopathic medicine. More telling, perhaps, was the fact that many of the respondents, who associated holism with osteopathic medicine, were equally adamant in their assertion that many of their allopathic colleagues are not holistic in their approach. Yet, Howell (1999) has written that it is difficult to defend the claim that holism lends uniqueness to osteopathic medicine in light of the increased interest in this approach by allopathic medicine.

Although the holistic philosophy has been strongly defended as central to osteopathic medicine, its increasing lack of uniqueness to the profession raises the issue of what then justifies a separate existence. Howell (2001) suggests that

a potentially more robust claim for uniqueness may lie in the use of osteopathic manipulation as part of the treatment approach. It should be noted, however, that 75 percent of the respondents to the interview felt that their practice approach distinguished them from allopathic physicians. When those who believed differences existed were queried further, only 28 percent perceived OMT as a distinguishing practice feature. Ambivalence clearly exists among all respondents in their attitudes toward OMT. Almost all of the practitioner and faculty respondents agreed that OMT was an efficacious treatment, and four-fifths believed it was an important treatment modality in their discipline, but over half of the respondents utilized OMT on less than 5 percent of their patients (Tables 4 and 5). Approximately one-quarter of the respondents interviewed said that they did not refer patients to other DOs in the area who did practice OMT.

Residency Programs

While professional attitudes toward OPP have changed over the last 25 years, the osteopathic medical profession has maintained rapid professional growth. Since 1980, the number of colleges of osteopathic medicine (COMs) has increased from 14 to 20 (Howell 1999). While the number of COMs and COM graduates has increased, the proportion of graduates choosing to finish their medical training in American Osteopathic Association (AOA)-approved internship and residency programs has not kept pace (Swallow 2000). Many graduates of osteopathic medical schools elect to finish their medical training in the allopathic Accreditation Council for Graduate Medical Education (ACGME)-approved internship and residency programs which welcome osteopathic medical

graduates. The number of osteopathic medical graduates choosing to finish their medical training in ACGME-approved programs has steadily increased over the last seven years to 25% in 2003-2004(Brotherton et al. 2003).

The long-term outcome of the shift in post-graduate education from osteopathic to allopathic residencies is unknown. Early professional training experience, however, is likely to impact long-term practice patterns. Respondents stated with certainty that osteopathic medical graduates in ACGME-approved programs are unlikely to practice OMT.

Future Challenges

This study suggests that the profession of osteopathic medicine will continue to face difficult challenges in the near future. It will need to broaden and strengthen its undergraduate programs. It will have to find ways of creating more good-quality, well-funded internships and residencies under osteopathic auspices. Osteopathic medicine needs to draw back into its orbit many of the allopathically trained D.O.'s who have either been alienated from the profession or simply see no reason to establish their osteopathic ties to strengthen its professional identity. For the purposes of self-identification, the osteopathic profession will also have to determine in what ways and to what extent certain aspects of the practitioners' methods constitute "alternative medicine." It will need to consider what relationships it should establish or maintain with colleges who teach and espouse a drugless, manipulation-based approach to health care so as to preserve the declining art of OMT. The osteopathic profession must answer challenges posed by its student's to find ways to better incorporate osteopathic

philosophy and manipulative medicine into osteopathic medical school curricula. When this occurs, osteopathy, long viewed as a “parallel practice,” might come to be considered a specialized type of practice that provides osteopathic physicians with a competitive advantage over allopathic physicians. In order for this to happen, many young osteopathic practitioners must choose to practice medicine in a manner distinct from other physicians, and to fight for their continued autonomy and independence.

Contributions to Applied Anthropology

Identifying and engaging major social problems of the day is a concern of anthropology (McDonald 2002) and the study of alternative medical systems (Baer 2004), in all places and throughout time (Haviland 2002). Medical anthropology focuses on disease, illness, medical problems, and theories of illness in different cultural and ethnic groups from a biopsychosociocultural perspective; a perspective for recognizing the biological, psychological, social, and cultural factors that are connected with each individual as they relate to health or illness (Bailey 2000). Such an approach is holistic, and therefore, anthropological in perspective (Bailey 2000).

The applied anthropologist uses the knowledge, skills, and perspective of the discipline to help solve problems and facilitate change (Chambers 1985). The problem this research addressed was that few biomedical physicians function within osteopathic settings, osteopathic physicians frequently practice in biomedical ones (Baer 2000; 2004). As a result, the osteopathic medical

profession has adapted the culture of the hegemonic, or dominant, medical system in the United States. The process of professionalization of osteopathic medicine has caused D.O.'s to become more like M.D.'s, which has created an identity crisis within the profession (Baer 2004). Thus, an initial contribution of this research is to the sparse applied anthropology literature on the professionalization of osteopathic medicine (Gevitz 1994). For example, this research has generated knowledge on the beliefs of how the co-optation of the heterodox or alternative medical system of osteopathic medicine by the hegemonic or dominant medical belief system of biomedicine has impacted the training and practice of osteopathic medicine in the United States. This study also identified those who choose to study osteopathic medicine and why.

Contributions to Medical Anthropology

Medical anthropology is concerned with human life and wellness, human evolution and the geographic distribution of disease, the means by which societies cope with illness, comparative health care systems, and the delivery of biomedicine to traditional and modern societies. It is the comparative and holistic study of culture and its influence on disease and health care. It stresses the importance of culture in governing the type and frequency of disease in a population, the way people explain and treat disease, and the manner in which persons respond and relate to the delivery of modern medicine (Kleinman 1988). Medical anthropologists have concentrated on ways of knowing (Kleinman 1988).

In contrast to tribal or indigenous societies, each of which has a more or

less coherent medical system that is an integral part of the larger sociocultural system, complex or state societies manifest the coexistence of an array of medical systems or a pattern of medical pluralism that is part and parcel of their socially stratified and culturally diverse nature. From this perspective, the medical system of a society consists of the totality of medical subsystems that coexist in a cooperative or, more often, competitive relationship with one another (Baer 2004). In modern industrial or postindustrial societies, in addition to biomedicine, the dominant medical subsystem, one finds other medical subsystems, such as homeopathy, osteopathy, chiropractic, naturopathy, religious healing systems, and folk medical systems. Patterns of medical pluralism tend to reflect hierarchical relations in the larger society. Patterns of hierarchy may be based on class, caste, racial, ethnic, regional, religious, and gender divisions (Baer 2004).

The holistic philosophy, which was defined as treating the patient as a whole person, mind, body, and spirit, is the one factor that distinguished osteopathic medicine from the dominant medical subsystem, allopathic medicine in this study. The respondents in this study were passionate about the philosophy and very confused about the practice of OMT which has been reported as the main distinguishing difference of osteopathic and allopathic practice. Anthropologists have found that in state societies, alternative medical systems or health movements often exhibit counterhegemonic elements that resist, often in subtle forms, the elitist, hierarchical, bureaucratic, and iatrogenic aspects of

biomedicine. Alternative or heterodox medical systems often are initiated by individuals or people who reject some important aspect of biomedicine. Although their theories of disease causation may be more naturalistic than personalistic, many anthropologists have likened them to religious sects. Indeed, healing often is part and parcel of certain religious movements, such as spiritualism, Christian Science, Unity, religious science, Pentecostalism, the charismatic movement, and Scientology.

Furthermore, religion and healing almost always are intertwined in both indigenous medical systems and folk medical systems in complex societies. Just as churches or denominations castigate unconventional religious groups as “cults” or “sects,” historically there has been a strong tendency for biomedicine to refer to heterodox medical systems in the same manner (Fishbein 1932; Reed 1932).

Wardwell (1972), however, questions the utility of comparing the model of medical orthodoxy and medical sects with the sect–denomination model in the sociology of religion: Since there can be a number of different religious denominations at one time, any religious sect has the potential for evolving into a denomination, although it normally has to modify its theology in order to accommodate to the established social order. Medical sects, however, do not evolve into denominations. As they evolve, they tend to merge into the medical mainstream.

According to Roth (1976), as a new health movement grows, particularly in capitalist societies, it accumulates more and more members who are

interested in making a good living and raising their status in the outer world. In the health sphere, this means they become more concerned with obtaining respectable (or at least respectable-looking) credentials, providing services that more closely follow the medical model, and eventually even developing working relationships with the orthodox medical world.

Roth (1976) maintains that a health movement that goes beyond this middle stage may follow one of four paths: (1) evolution into the dominant form of medicine (e.g., biomedicine); (2) merger with the dominant medical system (e.g., homeopathy and eclecticism in the early twentieth century); (3) steady decline and perhaps eventual extinction (e.g., hydropathy); and (4) absorption by the dominant medical system as an auxiliary practice (e.g., pharmacy and physical therapy).

In addition to these possible outcomes, an alternative medical system may evolve into a parallel form of medicine (e.g., osteopathic medicine in the United States) that has the same legal rights and closely resembles both philosophically and therapeutically the dominant medical system. Finally, a heterodox or alternative medical system may develop into a semilegitimate or even fully legitimate “limited form of medicine (Roth 1976).”

In my discussion of one partially professionalized or lay heterodox medical systems in the United States, osteopathic medicine, I situate osteopathy in the context of the holistic health movement that emerged in the early 1970s and came to encompass an extremely varied assortment of alternative medical therapies and practices.

Although a wide variety of alternatives to biomedicine have existed around the globe, many alternative medical systems underwent either a growth spurt or even a comeback under the umbrella of this popular movement, particularly in Western societies such as the United States, Canada, Britain, Germany, the Netherlands, the Scandinavian countries, and Australia (Goldstein 1999; Sharma 1992; Cant and Sharma 1996; Schepers and Hermans 1998; Kelner and Welman 2000). The holistic health movement is by no means a monolithic phenomenon and varies considerably from society to society. It encompasses an extremely variegated assortment of alternative medical systems, such as homeopathy, herbalism, naturopathy, and bodywork, with divergent philosophical premises. Although it appears to have its strongest expression in Western societies, it draws heavily upon various Eastern healing systems, such as Chinese medicine and Ayurveda. To a large extent, the holistic health movement overlaps with the New Age movement, which has also become very popular in Western societies and varies in its expression depending on the national context. Like the holistic health movement, New Ageism focuses on a balance in the interaction of mind, body, and spirit in its attempts to achieve

Perhaps inspired by the experimental ethos of the time, various biomedical and osteopathic physicians and particularly nurses as well as biomedical schools began also to take an interest in alternative therapies and discussed the development of an integrative medicine.

As professionalized heterodox medical systems succeeded because they

began to seek legitimation by creating professional associations and training institutions as well as lobbying for licensing or certification. By the late 1970s, an increasing number of biomedical and osteopathic physicians began to recognize both the limitations of their conventional approach to illness and the fact that they were losing many of their more affluent patients to alternative or heterodox practitioners. Gradually, these physicians began to incorporate alternative therapies into their practices, and some even became the directors of holistic health or integrative medicine centers where they coordinated the activities of an array of alternative therapists.

A group of M.D.'s and D.O.'s established the American Holistic Medical Association in 1978. In time, more and more biomedical schools began to offer courses on alternative medicine—a process that still is in progress. Due to political pressure, Congress mandated the establishment of the Office of Alternative Medicine in 1992 (renamed the National Center for Complementary and Alternative Medicine in 1999) within the National Institutes of Health (NIH). The demise of the Clinton health plan in the early 1990s provided a shot in the arm to an already-expanding managed care industry. Health insurance, health maintenance organizations, and hospitals have become increasingly interested in alternative therapies as a way of satisfying patients' demands and curtailing costs.

The basic premises of the holistic health movement are laid out in several resource guides that appeared in the late 1970s and early 1980s (Kaslof 1978; Otto and Knight 1979; Sobel 1979; Hastings, Fadiman, and Gordon 1980;

Bauman et al. 1981; Bliss 1985). These sources include short essays on a wide variety of healing systems and therapeutic techniques by laypersons, alternative practitioners, and holistic M.D.'s and nurses and provide a baseline for a popular movement that has undergone major transformations in a matter of three decades or so.

While proponents of the holistic health movement vary in terms of what they regard to be the basic premises of the holistic health perspective, sociologist June S. Lowenberg (1989:15–50) presents a comprehensive overview of the core beliefs, meanings, and values exhibited by holistic health practitioners and patients. She delineates seven elements of the holistic health model:

(1) holism, which entails the recognition of the uniqueness of each individual and the notion that the humanness entails the “interrelation of the physical, mental, emotional, spiritual, and social dimensions” (Lowenberg 1989:19); (2) an emphasis on health promotion; (3) the recognition that illness represents a state of imbalance or “dis-ease” in a person’s life and provides an opportunity to alter one’s lifestyle; (4) the belief that the patient’s health ultimately is the patient’s responsibility; (5) the notion that the health practitioner should mobilize the patient’s innate healing capacity and act as an educator, consultant, and facilitator in an egalitarian and mutual relationship with the patient; (6) an openness to a variety of healing traditions and practices from many cultures, including Eastern and indigenous ones; and (7) a new consciousness that includes a present-time orientation and subjective and intuitive approaches to

life. These elements of holistic medicine are ideals, some of which are not fully adhered to in practice. For example, whereas the holistic health movement often subscribes to the assertion that the individual is part of a larger internal system that consists of a body, mind, and spirit and that this internal system is embedded in a larger sociocultural and natural environment, in most cases holistic practitioners give priority to mind–body–spirit connections over mind–body–spirit–society connections.

Ironically, holistic health as a popular movement is quickly being tamed and evolving into a professionalized entity increasingly referred to as *complementary and alternative medicine (CAM)* or *integrative medicine*. *Alternative medicine* generally refers to all medical systems or therapies lying outside the purview of biomedicine that are used *instead* of it. *Complementary medicine* refers to medical systems or therapies that are used *alongside* or as adjuncts to biomedicine.

Finally, *integrative medicine* refers to efforts on the part of conventional physicians to blend biomedical and CAM therapies or the collaborative efforts between biomedical physicians and CAM practitioners to address health care needs of specific patients. The shift from a discussion of holistic health, holistic medicine, or simply alternative medicine to CAM or integrative medicine over the past decade or so is perhaps most apparent in the titles of various books and periodicals.

During that time, numerous biomedical practitioners have written overviews of CAM (Rosenfeld 1996; Bratman 1997; Jonas and Levin 1999; Novey

2000; Diamond 2001; Micozzi 2001). The shift from holistic health to CAM is also exemplified by an article titled “The Evolution of Complementary and Alternative Medicine in the United States: The Push and Pull of Holistic Health Care into the Medical Mainstream” (Caplan, Harrison, and Galantiono 2003).

Anthropologists have proposed various typologies of CAM therapies. Fulder (1996:107) delineates five “therapeutic modalities of complementary medicine”:

- (1) ethnic medical systems, such as acupuncture and Chinese medicine and Ayurveda;
- (2) manual therapies, such as osteopathy, chiropractic, massage, Alexander technique, and reflexology;
- (3) therapies for “mindbody,” such as hypnotherapy, psychic healing, radionics, and anthropological medicine;
- (4) nature-cure therapies, such as naturopathy and hygienic methods;
- and (5) nonallopathic medicinal systems, such as homeopathy and herbalism.

Kaptchuk and Eisenberg (2001) present a typology of “unconventional healing practices” based on the following CAM sectors: (1) professionalized or distinct medical systems; (2) popular health reform (alternative dietary and lifestyle practices); (3) New Age healing; (4) psychological interventions: mind cure and “mind–body” medicine; (5) nonnormative scientific enterprises; and (6) parochial unconventional medicine. Professionalized or distinct medical systems include chiropractic, acupuncture, homeopathy, naturopathy, massage, and dual-functioning (or holistic) M.D.’s. Popular health reform practices include health food stores, popular health books and journals, charismatic health leaders, alternative provider recommendations,

and neighborly health advice. New Age healing draws a wide array of religions (e.g., Hinduism, Christianity, Buddhism, neopaganism) and energy healing therapies (e.g., crystals, qigong, Reiki). Psychological interventions draw from either Mind Cure or New Thought (e.g., visualizations, affirmations, meditations), psychotherapy, or cognitive-behavioral psychology. Nonnormative scientific enterprises tend to appeal to patients with highly dangerous diseases, such as cancer, and include therapies such as Livingston-Wheeler pleomorphis bacteria cancer vaccine and hair analysis, which purportedly detects many diseases and nutrient imbalances. Parochial unconventional medicine includes three main categories: (1) ethnomedicine (e.g., *curanderismo* among Mexican Americans and Native American healing systems); (2) folk medicine practices (e.g., wearing of copper bracelets for arthritis); and (3) religious healing (e.g., faith healing, Christian Science, Mind Cure).

Tataryn (2002) presents an elaborate typology based on four broad categories of paradigms of health and disease: (1) body-based paradigms, (2) mind–body paradigms, (3) body–energy paradigms, and (4) body–spirit paradigms. Body therapies focus on physical substances, including diets and supplements (e.g., herbal remedies, macrobiotics), extracts and concentrates (e.g., Laetrile, ozone therapy), or chemicals/synthetics (e.g., chemotherapy, chelation therapy); and physical manipulation (e.g., massage, chiropractic, colonic irrigation, surgery). Body–mind therapies include affirmations/suggestion, counseling, hypnosis, imagery/visualization, meditation, psychotherapy, stress reduction, and support groups. Body–energy therapies

include acupressure, acupuncture, Chinese medicine, homeopathy, polarity therapy, reflexology, Reiki, therapeutic touch, and yoga. Body–spirit therapies include ceremonies, exorcism, faith healing, indigenous or “First Nations” healing, prayer, psychic healing, and shamanism.

Based on these typologies, what has come to be termed complementary and alternative medicine is an amorphous category that encompasses many medical systems and therapies. As in any typology, categories of CAM in the three schemes discussed overlap with each. Also, all of the schemes tend to privilege Western and Asian therapies over indigenous, folk, and religious therapies.

Furthermore, the distinction between conventional and alternative medicine is a matter of historical circumstances and sociocultural setting (Frohock 2002). For example, whereas osteopathy emerged as a distinct alternative medicine system in the late nineteenth century, in the United States it has evolved into osteopathic medicine and surgery or a parallel medical system to biomedicine and can for the most part be included within the rubric of conventional medicine.

Cassidy (2002) argues that biomedical hegemony pervades the notion of CAM: This issue of the dominant practice versus “all others” lies behind the whole concept of CAM, which is surely a misperception that we should be just about ready to give up. For, if we are agreed that there are many medicines and that they can be sorted in terms of their philosophical underpinnings, then we must come to see that all are alternatives, and all can complement others. In

short, biomedicine ought not to be treated as the standard against which all others are compared but as one among many, itself a complementary and alternative practice. (894)

Wolpe (2002:165) argues that CAM is “what sociologists refer to as a residual category” in that it is “defined not by its internal coherence but by its exclusion from other categories of medicine.”

In contrast to the aforementioned schemes, which preclude biomedicine, Nienstedt (1998) presents a “model of complementary medicine and practice,” which includes it. Her typology delineates four categories or quadrants:

(1) biomedicine (e.g., M.D.’s, D.O.’s, dentists, optometrists, podiatrists, psychologists, pharmacists, nurses, physician assistants, medical technologists, physical therapists, dietitians); (2) body healing alternatives (e.g., chiropractors, homeopaths, medical herbalists, naturopaths, colonic therapists, massage therapists, nutrition counselors, reflexologists, iridologists, and aromatherapists); (3) mind–spirit alternatives (e.g., Christian Scientists, Edgar Cayce healers, charismatic Catholic healers, hypnotherapists, psychic healers, transcendental meditation); and (4) cross-cultural alternatives (e.g., yoga, shamanism, Ayurveda, folk medicine, Reiki therapists, shiatsu, Chinese acupuncture, Native American healers). Although Nienstedt’s scheme includes biomedicine, it does not make any reference to the power difference that exists between biomedicine and other medical and therapeutic systems. In passing, it should be noted that Kelner and Wellman (2000:6) recognize that a pecking order does exist with plural medical systems by noting that one

“useful way to classify CAM therapies is based on the extent of legitimacy and public acceptance: (1) top of the hierarchy (osteopathy, chiropractic, and acupuncture); (2) middle range (naturopathy and homeopathy); (3) bottom of the hierarchy (rebirthing and Reiki).”

Baer(1989, 2001) developed a model of medical pluralism in the United States that recognizes biomedical hegemony and recognizes such power differences within plural medical systems. It is referred to as the *dominative medical system* because of the fact that biomedicine exerts dominance over other medical or therapeutic systems. His scheme is based on the thesis that the principal practitioners of each medical subsystem tend to be drawn from specific classes, racial and ethnic categories, and genders depending on their status in the larger society. Baer also suggests that for the most part, the therapeutic systems that fall under the rubric of CAM tend to follow under the categories of professionalized, partially professionalized, and lay heterodox medical systems. Within this framework, for example, whereas M.D.’s tend to be white, upper- and upper-middle-class males, and folk healers tend to be working-class women of color.

Integrative medicine or integrative health care has come to refer to a “system of medicine that integrates conventional care with CAM” (Cohen 1998:2). Diamond (2001) argues that the terms alternative and complementary are divisive and should be discarded by integrative or integrated medicine. In many cases, however, the terms CAM and integrative medicine are used interchangeably (Baer 1994).

Victor S. Sierpina (2001) delineates eight aspects of integrative health care: (1) patient-centered care; (2) encouragement of personal responsibility for health; (3) recognition of interaction of mind, body, and spirit in health and healing; (4) an emphasis on wellness, (5) “collaborative partnerships involving interdisciplinary teams of health-care providers and the patient”; (6) openness to CAM therapies “that have a record of safety and efficacy but are outside of the conventional biomedical model”; (7) reliance on evidence based scientific thinking when integrating biomedical and CAM therapies; and (8) recognition of the fact that health and healing are individualistic processes. Other than the emphasis on evidence-based science and reliance on safety and efficacy studies, Sierpina’s model of integrative health care is virtually identical with the old holistic health model, suggesting that integrative medicine is nothing more than “new wine in old wineskins.” Whereas alternative practitioners and laypeople have tended to speak of holistic health, CAM and integrative medicine are in large part biomedical constructions. While CAM or integrative medicine often continues to adhere to some notion of holism, in reality it appears to function as a style of health care in which biomedicine treats alternative therapists as subordinates and alternative therapies as adjuncts.

Micozzi (2001) suggests that “ecology of health” is needed that interprets human health in a broad context. Both the holistic health and CAM movements tend to subscribe to a limited holism that emphasizes mind–body–spirit connections but not mind–body–spirit–society connections. Its proponents

all too often treat the notion of holistic health or integrative health care as rhetorical devices that serve their own needs, including professional and pecuniary ones, rather than as a substantive one that provide a critique of the existing capitalist world system, its role in contributing to disease, and nationally based dominative medical systems under which biomedicine exerts hegemonic influence.

As discussed previously, most of the relevant literature in osteopathic medicine that contributed to this study was found in the medical sociological literature. Therefore medical anthropologists need to pay more attention to the field of complementary and alternative medicine, a significant topic that I believe holds unrealized research potential for medical anthropology. It is interesting to note that the paucity of literature from medical anthropology suggests that this important subject is understudied.

Anthropological research is necessary both for understanding the limitations of our present knowledge of complementary and alternative medicine, and more importantly, for construction of new models of understanding. Anthropological perspectives are needed to study and understand complementary and alternative medicine and integrative medicine as cultural phenomena. Traditional anthropological methodologies can be utilized, for example, by incorporating a cross-cultural ethnography that is critical for the understanding of the shift in the possible integration and continued distinctiveness of osteopathic medicine as well as other CAM medical systems in the United States. Medical anthropologists are keys to informing this discussion.

Limitations

1. A limitation relates to generalizability, or the degree to which the results of a study can be expected to occur in other places (Marshall and Rossman 1995). This study included thirty respondents for the unstructured interviews. The results of this study at one osteopathic school may not be generalizable to the larger population of all osteopathic medical students, faculty members or practitioners. However, there is no known reason to believe that Nova Southeastern University college of Osteopathic School differs from other osteopathic schools in some way that would substantially affect the generalizability of the study findings.
2. The questionnaires and survey questions were developed by the researcher specifically for this study, and therefore would need to be tested further for reliability and validity when used by researchers in other settings.
3. The use of self-administered questionnaires and surveys limits the interpretation of the responses to the questions, asked in the questionnaires. In addition, even if the questionnaire is returned, the researcher cannot be certain that the intended respondent is the person who completed the questionnaire (Sudman and Bradburn 1982).

4. In-depth interviewing is limited by the potential for the researcher to impose her own values through the phrasing of the questions or interpretation of the data. Accordingly, an attempt was made to maintain a perspective of critical subjectivity, which has been defined by Reason (1994) as “a quality of awareness in which we do not suppress our primary experience; nor do we allow ourselves to be swept away and overwhelmed by it; rather, we raise it to consciousness and use it as part of the inquiry process.”

Recommendations

From the investigative results it became clear that the themes that emerged from the actual research moved off in somewhat different directions than was originally proposed. This allowed me to offer some suggestions about what the next phase of the research might entail. Several recommendations, based on the findings and conclusions of this study, are thus presented in this section. Some relate to the need for further study to support the present findings and also uncover newly developing trends. Also, recommendations are provided to suggest further areas of research to provide increased understanding of osteopathic medical training as well as recommendations for applied anthropologists.

1. To support the empirical findings of the present study, it is recommended that follow-up studies be conducted with larger sample

sizes and a broader diversity of the sample groups included in the population.

2. Information from second and fourth year students, for example, could add greater insight into the perceptions and beliefs regarding osteopathic medical training in general and at Nova, in particular. Broadening the population included in the investigation, in other words, would yield greater insight and perhaps an even closer convergence with the findings of the present investigative research.

3. A closer examination of the demographics suggests another possible direction for exploration. Recommended areas of investigation are similarities and differences of perceptions of curriculum and training based on age and ethnicity/cultural background. Other non-demographic variables that could be introduced might include socio-economic status, family background in medical training, and gender.

4. Additionally, the degree to which practitioners use various techniques may be influenced by many organizational factors, including the educational continuum to which they have been exposed, such as allopathic residencies, time available for treating patients requiring OMT, physically and philosophically supportive facilities for OMT, and reasonable reimbursement for the time and effort to provide OMT for selected patients. However, data from this study suggest that the physician's sense of competence and comfort level with his or her own

abilities may be a key factor in determining whether OMT is the treatment of choice as opposed to non-manipulative options.

5. This study found that respondents expressed an increased knowledge of OMT but lacked the comfort level necessary to practice OMT once they had graduated from osteopathic medical school. A recommendation would be for additional OMT classes and OMT labs to be available to students during the first three years of osteopathic medical school.

6. Seventy percent of first year and 40 percent of third year students attended osteopathic school due to their personal experience with either a family member, a DO physician, or an experience with the holistic philosophical approach that osteopathic medicine has to offer.

Respondents became aware of osteopathic school by personal experience rather than by a college guidance counselor. A recommendation offering workshops on complementary and alternative medical systems to college guidance counselors would disseminate this information and widen the opportunities for students seeking medical training.

7. Respondents stated that there is a lack of public awareness as to the distinct differences of osteopathic principles and practice, i.e. OMT and a holistic philosophy of treating the whole person, mind, body, and spirit.

A recommendation that applied anthropologists must take responsibility for is to recommend to all of the twenty osteopathic schools in the United

States to conduct lecture series in local hospitals to inform the public of these differences.

8. A further recommendation would be for the A.O.A. to advertise their unique medical practices to the public in an attempt to increase public awareness when making choices in health care.

Future Research

Many third year students who have completed clinical rotations in allopathic hospitals and have decided on the specialty that they will undertake are less likely to practice OMT because they will be doing an allopathic residency. The allopathic residency constrains the usage of OMT practice. These students will be doing an allopathic residency rather than an osteopathic residency because of the limited number of osteopathic residencies available to graduating osteopathic students. The insufficient number of osteopathic residency positions deserves further study. The need for the osteopathic profession to improve the number of osteopathic residencies has never been greater because of the number of students graduating from osteopathic medical schools. The resolution to this problem may not be one of simply understanding, but one of action.

For osteopathic residencies to increase in number, osteopathic graduates must perceive these programs as equal to their allopathic counterparts. The profession needs to take a hard look at itself in terms of evaluating the quality of its residency programs and host hospitals throughout the

country. By improving the number and standards of osteopathic residencies, the opportunity for increased usage of OMT in practice would most likely occur.

Fifty percent of first year students and fifty percent of third year students surveyed in this study had applied to both allopathic and osteopathic school. They entered osteopathic school as a second choice, or through the “back door.” If osteopathic medicine is to be successful as a separate profession, its practitioners must be emotionally committed to its success. Eckberg (1987) suggested that when students come to osteopathic school as a second choice, it will be increasingly difficult to ask them to be emotionally supportive of the profession in times of stress. If D.O.’s and M.D.’s practice in an identical fashion and the D.O.’s are only D.O.’s because an allopathic school did not accept them, osteopathy’s future as a separate profession remains questionable. Further research is recommended to determine if these particular students have more of a problem accepting osteopathic beliefs and practices due to their “second-choice” status. This could be done interviewing a larger student population at more than one osteopathic medical school.

One aspect of this study addressed practitioners’ perspectives on osteopathic medicine as compared to what students are taught. What practitioners of osteopathic medicine practice once they have completed medical school differs from what students learn during their training. The holistic philosophy was practiced by all five practitioners whether they practiced OMT or not, and was seen as the biggest difference between professions. This finding was significant because it is contrary to the existing literature which states that

the biggest difference between professions is the practice of OMT. It is recommended, therefore, that additional studies identifying the differences between osteopathic and allopathic medicine be done to compare their findings with those found in this study.

The results of this study identified the curriculum needs and improvements for the one school included in the study. Therefore, it is recommended that additional studies be conducted to compare that information for two or more schools that offer comparable curriculum to determine what other schools are actually doing to improve curriculum and training.

To strengthen this applied anthropological project, I will expand the recommendations from the thematic analysis as well as the curriculum analysis into an educational format to be presented at Nova Southeastern College of Osteopathic Medicine. The purpose of my presentation will be to detail the findings of my dissertation research and the information qualitative methods can reveal.

The final recommendation to schools offering osteopathic medical training and wishing to improve their enrollment and retention of students is to conduct a survey to research and identify precisely what facets and components of their curriculum need to be strengthened. Osteopathic medical schools must identify the attributes that their students are looking for in order to continue to attract them.

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APPENDICES

Appendix A

In-Depth Interview Questions

Students

1. Why did you choose Osteopathic School?
2. How is osteopathic medicine different than medical training?
3. What did you hope to accomplish as a D.O.?
4. Why did you choose Nova Southeastern College of Osteopathic Medicine?
5. Which courses do you think will be most beneficial to you in your practice of osteopathic medicine? Why?
6. Which courses have helped you the most during your training to prepare you for practice? Why?
7. Describe why osteopathic medicine is holistic? What courses have you taken (or will take) that will prepare you as a holistic physician?
8. What percentage of the time will you practice OMT? Why or why not?
9. What courses at Nova have best prepared you to practice osteopathic medicine?

Appendix A (Continued)

10. How would you describe the differences between a DO and an MD in terms of classes offered and the practice of medicine?
11. What do you think is the future of osteopathic medical profession?
12. What changes would you make in the curriculum? Why?
13. How does Nova's philosophy of holistic medicine live up to the actual class offerings?
14. What differentiates DO training from MD training? How do you see the training of DO's changing in the future?
15. Were you disappointed with your training at Nova? Why or why not?
Examples.

Appendix B

In-Depth Interview Questions

Faculty

1. Did you apply to both allopathic and osteopathic schools? Why?
2. What were the reasons and circumstances that led you to choose osteopathic school?
3. How is osteopathic medicine different than traditional medical training?
4. Where did you attend osteopathic school? What year did you graduate?
5. How many years have you been in practice? Teaching?
6. What is your specialty?
7. Why have you chosen to teach at NSUCOM?
8. What percentage of time do you practice OMT? Why or why not?
9. Describe the reasons you chose to do an allopathic or an osteopathic residency? Did you do an allopathic or osteopathic residency and why?
10. Describe the perception that allopathic physicians have of the osteopathic profession? Training?

Appendix B (Continued)

11. Which courses have helped you the most during your training to prepare you for practice? Why?
12. What courses do you teach at NSUCOM?
13. Describe your philosophy of medicine?
14. What is your personal definition of the “holistic” philosophy you learned while in medical training? Do you still practice this philosophy? Why or why not?
15. Describe what do you think is the future of the osteopathic medical profession?
16. Is the profession losing its identity? Why or why not?
17. What changes would you make in the curriculum at NSUCOM? Why or why not?
18. What differentiates DO training from MD training? How do you see the training of DO's changing in the future?

Appendix C

In-Depth Interview Questions

Practitioners

1. Did you apply to both allopathic and osteopathic schools? Why?
2. What were the reasons and circumstances that led you to choose osteopathic school?
3. How is osteopathic medicine different than traditional medical training?
4. Where did you attend osteopathic school? What year did you graduate?
5. How many years have you been in practice?
6. What is your specialty?
7. What percentage of time do you practice OMT? Why or why not?
8. Describe the reasons you chose to do an allopathic or an osteopathic residency? Did you do an allopathic or osteopathic residency and why?
9. Describe the perception that allopathic physicians have of the osteopathic profession? Training?
10. Which courses have helped you the most during your training to prepare you for practice? Why?

Appendix C (Continued)

11. Describe your philosophy of medicine?
12. What is your personal definition of the “holistic” philosophy you learned while in medical training? Do you still practice this philosophy? Why or why not?

13. Describe what do you think is the future of the osteopathic medical profession?

14. Is the profession losing its identity? Why or why not?

Appendix D

Informed Consent

Social and Behavioral Sciences
University of South Florida

Information for People Who Take Part in Research Studies

The following information is being presented to help you decide whether or not you want to take part in a minimal risk research study. Please read this carefully.

If you do not understand anything, ask the person in charge of the study.

Title of Study: The Cost of Professionalization: A Case Study of Osteopathic Medicine in America

Principal Investigator: Rochelle Harris

Study Location(s): Nova Southeastern College of Osteopathic Medicine

You are being asked to participate to help understand how and why you have chosen to become an osteopathic physician and how osteopathic medical training affects the practice of osteopathic medicine.

Appendix D (Continued)

General Information about the Research Study

The purpose of this research study is to gain a better understanding of why students choose osteopathic medicine, what osteopathic medicine has to offer through its curriculum, and how its training affects osteopathic practice.

Plan of Study

You will be asked to participate in two audio taped interviews lasting between 30-60 minutes each at your convenience over a two-four week period. Each interview will consist of questions concerning the issues surrounding your experience studying and practicing osteopathic medicine.

Payment for Participation

You will not be paid for your participation in the study.

Benefits of Being a Part of this Research Study

By taking part in this research study you may increase the overall knowledge of osteopathic medical training that may help develop better curriculum to meet the needs of osteopathic physicians. The end result of this study will inform faculty of osteopathic medical schools to more effectively reach their student needs and goals for future practice.

Appendix D (Continued)

Risks of Being a Part of this Research Study

There are no known risks associated with this study

Confidentiality of Your Records

Your privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, and the USF Institutional Review Board and its staff and any other individuals acting on behalf of USF, may inspect the records from this research project.

The results of this study may be published. However, the data obtained from you will be combined with data from others in the publication. The published results will not include your name or any other information that would personally identify you in any way.

All information obtained from you will be kept confidential and will be coded with an identification number so that your name will not appear on any documents or questionnaires. In addition, your name will not be used in any reports or publications resulting from this study. The data will be kept in a locked file cabinet and access to the data will be available in group form only.

Appendix D (Continued)

Volunteering to Be Part of this Research Study

Your decision about participation in this research study is completely voluntary.

You are free to participate in this research study or to withdraw at any time.

There will be no penalty or loss of benefits you are entitled to receive, if you stop taking part in the study. Your decision about participation will in no way affect your student status.

Questions and Contacts

- If you have any questions about this research study, contact: Rochelle Harris 561-315-8737.
- If you have questions about your rights as a person who is taking part in a research study, you may contact the Division of Research Compliance of the University of South Florida at (813) 974-5638.

Consent to Take Part in This Research Study

By signing this form I agree that:

- I have fully read or have had read and explained to me this informed consent form describing this research project.
- I have had the opportunity to question one of the persons in charge of this research and have received satisfactory answers.
- I understand that I am being asked to participate in research. I understand the risks and benefits, and I freely give my consent to participate in the research project outlined in this form, under the conditions indicated in it.
- I have been given a signed copy of this informed consent form, which is mine to keep.

Appendix D (Continued)

Signature of Participant Printed Name of Participant Date

Investigator Statement

I have carefully explained to the subject the nature of the above research study.
I hereby certify that to the best of my knowledge the subject signing this consent form understands the nature, demands, risks, and benefits involved in participating in this study.

Signature of Investigator Printed Name of Investigator Date

Or authorized research investigator designated by the Principal Investigator

Appendix E

SURVEY QUESTIONNAIRE

Age_____

Gender_____

Ethnicity_____

Circle your response to the following statements: SA (Strongly Agree), A (Agree), UD (Undecided), D (Disagree), SD (Strongly Disagree).

	<u>SA</u>	<u>A</u>	<u>UD</u>	<u>D</u>	<u>SD</u>
1. Osteopathic Medical School Training is what I thought it would be.	SA	A	UD	D	SD
2. Osteopathic Medical training will prepare me to be a holistic physician.	SA	A	UD	D	SD
3. I entered osteopathic medicine because of its holistic philosophy.	SA	A	UD	D	SD
4. I am well prepared in my training to integrate OMT in my practice.	SA	A	UD	D	SD
5. Insufficient training limits my current OMT practice.	SA	A	UD	D	SD
6. I need better OMT role models during my training.	SA	A	UD	D	SD
7. I am satisfied with the amount of OMT in the curriculum.	SA	A	UD	D	SD
8. Lack of faculty support affects the amount of OMT I want to use in my practice.	SA	A	UD	D	SD
9. I will practice OMT when I practice medicine.	SA	A	UD	D	SD
10. Difference in personal philosophy will limit my OMT practice.	SA	A	UD	D	SD

Appendix E (Continued)

11. Allopathic medical school was my first choice when applying to medical schools.	SA	A	UD	D	SD
12. I did not get accepted to allopathic medical school.	SA	A	UD	D	SD
13. I am glad I chose osteopathic medicine.	SA	A	UD	D	SD
14. I lack confidence in my OMT abilities.	SA	A	UD	D	SD
15. I believe OMT is an efficacious treatment modality.	SA	A	UD	D	SD
16. The public associates the use of manipulation therapy with chiropractic medicine.	SA	A	UD	D	SD
17. I want to do an allopathic residency.	SA	A	UD	D	SD
18. Nova Southeastern was my first choice.	SA	A	UD	D	SD
19. Nova Southeastern was the only osteopathic program I applied to.	SA	A	UD	D	SD
20. I knew what OMT was about before I attended medical school.	SA	A	UD	D	SD
21. Osteopathic medical training is perceived to be as efficacious as allopathic medical training.	SA	A	UD	D	SD
22. I consider my medical training to be scientifically based.	SA	A	UD	D	SD

Please answer the following “Yes/No” questions.

23. Osteopathic and allopathic medical training are the same. Yes, No, Unsure.

24. The philosophy of osteopathy is different than that of allopathic

medicine.

Yes, No, Unsure

Appendix E (Continued)

25. Osteopathic medical training needs to include more OMT courses for students to feel more comfortable with the practice of OMT.

Yes, No, Unsure

26. Osteopathic physicians treat the person not the disease.

Yes, No, Unsure

27. The practice of medicine in the future will be a combination of both allopathic and osteopathic philosophies.

Yes, No, Unsure

28. Osteopathic medicine will always be distinguishable from allopathic medicine.

Yes, No, Unsure

29. Most osteopathic medical school curriculums are the same.

Yes, No, Unsure

Appendix F

NOVA SOUTHEASTERN UNIVERSITY COLLEGE OF OSTEOPATHIC

MEDICINE

Curriculum Outline

FIRST YEAR

First Semester Core Courses Lecture Laboratory Credit Hours

ANA 5114 Medical Histology 2.0 3.0 4.0

ANA 5218 Gross Anatomy 6.0 4.0 8.0

BCH 5113 Medical Biochemistry I 3.0 0 3.0

FME 5105 Basic Life Support 0 0.5 0.5

FMO 5112 OP&P I 1.0 2.0 2.0

IDC 5112 Clinical Practicum I 1.0 2.0 2.0

IDC 5211 IGC Preceptorship I 0 2.0 1.0

IMX 5105 Principles of Radiology I 0.5 0 0.5

PHS 5123 Medical Physiology I 3.0 0 3.0

Total Hours 16.5 13.5 24.0

FIRST YEAR

Elective Courses Lecture Laboratory Credit Hours

IDC 5312 Community Service I 0 4.0 2.0

IDC 5513 Research I 0 6.0 3.0

IDC 5612 Guided Study I 0 4.0 2.0

Appendix F (Continued)

IDC 5313 Preclinical Preceptorship I 0 6.0 3.0

FIRST YEAR

Second Semester Core Courses Lecture Laboratory Credit Hours

ANA 5423 Neuroanatomy 2.0 1.0 3.0

BCH 5116 Medical Biochemistry II 3.0 0.0 3.0

FMC 5221 Medical Epidemiology 1.0 0 1.0

FMO 5222 OP&P II 1.0 2.0 2.0

IDC 5421 IGC Preceptorship II 0 2.0 1.0

IDC 5505 Ethnocultural Medicine 0.5 0 0.5

IDC 5522 Clinical Practicum II 1.0 1.0 2.0

MIC 5127 Medical Microbiology 7.0 0 7.0

PHS 5127 Medical Physiology II 4.0 0 4.0

IMX 5205 Principles of Radiology II 0.5 0 0.5

PSY 5105 Substance Abuse:

Tobacco Cessation 0.5 0.5 0.5

PRM 5121 Preventive Medicine and

Public Health Preparedness 1.0 0 1.0

Total Hours 21.5 6.5 25.5

FIRST YEAR

Elective Courses Lecture Laboratory Credit Hours

IDC 5122 Community Service II 0 4.0 2.0

IDC 5213 Research II 0 6.0 3.0

IDC 5722 Guided Study II 0 4.0 2.0

Appendix F (Continued)

IDC 5323 Preclinical Preceptorship II 0 6.0 3.0

SECOND YEAR

First Semester Core Courses Lecture Laboratory Credit Hours

PSY 6113 Psychiatry and

Behavioral Medicine 3.0 0 3.0

FMO 6112 OP&P III 1.0 2.0 2.0

IDC 6112 Clinical Medicine I 2.0 0 2.0

IDC 6212 Hematopoietic and

Lymphoreticular System 2.0 0 2.0

IDC 6215 Cardiovascular System 5.0 0 5.0

IDC 6413 Respiratory System 3.0 0 3.0

IDC 6412 Endocrine System 2.0 0 2.0

IDC 6512 IGC Preceptorship III 0.5 3.0 2.0

IDC 6612 Integumentary System 2.0 0 2.0

IDC 6005 HIV Seminar 0.5 0 0.5

IDC 6705 Intro. to Complementary

Alternative Medicine 0.5 0 0.5

IDC 6613 Reproductive System 3.0 0 3.0

IDC 6911 Clinical Procedures I 0.5 0.5 1.0

PCO 6112 Principles of Pharmacology 2.0 0 2.0

Appendix F (Continued)

PTH 6113 Principles of Pathology 3.0 0.5 3.0

Appendix F (Continued)

Total Hours 30.0 6.0 33.0

SECOND YEAR

Elective Courses Lecture Laboratory Credit Hours

IDC 6212 Community Service III 0 4.0 2.0

IDC 6213 Research III 0 6.0 3.0

IDC 6312 Guided Study III 0 4.0 2.0

IDC 6313 Preclinical Prctshp. III 0 6.0 3.0

SECOND YEAR

Second Semester Core Courses Lecture Laboratory Credit Hours

FME 6221 Advanced Cardiac

Life Support 0.5 0.5 1.0

FME 6312 Pediatric Advanced

Cardiac Life Support 0.5 0.5 1.0

FMG 6105 Geriatrics 0.5 0 0.5

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FMC 6421 Medical Jurisprudence 1.0 0 1.0

FMO 6422 OP&P IV 1.0 2.0 2.0

FMR 6205 Rural Medicine 0.5 0 0.5

IDC 6122 Clinical Medicine II 2.0 0 2.0

IDC 6221 Clinical Procedures II 0.5 0.5 1.0

IDC 6324 Nervous System 4.0 0 4.0

IDC 6423 Musculoskeletal System 3.0 0 3.0

Appendix F (Continued)

IDC 6524 Gastrointestinal System 4.0 0 4.0

IDC 6823 Renal/Urinary System 3.0 0 3.0

IDC 6722 IGC Preceptorship IV 0.5 3.0 2.0

IDC 6905 Pre-Clerkship Seminar 0.5 0 0.5

SAN 6105 Anesthesiology 0.5 0 0.5

IDC 6105 Medical Ethics 0.5 0 0.5

Total Hours 22.5 6.5 26.5

SECOND YEAR

Elective Courses Lecture Laboratory Credit Hours

IDC 6522 Community Service IV 0 4.0 2.0

IDC 6123 Research IV 0 6.0 3.0

IDC 6022 Guided Study IV 0 4.0 2.0

IDC 6323 Preclinical Preceptorship IV 0 6.0 3.0

THIRD YEAR

Core Clinical Rotations Months Semester Hours

BMP 7108 Psychiatry 1 8

FMG 7108 Geriatrics 1 8

FMN 7108 Family Medicine—Clinic 1 8

FMN 7208 Family Medicine 1 8

IMA 7108 Internal Medicine 1 8

IMA 7208 Internal Medicine 1 8

IMA 7308 Internal Medicine 1 8

Appendix F (Continued)

OBG 7108 Obstetrics/Gynecology 1 8

PED 7108 Pediatrics—Ambulatory 1 8

PED 7208 Pediatrics—Hospital 1 8

SGN 7108 General Surgery 1 8

SGN 7208 General Surgery 1 8

FOURTH YEAR

Core Clinical Rotations Months Semester Hours

FME 8108 Emergency Medicine 1 8

FMR 8108 Rural Medicine—Ambulatory 1 8

FMR 8208 Rural Medicine—Ambulatory 1 8

FMR 8308 Rural Selective—Ambulatory 1 8

IDC 8821 Senior Seminar 0.25 1

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FOURTH YEAR

Elective Clinical Rotations Months Semester Hours

BMA 8108 Addiction Medicine 1 8

BMP 8108 General Psychiatry 1 8

FME 8208 Emergency Medicine 1 8

FMG 8108 Geriatrics 1 8

FMN 8208 Family Medicine 1 8

FMO 8108 Osteopathic Manip. Medicine 1 8

FMO 8148 Osteopathic Principles

Appendix F (Continued)

and Practice Fellowship I 6 48

FMO 8248 Osteopathic Principles

and Practice Fellowship II 6 48

FMR 8208 Rural Medicine 1 8

IMA 8108 General Internal Medicine 1 8

IMA 8208 The Cardiology Patient

Simulator "Harvey" 1 8

IMA 8308 Medical Intensive Care 1 8

IMD 8108 Dermatology 1 8

IME 8108 Endocrinology 1 8

IMG 8108 Gastroenterology 1 8

IMH 8108 Hematology/Oncology 1 8

IMI 8108 Infectious Diseases 1 8

IMK 8108 Nephrology 1 8

IMN 8108 Neurology 1 8

IMR 8108 Rheumatology 1 8

IMX 8108 Radiology 1 8

OBG 8108 Obstetrics/Gynecology 1 8

PED 8108 General Pediatrics 1 8

PED 8208 Neonatology 1 8

PED 8308 Pediatric Sub-specialty 1 8

PED 8408 Pediatric Emergency Medicine 1 8

Appendix F (Continued)

PED 8508 Pediatric Infectious Diseases 1 8
PED 8608 Adolescent Medicine 1 8
PED 8708 Pediatric Intensive Care 1 8
PTH 8108 Clinical Pathology 1 8
PTH 8208 Forensic Pathology 1 8
SAN 8108 Anesthesiology 1 8
SCV 8108 Cardiovascular Surgery 1 8
SGN 8208 Surgical Intensive Care 1 8
SNE 8108 Neurosurgery 1 8
SOP 8108 Ophthalmology 1 8
SOR 8108 Orthopedics 1 8
SPR 8108 Proctology 1 8
SRP 8108 Plastic/Reconstructive Surgery 1 8
STH 8108 Thoracic Surgery 1 8
SUR 8108 Urology 1 8
IDC 8124 Research V 1 8
IDC 8108 International Health 1 8
IDC 8208 International Health 1 8
IDC 8308 International Health 1 8
IDC 8608 International Health 1 8

Appendix G

NSUCOM DEMOGRAPHIC TABLE

MAY 2005

Class of 2004-2006

GENDER

		Frequen	Perce	Valid	Cumulativ
		cy	nt	Percent	Perce
Valid	F	38	48.	48.	e 48.
	M	41	51.	51.	nt 100.
Total	Tota	79	100.	100.	
		1	0	0	0
		3	0	0	0

ETHNICITY

ETHNECITY	N	Mean
Amer. Indian or Alaska Native	5	29.80
Asian	118	27.14
Black or African American	31	30.68
Hispanic or Latino	101	28.18
I Decline to Respond	6	26.00
Native Hawaiian/Pacific Islander	5	27.80
Other	28	26.21

Unknown or Not Reported	12	27.83
White (Non-Hispanic)	485	27.87
Total	791	27.85

ABOUT THE AUTHOR

Rochelle G. Harris received a Bachelor's Degree in Anthropology from Florida Atlantic University in Boca Raton, Florida in 1972. She received A Masters Degree in Education from Florida State University in 1975, and a Master's Degree in Business Administration from Nova Southeastern University in 1988.

Ms. Harris is an award-winning health care professional with over 15 years of successful experience in pharmaceutical sales management, medical marketing, and field training. She has also taught Social Science in Community College and English in the Broward County Public Schools.

Ms. Harris' health care career has included positions as District Manager, Field Trainer, Senior Medical Marketing Representative, and Hospital Administrator Assistant for Medical Education. She has also worked on two NIH research grants in the Psychosocial and Palliative Pain Department and the Breast Cancer Program at H. Lee Moffitt Cancer Center in Tampa, Florida.

She is presently working for Astra Zeneca Pharmaceutical Company.