

YOGA PSYCHOTHERAPY: THE INTEGRATION OF WESTERN PSYCHOLOGICAL THEORY AND ANCIENT YOGIC WISDOM

Mariana Caplan, Ph.D.
San Francisco, CA

Adriana Portillo, M.A.
San Francisco, CA

Lynsie Seely, M.A.
San Francisco, CA

ABSTRACT: This article offers a comprehensive perspective on how Western psychological theory and practice, specifically developments in somatic psychology, can be integrated with the scientific insights of Yoga in order to produce a more thorough model that seeks to reduce the symptoms of psychological trauma and promote overall well-being. Toward this goal, the article offers a literature review that includes trauma studies, neuroscience, mindfulness, and yoga. By integrating these disciplines, we discover new possibilities for healing psychological trauma in the body through yogic techniques, including physical postures, meditation, and breathing exercises. The article also introduces an overview of the Yoga & Psyche Method, a process that allows practitioners to easily experience and teach this integration to clients and offers five key insights and possibilities that result from this integration. This synthesis of Eastern philosophy and modern scientific research offers a possibility for further developments in psychological theory, research, and effective therapeutic treatments.

KEYWORDS: somatic psychology, trauma, yoga, neuroscience, mindfulness.

Psychology is a field in the making. Whereas many of the wisdom traditions have been developing philosophies and methods to address the great questions facing humanity for thousands of years, Western psychology is just over a hundred years old. Globalization, the increasing interest in Eastern traditions such as Yoga, and significant developments in neuroscience, trauma research, and somatic psychology, have opened up the doors for a synthesis of Eastern and Western approaches to well-being that include the treatment of clinical disorders, as well psychological health and thriving.

This article offers an insight into what the integration of Western psychology and ancient yogic wisdom might look like. We begin by describing important findings and developments in somatic psychology, yoga research, breathing techniques, and mindfulness. The literature review then summarizes current trauma research in order to illustrate the importance of incorporating the body and yoga in the treatment of trauma. To conclude, we offer five key insights and implications of this integration, and consider the important questions and research directions for further developments in this emergent interdisciplinary

Email: mariana@realspirituality.com

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field. An appendix describing the Yoga & Psyche Method, a process created by one of the authors of this article, is introduced as an example of a model that offers a theoretical explanation and a phenomenological experience of the usefulness of integrating these approaches.

Delving into the vast field of Yoga, one discovers that the physical exercises we commonly understand as Yoga are but one aspect of a highly refined philosophy that offers a psychological view of the human being. When we consider Yoga from this wider perspective, we discover many of the goals of modern psychology to be complementary with those of Yoga.

The precise origins of Yoga are not known, and even great Yoga scholars differ vastly on the dates they cite in Yoga's history. Eliade (1975) suggests that the first systematized form of Yoga could have been written by *Patañjali* in his *Yoga Sūtras*. There seems to be no consensus of when Patañjali lived and wrote this classical text, but it is thought to be somewhere between 300 BCE to 500 CE. Feuerstein (1998) dates the writing of the *Yoga Sūtras* back to the Classical Age (100 BCE to 500 CE) and suggests that less structured yogic ideas and practices can be found dating back to the time of the *Rig-Veda*, which is thought to be composed before 1900 BCE. Additionally, Bryant (2009) in his book *The Yoga Sūtras of Patañjali* talks about images of figures in yogic postures, dating to pre-vedic times (3000 - 1900 BCE) adding that, "This evidence suggests that, irrespective of its literary origins, Yoga has been practiced on the Indian subcontinent for well over four thousand years" (p. xx).

Considering that modern psychology is just over a century old, we discovered that an interdisciplinary approach that bridges this field with Yoga has just begun to be articulated (Chung & Hyland, 2011). Yoga is a tool for a myriad of applications, including a reconnection with a deeper sense of self, as it is practiced by many in the East (Eliade, 1975). Yoga is a wide and complex subject, and for the purpose of this article, we will only make reference to three (of eight) specific "limbs" or aspects introduced by *Patañjali* in the *Yoga Sūtras*: *āsana* - physical postures and stretches, *prānāyāma* - breathwork, and *dhyāna* - meditation, all of which are also mentioned in the *Hatha Yoga Pradīpikā* (Swami Muktibodhananda Saraswati, Swami Satyananda Saraswati, & Swami Svatmarama, 2000).

Welwood (2000) overviews some of the distinctions in social and cultural factors between East and West—particularly the Indo-Tibetan cultures — which helps us understand some of the differences in the course of psychospiritual development between these cultures and points to why developments in modern psychology are specifically relevant to the Western practitioner of spiritual traditions. Some of the (generalized) strengths of the East include strong mother-infant bonding, intact extended families, a life attuned to the rhythms of the natural world, and maintenance of the sacred at the center of social life. He suggests that the gift of the West is "the impetus it provides to develop an individuated expression of true nature... [which is] the unique way that each of us can serve as a vehicle for embodying the suprapersonal wisdom, compassion, and truth of absolute nature" (p. 207). In other words, drawing on the strength of cultural and social factors from both

East and West, the sum is greater than each of its parts. For a deeper discussion and understanding of Eastern perspectives on and practice of Yoga and their contextual elements see the work of scholars such as Sovatsky¹.

A helpful step in integrating the yogic and Western psychological approaches is to consider the role of somatic psychology. In the West, there is increasing recognition that body awareness is an essential component to psychological well-being (Mehling et al., 2011). Somatic psychology has been shown to be effective in treating symptoms associated with anxiety, depression, psychosomatic issues, post-traumatic stress disorder (PTSD), sexual abuse, and other forms of trauma (Berg, Sandahl, & Bullington, 2010; Koemeda-Lutz, Kaschke, Revenstorf, Scherrmann, Weiss, & Soeder, 2006; Lopez, 2011; Price, 2005; Steckler & Young, 2009). Therapeutic techniques that include the body improve self-regulation, increase body awareness, reduce dissociation, foster self-care and pain management skills, and allow for the body's innate wisdom to come forth to help complete impulses that may have been halted during the time of the traumatic event (Lopez, 2011; Price, 2005; Price, McBride, Hyerle, Kivlahan, 2007).

Further building blocks that positively impact our capacity to integrate these theories and practices are the emerging fields of neuroscience and trauma research. Both are beginning to reveal a substantial body of research-based evidence about how trauma resides in the body, brain, and nervous system. Many of the most effective methods for working with post-traumatic stress disorder and complex trauma involve body-centered treatments (Emerson & Hopper, 2011; Lopez, 2011; Ogden, Minton & Paine, 2006; Ogden, Pain, & Fisher, 2006; Rothschild, 2000; van der Kolk, 1994; van der Kolk, 2006).

In setting out to offer an integration of Yoga and Western psychology, particularly in light of the findings in somatic psychology, neuroscience, and trauma research, the authors engaged a thorough review of the literature related to our topic. We discovered that there is little scholarly material published on how these topics are integrated. There are papers and books written on the benefits of physical yoga and meditative practices for health, happiness, and psychological issues. There are many new and important studies, too numerous to mention, about the benefits of mindfulness meditation. However, only a few individuals (Emerson, Sharma, Chaudhry, & Turner, 2009; Longaker & Tornusciolo, 2003; Spinazzola, Rhodes, Emerson, Earle, & Monroe, 2011; van der Kolk, 2006) have published on how the Yoga of the East and the Psychology of the West can inform each other, enhancing the effectiveness of each to create an integral model seeking to reduce the effects of psychological trauma. It is our hope that this synthesis and accompanying method will form a foundation for further research and the development of practices that support healing from trauma.

SOMATIC PSYCHOLOGY: WHAT IS IT AND WHY IS IT RELEVANT?

In beginning to articulate a synthesis between Yoga and Western psychology, it is useful to understand the significance and scope of the developments in

somatic psychology. A philosopher named Thomas Hanna first applied the term Somatics to the field of psychology in the 1970's. Hanna wished to merge the Western split between mind and body and declared that, " 'Soma' does not mean 'body'; it means 'Me, the bodily being' " (Hanna, 1970, p. 35). Hanna (1995) later defined somatics as, "The field which studies the soma: namely the body as perceived from within the first person perception... the human being as experienced by himself from the inside" (p. 343).

Although somatic psychology has only picked up momentum within the past decade, its roots date back to the early originators of modern psychology, including Freud, Ferenczi, Adler, Groddeck, Reich, and Jung (McNeely, 1987). It took the outside view of scholars, some fifty years later, to name this phenomenon as the single field of somatic education. Summarizing the history of somatic practices, Eddy (2009) wrote:

Hanna (1985), supported by Don Hanlon Johnson (2004) and Seymour Kleinman (2004), saw the common features in the "methods" of Gerda and FM Alexander, Feldenkrais, Gindler, Laban, Mensendieck, Middendorf, Mézières, Rolf, Todd, and Trager (and their protégés Bartenieff, Rosen, Selver, Speads, and Sweigard). Each person and their newly formed "discipline" had people take time to breathe, feel and "listen to the body," often by beginning with conscious relaxation on the floor or lying down on a table. (p. 6)

More recent approaches to somatic psychology and body-oriented psychotherapy include Sensorimotor Psychotherapy (Ogden, Minton, & Paine, 2006), Somatic Experiencing (Levine, 1997, 2008, 2010), Body-Mind Centering (Bainbridge Cohen, Nelson, & Nelson, 2003), Somatic Trauma Therapy (Rothschild, 2000), Hakomi (Kurtz, 1990), Bioenergetics (Lowen, 1994), Integrative Body Psychotherapy (Rosenberg, Rand, & Asay, 1985), Holotropic Breathwork (Grof & Grof, 2010), Core Energetics (Pierrakos, 1987), and iRest (Miller, 2010). These approaches include both the body and mind, creating specific methods to deal with trauma and self-knowledge.

Within this discipline of somatic psychology, the mind and body are viewed as an interactive whole where mental and physical symptoms are connected and are representative of an individual's whole being. In this way somatic psychology links psychotherapy with the soma, which allows one to consider the psychological meaning of symptoms that manifest in the body (Hartley, 2004). The change from doing psychotherapy strictly in the mind to moving it into the body is a radical shift. Somatic approaches work directly with present tense phenomena in the body and "unwind" psychological material via the means of direct experience. Berg et al. (2010) state that becoming more aware of the connection between bodily symptoms and emotions allows clients to increase their feeling of control. This approach empowers individuals as physical symptoms morph into information about their body that they can then learn to understand and integrate.

Treatment of disorders such as depression, which is increasingly recognized as a mind-body phenomenon (Steckler & Young, 2009), must include both mind

and body for full recovery. Furthermore, Koemeda-Lutz et al. (2006) found that body therapy treatments significantly improved symptoms of anxiety, depression, interpersonal problems, and psychosomatic grievances just after six months. The longer the treatment lasted the greater the improvement, with benefits remaining for up to two years following treatment (Koemeda-Lutz et al., 2006).

By understanding the bridge that somatic psychology makes between psychotherapy and somatic bodywork, we can build a similar bridge between psychotherapy and Yoga. With an accompanying language and set of practices, Yoga psychotherapy is an integral framework that has a powerful impact on cultivating wellness.

YOGA RESEARCH

In the West, the intricacies and depth of Yoga are not widely practiced to its fullest extent (see endnote¹). The Yoga research and literature reviewed here includes studies of physical yoga, as well as breathwork and meditation; the latter is often investigated under the term “mindfulness.” The authors do recognize that due to all the different types of meditation and breathwork approaches, it is difficult to compare the results and psychological effects of the various methods (Sedlmeier et al., 2012).

Yoga, including meditation and breathwork, has proven to be effective in reducing symptoms of several physical and psychological disorders. In a study done by the National Center for Complementary and Alternative Medicine (NCCAM), Yoga, deep breathing, and meditation are in the ten most common complementary and alternative medicine therapies among adults in 2007 (Barnes, Bloom, & Nahin, 2008). The following sections summarize specific studies that explore the benefits of different yogic techniques. Given that in the West some of the terms used for different techniques are interchangeable, some of the following studies might incorporate more than one of these approaches (i.e., postures, breathwork, meditation).

Yoga and Stress

Numerous studies have been conducted that demonstrate that the physical practice of Yoga *āsana* decreases stress, promoting increased relaxation and regulation at a psychological and neuromuscular level. In the Harvard Mental Health Letter (Harvard Health Publications, 2009), an article entitled, “Yoga for Anxiety and Depression” spoke to the significance of yoga on stress management:

By reducing perceived stress and anxiety, yoga appears to modulate stress response systems. This, in turn, decreases physiological arousal—for example, reducing the heart rate, lowering blood pressure, and easing

respiration. There is also evidence that yoga practices help increase heart rate variability, an indicator of the body's ability to respond to stress more flexibly. (p. 1)

Some researchers have conducted similar studies using short term yoga interventions and have found a relationship between Yoga and decreased stress across many different populations such as young adults (Gard, Brach, Hölzel, Noggle, Conboy, & Lazar, 2012), older adults, (Bonura & Pargman, 2009), businessmen and women (Wolever, Bobinet, McCabe, Mackenzie, Fekete, Kusnick, & Baime, 2012), and patients suffering from chronic illness (Pritchard, Elison-Bowers, & Birdsall, 2010; Salmon, Santorelli, & Kabat-Zinn, 1998). Yoga helps to train the body to relax on a muscular level, allowing the stress response to be more easily managed (Serber, 2000). Brisbon and Lowery (2011) found that compared to beginners, advanced practitioners of Hatha Yoga displayed lower levels of stress and increased awareness of being present in the moment.

Yoga also gives individuals a framework for regulating emotions and a space to practice self-soothing techniques (Harper, 2010). Gootjes, Franken, and Van Strein (2011) conducted a study that confirmed that yogic meditative practices help with successful emotion regulation. There is also evidence to suggest that yoga aids in the development of the self-soothing capacity of traumatized youth (Spinazzola et al., 2011). Overall, yoga practice has been shown to support stress management at a level comparable to cognitive behavioral interventions, helping to increase relaxation and improve emotion regulation (Granath, 2006). Breathwork has also been found to increase one's ability to regulate emotions, in addition to improving heart rate variability by balancing the interaction between the sympathetic and parasympathetic systems (Brown & Gerbarg, 2009; Holzel, Lazar, Gard, Schuman-Oliver, Vago & Ott, 2011).

Yoga and the Treatment of Clinical Diagnoses

Numerous studies have revealed that Yoga benefits various clinical diagnoses, as articulated by the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychological Association, 2013). An example of this is children with a diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) for whom a yoga practice has been shown to stabilize emotions, reduce hyperactivity and impulsivity, increase attention span, feelings of calmness and confidence, and improve social skills. It also has shown to improve the quality of the parent-child relationship, sleep patterns, and positively change the child's approach to school (Abadi, Madgaonkar, & Venkatesan, 2008; Harrison, Manocha, & Rubia, 2004; Jensen & Kenny, 2004).

When applied to those with eating disorders, such as anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified, yoga has shown to improve mood, increase physical and emotional awareness, and decrease eating disorder symptoms. A study conducted by Dale, Mattison, Greening, Galen, Neace, & Matacin (2009) reported that "Women's intense fear of gaining weight, preoccupation with weight, body dissatisfaction, extreme desire to be

thinner, and desire to think about and engage in bouts of binge eating was reduced” (p. 431).

Yoga has also been shown to benefit those with schizophrenia by reducing psychopathology when paired with standard psychiatric treatment. Studies have found reduced psychotic symptoms and depression, improved cognition, enhanced social and occupational functioning, and an increased quality of life (Bangalore & Varambally, 2012; Duraiswamy, Thirthalli, Nagendra, & Gangadhar, 2007; Visceglia & Lewis, 2011).

Yoga and Depression

As depression and anxiety are often co-occurring, some findings related to anxiety are also included in this section. A study conducted by Kinser, Bourguignon, Whaley, Hausenstein, and Taylor (2013) found that the women diagnosed with major depressive disorder who were assigned to the yoga intervention group showed a decrease in depression and experienced less ruminations, increased feelings of connectedness, and the added benefit of a new coping method. Forbes (2008) reports that yoga’s ability to calm the nervous system, foster an awareness of the present moment, and release energy that has been trapped in the body, aids in the reduction of symptoms associated with affective disorders.

Studies have shown that the practice of following the breath is a valuable aid in the treatment of depression and anxiety. Miller (1994) found that yogic, diaphragmatic breathing increases ego strength, emotional stability, confidence, alertness, and perceived control over one’s environment, as well as reducing anxiety, depression, phobic behavior, and psychosomatic problems. Lalande, Bambling, King, and Lowe (2012) studied how the suppression of inner experiences, possibly triggered by traumatic events, may be linked to inhibited breathing which in turn may be furthering states of depression and anxiety. Additionally, a meta-analysis conducted by Baer (2003) suggests that mindfulness-based interventions may be helpful in the treatment of several issues including chronic pain, anxiety, depression, eating disorders, patients with cancer, fibromyalgia or psoriasis all with positive results.

Amy Weintraub (2004) describes in detail various yoga practices that can be used to treat depression. Her work is grounded in research and based as well on the experience of healing and managing her own depression through Yoga. In a more recent effort (Weintraub, 2012) she also illuminates how therapists can learn and teach a variety of yogic processes—including breath, sound, mudras (hand positions), imagery, and self-inquiry — to increase the effectiveness of psychotherapy.

Yoga and Well-Being

Yoga also improves the mood of individuals who do not suffer from a diagnosable disorder and overall offers a practice that promotes general well-

being. In a study by Shapiro (2004) healthy participants recorded the fluctuations of their mood and emotional states before and after yoga classes. The results showed that positive moods increased and negative moods decreased following yoga practice (Shapiro, 2004). A study that assessed yoga practice and its effect on mood compared to walking found that those who were assigned to the yoga group reported greater improvements in both mood and anxiety levels than those in the walking group (Streeter et al. 2010). Yoga practice additionally promotes greater well-being by increasing body awareness, positive affect, and satisfaction with life for both men and women, while simultaneously decreasing objectification of their bodies (Impett, Daubenmier, & Hirschman, 2006).

The ability to be present increases with the practice of yoga, which has a positive effect on overall well-being. Studies on mindfulness have found how it helps people increase attention and focus (Lazar, Bush, Gollub, Fricchione, Khalsa, & Benson 2000). Shelov, Suchday, & Friedberg (2009) found that just eight weeks of yoga practice significantly increased mindfulness, insightful understanding, and an open attitude. Meditation can also be useful with deeper issues around personality and maturity of relatively healthy individuals (Epstein, 1986). Findings such as these are important in thinking about preventative mental health, protecting against disorders such as anxiety and depression, and strengthening the already existing resources that every individual possesses.

Yoga has been shown to relieve suffering during periods of grief and bereavement. Philbin (2009) wrote, “The therapeutic process creates a safe and sacred space for processing sensations, thoughts, and emotions... Grieving adults who participated in the yoga therapy intervention showed significant improvements in vitality and positive states and a trend toward improved satisfaction with life” (p. 129). Yoga can also provide a space for connection and relationship building. Partner yoga can foster deep emotional connection, healthy boundaries, trust, and a strong sense of self while simultaneously being in relationship (Swart, 2011).

Looking to neuroscience, studies show that practicing mindfulness increases positive affect (Davidson et al., 2003) and enhances self-regulation (Holzel et al., 2011). Certain areas of the brain associated with attention, introspection, and sensory processing are thicker in participants with extensive meditation experience compared to those with little to no experience, and the UCLA Laboratory of Neuroimaging found that the brains of people who practice meditation are in fact different from those who do not (Holzel et al., 2011; Lazar et al., 2005; Luders, Kurth, Mayer, Toga, Narr, & Gaser, 2012).

TRAUMA RESEARCH

Trauma and the Body

A significant amount of attention has been paid to the study and treatment of trauma in the last few decades. The most effective treatments for trauma often include body-centered methods as these have a direct effect on the

physiological and neurological mechanisms that affect the body following a traumatic event (Emerson & Hopper 2011, Levine, 1997; Ogden, Minton, & Paine, 2006; Rothschild, 2000; van der Kolk, 2006). We now know that Yoga also contributes to the health and well-being of both the body and psyche, and when it is merged with modern psychology, clinicians have a wider array of tools and greater knowledge from which to draw upon in regards to treating individuals suffering from trauma. Before offering a synthesis of how these approaches to psychological transformation work together, it is important to note some of the significant findings in trauma research.

Trauma is a form of stress. Under normal circumstances stress protects the human system and promotes growth. However, if the stress response is maladaptive or becomes chronic, it can lead to psychological and biological transformations that are harmful (Christopher, 2004; McEwan & Lasley, 2002). Although the stress response is a biological process that naturally occurs in every individual, trauma manifests in different ways for each unique person (Christopher, 2004). The event does not necessarily have to be catastrophic, it can be a seemingly mundane event that directly or indirectly affects the individual, but what is crucial is how the body reacts to the situation (Levine, 2008). Peter Levine (1997) stated that:

Traumatic symptoms are not caused by the “triggering” event itself. They stem from the frozen residue of energy that has not been resolved and discharged; this residue remains trapped in the nervous system where it can wreak havoc on our bodies and spirits. (p. 19)

Trauma symptoms arise when the arousal cycle cannot be completed, keeping the individual locked in an aroused state of fear. This traps the traumatized person in a cycle of fear that affects the entire body, including the mind, the emotional system, and the neurological system that regulates the body (Levine, 1997). Stephen Porges (Porges, 2001; Prengel, 2011), a professor in the Department of Psychiatry at the University of Illinois at Chicago, proposed, through his polyvagal theory, that in addition to the fight or flight defenses of the sympathetic nervous system, there is a vagal defense system that causes immobilization and a newer mammalian development, the myelinated vagus, which plays a role in self soothing (Prengel, 2011). When treating trauma these systems are important to note as they are physiological components that can keep the trauma victim locked in a frozen state and unable to self soothe.

Experiencing trauma puts the individual under great physical and emotional distress, and the biological changes that happen in the body result in various forms of symptoms that can show up months or years following the event. It is the biological alterations that lead to the psychological effects of trauma, which are often not within control of the individual. A comprehensive literature review on complex trauma observed in childhood trauma revealed seven areas of impairment: attachment, biology, affect regulation, dissociation, behavioral regulation, cognition, and self-concept (Cook et al., 2005). Leading trauma researcher Bessel A. van der Kolk (2002) wrote:

Once people are traumatized and develop PTSD, their ability to soothe themselves is compromised. Instead, they tend to rely on actions, such as fight or flight, or on pathological self-soothing, such as self-mutilation, bingeing, starving, or the ingestion of alcohol and drugs, to regulate their internal balance. (p. 386)

The limbic system, an area of the brain that is associated with emotions and survival behaviors, is also affected by trauma. The result of this is that the individual may feel the emotions as if they were a reenactment of the traumatic event, leading him/her to act irrationally to events that may be irrelevant in the moment but important during the traumatic event (van der Kolk, 2006). Emotions can be uncontrollable and overwhelming, becoming the enemy, turning the individual against his or her self, therefore learning to self-soothe is essential in healing from trauma (Gallop, 2002). The goal of treating PTSD is to help the client live safely in the present without being pulled back into the trauma.

What then, constitutes the major ingredients to effective trauma treatment? Van der Kolk (2006) suggested it needs to involve, “(a) learning to tolerate feelings and sensations by increasing the capacity for interoception; (b) learning to modulate arousal; and (c) learning that after confrontation with physical helplessness it is essential to engage in taking effective action” (p. 1). Since trauma is re-enacted in the present through one’s physiological, mental, and emotional systems, effective therapy includes self-awareness and self-regulation to bring one back into the present moment (van der Kolk, 2006).

Yoga and Trauma Research

Because trauma treatments often involve body-centered approaches to healing, a new body of research on the benefits of Yoga on trauma has just begun to emerge. “Clinical experience shows that traumatized individuals, as a rule, have great difficulty attending to their inner sensations and perceptions—when asked to focus on internal sensations they tend to feel overwhelmed, or deny having an inner sense of themselves” (van der Kolk, 2006, p. 11). The practice of Yoga is an excellent tool to bridge this gap. Gerbarg & Brown (2011) voiced some strong points on this topic:

While talk-based and cognitive therapies can be of great benefit, there are situations in which mind-body approaches, such as yoga, qigong, tai chi, breathing practices, and meditation can be extremely beneficial and sometimes necessary for full recovery... Learning how to use the body to speak to the mind circumvents the prohibition against talking and can be more effective than relying solely on verbal, cognitive, or intellectual approaches. (p. 199)

Traumatized youth have also benefited from yoga. Spinazzola, Rhodes, Emerson, Earle, & Monroe (2011) conducted a study with traumatized youth living in residential treatment homes. The primary goal of the practice was to provide them with a safe space and structure in which to reconnect with their

bodies. The results showed that doing yoga helped to strengthen the youth's self-regulating ability (Spinazzola et al., 2011). Another study (Longaker & Tornusciolo, 2003) implemented yoga as a type of group therapy for severely traumatized adolescent boys and found that the boys learned how to develop effective attachments, empathy for others, trust, and a sense of security within the group. There was improved self-regulation, a foundation for which to build a stronger sense of self, which allowed for the boys to connect with bodies in a healthy way promoting a sense of empowerment and responsibility over their body (p. 80-81).

One week of yoga has proven to reduce fear, anxiety, sadness, and interrupted sleep in individuals who survived natural disasters, suggesting that yoga may be useful in managing the negative emotional and somatic-based effects of these disasters. (Telles, 2007; Telles, Singh, Joshi, & Balkrishna, 2010). Additionally, yogic breathing can help relieve psychological distress in individuals that have undergone trauma from such events (Descilo et al., 2010).

Mindfulness techniques help individuals to re-focus on the present, allowing thoughts and feelings to be experienced without judgment or avoidance (Follete, Palm, & Pearson, 2006). A study by Lopez (2011) suggested that techniques that have a mindfulness component allow people suffering from PTSD to improve self-regulation. Meditation also activates structures involved in attention and control of the autonomic nervous system (Holzel et al., 2011).

CONCLUSION

Through our review of the major studies exploring yoga (including *āsana*, breath control, and meditation), somatic psychology, and trauma, we have found yoga and psychology to be complementary to each other and that the integration supports the process of recovering from psychological trauma. In closing, we propose the following five insights and possibilities for this integration:

1. The Western psychologist can benefit from the insights of a comprehensive view of Yoga and how this ancient practice can complement modern psychological theory and clinical work. Yoga and yogic techniques have been shown to reduce stress and anxiety by modulating the stress response and regulating emotions. This improves one's ability to self-soothe, supports mindful living, increases feelings of connectedness, confidence, focus, body awareness, and perceived control over the environment, and promotes greater well-being and satisfaction with life. Using some of the key insights Yoga offers to inform psychology—it particularly lends itself to somatic psychology—the clinician can begin to use these techniques to complement their clinical knowledge to benefit their clients without having to engage years of Yoga studies.
2. As a result of these positive effects of Yoga, the symptoms of a handful of *DSM-5* disorders can be reduced, i.e. ADHD, eating disorders,

schizophrenia, and depression. The positive benefits seem to particularly address many of the issues associated with PTSD and related symptomology, including the inability to self soothe and modulate arousal, fear and dissociation from the body, and persistent stress that pulls the individual out of the present and into the trauma.

3. The Western practitioner of Yoga can benefit from this integration by expanding their understanding of Yoga to include a psychological component. This can allow for a deepening of the practice to focus on how Yoga can affect one's sense of self and improve well-being both in formal yoga practice as well as in daily life. It is not expected that Western yoga teachers would know how to work psychologically, but by increasing their understanding of somatic psychology and the sensitive nature of trauma, they can significantly increase their skill set to integrate psychological material, or create a psychological frame, for themselves and their students during yoga practice.
4. *Embodiment*. There exists the possibility for human beings to become fully embodied—for the consciousness and intelligence that is ordinarily associated with the mind, to become awakened throughout the whole body. The integration of Yoga and psychology supports this whole body awakening by allowing one to work through their psychological holding patterns, traumas, and ailments, while also connecting one to their body and the present moment. This clearing away of psychological traumas, paired with full body and present moment awareness, allows one to come into a deeper knowing of themselves and get in touch with their natural essence that is embodied in their being. When this happens, radical changes in the phenomenological experience take place. The split between thoughts, feelings, and actions, disappears and more congruence begins to arise, adding a spiritual dimension to life that includes behaviors, vocation, health, lifestyle, relationships, and thriving.
5. The integration of Yoga and psychology, in the light of trauma, offers many opportunities for trauma sensitive yoga techniques, informed by psychology, to be created, researched, and implemented. The authors believe that further researcher in this area will strengthen the links between these three fields of knowledge (yoga, psychology, and trauma), supporting its application to different populations from prisoners to youth, medicine, preventative medicine, palliative care, well-being, and thriving. We offer this foundational article, and following application of how Yoga and psychotherapy can be integrated for clinical use, as a wellspring from which others can draw on and further develop.

To conclude, as Yoga becomes increasingly acceptable to mainstream and scientific communities, it is likely that many opportunities for further research will become available. As the popularity of neuroscience continues to link science with psychology and spirituality, we hope it will bridge the perceived separation between “mainstream” and “psychological” communities with spiritual traditions. Questions that remain for further study include: Could the validation of Yoga, that neuroscience and trauma research are providing, make it possible to include Yoga as a treatment modality in the DSM for PTSD and

other anxiety-related disorders? Will the scientific discoveries and developments that are changing the way humanity lives in the world be able to further integrate the wisdom of the East and West to allow for an inclusion of not just mind and body, but of the more spiritual aspects of the soul/psyche too? Will this integration allow for trauma to be better understood and addressed? We offer this review and synthesis of the current literature and research in these areas not as a final analysis but rather as a foundation and springboard for further studies in the field.

Appendix: The Yoga & Psyche Method

One practical application of the integration of yoga and Western psychology, which would benefit from further research as well as added developments as the field continues to evolve, is *The Yoga & Psyche Method*. Developed by one of the authors of this article, who is a psychotherapist specializing in psychological integration on the spiritual path as well as a long-term yoga teacher and practitioner, *The Yoga & Psyche* method draws upon 19 years of clinical experience and Yoga studies, as well as Peter Levine's Somatic Experiencing model. Through this method, clients and students are introduced to the importance of the body in their psychological healing, and taught to use yogic exercises, breathing, and meditative practices to unwind trauma and regulate their nervous system.

This method can be taught in a workshop setting where the facilitator teaches, demonstrates, and guides participants through the steps listed below, followed by an opportunity to share in dyads, bring questions to the facilitator in a group setting, and then continue to practice and refine the skills. The steps can also be applied in the psychotherapy room, with the therapist directly guiding the client through the process over several weeks or months. The process deepens and becomes more effective the longer it is practiced. It can be integrated with most other therapeutic modalities, complementing their efficacy.

The following steps are an outline of the process, which can be adapted and changed according to the skills of the therapist and needs of the clients or practitioners:

1. Educate the client or group about a) the field of somatic psychology, b) how Yoga and psychology complement each other, c) trauma and its treatment, and d) an overview of how the exercise will be experienced in their bodies.
2. Teach client(s) to move awareness from their minds into their bodies by teaching exercises that create psychological safety and bring in visualization, yogic breathing, and mindfulness.
3. Once clients have a sense of how to experience their emotional states as bodily sensations, a process called *pendulation* or *titration* (Levine, 1997) is introduced through which clients learn to move their awareness between creating a sense of safety in their bodies to briefly (30–60 seconds) experiencing the sensations associated with traumatic experience and then moving back to that place of safety in their bodies. This process of *pendulation* (Levine, 1997) can be repeated several times for a gradual deepening, and clients discover they can learn to move back into a sense of safety.

4. The process is then applied to working with specific yoga poses. These include some general positions understood to allow the release of tension and even illness, as well as yoga postures that could be holding deep emotional content.
5. The possibility of receiving physical touch and support in the yoga poses while releasing traumatic emotions is introduced when appropriate in a workshop context. Workshop participants learn to provide a safe space in which to offer this. Clients and workshop participants are always offered the option of the therapist's or facilitator's presence without touch.
6. Clients and/or workshop participants are then redirected to a place of safety within their bodies and "complete" their process with the conscious recognition that they can engage with deep, traumatic material within themselves, and emerge from this with more energy, joy, and relaxation. This experience facilitates the eventual ability to digest very difficult emotions and experiences in the moment.
7. The client/participant processes with the therapist/facilitator the material that emerged.

Once the therapist or facilitator is comfortable with these steps, these practices can range in length from a short, 5–10 minute individual or group process, to a 45 minute – 1 hour session, including the time for integration and discussion.

This practice is safe as long as the therapist or facilitator keeps the interaction between the client and their traumatic material in gentle 30–60 second intervals, instead of longer periods of time, which tend to facilitate catharsis rather than gradual integration.

It is the hope of the authors that many new methods and practices will continue to emerge alongside the continued developments in neuroscience, trauma research, somatic psychology, and Yoga research.

NOTES

¹ Although outside the scope of the present article, some researchers—especially Sovatsky—are of the position that modern psychology is incomplete and operates from a *scientia sexualis* (science of sexuality) perspective, thus missing further maturational states that a system operating from *ars erotica* (erotic art), such as Kundalini Yoga, embraces and embodies. This position suggests that modern psychology does not fully comprehend the depth of yogic phenomena. Furthermore, it is said that *asanas* exported to US are disconnected from their tantric traditions and shaped by European practices, such as ballet and gymnastics (Sovatsky, 1998). Norman Sjoman (1999) stated that modern yoga "appears to be distinct from the philosophical or textual tradition, and does not appear to have any basis as a tradition as there is no textual support for the *asanas* taught and no lineage of teachers" (p. 35). For those who may wish to further explore this matter, please see Singleton, M. (2010), Sjoman, N.E. (1999), and particularly Sovatsky, S. (1998).

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The Authors

Mariana Caplan, Ph.D., MFT, is a psychotherapist and the author of six books in the fields of psychology and spirituality, including *Eyes Wide Open: Cultivating Discernment on the Spiritual Path* (Sounds True, 2010), *Halfway Up the Mountain: the Error of Premature Claims to Enlightenment* (Hohm Press, 1999), and *The Guru Question: The Perils and Rewards of Choosing a Spiritual Teacher* (Sounds True, 2011). As a psychotherapist, she specializes in using somatic approaches to therapy to support spiritual practitioners and teachers of all traditions and religions to heal trauma and thrive, as well as working with complex spiritual traumas within spiritual communities. She has been an adjunct professor at The California Institute of Integral Studies in San Francisco since 2001, as well as teaching extensively at Naropa University, Sophia University and John F. Kennedy University.

Adriana Portillo, M.A., is an avid meditator with over 15 years of practice and has a background in management. She earned her degree in Integral Counseling Psychology from the California Institute of Integral Studies and currently combines her work as a psychotherapist both with children, through a school based program and with adults through private practice in Berkeley, California. She is interested in finding creative ways to address trauma at all levels of existence.

Lysie Seely, M.A., is a doctoral candidate in the East West Psychology Program at the California Institute of Integral Studies. She works as a marriage and family therapist intern at a private practice and for an agency working with children on the autism spectrum. Her passion is researching the relationship between body-based practices/therapies and healing from the trauma of sexual abuse.