RAIS RESEARCH ASSOCIATION for INTERDISCIPLINARY STUDIES
JUNE 2019

DOI: 10.5281/zenodo.3267706

Meditative Cognitive Therapies: A Literature Review

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ABSTRACT: Yoga has existed for centuries in the East, beginning in India, as a religious practice of meditation and mindfulness. In the West, however, yoga is more often a popular exercise-based practice with little to no emphasis on its religious or spiritual foundations. Curiously, the mindfulness aspect of yoga has become increasingly popular within the United States, particularly as a method for therapeutic treatments, such as Mindfulness-Based Cognitive Therapies (MBCT), Dialectical Behavior Therapy (DBT), and Acceptance and Commitment Therapy (ACT). These therapies have been useful for patients in the early stages of psychiatric disorders (e.g. Generalized Anxiety Disorder, Major Depressive Disorder, Type 1 Bipolar Disorder), as some patients can supplement their medication in exchange for these forms of therapy. This paper investigates the origins of yoga from a Hindu perspective, explaining how recent trends in the U.S. have extracted elements of the traditional practice while adding other elements with a Western influence. This paper also investigates current symptoms and treatments for psychiatric disorders and explores how mindfulness can play an important role in future forms of therapy.

KEYWORDS: yoga, mindfulness, brain, cognition, therapy, anxiety, depression, bipolar, religion, exercise

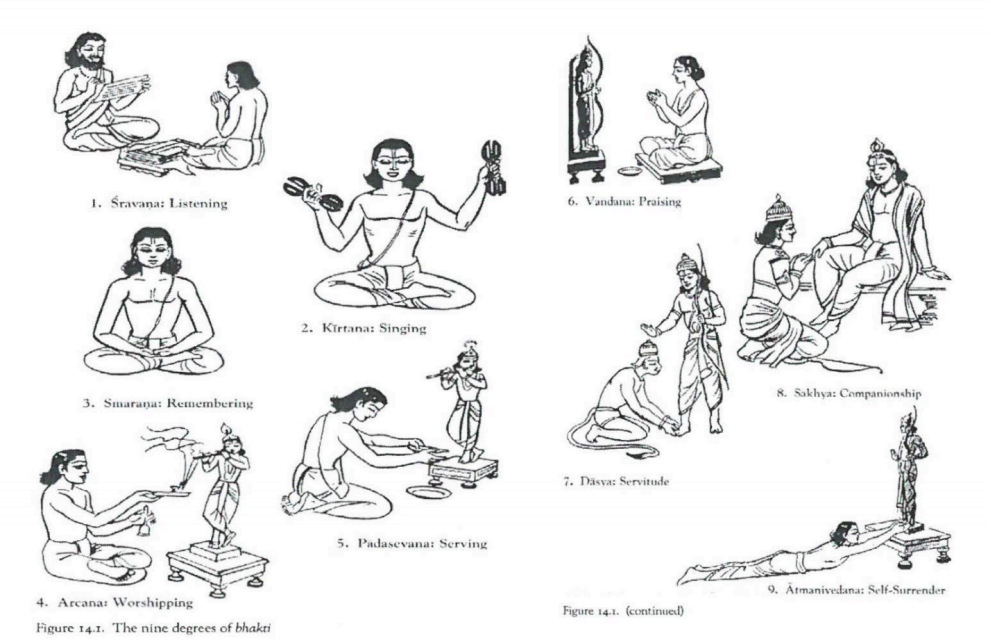
Section 1. Traditional Branches of Yoga

According to Klostermaier (2007), yoga was developed as a pathway between the physical and spiritual worlds. Those who practiced yoga did so with the intent of achieving a higher state of mind and a closer relationship to the Gods. There are four main branches of yoga, which are divided into the purposes of their use. *Raja* (translating from Sanskrit to English: king) yoga, is defined as the royal path to meditation (Klostermaier, 2007). The purpose of *Raja* yoga is to quiet the mind and to concentrate in order to attain a higher state of being. Traditional ways of practicing Raja yoga are to focus on a mantra (Sanskrit: मन्त्र), physical object, or a concept. Those who practice *Raja* yoga hope to possess a mental connection between their physical world and the spiritual. Within this connection, they hope to cleanse their physical bodies of sin, sickness, and suffering, while bringing in peace, happiness, blessings, and health into their bodies.

Klostermaier further describes the second branch of yoga, *Jnana*, which is the yoga of knowledge. *Jnana* yoga is more of a lifestyle in the sense that this form of yoga is the search for truth and the ability to discern reality from illusion. This knowledge is not to be confused with the intellectual type. It is important to note that the religious practice of Jnana yoga is not only a physical practice but a way of life, in the hopes of becoming a more wholesome, spiritual being (Klostermaier, 2007). Belief systems within *Jnana* yoga consist of the idea that everything is interconnected and shares one soul, including the Gods. *Jnana* yoga practices within meditation consist of possessing an awareness of what is perceived as permanent and temporary.

Bhakti yoga, the third branch, is about devotion (Bhakti directly translates into devotion). This practice consists of devotees releasing their emotions and undivided attention into a divine being. Figure 1.1 show the nine degrees of bhakti and depicts how devotees of the Hindu religion should act toward Gods as part of a daily practice (Klostermaier 2007). Providing companionship, listening, singing, self-surrender, and servitude are some examples of this daily practice, and these offerings are intended to reciprocate blessings back to worshippers.

Figure 1.1. *The Nine Steps of Bhakti Yoga Practice*



Source: Klostermaier 2007

The nine degrees of *bhakti* are very meditative in themselves, as daily offerings are to be made to divine beings. These offerings must be washed daily, fed, praised, thought of, sung to, all during one's daily practice. Bhakti is the idea of giving oneself to the divine being and sacrificing in order to attain fulfillment (Klostermaier 2007). *Bhakti* must also be done with joy, as it must come from the heart and the devotee must enjoy their practice in order for the praise to be deemed as genuine. *Bhakti* practiced under a negative mindset is deemed as less meaningful than engaging in *bhakti* out of joy.

Though the practice of *bhakti* yoga is generally seen as surrendering to a divine being, *bhakti* also teaches others to surrender to other people around them and to respect and praise them. This is due to the belief that all living things are interconnected, and deserve praise, respect, and never-ending love from each other. Those who practice bhakti may also experience *Narada*, which is the pain one feels when they are separated from someone they love (Klostermaier 2007). The love a devotee experiences with a divine being is supposed to be one towards a mother or father, and they are supposed to care for this divine being as they would for someone for whom they have intense amounts of affection. Bhakti is deeply respected and celebrated in Hindu religion, as the initial devotion is supposed to progress into a constant state of joy to the devotee!

The fourth branch of yoga is Karma yoga, which pertains to the practice of giving to other people and divine beings, with no expectation of receiving in return. This also connects to the belief, which is common across many yoga practices, that all beings are interconnected and share energies. According to karma yoga, when one offers their love and support to another being, they are also doing so to themselves (Klostermaier 2007). This is one of the many reasons why Hinduism in its ideology can be defined as an ethno science. Hindu cultures teach their devotees how to live within the world, and how to think about specific entities (i.e. plants, food, animals, love, fulfillment). These views within the religion greatly shape the traditional practice of yoga and aid in creating a society that is based upon very similar values. This is important when thinking about how Eastern traditions view yoga as a native science, a way of life, and a path to good health.

The Introduction of Practices of Yoga to the West

There are clear differences between yoga in its traditional practice and the way yoga is practiced in much of the Western world. With that said, it is important to note that this paper refers to the "Western world" by focusing on the U.S. The practice of yoga in the U.S., perhaps in particular, is deemed as something that is less of a lifestyle, and more of a workout. Elizabeth De Michelis, the author of *A History of Modern Yoga* (2004), refers to this mode of practice as "modern yoga". When asking the question of when "modern yoga" began in the West, De Michelis suggests that 1849 is an important year. This is when the influential writer Henry David Thoreau mentions yoga in a letter to a friend, saying, "I would fain practice the yoga faithfully. To some extent, and at rare intervals, even I am a yogi". This shows an acceptance (in whatever form that may be) of yoga, *without* the widespread modification of traditional practices.

De Michelis describes how important religious figures, such as Swami Vivekananda, a spokesperson for Vedanta and author of texts such as *Raja Yoga* (1896), *Karma Yoga* (1921), *Jnana Yoga* (1899), and many other pivotal texts to the understanding of yoga, played a major role in the introduction of yoga into Western societies. In 1893, Swami Vivekananda introduced the practice to the Chicago Parliament of Religions, as well as some other institutions of Hindu thought that he created. With the intent of spreading the idea of yoga to places near and far, the response he received from people was all he needed in order to create a cloud of popularity around his ideas.

At the same time, Swami Vivekananda knew that the traditions of yoga would have to be reshaped in order to be approachable to a general Western audience, and with his creation of *Raja Yoga,* he did just that. While continuing research on the origins of yoga, and reflecting upon traditional, religious texts, Swami Vivekananda found a way to translate the knowledge he had to his Western audiences, thus catering to the mindset of a Western audience. Vivekananda sought those in both the East and West for their opinions and guidance and went to his successors in hopes of writing a book that would make everyone involved satisfied.

A. The Instruction of Yoga in the West

With the intermingling of traditional and modern views, and an acceptance of which aspects of yoga felt most comfortable to Westerners, De Michelis reviews how a fusion of different forms of yoga entered the U.S. As a result, she observes, this has created different teachings of yoga, different followings of yoga, and different lineations of yoga.

It appears that the most popular type of yoga that has emerged into Western society is *asana*, as popular yoga classes consist of different postures/ways to balance the body. Though this idea can be argued, the second most popular limb that has emerged into the West is pranayama, as the structure of a standard yoga class will end in a brief meditation. It is hard to decipher why it is that these two limbs of yoga have become most popular, but my theory for the asana limb is that yoga was transformed into a form of exercise, which is more accepted when envisioning a Westernized practice (based on societal norms). Pranayama is the backbone of yoga in Eastern societies, so it is not surprising that this limb would cross over into the West. It is also rather interesting to analyze how yoga has changed so greatly. One Western form of yoga, Modem Postural Yoga is particularly popular (DeMichelis 2004). Modem Postural Yoga focuses on asanas, the poses that can strengthen different parts of the body, or can improve flexibility (touching upon gymnastics). An *asana* is a comfortable, seated position. There are many poses, however, that are called asanas, such as savasana, or adho mukha svanasana. These do not fit under the definition of asana, but in modern yoga are considered to be such.

In addition to the transformation of the definition of asana, the names of modern yogic asanas are "translated" into English, so that it is easier for practitioners to identify the poses. Savasana popularly translates to "corpse pose", and adho mukha svanasana translates to the well-known, "downward facing dog." Some instructors make the choice to introduce their students to the traditional Sanskrit terms, while others decide to teach solely based upon the English terminologies. Some instructors also teach a mixture of the languages, which connects back to the scenarios described previously. Modern yoga has successfully taken off in Western societies, particularly as it has been adopted as a form of exercise and became a major cultural trend. *Yoga Journal* is a good example of

this phenomenon, as the traditional practice of yoga has been completely transformed into something else to meet the Western gaze.

Section 2. Common Psychological Disorders and Biological Treatments

Mindfulness therapy is a relatively new approach towards patients suffering from generalized anxiety (Mclndoo, File, Preddy, Clark, & Hopko 2016), major depressive disorder, and type I bipolar disorder (Deckersbach, Hölzel, Eisner, Lazar, & Nierenberg 2014). For this reason, I have decided to discuss these three neurological disorders. Though the neurological bases of these contemporary psychological disorders are somewhat understood, treatments that are available contain many side effects and do not quite address the symptoms patients experience in their daily lives.

B. Generalized Anxiety Disorder

According to the *DSM 5* (American Psychiatric Association, 2013), those with generalized anxiety disorder (GAD) display excessive anxiety and worry, difficulty concentrating, irritability, muscle tension, and disturbances in sleep patterns. This disorder affects about 0.9% of adolescents and 2.9% of adults in the United States. Females are twice as likely to be affected by the disorder than males, and some with this disorder can experience somatic symptoms, such as sweating, nausea, and diarrhea. Not only does anxiety make for challenging social situations, but it can lead to increased self-doubt. Between a lack of sleep, constant feelings of doubt/fear, and tension throughout the body, as the DSM describes, those diagnosed with GAD live a life of constant discomfort (American Psychiatric Association, 2013). There are many other disorders that fall under the category of anxiety in the DSM, such as social anxiety disorder, agoraphobia, separation anxiety disorder, etc.

The current forms of medical treatment for GAD include selective serotonin reuptake inhibitors (SSRIs) such as sertraline, escitalopram, citalopram, and fluoxetine (Walker 2013). Potential side effects for these SSRIs include anxiety, restlessness, thoughts of self-harm, muscle twitching, seizures, hallucinations, and *many* other intense after effects. Another form of treatment for generalized anxiety disorder is anxiolytic drugs, which increase the production of GABA (Gamma-aminobutyric acid), thus reducing increased excitatory brain activity (Pastore et al. 2018). An example of a popular anxiolytic drug is Xanax (alprazolam), which is intended to produce the effect of relaxation via the slowing down of neurotransmitter flow. Though some of these medications can be helpful to those suffering from anxiety, the efficacy of these drugs is questionable, given the number of side effects they can also result in for patients. An example of this lies within what is referred to as substance/medication-induced anxiety disorder, which is a disorder that can be developed through the usage of sedatives, and hypnotic or anxiolytic drugs (Markota & Morgan 2017). The fact that drugs meant to treat anxiety can *develop* anxiety disorders reveals our need for further research in medicinal approaches to neurological disorders.

C. Major Depressive Disorder

Affecting approximately 7% of individuals in the United States, major depressive disorder (MDD) interferes with the daily processes of life for all, making it challenging to carry out tasks as simple as getting out of bed (American Psychiatric Association, 2013). Individuals between the ages of 18-29 years old make up three times more of this diagnosed population than those 60 years or older. According to the DSM, the diagnostic criteria are as follows: depressed mood for most of the day, feelings of emptiness or sadness, lack of pleasure in almost all to all activities, a change in body weight greater than 5%, insomnia/hypersomnia, fatigue, loss of energy, and other symptoms that are representative of a major depressive episode. Individuals with MDD experience daily feelings of worthlessness or excessive guilt, and also psychomotor agitation (e.g. inability to sit still, pulling of the skin, pacing). Suicidal thoughts are also very common but can vary significantly in the type of thoughts, i.e. not wishing to wake up this morning to feeling happier if dead.

The current treatments in terms of medicine that are available for those with MDD tend to overlap with anxiety medications; SSRIs being an example of this. As previously mentioned, sertraline is an SSRI that is used for the treatment of obsessive-compulsive disorder, post-traumatic

stress disorder, panic disorder, social anxiety disorder, as well as major depressive disorder (Walker, 2013). A popular brand of sertraline is Zoloft, which increases the production of serotonin in the body as an attempt to alleviate feelings of depression. Side effects of this drug are anxiety, restlessness, muscle spasms, eye pain, thoughts of hurting oneself and others, etc. Side effects that are deemed as "less serious" are sexual problems, weight loss, mild diarrhea, and vomiting.

Another form of treatment for MDD that is also used for generalized anxiety disorder is escitalopram (Zhong, Haddjeri, & Sánchez 2012). A popular brand within this type of SSRI is Lexapro, with side effects such as fever, muscle spasms, fast/uneven heartbeat, seizures, thoughts of hurting oneself and others, confusion, anxiety, and many others. For a person diagnosed with MDD, they are experiencing burdening symptoms every day of their life. Moreover with current treatments that are available, even more negative symptoms may be added to the patient's concerns, while only moderately alleviating feelings of restlessness and inadequacy.

D. Bipolar Disorder (Type I)

From a 12-month prevalence estimate in the continental United States, 0.6% of individuals have bipolar I disorder (BD-I) (American Psychiatric Association 2013). With respect to symptoms and side effects, the diagnostic criteria for type I is divided into three sections: manic episode, hypomanic episode, and major depressive episode. Potential symptoms for manic episodes include inflated self-esteem or grandiosity, distractibility, decreased need for sleep, and being more talkative than usual or having the pressure to keep talking. For hypomanic episodes, one diagnostic criterion is "a distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased activity or energy, lasting at least 4 consecutive days and present most of the day, nearly every day" (American Psychiatric Association 2013). The difference between manic and hypomanic symptoms is that for manic, the disturbances in mood are severe enough to cause marked impairments in social functioning, while for hypomanic this is not the case (American Psychiatric Association 2013). Within major depressive disorder, the same criteria apply as explained in the previous subsection.

Current medicinal treatments available for BD-I are SSRIs, antipsychotics, and anticonvulsants. It is particularly interesting that a medication intended for those who experience epileptic episodes (anticonvulsants) would also be administered to those with bipolar disorder, as the symptoms are not the same. This is reflective of the lack of targeted care the pharmaceutical industry possesses for understanding the functions of neurotransmitters, and neurological disorders for that matter.

An example of an anticonvulsant is carbamazepine. Carbamazepine is used to treat seizures, nerve pain, and bipolar disorder and is a sodium ion blocker that prevents the sustained, unnatural firing of action potentials, which is one of the understood sources of epileptic episodes (Ambrosio et al., 2002). Side effects of this drug include blurred vision, chest pains, memory problems, muscle spasms, fever, fainting, etc. Given the complexity of bipolar I disorder, as there are often other neurological disorders connected to it (major depressive disorder, mania, and hypomania), finding medications for treating these symptoms is even harder than treatment for a single disorder. Drugs are administered to patients for treatment, but the mechanism of action for all is still misunderstood.

Section 3. Mindfulness-Based Treatments

E. Mindfulness-Based Cognitive Therapy: MBCT

Combining components of traditional yogic practices (as described above), Mindfulness-Based Cognitive Therapy (MBCT) consists of 8 consecutive weekly sessions (Segal, Williams, & Teasdale 2002) with different themes. MBCT can be described as a multi-faceted approach to strengthening a duality in thought processes within the "doing mode" which can be described as understanding how one may tend to react/feel in a situation versus how they should, in a healthy manner feel/react to that same situation at play (Sipe & Eisendrath 2012). The first session consists of the "Raisin Exercise" (Segal, Williams, & Teasdale 2002) which asks the patient to hold a raisin in their hands, focus on the feeling of it in great detail, and to also take a bite out of the raisin and slowly chew it. This allows the patient to strengthen their awareness within the mode of processing that may not usually focus on the intricate details, a mode of thinking

described as "autopilot mode". An example of "autopilot mode" would be driving to a frequently visited location, as one's mind may wander during that drive without focusing on the process of driving the vehicle.

Exercises such as the raisin exercise present are a form of neural training, which allows patients to differentiate how they want to react in a situation versus how they should react. The following 7 sessions focus on similar exercises and prepare the patient to engage in more traditional modes of mindfulness, such as focusing on breath (embodying pranayama yoga) and interacting with longer versions of seated meditation. MBCT can especially help those with MDD and GAD as patients can tend to experience negative feedback loops in their thought processes (ex: "I'm not worthy enough", "Everyone hates me", "I will be running through this experience in my mind for a while") and the exercises can help patients to break out of these loops while introducing different ways of processing information.

F. Acceptance and Commitment Therapy (ACT)

Acceptance and Commitment Therapy (ACT) is separated into six processes: acceptance, defusion, and contact with the present moment, self as context, values and committed action (Fletcher & Hayes, 2005). One pinnacle of ACT is the fact that patients are urged to embrace events as they arise without the inclination of altering them (acceptance). De-fusion is an attempt to "change the functions of private experiences, even when they have the same form, frequency or situational sensitivity" (Fletcher & Hayes, 2005). Defusion tactics include repeating a word many times in order to change the relationship of the word to the patient. Interestingly enough, this exercise relates to Buddhist chanting or the chanting of mantras within Hinduism. The next process, contact with the present moment allows the patient to interact with their internal and external worlds. This will help the patient to reflect on their experience as it is, almost as an outside observer looking at themselves, which prepares the patient for the next process entitled self as context (Fletcher & Hayes 2005).

Self as context relates to Buddhist ideology as it allows the patient to think of themselves as a transcending concept. This process is utilized in an effort to separate the self from their thoughts and feelings (ex: I hate myself) by imagining themselves as an entity. The second to last process, values, allows the patient to evaluate what is important to them/what they prioritize in life in order to shift their energy towards those focal points, and committed action discusses goal-oriented strategies for the short and long-term in order to maintain a perspective of working on oneself. ACT can be used for workplace trainings/mediations, patients with MDD, GAD, Obsessive Compulsive Disorder, chronic pain and addiction.

G. Dialectical Behavior Therapy (DBT)

Dialectical Behavior Therapy (DBT), initially geared towards patients with borderline personality disorder (BPD) is an evidence-based treatment that is comprised of five functions of treatment (Chapman 2006). These five functions of treatment also include weekly therapy sessions (1-on-1), weekly group meetings (4-10 patients), and therapist consultation team meetings. The first two functions are entitled: enhancing capabilities and generalizing capabilities. These functions serve to strengthen emotional regulation, including tolerating distress and surviving crises which can then be applied to situations that relate to real-life events. The third function entitled improving motivation and reducing dysfunctional behaviors aims to correct/change behaviors within patients that can negatively affect one's quality of life, taking place during individual therapy sessions (Chapman 2006).

The fourth function entitled enhancing and maintaining therapist capabilities and motivation focuses on the therapist's well-being by creating therapist consultation team meetings. These meetings include DBT-practicing therapists that get together to discuss strategies for reducing the likelihood of "therapist burnout" (Chapman 2006) by providing support and words of encouragement. This function differs from the other available mindfulness-based forms of treatment as there is a component that solely focuses on the therapist and their state of mind. Emphasizing this form of self-care for the therapist not only benefits themselves, but also exemplifies a healthy approach that the patient can look up to. The final function of treatment, structuring the environment, consists of the therapist and

patient working on ways to re-evaluate unhealthy relationships/social circles that may promote relapse (ex: patients suffering from addiction).

DBT incorporates a variety of mindfulness-based techniques as acceptance of the patient and an emphasis on emotional regulation are included within the practice. DBT also focuses on reflecting on current reactions towards situations and learning how to combat those initial impulses with new coping strategies.

Conclusion

The concoction of traditional yogic practices in the West had led to a positive increase in popularity. This popularity has allowed people to reflect on their personal experiences with the practice and to consider the integration of mindfulness within the field of psychology. Mindfulness-based therapies such as MBCT, DBT and ACT show promising effects for those with certain psychiatric disorders, for example MDD, GAD and BP-I (Farb et al., 2018; Sado et al., 2018; Deckersbach et al. 2014). Though these therapies already exist and current studies suggest the effects they have on patients from a qualitative perspective (Fard et al., 2018; Segal et al. 2019), more research is required within the field of neuroscience to assess how the physiology of the brain may be affected from mindfulness-based practices via quantitative measures (Gard et al. 2015; Lee et al. 2015; Braboszcz et al. 2015).

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