TECHNIQUE

The Transition of Network Spinal Analysis™ Care: Hallmarks of a Client-Centered Wellness Education Multi-Component System of Health Care Delivery

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ABSTRACT

Network Spinal Analysis ™ (NSA) care has been transitioned from a health care system with the objective of correction of two types of vertebral subluxation, to a multi-component system of health care delivery with emphasis on wellness education for participating clients. NSA care is now delivered and communicated in discrete Levels of Care with emphasis on client participation through self-evaluation. Emphasis on wellness education will be introduced into NSA practice through training via a Certificate Program currently under development. This paper considers some hallmarks that delineate a wellness education, patient (client)-centered practice. The concepts presented relative to this wellness model of health care delivery are believed to be applicable to any approach with similar practice objectives. The perspective presented considers that the major aspects of a patient-centered, wellness education health care delivery system is multi-dimensional. Hallmarks include differentiating terms, and establishing a wellness mentality. Substantiation of the discipline must be established through credible published research regarding its efficacy and safety as well as a consistent and valid means of measuring progressive outcomes derived from the care received. The relationship of NSA to other disciplines is discussed.

Key words: *Wellness, wellness education, client-centered health care, health, health care, health care delivery, chiropractic, vertebral subluxation, subluxation.*

Introduction

This paper has two primary intentions. The first describes the transition of **Network Spinal Analysis ™** [1] practice from its prior objectives to its current state of presentation within the health and wellness arenas. In describing this transition process, the second intent is to provide hallmarks of a practice that is centered on the participation of the client while emphasizing wellness education during care. Although, in this presentation, these links are described through the specific model of Network Spinal Analysis (NSA), the concepts and ideas reported are applicable and readily portable to a wide variety of health, wellness and educational approaches.

The Transition of NSA Care

NSA care, as presented in this paper, represents an evolution from its earlier description in 1996.[1] At that time; NSA care was practiced solely as a system of health care delivery within the subluxation-based chiropractic model. Practitioners sought to reduce two types of vertebral subluxation with specific objectives underlying NSA application.

Over the past seven years, accumulating evidence and clinical observations have led to a transition of NSA's clinical philosophy and technical delivery. The clinical transition was first influenced by linking self-reported improved health and quality of life outcomes to aspects of NSA care.[2] For example, a substantial number of patients reported an increased awareness of deeper respiration approximately two months into care, whereas the **Somatopsychic Wave ™** phenomenon was reported approximately four months into care. Those experiencing an increased awareness of deeper respiration and/or the **Somatopsychic Wave** event also reported the greatest wellness and overall quality of life compared to those also under NSA care but not aware of these phenomena.[2]

The philosophy of the clinical application of care has evolved to include client participation through self-reports of health and wellness. For the client, this approach is believed to foster a greater sense of personal responsibility for their health, and a greater sense of participation in evaluating the benefits of NSA care. Moreover, these outcomes also assist the practitioner to complement clinical observations with client observations in the overall plan of care. Thus, greater patient involvement in their care and utilization of information derived from this approach designate NSA care as "client-centered."

Therefore, the presentation of NSA practice is now delivered and communicated in discrete Levels of Care. These Levels of Care are believed to represent progressive states of neu-

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rophysiological organization. This belief is substantiated in a recent report (Lohsoonthom and Jonckheere, 2003).[3] These researchers have reported that analysis of the sEMG signal reflect mathematical models that are distinctly more organized from Level One through Level Three of NSA care. As well, clinical evaluation of the active and passive neural control subsystems (Panjabi, 1992),[4] have suggested that the Levels of Care are reflecting sensory motor strategies underpinning the progressive states of neurophysiological organization.

Each Level of Care also has specific philosophical objectives designed as holarchial rather than hierarchical. This approach is intended to avoid "competition" among patients or a sense of lack of success in regard to progressing through the Levels of Care for both patients and practitioners. Also, as a holarchy, each level includes rather than transcends elements of the previous level. To provide such care, NSA practitioners are expected to meet competency in the areas of patient care, clinical knowledge, interpersonal and communication skills, practice-based learning and improvement, and professionalism. These skills, relative to NSA practice, will be taught through the NSA Certificate Program. This Program will be offered at the university level and is expected to be operational in 2004. Information may be obtained through the official website associatiofornetworkcare.com.

The technical evolution of NSA was initiated through clinical observations revealing that the character of the wave changed visually over time (duration of care). This consistent clinical observation suggested the need to continue enhancing care in a manner that would allow for greater differentiation of the body's changing responses to the NSA application. This led to further investigation of the **Somatopsychic Wave** event to characterize this phenomenon and to gain understanding as to how it might be linked to positive health and overall quality of life benefits. The first empirical evidence of the unique character of the wave was provided by Bohacek and Jonckheere (1998)[5] evaluating unfiltered surface electromyography signals (sEMG). These authors reported that the wave exhibited a dynamical nonlinear character distinct from voluntary muscle contraction. This finding complements the observation that the wave cannot be consciously generated by the client, but can be consciously halted. Although continued research will be necessary to elucidate the link between those experiencing the **Somatopsychic Wave** event and self-reports of improved health and quality of life, it is clear that the wave has unique properties. It may be that these properties are linked to neurophysiological processes not currently identified in the scientific literature.

The findings described above regarding client outcomes coupled with the information regarding the distinctiveness of the **Somatopsychic Wave** phenomenon, in relationship to the Levels of Care, suggested that NSA care should be transitioned to a *client-centered multicomponent system of health care delivery.*

First Component

The first component of NSA care is practical. This involves the application of specific low force spinal contacts made by precise touch through three well-defined levels of care (a forth is currently being developed). Through these contacts, practitioners initiate the Respiratory and **Somatopsychic Wave** phenomena believed to lead to a higher brain awareness of the body (somatic awareness) and its external and internal environment, particularly the spine.

Second Component

The second component of NSA care involves the belief that both of these wave phenomena assist the body in developing processes that enhance internal physiological and behavioral adaptive strategies. In support of this component, a relationship can be drawn between the physical application of care and subsequent changes in the recipient's health and wellness status. This second component of NSA care has been substantiated through study revealing statistically significant differences between health benefits reported by those under NSA care experiencing the wave phenomena as opposed to those under care who were not.[2] That is, a relationship exists between the practical application of care (first component) and positive changes in health and wellness status in conjunction with the development of the two waves (second component).

Third Component

A third component is psychosocial in nature. Findings from a recent study[6] indicated that "Network Care has a direct effect on client self-reported wellness, which is twice that expected from healthy lifestyle practices (i.e., exercise, risk avoidance, optimal food choices). Network Care also has a major indirect effect on wellness by promoting health lifestyle choices" (Schuster et al., 2003).[6] This suggests that NSA care, in and of itself, may have the potential to affect a person's perception of their state of wellness, additionally influencing the adoption of a lifestyle considered to be health promoting. Further research will be necessary, but it may be that NSA care represents a new approach to facilitate positive self-modification of behavior.

These three components appear linked together whereby the physical low force contacts elicit waves that create a strategy for dissipating and/or redistributing tension patterns. Ultimately, this significantly ameliorates health, life enjoyment, and the perception of wellness.

Fourth Component

Intrinsic to NSA practice is underpinning in the form of "wellness education." In the context of this paper, the fourth component encompasses the concept of a wellness education paradigm. This is viewed, minimally, as creating in the client an awareness and identification of (1) the differences between goals and objectives of allopathic practices (illness model) and non-allopathic practices, (2) strengths and weaknesses of both approaches (3) the body's inherent integrative (body-mind) abilities, (4) differences between illness behavior or actions and wellness actions, (5) physiological ramifications of healthy life style choices, and (6) the importance of participating through self-reports of health and quality of life in regard to their respective wellness care.

Practitioners will receive qualified instruction regarding these fundamental concepts of education via the Certificate Program previously described. Current observations indicate that changes in clients' perceived wellness occurs principally as a consequence of experiencing the Respiratory and **Somatopsychic**

Wave phenomena through application of the Levels of Care. Thus, wellness education is provided as a source of information possibly enhancing the outcome of perceived changes in wellness already apparent in NSA care.

Current Objectives of NSA

Consequent to the transition of NSA care, the objectives have been reassessed and are presented below. There are terms within the objectives that are not germane to this paper, but will be presented in subsequent articles. The current objectives of NSA Care are to:

A. Promote practice member self-awareness of the spinal structures, including gross and subtle movement of spinal structures, spinal and somatic tension patterns, associated participation with the respiratory system, and responses to stress;
B. Initiate the production of spontaneous, self-generated somatopsychic responses that are postulated to dissipate tension or stored energy from the active, passive, and neural control subsystems described by Panjabi.
C. Promote or maintain through the active, passive, and neural control sub-systems, and the meningeal and emotional subsystems as described by Epstein those elements of spinal integrity that increase neural effectiveness, enhancing the body's ability to self-organize;
D. Detect and enhance the availability of the **Spinal Gateway ™** contacts for self assessment and self organization;
E. Detect the presence of indications of adverse mechanical spinal cord tension, and associated altered states of spinal and neural integrity;
F. Administer safe and effective applications of low force to affect the nervous system's capacity to enhance precognitive and cognitive self-awareness.
G. Promote self-regulation of adverse mechanical spinal cord tension through the natural oscillatory patterns of associated tissues via administrations of specific low force touch made by hand.
H. Evaluate the efficacy of the above by relating NSA application to practice member (recipients of NSA care) self-ratings regarding their wellness and quality of life.
I. Conduct research to investigate hypotheses linked to the objectives of NSA care.

The Position of NSA relative to Chiropractic, the Biomedical Approach and Complementary/Alternative Medicine

Empirical research findings and clinical observations have influenced the transition of NSA care, as herein described. Further, NSA is expected to initiate neurophysiological strategies that elevate clients to a state of health and wellness beyond any previous state prior to commencing care. This expectation denotes a specific niche for NSA in the health care arena. This niche will ultimately allow for NSA to be practiced exclusively as "wellness care"‡ adhering to the objectives outlined in this paper.

However, since many clients who first appear for NSA care are concomitantly receiving chiropractic, complementary or alternative medicine and/or medical care, it is important to position NSA relative to those disciplines in light of its unique objectives.

Subluxation-Based Chiropractic

The subluxation-based chiropractor often considers him/herself to be a non-medical practitioner who does not treat conditions other than the vertebral subluxation (VS). [7] Research has provided evidence that recipients of NSA care experience benefits that transcend the single objective of correction of VS. However, since it has been clinically observed that correction of VS occurs in recipients of NSA care, NSA methodology remains of benefit to chiropractors practicing with the objective of correcting that condition.

The Biomedical Approach

The biomedical approach is traditionally based on the patient's presenting complaint(s) and accompanying symptoms. It is presumed that any medical condition is related to a specific cause (biochemical or physical insult), resulting in symptoms that are unique to the presenting condition.[8, 9] That is, in the strictest sense, the biomedical model assumes a direct cause and effect between a disease or pathophysiology and its symptoms, with care consisting of administering counteractive pharmaceuticals and behavioral instructions, both of which, supposedly, the average patient will understand and follow. [10]

Critics have complained that this traditional approach underplayes the psychosocial aspects of the illness process as well as providing a poor fit to many health problems.[10-12] There are some areas, however, where the medical and psychosocial models do blend (chronic pain management for example),[10] and more attention is now oriented towards a person's "perceptions of somatic change" [10,12] being relevant to patient regulation of medications (i.e., blood pressure drugs). However, the traditional model is still prevalent and concerned with eradicating symptoms and disease.

This prevalence is evident in considering that over the last decade there have been reports of a noticeable trend of use of non-medical services and emphasis on wellness practices. [13, 14-16] However, Schuster et al report that those who are in wellness promotion also assess wellness as disease prevention. [16] Thus, while terminology regarding wellness is emerging in biomedicine, the concept of wellness as described in the current practice of NSA practice shares no resemblance to this terminology.

When NSA is practiced exclusively as wellness care, it does not provide for the correction of any specific disease or other affliction. Rather, the care is provided to enhance the interrelationship of body and mind. Thus, its objectives are distinct from biomedicine. In this regard, enhancement or re-establishment of the body-mind has been recognized for some time. Bakal[17] states that a loss or reduction of the integrity of body-mind communication (somatic awareness), brought about by any of a variety of reasons, can lead to a general or specific collapse of the immune system, or other system failure. Consequently, it is

‡Those wishing to practice NSA solely as wellness care must be duly certified personally by Dr. Epstein, and meet all requirements for practice as established by the Association for Network Care (ANC). For further information please contact the ANC at: www.associationfornetworkcare.com.

noteworthy that while NSA care does not seek to bring about a cure for any medical condition, any given recipient could possibly fit the profile of one hoping for a non-medicinal or non-surgical approach to correct or resolve a specific medical condition.

Clinical observations and published case reports [18] do attest to improvement in certain medical conditions in some recipients while receiving NSA care. Nevertheless, although amelioration of certain medical conditions may occur concomitant with NSA care, NSA practice as described in this paper is an application that extends beyond where the biomedical and therapeutic approaches end.

Complementary/AlternativeMedicine (CAM)

A distinction between various CAM approaches has been described by Schuster et al. [16] They point out that CAM modalities vary widely in scope of practice, healing objectives, and individual motivations for use. Although NSA may not share allopathic objectives as many CAM approaches do, certain values common to CAM practices including "high level wellness," "the interpretation of mind, body and spirit," and "holism/individual," "self-healing," and principles of vitalism are shared.

There are several CAM approaches that fall under the larger category of "somatic education." [19] Each of these approaches has some relationship between consciously learned movements of the body and enhanced state of mind, and for some, enhanced physical performance. A major distinction between these types of CAM and NSA, also a body-mind discipline, is reflected in the fact that the Respiratory and Somatopsychic Wave phenomena characteristic of NSA care are not consciously initiated, though they can be consciously ceased.

This distinction suggests that a mechanism, not apparent in other CAM approaches may be operable in regard to NSA care. Thus, NSA care as a unique non-allopathic approach to health and wellness will continue to evolve as the body of knowledge is broadened through research and clinical observations.

Hallmarks: Overview of a Wellness Education Paradigm

Since it is possible for clients to "transfer" the conditioning of illness thinking into their experience under "wellness" care it is important to consider wellness education as integral to eliminating pre-conditioned "well" versus "illness" thoughts and actions. That is, because health and illness for the most part remain embedded in traditional definitions, new perceptions and perspectives regarding these successful approaches and the concept of wellness, merit new models that are congruent with these ideas. Consistent with the development of new models, it is important to refine the practitioner's care as a form of education centered on wellness as distinct from illness care.

Some of the hallmarks involved in implementing a wellness education paradigm are presented. Several of the concepts discussed rely upon specific application of terms that are now appearing more frequently in the literature, often reflect different definitions or meanings. To maintain continuity, the ideas of health and wellness as presented in this treatise are differentiated.

Differentiation of Terms

Health

Health has been defined by the World Health Organization as "a state of complete physical, mental, and emotional well-being, not merely the absence of disease or infirmity."[20] Moreover, the current Physician's Desk Reference medical dictionary [21] defines health as "a state of characterized by anatomical, physiological, and psychological integrity, ability to perform personally valued family, work, and community roles; ability to deal with physical, biological, and psychological and social stress; a feeling of well-being and freedom from the risk of disease and untimely death." As Schuster et al[16] point out, "clearly the biomedical as well as the social science community now acknowledges, theoretically, if not empirically, the multifaceted and complex nature of health and well-being." Moreover, Schuster et al[16] note that a consensus is developing that health includes several domains including physical, psychological, mental, emotional, intellectual, social, and spiritual.

Wellness

Following an extensive review of the literature, Schuster et al,[16] define wellness relative to physical, psychological, mental, emotional, intellectual, social and spiritual health domains "as a higher order construct *integrating* these domains, and necessarily draws on the level of individual self-perception. Thus, we conceptualize wellness as the *generalized self-perception* of health. From this perspective, wellness is distinct from health-illness; an individual can deem themselves to be in an acceptable state of wellness whether they experience sub-optimal "health" in any given domain or area of functioning (see Greenberg, 1985.[22])" This concept of wellness, developed by Schuster et al, provides a novel description amply reflecting clinical observations by NSA practitioners and client self reported benefits of care.

They also point out "as wellness is a generalized self-perception, the relative importance of each domain is unique within each individual, while also incorporating the health values and beliefs of the surrounding social environment." (Greenberg,[22] as cited by Schuster et al.).[16] While the authors also clarify that "we are only beginning to address the dynamics of wellness," one important contribution to the concept of measuring wellness has been presented by Blanks et al.[2] In that study, wellness was assessed by summing scores for four health domains: Physical State, Mental/Emotional State, Stress Evaluation, and Life Enjoyment. This constituted a combined wellness scale. In their study a wellness coefficient was determined by comparing the scale "presently" and "before Network." The scale ranged from –1 to +1, with zero representing no change.

Another important contribution regarding the dynamics of wellness stem from the work of Schuster et al[6] linking exogenous variables to wellness through structural equation modeling (SEM). Analyzing data from the study of a population of over 2800 Network Chiropractic (now known as NSA) recipients, Schuster et al demonstrated that gender (females greater than males), and post-college education impact in a significant positive manner on perceived wellness.

Also, other authors have envisioned the idea of wellness from a position of developmental states of consciousness. While these ideas often lack empirical evidence they do provide concepts that can be tested for veracity. The collective writings of Pearce,[23] Epstein, [24] Pert, [25] Wilber, [26] and Wade [27] seem to provide a theme directed to the spiritual aspects of self-perception. This theme suggests that wellness is an integral state linking the personalized and undeniable experience of connection with a perceived transcendent source of strength and wisdom. One also experiences a sense of community, peace, wisdom and well-being. Wellness is manifested as movement towards deepening states of perception regarding one's total environment, refinement of adaptive responses, and an evolving pliable sense of self. Moreover, wellness is accompanied by a heightened sensitivity to emotions or actions involving gratitude, forgiveness, empathy, love and compassion in relation to the individual's life experiences. It is recognized that individuals will realize the experiences presented above in a progressive manner as the journey to wellness unfolds.

Developing a Wellness Mentality

Providing Information

An important step in a wellness education paradigm is to provide information that might not be obtained in allopathic approaches. In this context, wellness education cannot adhere to the concept of single causes for any particular condition or problem. This may be difficult, as heretofore many health care disciplines have promoted this viewpoint either by design or default. For example, the medical physician would see the tumor or the bacteria, virus or alteration of body chemistry to be the cause of a problem.[28]

The doctor of oriental medicine would see it to be an interruption to the flow of chi or life force.[29] The homeopathic physician seeks the remedy that in larger amounts would create the gestalt of the disease.[30] For the chiropractor, the problem is a vertebral subluxation altering communication between the brain and other tissues. [31] The nutritionist sees the cause as a lack of or excess of particular foods or other substances.[32]

Thus, recognition that illness is not simple cause and effect, but rather a complex phenomenon linked to and reflecting many aspects of the individual is essential to develop a wellness mentality.

Awareness of Wellness Versus Illness Actions

Belief plays a significant role in healing and maintaining health. Belief can also guide our actions. For example, the causative pathophysiology and prognosis as reported to a patient, is often as much a product of the culture of belief of the practitioner as it is a product of clinical findings. However, research has also shown that personal belief can have healing or other positive restorative effects. [33] That is, just as nocebo, or negative belief can produce a negative outcome, placebo or positive personal belief can bring about healing or other positive restorative effects that may be classified as promoting a sense of wellness.

Thus, wellness and illness are viewed as a continuum, each representing an extreme. At any given time, one's position along the continuum represents the window through which the individual experiences their body, life circumstances, symptoms, sense of self, relationships and their world location in general.

A "wellness lifestyle," [6] whether considered as a reflection of empirical evidence or envisioned through subjective insight, is thought to manifest through human expression in a manner distinct from illness behavior. It is becoming increasingly evident that the actions taken by individuals that abide in the 'sickness" mode are quite different from those espousing the "wellness" mode. Macenbach et al.[34] compared determinants of excellent health with those of ill-health. The determinants were measured as absence of complaints of health and very good self-assessments of health. The authors concluded that education, employment status, age and gender accounted for two to three times the variance in ill-health compared to excellent health. Schuster et al.[16] suggest that the concept of positive health is empirically distinct from ill-health. Pizer [35] has pointed out that the sickness mode prompts action only when the sickness is apparent, whereas individuals enter the "wellness" mode voluntarily seeking ways to improve their overall state, thus avoiding the "sickness" mode. These concepts are important hallmarks for any practice that espouses a wellness model as the basis of care.

One could argue that the successful wellness outcome is linked to the specific intervention, but clearly the overall success of the health care system (or approach) is determined by many other factors. As pointed out by Benson,[36] and Barrett.[37] Patient care has become imbalanced by the heavy reliance on pharmaceuticals and surgery/procedures. Both authors contend that self-care must be reintroduced to balance the equation. Benson,[7,38], like authors of earlier chiropractic literature, points out that the individual must draw upon the body's restorative capabilities. Benson further points out that three components of his concept of "remembered wellness" are: (1) belief and expectancy on the part of the patient, (2) belief and expectancy on the part of the caregiver, and (3) belief and expectancies generated by a relationship between the patient and the caregiver. Thus, the modern wellness practice must carefully adjust belief and expectancy to maintain the balanced perspective that optimizes healing.

Awareness of One's Body

It is well accepted that trauma can lead to alexithymia.[39] Alexithymia, is characterized by incapacity to recognize, name, or verbalize emotions,[40] and may be accompanied by alexisomia, or lack of body awareness.[17] This conditions inhibits an individual's ability to experience somatic awareness that "constitutes an innate wisdom that people have about their own psychobiological health." [17] When these conditions operate collectively or separately the person has lost the body-mind connection that is central to healing and health. This is borne out by studies showing that alexithymia is linked to subjective reports of poor health and physical symptoms.[41,42] One study ranked alexithymia as predictive of a greater risk of all cause death in a population of Finnish middle-aged men.[43]

Fortunately, positive changes in cognitive awareness of one's soma, including the spine, are observed in those receiving NSA care.[2] This essential component of healing and wellness, consistent with the concept of somatic awareness, may account for

self-reported improvement of clients of NSA. That is, as clients begin to experience improved perceptions of wellness, health, and overall quality of life, these perceptions are likely to be more pronounced compared with those who have been far distanced from "self."

Summary and Conclusions

1. The practice of NSA care has been transitioned from a health care system with the objective of correction of two types of vertebral subluxation, to a multi-component system of health care delivery with emphasis on wellness education for participating clients. While wellness education is not formally included as part of current NSA practice, this concept will be taught through a developing Certificate Program offered at the university level. Wellness education will be provided through a module and personalized lectures that involves the six components outlined in this paper. These components pertain to the concepts of illness and wellness that have evolved from academic literature and the popular press. This program is expected to be operational in 2004.
2. NSA is currently delivered and communicated in discrete Levels of Care with emphasis on client participation through self-reports. This transition was based on clinical observations and research findings that suggested the need for attention to the manner in which the unique somatopsychic and respiratory waves were initiated. This has been achieved through the development of three (a fourth is in development) Levels of Care, each with its own objectives and markers to designate progress.
3. The clinical philosophy has also evolved to include dialog between practitioner and client concerning survey self-reporting and wellness actions as opposed to illness behavior as part of the care regimen. This participation by the recipient of care creates a client-centered practice, focused on an awareness of outcomes by both client and practitioner.
4. New clients often visit NSA practitioners while receiving concomitant care either with a chiropractor, medical physician, or complementary/alternative practitioner. Consequently NSA care is positioned relative to these disciplines. NSA care is of benefit to chiropractors practicing with the professional objective of correction vertebral subluxation. While NSA care does not share objectives with biomedicine, clinical observations and published studies indicate that medical conditions may ameliorate or abate in recipients of NSA care. Although objectives may be different, NSA care shares some common values with other CAM approaches.
5. The current model of NSA is developing as a wellness education paradigm in addition to physical care. That is, among those receiving care adaptation of better health promoting life styles become apparent, as well as reports of overall quality of health and quality of life, increased perceived wellness, and enhanced somatic awareness. As these are all aspects of a developing wellness mentality, they are supportive of the success to date of the current method of providing NSA care.
6. It is clear that a wellness education paradigm must consider a number of variables. It is seemingly apparent that regardless of the system of care practiced, the outcomes related to a true wellness model are common to all. These variables will include establishing a mindset for both the practitioner and patient (client). That mindset will include cessation of seeking a singular cause for a given condition. This also includes the development of somatic awareness, experience of and trust in the body's innate restorative and healing ability, the clients' consideration of personal physical, mental, and emotional circumstances profiling their life, and ultimately a consistent and valid measurement of progressive outcomes derived from the care received. In order to integrate all of these variables, it may be necessary for practitioners in different disciplines to work in concert to share expertise regarding aspects of patient (client) care not regularly considered part of their training.
7. An active university based research program is maintained to provide evidence related to outcomes association with NSA care, as well as a means to measure those outcomes. In that regard, research conducted in regard to NSA care has produced a health and quality of life questionnaire that is applicable to any health care approach. The self-evaluation aspect of wellness care must have such an instrument to legitimately measure the subtle to profound changes that are being perceived by those under care. Additionally, NSA care is researched on a continuous basis to investigate its mechanism(s), contraindications (if any), global effectiveness, consistency of delivery, range of benefits, and patient (client satisfaction). This level of scrutiny enhances both public confidence and the practitioner's comfort in its delivery.
8. The need for continuing documentation that the wellness education approach is resulting in outcomes that justify its existence is imperative. Thus, continued research, publication of findings, and funding to carry out such costly research are agenda items that must next be considered in sustaining a client-centered wellness education system of health care delivery.
9. It is intended that the hallmarks presented in this paper will be of value to other practices with wellness objectives.

Acknowledgements

While there are numerous persons that have provided insight regarding this paper, the author would especially like to thank Tonya Schuster, Ph.D., Marnie Dobson Ph.D., (candidate) Robert Blanks, Ph.D., Kimberly Kiddoo, Ph.D., and Jenny Wade, Ph.D., for their timely consultation and suggestions. Special thanks are extended to Jackie Knowles Epstein, D.C. for her continuous support and encouragement as well as her insight and constructive criticisms regarding the transition of NSA.

References

1. Epstein, D. Network spinal analysis: A system of health care delivery within the subluxation-based chiropractic model. JVSR, Aug 1996; 1(1):51-59
2. Blanks RHI, Schuster TL, Dobson M. A retrospective assessment of network care using a survey of self-rated health, wellness and quality of life. JVSR, 1997; 1(4):15-30.
3. Lohsoonthom P, Jonckheere. Nonlinear switching dynamics in surface electro-myography of the spine. International Conference "Physics and Control."Aug. 2003; St. Petersburg Russia.
4. Panjabi M. "The stabilizing system of the spine, Part I. Function, dysfunction, adaptation, and enhancement." Journal of Spinal Disorders 1002; 5(4):383-389.
5. Bohcek S, Jonckheere E. Chaotic modeling in network spinal analysis: Nonlinear canonical correlation with alternating conditional expectation (ACE): A preliminary report.
6. Schuster TL, Dobson M, Jauregui M, Blanks RHI. Wellness Lifestyles II. Modeling the dynamics of wellness, health lifestyle practices, and network spinal analysis. "Submitted." Journal of Alternative and Complementary Medicine June 2003.
7. Strauss JB. Chiropractic philosophy. PA: Foundation for the Advancement of Chiro-practice Education. 1991; 67:1788-1792.
8. Thomas L. On the science and technology of medicine. 1977.In J. Knowles (ed), Doing better and feeling worse: Health in the United States. Norton, New York
9. Lyddon W. Emerging views of health: A challenge to rationalist doctrines of medical thought. The Journal of Mind and Behavior 1987; 8:356-395.
10. Cioffi D. Beyond attentional strategies: A cognitive-perceptual model of somatic interpretation. Psychological Bulletin 1991; 109(1):25-41.
11. Kaplan R. The connection between clinical health promotion and health status: A critical overview. American Psychologist 1984; 39:755-765.
12. Holroyd K, Penzien D, Hursey K, Tobin D, Rogers L, Holm J and Marelle P. Change mechanisms in EMG biofeedback training: Cognitive changes underlying improvements in tension headache. Journal of Consulting and Clinical Psychology 1984; 52:1039-1053.
13. Eisenberg DM, Kessler RC, Foster C, Norlock FE, Calkins DR, Delbanco TL. Unconventional medicine in the United States: Prevalence, costs, and patterns of use. New England J Med 1993; 328(4):246-252.
14. Eisenberg DM, David RB, Ettner SL, Appel S, Wilkey S, Rompay MV, Kessler RC. Trends in alternative medicine use in the United States, 1990-1997: Results of a follow-up national survey. JAMA 1998; 280(10):1569-1575.
15. Eisenberg DM, Kessler RC, Van Rompay MI, KaptchukTJ, Wilkey SA, Appels S, Davis RB. Perceptions about complementary therapies relative to conventional therapies among adults who use both: Results from a national survey. Ann Int Med 2001; 135(5):344-351.
16. Schuster TL, Dobson M, Jauregui M, Blanks RHI. Wellness Lifestyles I. A theoretical framework linking wellness, health lifestyles, and complementary and alternative medicine. In Press JACM, June 2003.
17. Bakal D. Minding the body: Clinical uses of somatic awareness. 1999. The Guildford Press. New York. London (UK).
18. The evolving model of Network Spinal Analysis. Select abstracts from the home page Http://www.associationfornetworkcare.com
19. Http://www.expandcw.com/sma.html
20. World Health Organization: The first ten years of the world health organization. Geneva: WHO, 1958.
21. Physician's Desk Reference Medical Dictionary, First ed. New Jersey: Medical Economics, 1995.
22. Greenberg JS. Health and Wellness: A conceptual differentiation. J School Hlth 1985; 55:403-406.
23. Pearse JC. The biology of transcendence: A blueprint of the human spirit. 2003. Inner Traditions Intl Ltd. Rochester Vermont.
24. Epstein DM. Healing myths, healing magic:Breaking the spell of old illusions; reclaiming our power to heal. 2000. Allen-Amber (Janet Mills, ed.). San Rafael, California.
25. Pert C. Molecules of emotion: The science behind mind-body medicine. 1999. Simon & Schuster (Trade Division) London-UK.
26. Wilber K. The eye of spirit: An integral vision for a world gone slightly mad.1997. Shambala Publications, Inc. Boston Mass.
27. Wade J. Changes of mind: A holonomic theory of the evolution of consciousness. 1996. State University of New York Press, Albany.
28. Ewald PW. Plague time: The new germ theory. 2002. Anchor Publications, London (UK)
29. Kaptchuk TJ. The web that has no weaver. 1983 Chicago, Congdon and Weed, Inc.
30. Nicola G, Lockie A. Complete to homeopathy: The principles of treatment. 2000 DK publishing, Inc. New York, New York.
31. Leach RA. The chiropractic theories: A synopsis of scientific research (2nd ed) 1986.Williams and Wilkins, Baltimore Maryland.
32. Sizer FS, Whitney EN, Webb F. Nutrition: Concepts and controversy. 1999. Wadsworth Publishing Company, Belmont California.
33. Reid B. The nocebo effect: Placebo's evil twin. April 30, 2002. Page He01, Washington Post.
34. Makenbach JP, Van Den Bos J, Joung IMA, Van De Mheen H, Stronks K. The determinants of excellent health: Different from the determinants of ill-health? Int J Epid 1994;1273-1281.
35. Pizer H. Guide to the new medicine. What works and what doesn't. 1982. William Morrow, New York.
36. Benson H. Timeless healing: The power and biology of belief. 1996. Scriber, New York, New York.
37. Barrett S. Complementary self-care strategies for healthy aging. Geriatrics 1993; 17(3):49-53.
38. Palmer BJ. The subluxation specific – The adjustment specific. Davenport IA: Palmer School of Chiropractic. 1934 (1986 printing).
39. Lumley M, Stettner L, Wehmer F. How are alexitymia and physical illness linked? A review and critique of pathways. Journal of Psychosomatic Research 1996; 41(6):505-518.
40. Krystal H. Alexithymia and psychotherapy. American Journal of Psychotherapy 1979; 33:17-31.
41. Fernandez A, Sriram TG, Rakjkumar S, Chadrasekar AN. Alexithymic characteristics in rheumatoid arthritis: a controlled study. Psychother Spychosom 1989;51:45-50.
42. Taylor GM, Doody K, Newman A. Alexithymic characteristics in patients with inflammatory bowel disease. Can J Psychiatry 1981; 26:470-474.
43. Kauhanen J, Kaplan GA, Cohen RD, Julkunen J, Salonen JT. Alexithymia and risk of death in middle-aged men. Journal of Psychosomatic Research 1996; 41(6):541-549.