HYPOTHESIS

Reconceptualizing Principles and Models in Osteopathic Care: A Clinical Application of the Integral Theory

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ABSTRACT

The cornerstone of osteopathic care lies in the osteopathic tenets—first of all, the idea of a self-regulating, dynamic unit made of body-mind-spirit. The clinical application of the osteopathic principles mainly relies on the structure-function models, but the practitioners' community is still trying to reach a consensus on the fundamental theoretical framework. Mostly, the debate swings between the biomechanical-structural pole and the biopsychosocial pole. However, there is a compelling need for a robust conceptual framework in osteopathic care. It is necessary to draw up a more consistent interprofessional framework, emphasizing the distinctive focus of the osteopathic intervention in health care. In the present hypothesis paper, the different osteopathic care models are integrated into the 4-quadrant model of the Integral Theory. In light of the Integral Theory, osteopathic care can be construed to improve the individual mind-body function and spiritual behavior integrated with the environment. (*Altern Ther Health Med.* 2023;29(5):192-200).

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INTRODUCTION

Osteopathic medicine delivered by osteopathic physicians and osteopathy provided by health professionals offers a global contribution to patient-centered, evidence-informed, integrated health care. In the present manuscript, osteopathic care (OC) refers to the main osteopathic core activities of applying osteopathic principles and scientific evidence to inform person-centered osteopathic manipulative treatment.[1] Osteopathic care aims to restore the body-mind-spirit unit and maintain it in its natural state of well-being.[1] This balanced state is seen as a self-promoting homeostatic-allostatic ability to heal and regulate itself.[2] Furthermore, OC is considered a manual therapy addressing tissue alterations that potentially disturb normal neural function, circulation, and biochemical mechanisms.

A recent commentary reported 2 main trends in the models of care adopted by osteopathic practitioners.[3] On the one hand, some embrace the biopsychosocial model, preferring a more psychosocial, educational-oriented, hands-off care.[3] On the other hand there are more operator-centered biomechanical approaches: as an example, the so-called osteopathic lesion,[4] a palpatory finding based solely on operator-dependent procedures, can be considered a misinterpretation of the concept of somatic dysfunction and penalize interprofessional communication and practice. No accepted methodology is available to osteopathic practitioners wishing to share osteopathic lesion as a particular palpatory finding they consider relevant in practice—neither with patients nor with other professionals.[4] Conversely, somatic dysfunction is a concept that can be well developed and shared worldwide, being classified in the International Classification of Diseases (ICD-11) in order to promote international compatibility in health data collecting and reporting.[5] Nowadays, somatic dysfunction is proposed as something different from a lesion. It is considered a neuro-myofascial active area or pattern that might act as an osteopath-patient interface to transmit the biological and physiological effects of touch.[6]

Thus, Smith called upon the osteopathic community, recommending that it is now time to further reflect and embrace comprehensive models so that clinical treatment can be appropriately and scientifically applied to better address patients' conditions.[3] The osteopath-participant encounter is a dialogue that taps into a non-verbal behavior through a touch-mediated interface but is also supplemented

by verbal communication: it features both hands-on specific and hands-off non-specific aspects.[6] In recent years, discussions have emerged about the importance of implementing a conceptual model with diverse theoretical representations and constructs that can provide an organizing framework for health professions.[7] There is also a debate on developing a robust conceptual framework for a complex intervention such as osteopathic care.[8-10] Although the traditional osteopathic methods described are reported as a part of a cohesive framework to achieve a person-centered treatment plan, the integration of different models depicted for osteopathic care remains a challenge for osteopaths.

To incorporate this diverse array of viewpoints into a patient osteopathic intervention, we should follow other health professions that have applied a meta-framework to solve any incompatibility between these many viewpoints while being prepared to consider multiple standpoints.[7]

To confront multiple theoretical and philosophical perspectives, each with distinctive yet partial viewpoints for understanding and responding to health needs and including as many views within the discipline as possible, psychologists and nurses provided a practical perspective on Ken Wilber's Integral Theory (IT).[7] The IT is a metatheory developed by the American philosopher Ken Wilber that provides an organizational framework within which diverse theories and philosophies can be arranged within and across disciplines.[7]

This manuscript has been written under the firm belief that IT can combine osteopathic frameworks, favoring the whole body, mind, and spirit integration with a more balanced and interprofessional osteopathic practice within the health care professions.[7] Nevertheless, little is yet understood about how to embed the IT into the health care practice.[7] The present hypothesis paper aims to present a novel argument for OC: the IT's interpretation intended to introduce a new hypothesis of integrated models for osteopathic person-centered approaches. A presentation of the osteopathic models, of the IT, and personal insights and opinions are given to encourage constructive discussion on meta-frameworks to support calls for working in partnership with patients and the need for osteopaths to implement person-centered care as the basis of their practice.[8-10]

To summarize all concepts of the hypothesis, 3 subsections relevant for the subject are reported: (1) Background: the need to reconceptualize osteopathic models; (2) Overview of the integral theory; and (3) Osteopathic care in the light of the integral theory.

BACKGROUND: THE NEED TO RECONCEPTUALIZE OSTEOPATHIC MODELS

As stated in the Glossary of Osteopathic Terminology,[11] the structure/function models also represent a framework for interpreting the significance of somatic dysfunction within the context of objective and subjective clinical information.

The concept of the 5 osteopathic models builds on the anatomical orientation of Dr A.T. Still, MD, DO, founder of osteopathic medicine, further expanding it to include physiological functions.[12-15] In one of the first reports describing the osteopathic lesion,[14] now renamed somatic dysfunction, a great importance was given to patient responsiveness in order to assess the relevance of the identified tissue alteration.[10,14,15] Any structural change that negatively affects the functionality of tissues and of the self-regulating systems was called a lesion. To schematize the self-regulatory network in the field of OC, a model comprising 5 functional hubs was developed—the biomechanical, neurological, respiratory-circulatory, psychic, and metabolic systems all strive to adapt to environmental and social challenges.[10] Some of the structural changes identified by manual palpation do not modify the self-regulating functionality and cannot be considered lesions. In other words, osteopaths can detect biomechanical tissue changes which do not correlate with the patient's physiological responsiveness; therefore, they are not to be considered relevant in devising a treatment. The guidelines issued by the American Osteopathic Association for the osteopathic manipulative treatment of patients with low back pain report that a somatic dysfunction can be diagnosed only if it is associated with the patient's response and tolerance, and if it represents a contributing factor to the medical consultation.[16]

The osteopathic models are described as 5 treatment approaches to address musculoskeletal, visceral, neural, and psychological functions to maintain health, favor adaptation to environment, recovery, and repair from illness and disease.[10] An overview of the 5 osteopathic models is given in Table 1.

Table 1. Structure/Function Models[10]

Model	Aim
Biomechanical	The body is viewed as an integration of somatic components relating to posture and balance. Therapeutic approaches target the restoration of posture and balance and the efficient use of the musculoskeletal system.
Respiratory/ Circulatory	This model is concerned with the homeostasis of extracellular and intracellular environments: the delivery of oxygen and nutrients and the removal of cellular waste. Therapeutic approaches aim to address dysfunctions in the circulation of body fluids and respiratory mechanics.
Neurological	This model is concerned with the proper functioning of the neuroendocrine-immune network, considering the influence of the autonomic nervous system, spinal facilitation, proprioceptive function, and nociception. Therapeutic approaches are aimed at reducing mechanical stresses, balancing neural input, and reducing nociceptive drive.
Biopsychosocial	This model takes the various stresses into account that can affect the patient's health and well-being, including environmental, physiological, cultural, socioeconomic, and psychological factors. Therapeutic approaches address the effects of these biopsychosocial stresses.
Metabolic-Energetic	This model considers the body seeking an energy balance in terms of production, distribution, and expenditure, which can aid in better stress resistance. Therapeutic approaches include the focus on factors that may disturb the energy cycle in the body.

However, the current debate mainly revolves around the biomechanical and the biopsychosocial oriented approach.[3] As concerns the biomechanical model, growing evidence suggests that the structurally based reasoning of OC is flawed.[3] Several issues have been reported about the poor reliability of palpation and tissue diagnosis, and furthermore, about the postural and structural diagnostic hypotheses to explain chronic pain.[3] Albeit osteopaths historically endorse a holistic view, they mainly adopted a biomechanical approach to diagnosis and treatment.[3] Although articular or neural manipulative techniques have been linked to biomechanical effects, their clear association with clinical results is controversial.[17] According to Bialosky et al, (1) only temporary movement improvement effects are supported by research; (2) positional changes are not documented; biomechanical palpatory evaluation of the specific regions that necessitate manual techniques has demonstrated poor reliability; (3) articular and neural manipulation techniques do not affect a single nerve or joint area; (4) clinicians use different moving parameters in the performance of the same procedure; and (5) the practitioner-based technique selection does not seem as determinant as the individual preferences.[17] Moreover, structural changes have not been identified, clinicians show a weak reliability in recognizing which areas necessitate manual therapies, the forces associated with manipulative techniques are not specified for each given area and differ between clinicians, and the choice of method does not seem to affect outcomes.[17] However, documented improvements in signs and symptoms have been found in remote regions, far from the area of manual technique application (eg, osteopathic manipulative therapy applied to somatic dysfunction of the head or pelvis can reduce pain in patients with patellofemoral pain syndrome).[18] Thus, research findings support the need for more investigation to clarify both the specific and nonspecific effects of manual therapies. Is the impact related to the treatment of the person administered by the touch of the somatic dysfunction? A body framework changes related to function impairments selected into the osteopathic-patient dyadic relationship in a shared decision-making process.[6]

Nowadays, to go beyond the limits of the biomechanical applicative model, some authors are considering new biopsychosocial-based models for OC.[3] On the one hand, the process approach, which supports self-regulatory mechanisms, directly relates to the process of patients' recovery, ie, repair, adaptation, and alleviation of symptoms.[19] The practitioner acts as an educator and facilitator of healing, applying the best manual therapy according to the patient's needs.[19] On the other hand, Fryer's model focuses on the pain process—it identifies different patients' presentation in terms of acute or chronic conditions, and of neuropathic, nociceptive, or central sensitization; then, manual therapy techniques and behavioral support are the selected treatment modalities.[20]

Both of the above described models were proposed within the biopsychosocial approach, which is increasingly used in manual therapy, however Smith also points out the benefits of incorporating a biopsychospiritual component.[3] In proposing a new biopsychosocial model, Smith also points out that patients need to be more active and engaged in their treatments, ie, that besides addressing biopsychosocial factors, practitioners should offer education, and generally adopt a patient-centered approach.[3,19] Other authors developed an integrated clinical application of the biopsychosocial model, combining mindfulness-based, behavioral, and osteopathic approaches to improve the psychological quality of the osteopath-patient relationship.[21,22] This Osteopathy, Mindfulness and Acceptance Programme[21,22] emerged to facilitate psychological compliance through the development of new, self-generated behavioral strategies and the deactivation of unhelpful automatic responses based on the automatic reactions to individual experiences.[21] Following an in-depth analysis of the clinical application of the biopsychosocial model, Fahlgren et al proposed that shifting from a patient-centered to a person-centered approach might be beneficial for OC, as practitioners should understand the whole person and their health.[23] In their manuscript, they insist on the importance of practitioners understanding each individual person and addressing their therapeutic needs, helping them to self-heal by learning a healthy lifestyle.[23] Given that osteopaths aim to understand the person as a unit of body, mind, and spirit within the framework of a biopsychosocial model, it is important that they draw up a scientifically robust paradigm, including a person's spiritual values. Spirituality is considered as self-transcendence: a person's mental self-government that allows a person to be creative, intuitive, feel that he/she is part of the social environment, and part of something greater than self.[23]

In the absence of a scientific paradigm, treatment risks being based on the individual osteopath's values or dogmas—each practitioner would arbitrarily enhance the 'bio', 'psycho', 'social', or 'spiritual' aspect with no adequate rationale. Practitioners should avoid unnecessary boundaries, such as the body-mind duality, integrating Cloninger's biopsychosocial model of personality into the osteopathic decision-making process.[23] Personality development—and the related health outcomes—are an ongoing epigenetic procedure, whereby temperament (ie, body) and character (ie, mind and soul) generate behavior by a reciprocal interaction and influence, and the adaptation to external events (ie, social).[23]

In a new commentary, Zegarra-Parodi et al propose an update of the biopsychosocial model for musculoskeletal care, also including the dimensions of religion and spirituality to optimize the therapeutic alliance. Implementing this process into the context of the osteopathic practitioners' community should not be difficult, since early osteopathy fostered the integration of body, mind, and spirit with the social environment.[24]

Various recent documents about the core competencies of osteopaths also point out that, in order to optimize results, patients' beliefs and values should be considered and

incorporated into the treatment, combining them with the best available tests and the operator's experience.[25-28] The patient's beliefs also include the dimensions of religion and spirituality, which affect health and treatment results.[24]

Modulation of musculoskeletal pain is conceptualized as the result of complex neural interactions, whereby physiological and psychological information is integrated into the individual experience of pain and modulated by the religion and spiritual dimensions of each individual.[24] Therefore, manual therapy techniques may influence these interactions, triggering a cascade of neurophysiological events by mechanically stimulating the musculoskeletal system. Zegarra-Parodi et al describe the attitudes that professionals should master to meet patients' needs as concerns religion and spirituality: (1) be trustworthy, (2) treat the patient as a person, (3) be kind, (4) keep up hope, and (5) assist the patient in determining the meaning of life.[24] A model to facilitate measurements of the religious and spiritual dimensions in the clinical setting is also described, including affective, behavioral, and cognitive assessments. The affective dimension allows us to evaluate spiritual well-being (for example, a sense of deep inner peace or harmony) and distress. The behavioral dimension makes it possible to evaluate public and private religious activities and coping strategies. The above-mentioned approach would include empathic listening, to help investigate the meaning of the disorder and its impact on symptoms, and could incorporate the beliefs related to pain into a behavioral care model, also by exploring connections with other models. In both cases, the balance sways to one side. As concerns the biopsychosocial model, the scales are tipped in favor of a hands-off treatment, more oriented toward a psychosocial, educational approach.[3] On the other hand, more biomechanically oriented proposals lean toward a downright operator-centered approach, where the palpatory findings are considered definitive and used to select an unshared manipulative approach.[3] Smith just called the osteopaths to action, advising the practitioners' community that it is high time to rebalance the scales by supporting equilibrated models, appropriately applying hands-on treatment according to the patient's complex health process.[3] An overview of the essential core competencies of osteopaths,[28] however, makes it clear that in all cases each practitioner should possess an understanding of the structure-function models. Furthermore, the biomechanical and biopsychosocial domains are not to be considered as opposed, but complementary and reciprocally integrated with the neurologic, metabolic, and circulatory-respiratory models, thus allowing to organize health information and apply the osteopathic philosophy and its principles to patient care.[10]

Different health professions adopted a new enactive framework and the "five actions" models, integrating biomedical, psychological, phenomenological, traditional, and evidence-informed approaches to managing musculoskeletal pain.[29,30] Those new models challenge traditional models and current osteopathic professional identities favoring a paradigm shift to fully integrate them into the contemporary osteopathic approaches.[10] The patient-centered communication, the active learning approaches, the shared decision-making, and the self-management coaching can all be integrated into a conceptual system of OC while keeping the traditional models still connected by a meta-theoretical framework.[10]

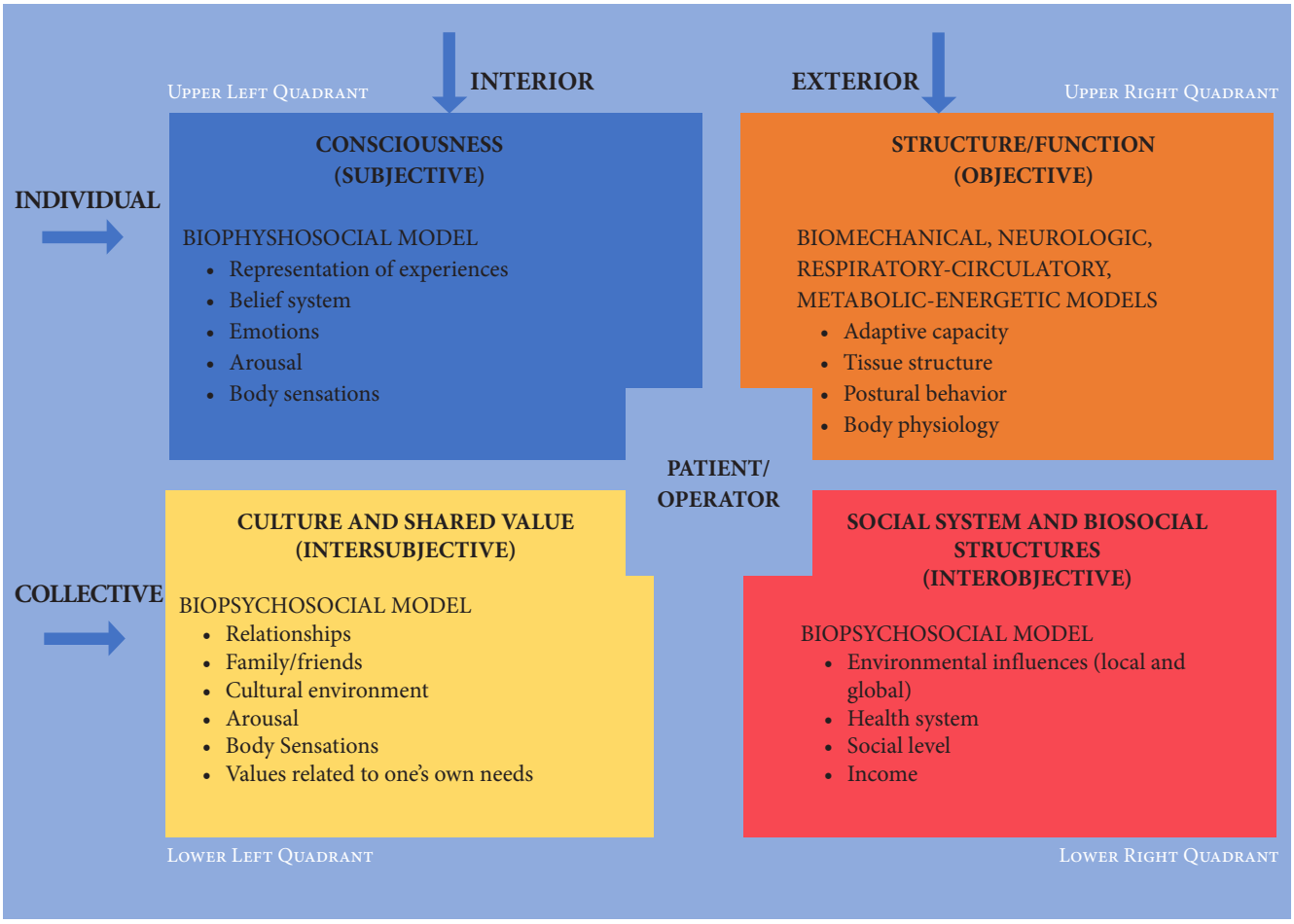
OVERVIEW OF THE INTEGRAL THEORY

The present hypothesis paper advocates that traditional and new models should be embedded into osteopathic practice in the light of the IT.[7,31] Ken Wilber's IT is a metatheory that offers an organizational structure in which various ideas and philosophies can be organized within and between disciplines.[7] This systemic and cohesive structure allows one to view specific disciplinary and technical circumstances through a series of multiple, interrelated lenses, and to exploit their respective contributions toward strategic ends.[5] Wilber's framework represents a cross-disciplinary synthesis of naturally occurring growth hierarchies.[7,31] To describe the complexity of health, disease, and treatment processes, Wilber relates to 5 areas of human experience—namely quadrants, levels, lines, states, and types.[31] Different domains are clustered into 4 distinct, simultaneously occurring perspectives on and perceptions of the world: the interior and exterior aspects, both on the individual and on the collective level.[7,31] To describe different epistemic perspectives, this theory resorts to a four-quadrant model (4QM): individual interior, individual exterior, collective interior, and collective exterior aspects. An overview of the IT is reported in Table 2.

Table 2. Overview of Integral Theory[7,31]

Element	Description
Quadrants	The 4 *quadrants* are identified as epistemological perspectives or aspects of truth, simultaneously occurring in living. (1) Upper Left quadrant/Individual interior: Self and consciousness; relates to subjective efforts, experience and awareness of the person; (2) Upper Right quadrant/Individual exterior: Physical body; relates to objective parameters of the physical body (structure, function, energetic equivalents); (3) Lower Left quadrant/Collective interior: Culture and shared values; relates to all intersubjective action between humans, such as culture and shared values; (4) Lower Right quadrant/Collective exterior: Social systems and structures; relates to interobjective external environmental and social structures.
States	*States* are related to levels of consciousness, such as being awake, dreaming or dreamless sleep, or meditative states of consciousness. States are defined by the factors present in all 4 quadrants and can only become lasting if they have been experienced through several stages or levels. Each level's achievements will be the result of ongoing development which only then will turn into lasting qualities.
Types	*Types* are various forms of existence related to different levels of consciousness (ie, as a man or woman).
Lines	*Lines* refer to the development of the self through the inner levels of growth or being, ie, sense of self (who am I?), moral (how do I relate to others?), needs (what do I need?) or talents or abilities.
Levels	*Levels* correlate to competence and complexity around the lines, ie, the ability to create inner images, symbols, concepts and rules.

Figure 1. The 4 Quadrants Framework in the Osteopathic Field



The 4 quadrants are described as inseparable dimensions or perspectives of "being in the world"—four irreducible epistemological perspectives or dimensions of reality which occur at the same time (Figure 1).[31] Illness, sickness and disease conditions can emerge in all 4 quadrants.[32]

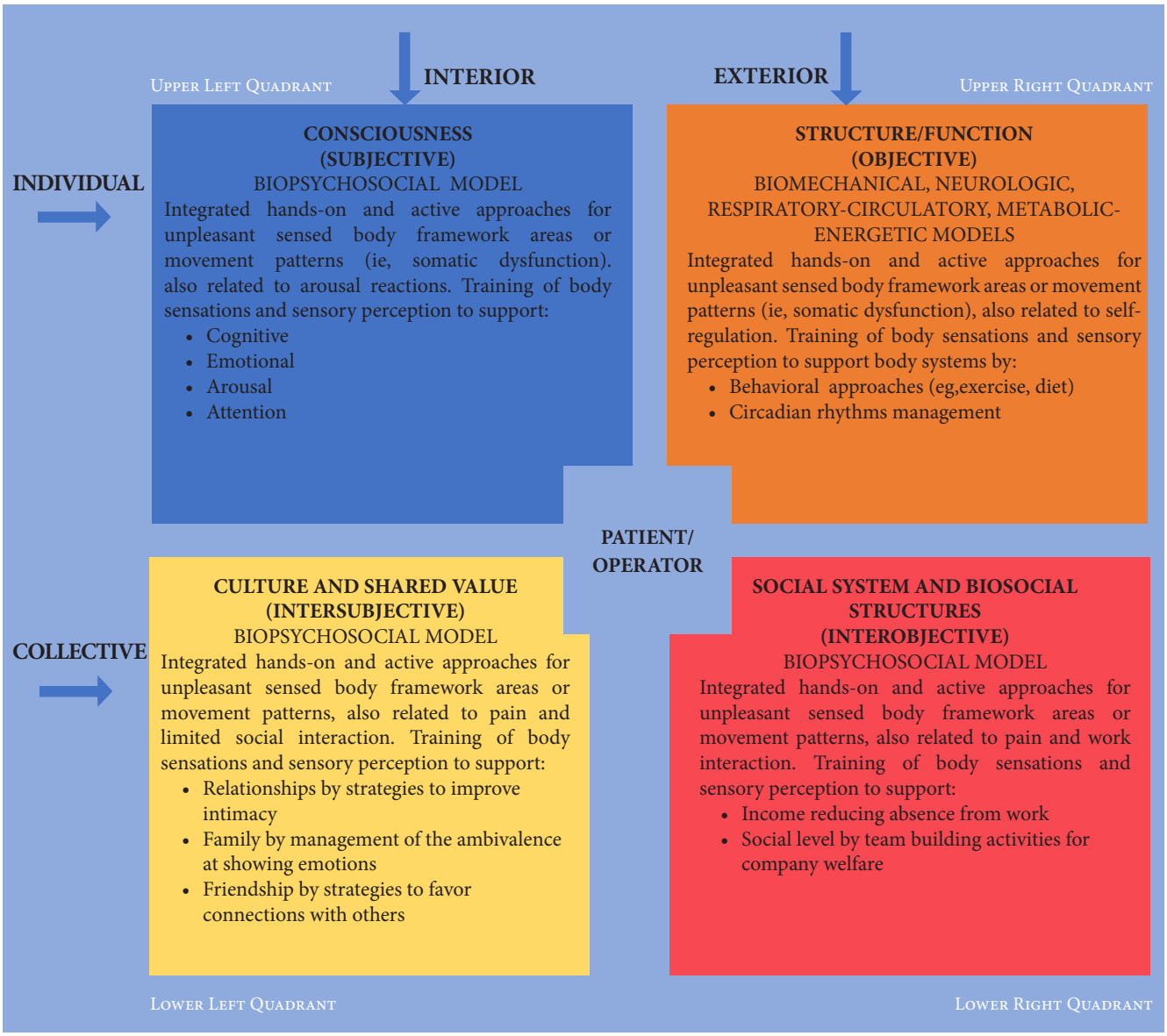
Osteopathic clinical reasoning based on a mechanical-biomedical point of view leads to the idea of a patient affected by imbalances that need to be manipulated to regain health. The application of Wilber's model allows overcoming the artificial fragmentation of dysfunctions into their somatic, psychological, cultural, and energetic aspects. Thus, it makes room for the patient's emotional, spiritual, and mental needs by including self-preservation, self-adaptation, self-immanence, and self-transcendence. The proposed model would also mean walking away from the subject-object relationship expressing the patient-practitioner duality to implement shared decision-making within the inter-enactive participatory treatment process.[33-35]

OSTEOPATHIC CARE IN THE LIGHT OF THE INTEGRAL THEORY

The osteopathic principle according to which the body possesses self-regulatory mechanisms has been largely developed at the biological level.[35] However, if embedded into Wilber's model, it extends to each level of the structure-function-consciousness unit, mainly characterized by factors such as self-assertion, self-maintenance, and self-adaptation.[31] The osteopathic treatment should not only address the structural and functional aspects of the external tissue expression (upper right quadrant), but also recognize the holistic quality of any somatic dysfunction. Limiting the treatment to the aspects of the upper right quadrant leaves out the essential inner aspects (beliefs, emotions, thoughts).[31]

The therapeutic procedure does not necessarily aim to change any patient presentation characteristic patterns rapidly, but to capture information arising from the whole perceptions by the patient. In this way, although nothing guarantees a symptom-free state, improved health or better wholeness could be achieved in a more significant and complex domain,[35-37] while also considering a process approach where the patient takes an active part in his treatment plan.[12] However, giving support to the whole person can reach its full potential only if the therapeutic interaction is based on a thorough understanding of the human being in all its dimensions.[5] A selection of treatment strategies is shown in Figure 2.

Figure 2. Osteopathic Treatment Strategies in the Light of 4 Quadrants Framework



The IT could be a model to guide the decision-making process and administer therapeutic information: both palpatory findings and biomedical data might be processed through 2 different channels—ie, the ordinary and the inordinary channel—within the environment-operator-patient relationship.[7,31] According to Zegarra-Parodi et al, on the one hand there is ordinary reality, which is represented by a 'perceptual-cognitive-symbolic' channel based on sensory perception, cognitive processing, and symbolic mediation (visual, verbal, and logical language)—at this level, the aim is to integrate the science of symptoms and the evidence-based approach into clinical practice.[38] On the other hand, a 'direct-intuitive-nonlocal' approach can be adopted—this inordinary reality channel provides a direct experience and goes beyond the subject-object split. It is not limited by language or other symbols.

This approach aims to assess and then address biological, psychosocial, and spiritual responsiveness of a person to the environmental challenges. Both the perceptual-cognitive-symbolic and the direct-intuitive-nonlocal approach should be balanced within an osteopathic body-mind-spirit paradigm. Furthermore, the patient's active approaches should be taken into account.[12,35] These can be embedded in the touch-based treatment[37,38] and include, for example, mindfulness and intentional breathing,[39] intrinsic myofascial vibration,[40] meditation,[41] stress management exercises,[42] as well as empathetic listening, cognitive behavioral approaches to integrate pain-related beliefs, bilateral stimulation and eye movement desensitization-reprocessing (EMDR),[37] and personal spiritual practice (Table 3).

Table 3. Integral Approaches in the Osteopathic Field

Approach	Aim
Therapeutic relationship	Practitioner used empathic communication skills to develop a stable therapeutic relationship. The patient should be informed of the therapeutic approach. The practitioners show presence and pay full attention to patients in the here and now, and perceive their circumstances, feelings, and needs.[37]
Osteopathic treatment	*Systemic and specific osteopathic manipulative approaches*[35]
	Systemic and specific osteopathic manipulative approaches can be used in the individualized osteopathic care focused on the structure/function models. The integrated approaches aim to improve postural control (biomechanical), to modulate autonomic neural overload (neurologic), to improve gastrointestinal function (metabolic), breathing patterns, drainage and supply of body fluids (circulatory-respiratory), and control stress components and augment reaction to biopsychosocial stressors (biopsychosocial).
	Symptom-based approaches[35]
	Also, *Symptom-based approaches* are considered in the treatment plan: administering appropriate techniques according to the outcomes of research studies on similar complaints.
	Patient's active approaches [35,37]
	The use of *patient's active approaches* (eg, exercise and nutritional advice) also allows the operator to fill in the gap that a passive manual treatment (without the patient's cognitive, proprioceptive, and interoceptive involvement in the process) can leave in the healing and recovery process. A touch-mindfulness-based approach could be proposed to involve all components of the body-mind-spirit dynamic unity of the person. *Intentional breathing* (Appendix I), and *Intrinsic myofascial vibration exercises* (Appendix II) are integrated into the osteopathic manipulative treatment. As an example, the *Bifocal Integration method* is presented: the tenets of osteopathic palpation are integrated with the principles of bilateral stimulation and EMDR; to visual, auditory, kinesthetic, olfactory, and gustatory stimulation; as well as to guided imagery meditation exercises to improve integration of structure-function adaptability to environmental challenges (Appendix III).

Abbreviation: EMDR, eye movement desensitization and reprocessing.

DISCUSSION

The hypothesis presented in this paper suggests that the IT can be exploited as a valuable guide to a holistic, multimodal, self-reflective clinical reasoning process in osteopathic practice. The adoption of the IT was recently proposed in the context of nursing practice and education: it has been described as a valuable model to understand and address the unique needs of individual patients in a variety of settings.[7] According to Shea et al,[7] such a framework could reinforce the health care practitioner's conscious inner work, which is required to cultivate the ability to access inner knowledge, enlightenment, and intuition—these aspects should be incorporated into a unitary health-promoting and caring perspective in clinical practice. Ontological competencies and ontological caring literacy are foundations of the health care science and praxis, as well as of the osteopathic practice standard of care.[1,25-28] Reflective (or spiritual) practices, eg, meditation or centering, could be brought to the forefront by implementing Wilber's framework, thus enhancing the inner harmony enacted by a practitioner during clinical encounters.[7]

The implementation of the 4 quadrants framework could enhance practitioners' awareness, allowing them to shift their focus reaching a broader vision at different levels of complexity in the context of the clinical scenario.[7] Furthermore, consciously grasping the multiple perspectives put forth by the IT could prove very useful to integrate all the different osteopathic structure-function models. By broadening their perspectives to include individuals' (psychosocial) contextual factors, and by focusing on interior biological functions (mechanical-postural, neurologic, metabolic, circulatory, respiratory) with the intent of gaining new understanding of clinical conditions, osteopaths could become aware of many so far neglected perspectives or viewpoints, both about the patients and their community. In the light of the IT, osteopathic treatment can be construed as an approach that aims to improve the integration of the human mind-body function into the environment. Spiritual components should also be considered, including any approach aimed to strengthen patients' sense of gaining power and comfort from their own resources, as well as the sense of significance within the dynamics of health and illness.

CONCLUSION

This hypothesis paper introduces the IT meta-framework as a means to bring together and combine various theoretical and conceptual perspectives—each of which features distinctive but partial insights—in order to understand and address human needs and obtain health and healing in the context of osteopathic treatment. The introduction of a new model into osteopathic clinical practice should respect professional boundaries and promote complementarity with other health care professions.

Today, osteopathic-centered care can rely on a historical heritage which puts patient empowerment at the forefront in striving for health promotion.[43] If the osteopathic health-promoting principles and practice will be integrated with other health care categories' conceptual models and competencies, the osteopathic profession will be able to emerge as one of the driving forces in interprofessional education and practice.[44] Further investigations are needed to determine whether adopting the IT's metatheoretical model in the osteopathic clinical setting would enhance the significance of individual and collective inner perspectives on clinical decision-making. Reaching a shared consensus on a consistent, plausible, and useful theory providing an explicit explanation on the distinctive role of osteopathic care could be the first step in achieving an influential conceptual model for osteopathic practitioners. Pragmatic methodological steps for the development of theoretically and evidentially informed osteopathic care models can be useful in developing a generalized theory.[8]

Appendices

Appendix I. Intentional Breathing

Aim
Support osteopathic manipulative treatment promoting relaxed behaviors by recruiting the vagal brake and dampening active sympathetic arousal and the entire hypothalamic–pituitary–adrenal axis. May be obtained by slow breathing with a focus on exhalation, slow heart rate, and relaxed facial and neck muscles.
Procedure
1. Perceive the breath (about 10 cycles) - Perception of rhythm; - Flow perception (chest, abdomen, right/left side, front/rear); - It may be noticed that only perceived consciousness of the breath can decrease the respiratory rate.
2. Perceive the breath without forcing it - Feeling the inhalation under the right hand (it is felt on the whole palm, better under the fingers, only on the thenar or hypothenar eminences) (about 10/20 cycles); to evaluate if it is possible to slow down the inspiratory phase; - Feel the inhalation under the left hand (it is perceived on the whole palm, better under the fingers, only on thenar or hypothenar eminences) (about 10/20 cycles); to evaluate if it is possible to slow down the inspiratory phase; perform deep inhalation and exhalation and return to a normal rhythm and amplitude.
3. Force (and perceive) the inspiratory airflow first underneath your right hand (sternum) then after a couple of seconds under your left hand (abdomen). - Do the same in the expiratory phase. Evaluate how many seconds they use for inspiration and exhalation (also counting 1,2,3... 1,2,3) -Save deep inhalation and exhalation and return to normal rhythm and amplitude.
The exercise aims to activate the parasympathetic polarity of the ANS, to elicit relaxation, calm, and a stress reduction response.
REFERENCE Bullock BG. *Mindful Relationships: Seven Skills for Success - Integrating the Science of Mind, Body and Brain*. 1st ed. Handspring Publishing Ltd; 2016.

Appendix II. Intrinsic Myofascial Vibration Exercises

Aim
The *intrinsic myofascial vibration exercises* are administered to involve specific muscle patterns. The body's natural tremor mechanism modulates the hyperarousal responses and restores the homeostasis of the body in allostatic overload conditions.[29,31,34,39]
Procedure
1. Standing position, feet supported shoulder width, alternating rolling in (inversion) and rolling out (eversion) (5 times per side);
2. Standing position in monopodalic support while keeping one hand against the wall, knee flexions are performed (15 times per side);
3. Standing position, opened extended legs, flexion of the trunk and elongation in the middle of the legs and unilateral;
4. Standing position, with closed fists resting on the pillars of the diaphragm, proceed with a bilateral extension and a unilateral extension (5 times per side);
5. Wall Squat (2/3 minutes);
6. Supine position with the legs bent and abducted with the soles of the feet in contact with each other, the hands in contact with the floor, contract the abdomen and raise the pelvis from the floor keeping in a tight position (2/3 minutes);
7. If a tremor emerges in the lower limbs, upper limbs or in the trunk, let it express freely for a few minutes.
REFERENCE Berceli D, Napoli M. A proposal for a mindfulness-based trauma prevention program for social work professionals. *Complement Health Pract Rev*. 2006;11(3):153-165. doi:10.1177/1533210106297989

Appendix III. Bifocal Integration Applied to Osteopathic Care

The "art of osteopathic encounter" consists of orchestrating multiple skill components, such as "osteopathic touch" and enactive soft skills. Numerous embodied micro-skills allow tailoring the intervention. Also, facilitating patient sickness behavior non-verbally expressed in the tissue changes. Somatic dysfunction is then recognized as an access for treatment by both patient and practitioner, in shared decision-making. Osteopaths combine perturbing and stabilizing stimuli, by touch as well as by other sensorial input, to stimulate the patient's system in a zone of proximal awareness development. Through cumulative, at times recursive interventions a step-by-step reconfiguration of body postures, sickness behavior, feelings, perceptions take hold in the patient's awareness system. Bifocal integration is then proposed as an integrated approach to be used in osteopathic clinical practice: osteopathic hands-on techniques were administered as combined with rhythmic eye movements to engage attentional processes, also addressing the stressful processes and sickness behavior related to patient condition.
Patient self-awareness assessment
1. The patient identifies the most stressful situation/picture related to the chief complaint and scores it on a stress scale from 0-10; 2. The patient is asked to feel all perception related to the region of somatic dysfunction identified by the osteopath in a shared decision-making. The patient is also asked to verbalize which type of touch increases or decreases the arousal level or perceived pain and unpleasantness; 3. Anchoring of individual resources of the patient are promoted by guided imagery meditation exercise (by guided meditation a *safe place* visualization is facilitated involving all the 5 senses to ignite positive healing messages throughout the mind and body); 4. The patient is asked to move the eyes from right to left, from top to bottom, and to identifiy the direction of viewing which increases the level of arousal, as well as the unpleasant feeling in the identified body region. Then the patient identifies the direction of viewing that increases the well-being and the pleasant feeling in the identified body region;
Treatment
5. The osteopath administers a gentle hands-on approach on the somatic dysfunctions according to the reactions that occur in the patient; 6. The patient shifts the eyes' focus between the 2 identified directions of viewing; 7. The osteopath acts as coregulator and identifies in each moment of the process the level of stress-related arousal. In the case of a stronger stress-related arousal, the patient is asked to do some intentional breathing or other mindfulness exercises; more resources will be facilitated by antalgic positioning of the patient, and/or by music; 8. In the case of arousal lowering, the osteopath guides the attention of the patient through touching the symptomatic area or asking them to perform some positioning previously assessed as unpleasant; also encouraging the patient to self-assess any changes or body sensations; 9. The patient identifies the arousing situation/picture previously related to the chief complaint and scores it on a stress scale from 0-10.
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