



Understanding Yoga Therapy For Clinical Practice Consortium Grand Rounds 9/19/19

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Case Studies

- Woman with Scoliosis. Back and neck pain. Difficulty participating in physical activity due to pain. She experiences anxiety and worry particularly around finding meaningful work and activity in her life
- Woman with back pain. History of trauma, anxiety. Stressful work situations which sometimes require extensive travel with little sleep
- Man with shoulder pain. Referred by a psychotherapist who wants to look at other ways to help with his PTSD.

What is Yoga Therapy

- A complementary, integrative healthcare practice that is based on the wisdom tradition of yoga and utilizing current biomedical/ scientific principles.
- International Association of Yoga Therapists- Professional Organization¹
 - *"The process of empowering individuals to progress toward improved health and wellbeing through the application of the teachings and practices of yoga"*
 - Accreditation of schools with a certification process for individuals
 - Educational standards are competency based with a defined scope of practice and code of ethics
- Yoga Therapists (C-IAYT) have 800 hours of training above that of the 200 hour yoga teaching (RYT).
 - Learn the yoga therapeutic framework and scope of practice
 - Yoga therapy assessment techniques
 - Application and adaptation of practices for the individuals needs.

Yoga Therapy Framework and Practices

- Yoga therapy is based on a philosophical system that inquires into the causes of suffering and teaches practices for its alleviation.
- The philosophical context sets the foundation for synchronistic application of its practices including movement, breathwork, meditation, lifestyle or ethical principles adapted to various populations for greater well-being
 - Different than if we break the practices apart and apply them in a pathogenic or biomedical model for symptom management

Yoga Therapeutic Perspective

- Salutogenic intervention²
 - Optimizing the contributors to wellness and well-being through
 - Improving functional movement
 - Physiological and psychological/emotional regulation and resilience
 - Stress management, quality of life, relaxation, lifestyle changes

Biopsychosocial-spiritual Approach is Inherent to Yoga Therapy

- Koshas- “sheaths”, “coverings”
 - physiological structures
 - energetic- physiological functions and breath
 - thoughts, emotions, beliefs
 - observer
 - equanimity, joy, well-being
- Social:
 - inquiry into ethical lifestyle principles and into mind-body habits can provide insight to enhance the quality of social relationships
- Spiritual well-being
 - Connection to joy, well-being, purpose, meaning
 - Eudaimonic well-being as a secular spirituality

Understanding Spiritual Well-being

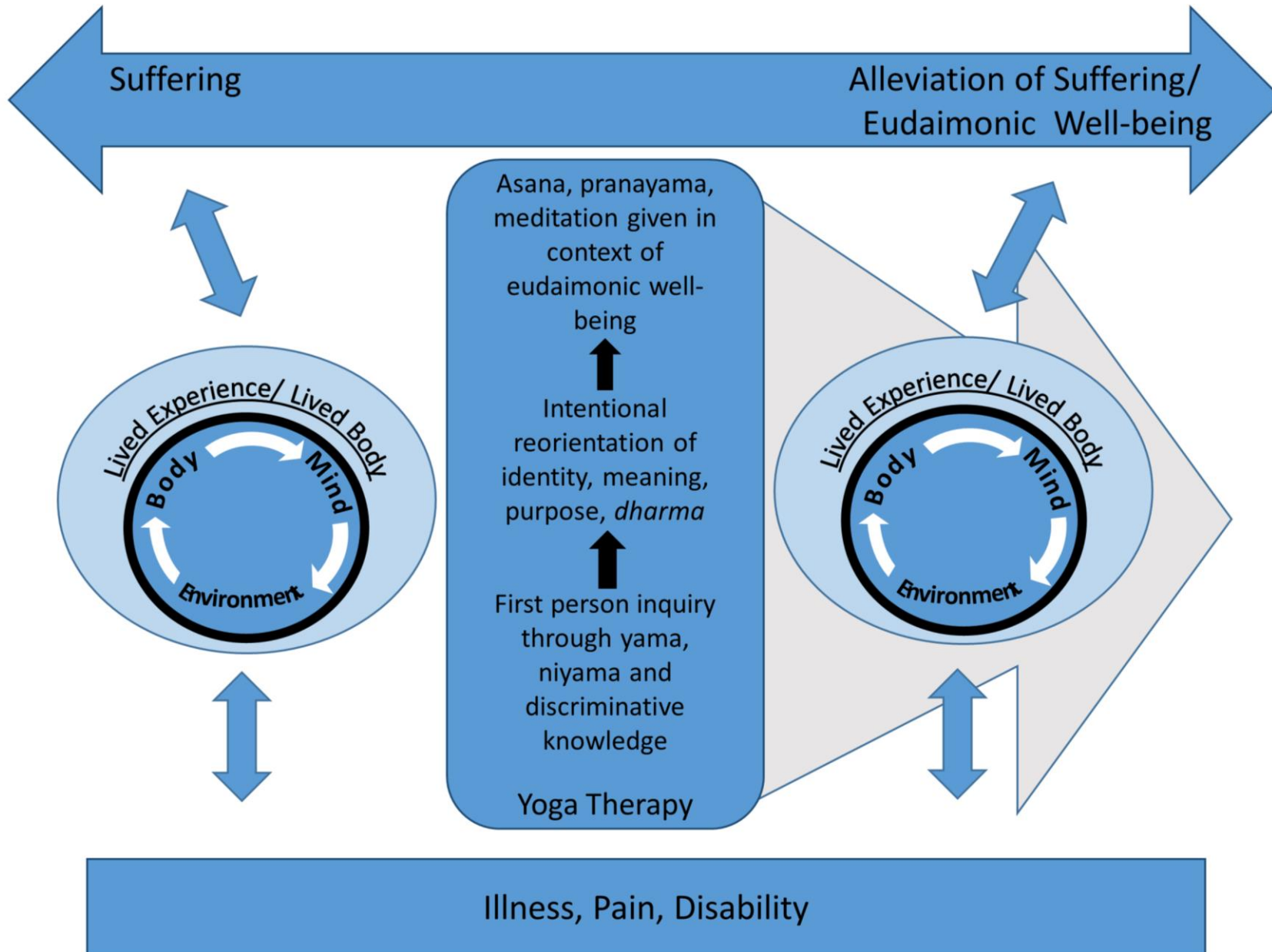
	Yoga Philosophy ³⁻⁷	Spiritual well-being- themes ⁸⁻¹⁰
Personal connectedness	Inquiry into and relationship with one's body, mind, inquiry into one's essential nature	Inner resourcing
Interpersonal connectedness	Shared essential nature with all people and ethical inquiry practices that help facilitate more positive relationships (patience, tolerance)	Meaningful social relationships
Existential connectedness/ Meaning and Purpose	Essential nature that is connected to a transcendental connectedness Dharma- meaning and purpose	Transcendent connectedness- trust, faith Meaning-making of adverse situations and purpose
Values and virtues	Practices of ethical inquiry as a foundation of practices from which one aligns with their essential nature as well as others and the environment- doorways to dharma- meaning and purpose	Development of positive psychological and prosocial attributes such as compassion, forgiveness, loving-kindness which can strengthen positive expressions of connectedness along the continuum from personal → interpersonal → existential

Secular Spirituality

- Science of well-being
 - Difference between emotional “happiness” from a sense of steadfast contentment (eudaimonic well-being)
 - Measures of eudaimonic well-being reflect same qualities mentioned in spiritual well-being and yoga ¹¹⁻¹²
 - Personal connectedness: Authenticity, personal expressiveness, self-realization, self-actualization
 - Interpersonal connectedness: positive and meaningful social relationships
 - Existential connectedness: meaning and purpose
 - Values: as guideposts to eudaimonic well-being

Why is the topic of eudaimonic well-being relevant?

- Research behind Eudaimonic Well-being ¹²⁻²⁰
 - Decreased all-cause mortality independent of other factors (co-morbidities, physical activity)
 - Particularly meaning and purpose
 - Pain interference and intensity
 - Psychological well-being, adaptation to and acceptance of chronic illness
 - Inflammatory and immune processes (hedonic vs eudaimonic)
- Yoga increases eudaimonic well-being and research has demonstrated that people begin for physical reasons but often change their reasons for maintaining for spiritual reasons ²¹⁻²³
 - Adherence



Regulation and the ANS as Mediators

Self-regulation²⁵⁻²⁶

- The conscious ability to manage or alter responses to threat, challenge, adversity.
- Sensitivity to and recognition of body-mind reactions to stimuli and the capability to manage or alter physiological, psychological, behavioral states or activations as appropriate to the situation
- Linked to many health benefits for various conditions
 - Decreases allostatic load
 - ANS as a mediator with systems wide body-mind connections to facilitate regulation for improved biopsychosocial health and eudaimonic well-being

Mind-body practices and regulation

Mind-body practices including yoga facilitate ANS regulation through^{25, 27-28} :

- Top down neurocognitive based practices
 - ethical inquiry and meditations
- Bottom up neurophysiological based practices
 - breath practices and movement/postures

Polyvagal Theory

- Underlying autonomic neural platforms or neural networks from which shared physiological, psychological, behavioral attributes emerge²⁹
 - Interoception
 - Afferent sensory information from viscera and internal environment
 - Perception of emotion, cognition memory
 - Brain structures that interpret and respond to that information
 - It is the receiving and appraising of bodily sensation, emotion, memory, cognition
 - The sensitivity to and accuracy of this perception is linked to regulation, resilience and in conditions such as pain, addiction³⁰⁻³¹
 - Neuroception: subconscious detection of danger or safety which results in ANS activations of safety, danger, or life threat, or their combinations

Polyvagal Neural Platforms

- Social Engagement Neural Platform
 - From the detection of safety the parasympathetic system activates to support physiological homeostasis, calm and positive psychological states and prosocial behavior
 - Compassion, empathy, calm more accessible or likely
- Defensive mobilization (fight or flight)
 - From detection of danger the sympathetic nervous system activates to support physiological mobilization, psychological and behavioral activations such as focused, narrowed attention, fear, anger, worry
- Defensive immobilization (death feigning)
 - From detection of immense danger the parasympathetic activates to slow resources to just what is needed for survival and creates physiological immobilization, hypotonia, psychological and behavioral states such as dissociation

Combined neural platforms

- Safe mobilization: Social Engagement + Sympathetic
 - From the detection of safety and mobilization such as play, sports, creative endeavors the neural activation supports physiological mobilization, psychological and behavioral states of creativity, excitement, relative calm
- Safe immobilization: Social Engagement + Defensive immobilization
 - Experiences such as meditation or intimacy can create physiological immobilization alongside psychological and behavioral states of calm, peace, tranquility

Yoga and Polyvagal Theory

Both theorize underlying substrates from which shared or connected physiological, psychological, behavioral states emerge, or become more accessible or likely.³²

Polyvagal Theory: Autonomic Neural Platforms

Yoga: Underlying yogic qualities (gunas)

Neural Platforms and yoga: Shared Attributes³²

Neural platforms and yoga	Emergent properties: shared physiological, emotional and behavioral characteristics
Balanced Social Engagement/ Quality of balance and clarity	Safety, connection, illumination, lucidity, clarity, compassion, relaxation, and calm
Safe mobilization/ Balanced Activation	Activity, creativity, motivation, capacity for change, capacity for being active and alert yet relaxed such as in play or dance
Defensive mobilization- Fight or flight/ Imbalanced activation	Fear, anger, greed, agitation, anxiety, tension and activation of physiological systems for fight-flight responses
Safe immobilization/ Balanced inactivation	Stability, groundedness, social bonding, meditative states
Defensive Immobilization/ Dissociative states	Obscuration, inertia, dullness, ignorance, delusion, dissociation, hypotonia and slowing of physiological systems for conservation of resources to the lowest needed for survival

Body-mind regulation

Balanced Social Engagement

- Underlying ANS neural platform and quality of calmness, lucidity supportive of mind-body states that can improve the capacity for self-regulation
 - Homeostatic relaxed physiological states
 - Positive psychological states such as contentment, equanimity
 - Prosocial behavioral such as compassion
 - Eudaimonic wellbeing
 - Personal connectedness; interpersonal relationships, meaning and purpose, virtues/values

Cultivating social engagement neural platform and through yoga practices

- **Ethics (yamas and niyamas):**
 - Foundational ethical qualities that include nonharming, contentment, compassion, self-study to support calm and positive physiological, psychological states and prosocial attributes
- **Movement postures (asana):**
 - Use body movement or positions to influence physiological activation and psychological states
- **Breathing Techniques (pranayama):**
 - influence physiological activation through breathing practices
- **Meditation:**
 - Influence physiological activation and support calm and positive physiological, psychological states and prosocial attributes such as compassion, lovingkindness

Beyond Regulation: Resilience

- Resilience adds a factor of efficiency to the ability to regulate³³⁻³⁵
 - Return to homeostatic states from that of adversity or stress in a timely fashion conserving physical and psychological resources.
 - High resilience linked to positive health outcomes including less perceived stress, recovery from illness, trauma, adjustment to serious diagnoses, management of chronic pain

Describing Resilience in the language of PVT and yoga³²

1. The ability to navigate and move between neural platforms or psychophysiological states
2. Creating a strong foundation or container of social engagement neural platform from which the person can experience a wider spectrum of safe mobilization/immobilization → widening the threshold for these varied states
3. Realization of eudaimonic well-being, steadfast contentment within all fluctuations of the body, mind, environment

1. Navigating between neural platforms

- Skill of noticing
 - Noticing through interoception, neuroception, mindful attention to emotions, thoughts the autonomic and psychophysiological state
- Skill of addressing
 - Tools are learned to activate the social engagement neural platform and increase qualities calmness, clarity, peacefulness
- Learn to skillfully navigate neural platforms and mind-body states.

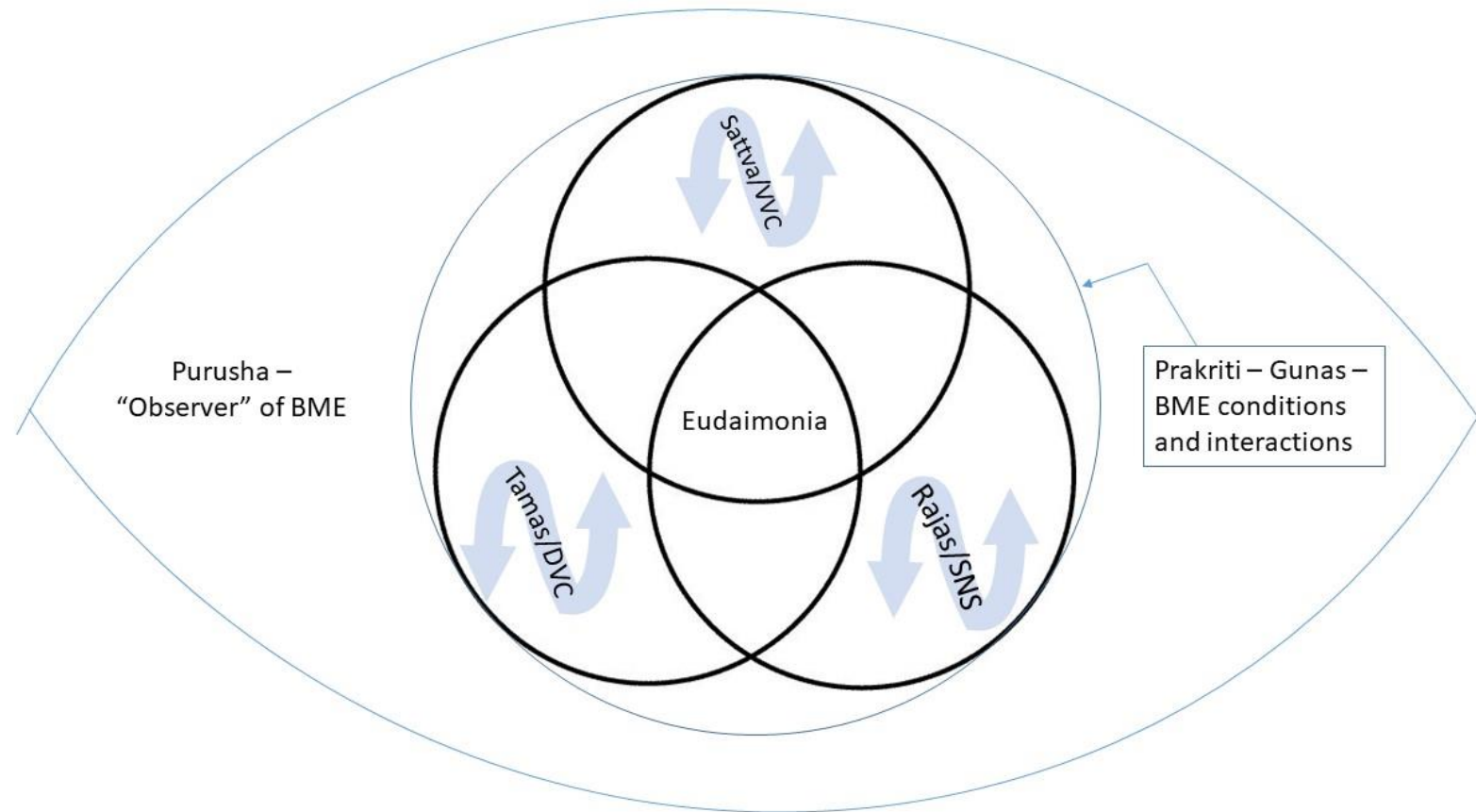
2. Widening threshold and continuum of experience

- Widen the capacity for safe mobilization ↔ safe immobilization
 - The person is able to be anchored in the calm, clarity of balanced social engagement amidst stronger activations/other neural platforms activate or are present
 - The person finds the capacity to be in relationship with a wider array of body-mind sensation while staying connected to calm, peace, equanimity
 - For example an activating posture (active or restorative) while maintaining physiologically calming breath practices or meditations/ethics
- Reflected in the capacity to be with a wider array of life events while connected to states of peace, calm, equanimity.

3. Finding peace within sensations

- Realization of eudaimonic well-being, steadfast contentment within all fluctuations of the body, mind, environment

Yoga therapy: a methodology for regulation and resilience and eudaimonia

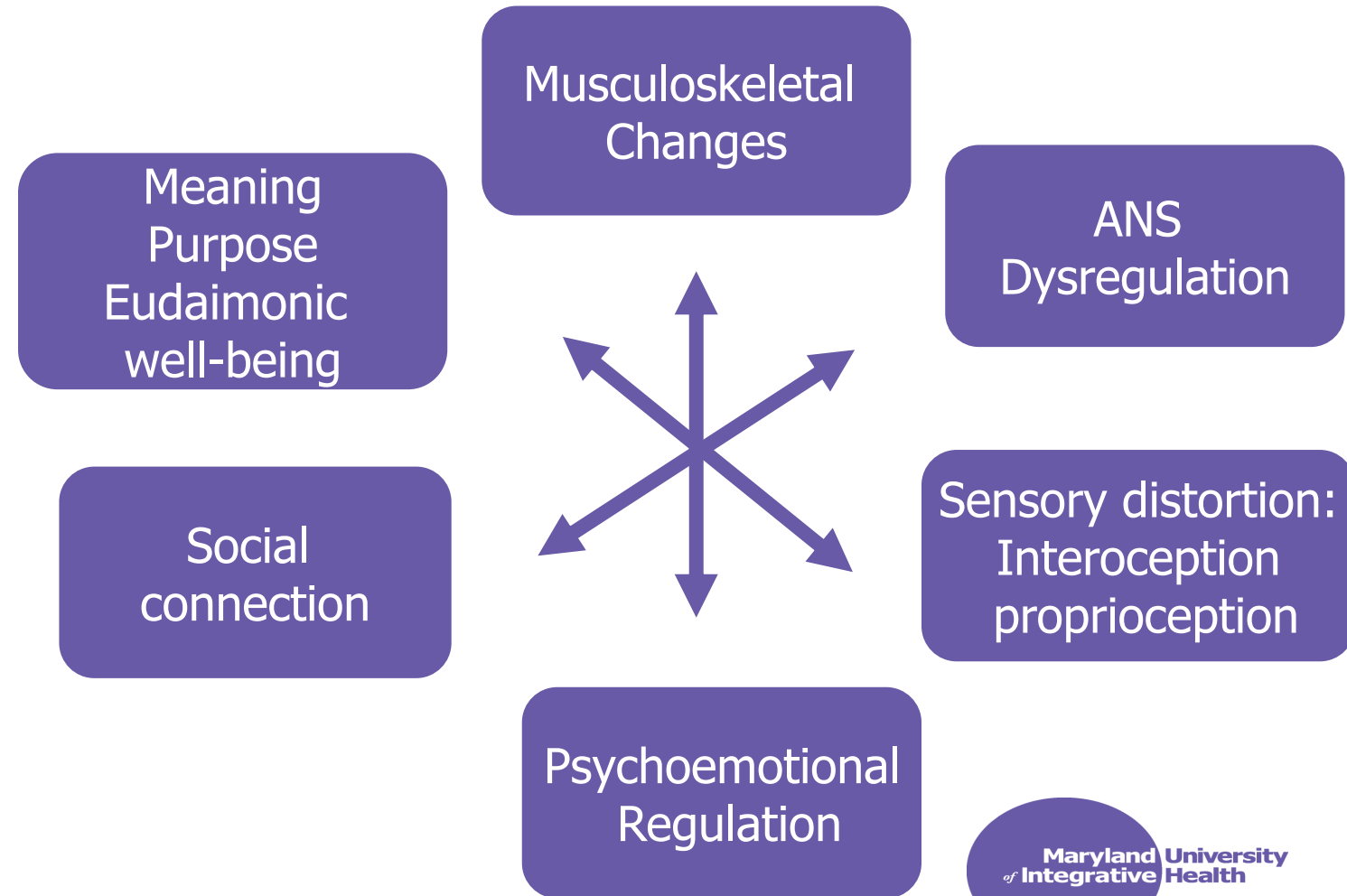


Yoga Practices

- Yoga Therapy practices for interoception, autonomic regulation and resilience, body-mind regulation and resilience
 - Movement
 - Breathwork
 - Meditation
 - Ethics

Chronic Pain- A biopsychosocial-spiritual perspective³⁶

- Yoga Therapy
 - Support Spiritual and eudaimonic wellbeing
 - Purpose/meaning; connectedness
 - Social engagement
 - Regulation and resilience
 - Change relationship to BME
 - Case Examples



Role and benefit of yoga therapy for other clinical populations

- Acute care
 - Howard County Hospital- see clients bedside
- Residential Drug addiction
 - Penn North in Baltimore
- Cancer Care
 - Proton Center in Maryland; Simon Cancer Center; Sloane Kettering; University of Pennsylvania Hillman center
- Chronic condition
 - Example: RA; IBS
- End-of-life care

Yoga in Research³⁶⁻⁴⁸

- Pain
 - Strongest research is for low back pain
 - Positive effect on function, pain intensity, psychosocial factors, quality of life for musculoskeletal pain conditions including back pain, fibromyalgia, OA, RA
 - Yoga is recommended as treatment for low back pain by American college of physicians- similar outcomes to PT (yoga for nonspecific cLBP noninferior to PT for function and pain)
- Immune function- reduce inflammation across chronic conditions
- Mental/emotional health- moderate effects for depression, anxiety, mood regulation, PTSD
- Cancer

Resources for yoga therapy and yoga therapists

- Yogatherapy.health
- Iayt.org
- Muih.edu
- White paper in press (IJYT):
<https://www.iayt.org/general/custom.asp?page=AboutIJYT>

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Questions?

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