Ayurveda's Perspective on Healing Mental Illness

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The United States is within the midst of a mental health crisis. A report conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA), a division of the United States Department of Health and Human Services (HSS), found that 18.1% or 1 out of 5 adults in the United States was affected by any mental illness (AMI) with the last year. Approximately 1 in 25, or 4.3%, of adults in the U.S. experienced severe mental illness, defined by the report as "any mental, behavioral, or emotional disorder that substantially interfered with or limited one or more major life activities." Additionally, the survey found 11.4% of adolescents aged 12 - 17 had experienced a major depressive episode (MDE) within the last year.

The Mayo Clinic describes mental illness as, "A wide range of mental health conditions that affect your mood, thinking, and behavior." It also provides an overview of common treatment protocols for mental illness that may include any or all of the following: medications, such as antidepressants, anti-anxiety, mood-stabilizing and anti-psychotics, designed to manage chemical imbalances within the brain; psychotherapy, or talk therapy intended to increase coping and stress management skills; brain-stimulation treatments, such as electroconvulsive therapy (ECT), used in extreme cases where medication and psychotherapy have failed to yield results; hospital and residential treatment programs, for those patients requiring 24-hour care, who cannot properly care for themselves or are in danger of harming themselves or others; substance abuse treatment, to treat substance abuse issues which may co-exist with mental illness. Lastly, the Clinic recommends patients participate in their own care by working together with the health care provider to decide which of the above-mentioned treatments are preferred.

For more than 50 years, the treatment of mental illness has been focused on the use of pharmaceutical drugs such as Thorazine, Prozac, and Valium, or psychopharmacology.⁶ These medications are designed to correct imbalances in the neurotransmitters within the brain and alleviate the life-altering symptoms thought to be caused by these imbalances. With these new miracle cures one might expect to see fewer and fewer patients needing these treatments, but just the opposite is true. The use of antidepressant medications alone has increased more than 400% since 1990.⁷ In his book, *Anatomy of an Epidemic*, Robert Whitaker notes the "astonishing increase in disability numbers [due to mental illness] in the

past 50 years," and explores the correlation between the increase in the use of psychiatric drugs and increase in mental illness diagnosis.⁸ The definitive physiological cause of mental illness has yet to be uncovered, leaving many patients in a gray area wandering from drug to drug looking for the perfect cocktail to manage their symptoms. While little focus is placed on how they might ever get off the drugs. While this introduction of psychopharmacology has revolutionized the field of psychiatry, bringing it out of the medical dark ages, there is still a need for whole person care that offers a real shot at healing without permanent psychopharmacological intervention. Immerging research is opening up the chemical imbalance paradigm of treatment. Recent studies have linked depression to dysbiosis, or imbalanced gut microbiota⁹ and to generalized inflammation throughout the body¹⁰. New approaches to the treatment of mental illness are opening the doors to a more holistic way of healing the mind.

Ayurveda, the ancient medical system from India, is one such holistic therapy offering an alternative approach to healing mental illness. Ayurveda presents a multifaceted approach to achieving *swasta*, or perfect health. First and foremost it regards each patient as having a unique constitution consisting of body, mind, and spirit. In practice, there is no single prescription for a particular disorder. Rather three things must be understood from the perspective of Ayurveda:

The Nature of the Individual

The Nature of the Disease

The Nature of the Medicine

Only when these three factors have been addressed is healing possible. The Ayurvedic practitioner begins with the least invasive treatment, such a modifications to diet and lifestyle, and progresses to more invasive treatments such as strong herbs, body therapies, and surgeries as a condition requires. Ayurveda's treatments can be mild in nature, involving only changes in diet and lifestyle. These therapies can easily integrate into western treatment plans to augment the healing effect.

Ayurvedic treatment, or *chikitsa*, begins by identifying and removing the root cause of an illness. The symptom is then treated with qualities that are antagonistic to the imbalance, thus provoking the mind-body and spirit to reestablish equilibrium. A period of cleansing to remove accumulated toxins may be necessary, through *shamana* or *shodana chikitsa*. Followed by a period of rejuvenation, or *rasayana*. Once the physical origins, such

as improper diet and lifestyle, have been resolved treatment can begin to work on the subtler levels of the mind and finally the spirit.

The Mind in Ayurveda

The Ayurvedic model of the mind is derived from *Sankhya* philosophy, one of the six major philosophical traditions from ancient India, or *shad dharshana*. Dr. David Frawley describes the four layers of the mind according to *Sankhya* as:

- 1. Chitta Conditioned consciousness
- 2. Buddhi –Intelligent judgment
- 3. Manas Mind, capacity for imagination
- 4. Ahamkara –Ego¹¹

Ayurveda recognizes three physical humors, or *doshas* (*vata*, *pitta* and *kapha*) as well as three mental humors, or *gunas* (*rajas*, *sattva* and *tamas*). The sage Charaka describes the *gunas* as,

Tamas: inertia, dullness, darkness

Rajas: momentum, desire, action

Sattva: peace, clear, balanced, steady¹²

The first two humors are considered by Charaka to be imbalances, while the later is the natural state of the undisturbed mind. The mind is also considered to be a channel, or *srotas*, through which consciousness flows. Its origin lies within the physical heart, flows throughout the entire body and ends at the five sense organs (eyes, ears, nose, tongue and skin).¹³ Each person has a unique personality, or *manasprakruti*, that Ayurveda describes through the language of the five elements and the three *gunas*.¹⁴ Classically, mental imbalances, or *manasvikruti*, are caused by the three bodily humors, *vata*, *pitta* and *kapha*, and by the mental humors *rajas* or *tamas*.¹⁵

The Origins of Mental Illness

Dr. Marc Halpern describes the origination of all mental illness as a lack of clarity (*sattva*) within the mind.¹⁶ This reflects the primordial cause of disease within Ayurveda as a whole, that upon taking birth we forget our true nature as spirit.¹⁷ Classically, Ayurveda recognizes three causes of disease:

- 1. *Prajnaparadha* Intellectual crime
- 2. *Asatmendriyartha samyoga* Misuse of the senses

3. Parinama – Decay due to time and motion¹⁸

These causes illustrate the intimate relationship between body, mind, and spirit in Ayurveda. The first two causes are key to the origins of mental illness. Intellectual crime is making unhealthy choices, such as staying up too late or eating unhealthy comfort foods. In serious mental illness, harm against the self or others, such as cutting, anorexia nervosa or physical abuse would fall into this category. The second cause, misuse of the senses, is described by Charaka to be, "of three categories, insufficient use, over-use and wrong use. This will vitiate the doshas." The sense organs are intimately related to the mind. One of the most important issues today is the growing exposure to media, and the increasing access and use of touchscreen devices. At the very least these devices distract us from the natural environment; at worst excessive use of smartphones is associated with sleep disturbances, increased stress, and symptoms of depression. The yogic practice of *pratyahar*, or the withdrawal of the sense inwards, is designed to correct imbalances of this nature.

Mental imbalances also may be caused by physical imbalances stemming from the three pillars of health. Ayurveda recognizes the primary importance of diet, sleep, and management of sexual energy, or *brahamacharya*.²¹ When the physical humors, or *doshas*, go out of balance they can throw the mind out of balance. Vata mental imbalances will exhibit more fear, worry, and anxiety. Pitta out of balance will exhibit anger, rage, and violence. Kapha mental imbalances will manifest as lethargy and apathy. Below is a chart of adjectives taken from Halpern's, *Principles of Ayurvedic Medicine*, describing the balanced and imbalanced states of the *doshas* and *gunas*:²²

Table 52	Vata	Pitta	Kapha
Sattva (in balance)	Enthusiastic, inspired, artistic, healer	Clear perception, spiritual teacher	Unconditional love, faithful, nurturing, compassionate, patient
Rajas (hyper active)	Fear, worry, nervousness, anxiety, insecurity, ungrounded, indecisive, hyperactive	Anger, resentment, jealousy, envy, judgment, critical, aggressive, dominating	Desirous, materialistic, attached, controlling, sentimental, stubborn, conditionally loving
Tamas (hypo active)	Self – destructive, addictive, secretive, paranoid, mentally disturbed	Violent, vindictive, hateful	Lethargic, apathetic, dull, depressed, manipulative, thievish

Classical Classification of Mental Illness

Unlike the modern *Diagnostic and Statistical Manual of Mental Disorders*, that recognizes hundreds of diagnosable psychological disorders, the *Charaka Samhita* recognizes one category of mental illness, insanity or *Unmada*. According to the classical text *unmada* is the, "Excessive wondering of the intellect, mind and memory "23 that is brought on by the consumption of impure food, blasphemy and mental shock.²⁴ The root of *unmada* begins in the *hrdaya*, the emotional heart and seat of the intellect, where the aggravated doshas travel into the mental channels, subsequently causing an imbalance within the mind.²⁵ Classically, there are five sub-divisions of *Unmada: Vataja* – due to vitiation by vata dosha, *Pittaja* – vitiated by pitta dosha, *Kaphaja* – vitiated by kapha dosha, *sannipatiaka* – vitiated by all three doshas, and one due to exogenous causes such as poisoning or possession by a demon.²⁶

The classical treatment for *unmada* is *pancha karma*.²⁷ *Pancha karma* is Ayurveda's go to treatment for clearing excess *dosha* and *ama* (toxins) from the body and mind. The process takes place in three phases. The first is a period of preparation or *purvakarma*, where through a process of internal and external oleation the excess dosha and ama are liquefied and returned to the digestive system. The next phase consists of five actions to expel the accumulated toxins from the body; oil and herbal enemas which reduce vata dosha alleviating fear, anxiety, worry and insomnia; purgation which expels pitta dosha alleviating anger, resentment and irritability; and emesis which clears excess kapha alleviating depression, grief and attachment.²⁸ The final phase or *praschat karma* is a period of recovery where the digestive fire, *agni*, is closely monitored and kept strong. This is followed by a period of rejuvenation, or *rasayana*, where the fluid tissues of the body are rebuilt. Charaka describes the effect of *pancha karma* treatment as, "When the heart, senses, head and bowels are evacuated with the cleansing therapies, the patient attains mental peace, memory and consciousness." Additionally, a form of shock therapy, akin to modern day aversion therapy, may pacify the deranged mind.³⁰

Cultivating Sattva: Sattavajaya

Ayurveda Psychology endeavors to change the energetics of the mind.³¹ To make the dull mind (*tamas*) sharp (*rajas*) and the sharp mind peaceful (*sattva*). The *Charaka Samhita* states that the mind should be treated, "With knowledge, specific knowledge, restraint, memory and concentration,"³² and, "The person of a strong mind who does not indulge in

meat or wine; who eats only healthy food, remains clean both physically and mentally, does not become affected by *unmada*."³³ The process of restoring the health of the mind is to cultivate that quality of clarity in the mind, that Ayurveda calls *Sattva*. Classically this form of therapy is one of the three main modalities of treatment³⁴ and is the primary method for treating mental illness.³⁵ In his book, *Ayurveda and the Mind*, Frawley describes the three stages of mental healing as follows:

- 1. Breaking up Tamas/Developing Rajas Moving from mental inertia to self-motivated action.
- 2. Calming Rajas/Developing Sattva Moving from self-motivated action to selfless service.
- 3. Perfecting Sattva moving from selfless service to meditation. ³⁶ It is necessary to determine the starting by identifying which *guna* is dominant within the mind. If the mind is *tamasic*, then *rajasic*, or active, therapies are necessary to break up the stagnation before moving into *sattvic*, or calming, therapies. In *Principles of Ayurvedic Medicine*, Halpern details the steps to cultivate *sattva:*³⁷
 - 1. Spend more time in nature In order to allow the peaceful and harmonious impressions to flow into conscious through all five senses.
 - 2. Meditation To bring stillness to the mind, and deeper self-awareness.
 - 3. Yoga all eight limbs of yoga cultivate *sattva* by outlining a code of internal and external conduct.
 - 4. Avoid the influence of the media TV is rajasic and disturbs the mind.
 - 5. Eat a *sattvic* diet Consisting of pure, organic, fresh vegetarian food.

According to Dr. Marc Halpern, the most important factor in treating mental illness is the maintenance of regular daily routines or *dinacharya*.³⁸ Creating healthy and regular routines helps to build resilience within mind, or *ojas*, and stabilizes the mobile effects of *vata dosha* within the mind. A healthy lifestyle will go a long way towards cultivating a clear and peaceful mind. The emerging field of circadian medicine studies how our bodies and minds revolve around a 24-hour cycle. Studies have linked misaligned circadian rhythms with depression, bipolar, and schizophrenia.³⁹

Diet and Nutrition

More than anything else we do, our diet has a primary effect on the body and mind. Food taken into the body will be broken down into its basic nutrients (protein, fat, vitamins

and minerals) and subtle qualities (*rajas*, *tamas* and *sattva*). Through the process of digestion, absorption and cellular metabolism we will literally become what we eat. Understandably, Ayurvedic treatment of mental illness emphasizes the importance of eating not only a nutritionally healthy diet but also one that is appropriate for the constitution of the individual. According to Dr. Frawley, *rajasic* and *tamasic* foods disturb or dull the mind and produce and unrest and disease.⁴⁰ While a *sattvic* diet "aids in the treatment of mental disorders because it helps restore harmony and balance to the mind."⁴¹ The *sattvic* diet is a plant based whole food vegetarian diet. *Sattvic* food is fresh, high quality, nourishing, and organic such as whole grains and vegetables. Canned, bagged, boxed, and processed foods lack life-force energy (*prana*) and are therefore tamasic. Meat, fish and any foods that may be obtained by harming animals should also be avoided.⁴²

Even Western scientists are getting on board with the importance of nutrition in treating mental illness. A 2014 review of the emerging field of nutritional psychiatry reported, "Research suggests that nutrition not only matters directly with regard to the conditions treated within various medical disciplines but also has the potential to influence mental outlook and mental disorders. ... We cannot ignore this, particularly as it is becoming increasingly clear that diminished mental outlook and elevated perceptions of stress are drivers of unhealthy eating habits."43

Therapies for the Senses

Just as food nourishes the body and mind, impressions taken in through the five senses also nourish the body and mind. Ayurveda regards each sensory organ as an entire universe of perception. Our modern world is lacking this reverent perception. We are exposed to chemical scents, fluorescent lights, and constant background music. Just as food must be digested before it can fuel the body, so too must sensory information be digested by the nervous system before it can be interpreted by the mind. Therefore everything that is taken into the body should be nourishing in nature. The senses can be used as a form of medicine when sensory impressions are consciously chosen or as poison when sensory impressions are driven by desires and addictions. Below is a chart of specific dosha reducing impressions adapted from Frawley's *Ayurveda and the Mind:*⁴⁴

	Vata	Pitta	Kapha
Sound	Calming music:	Cooling and soft	Stimulating music,
	classical, chanting or	music: Flute, Water	strong energizing
	peaceful silence	sounds	sounds
Touch	Gentle warming touch or massage using warm oils like sesame or almond	Cooling, soft and moderate touch with cooling oils like coconut or sunflower	Strong, deep body massage with dry powders and stimulating oils like mustard
Sight	Bright, calming colors like gold, orange, blue, green and white	Cool colors like white, blue and green	Bright, stimulating colors like yellow, orange, gold and red
Taste	Rich and nourishing food abounding in sweet, salty and sour tastes, with moderate use of spices	Food that is neither too heavy nor too light, abounding in sweet, bitter and astringent tastes, with cooling spices like coriander, turmeric and fennel	Light diet emphasizing pungent, bitter and astringent tastes with liberal use of spices, occasional fasting
Smell	Sweet, warm, calming and clearing fragrances like jasmine, rose, sandalwood, eucalyptus	Cool and sweet fragrances like rose, sandalwood, vetivert, champak, gardenia and jasmine.	Light, warm, stimulating and penetrating fragrances like musk, cedar, myrrh, camphor and eucalyptus

Yoga

According to Frawley, "Yoga is defined as calming the disturbances of the *chitta*, which are called *chitta vritti*, and in this regard, classical yoga is a psychology. Defined as a means of alleviating, mental psychological and emotional suffering." ⁴⁵ Classical yoga, or *ashtanga yoga*, involves the practice of the eight limbs of yoga, described by Frawley as,

- 1. Yama Rules of Social Conduct
- 2. Niyama Rules of Person Behavior
- 3. Asana Physical Postures: Right Orientation of the Physical Body
- 4. Pranayama Breath Control: Right use of the Vital Force
- 5. Pratyahara Control of the Mind and Senses
- 6. Dharana Concentration: Control of Attention

- 7. Dhyana Meditation: Right Reflection
- 8. Samadhi Absorption: Right Union⁴⁶

He continues to discuss the origins of mental illness and how the practice of *ashtanga yoga* can help: "All psychological problems arise ultimately from a misapplication of the energy of consciousness. ... The practice of Yoga, or inner integration, reverses all psychological problems by merging the mind back into its immutable source of pure consciousness." ⁴⁷

Contemporary research into yoga as a therapy has primarily focused on asana, pranayama and dhyana. The American Psychological Association reported, "There is a growing body of research documenting yoga's psychological benefits."48 According to Dr. Sat Bir Khalsa, neuroscientist, professor of medicine at Harvard Medical School at Brigham and Women's Hospital in Boston, and a leading researcher in the field, "yoga targets unmanaged stress, a main component of chronic disorders such as anxiety, depression, obesity, diabetes and insomnia. It does this by reducing the stress response, which includes the activity of the sympathetic nervous system and the levels of the stress hormone cortisol. The practice enhances resilience and improves mind-body awareness, which can help people adjust their behaviors based on the feelings they're experiencing in their bodies." Additionally, a comprehensive Bibliometric Analysis of Published Research Studies on Yoga as a Therapeutic Intervention from 1967 to 2013 found, "A surge in publications on yoga to mitigate disease-related symptoms in clinical populations has occurred despite challenges facing the field of yoga research, which include standardization and limitations in funding, time, and resources. The population at large has observed a parallel surge in the use of yoga outside of clinical practice. The use of yoga as a complementary therapy in clinical practice may lead to health benefits beyond traditional treatment alone; however, to effect changes in health care policy, more high-quality, evidence-based research is needed."49

The use of mantra is another practice associated with yoga and meditation.

According to Frawley, "Mantras are specially energized sounds or word... [and] is the main and most direct ayurvedic tool for healing the mind." 50

Medhya Rasayana: Herbal Support

Many plant medicines offer promising results for healing the mind. *Medhya Rasayana* is the Ayurvedic category of herbs that have a specific action, or *prabhava*, on cognitive function, or nootropic action.⁵¹ Though no herbal remedy can substitute for the

benefits of a constitutionally appropriate diet and healthy lifestyle, additional support from these remedies may bolster efficacy of treatment.⁵²

One herb that stands out is the incredible adaptogen Ashwagandha, or *withania somnifera*. A 2012 study showed that after 60 days of treatment with Ashwagandha adults with a history of chronic stress showed a significant reduction in stress and serum cortisol levels versus the placebo group.⁵³ The Journal of Alternative and Complimentary Medicine conducted a systematic review of all research into the herb and of the five studies that met their criteria, all five found evidence that treatment with Ashwagandha resulted in improvements in anxiety and stress levels.⁵⁴ Most recently the herb was used in a randomized double blind placebo controlled trial as an adjunct to the standard treatment for obsessive-compulsive disorder and was found to reduce the effects of the illness with no adverse reactions.⁵⁵

Conclusion

Mental illness is a complex collection of disorders effecting millions of Americans and its prevalence may be reaching epidemic proportions if the numbers continue to grow. Traditional psychopharmacological therapies offer hope but with many side effects. Increasingly patients and doctors are looking for alternative modalities to broaden their approach to treatment. Ayurveda, the classical medical system from India, which is over 5000 years old, offers a full spectrum of alternative diagnostic models and therapies. Ayurveda's approach to psychology treats each patient as a unique individual. Practitioners build unique treatment plans for each patient incorporating the whole individual as body, mind and spirit. More research into Ayurveda's classical psychology is needed to illuminate the efficacy of its many therapies.

Endnotes

Ayurveda, 2006. CD.

⁴¹ Ibid ⁴² Ibid, p. 191

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<sup>1</sup> Center for Behavioral Health Statistics and Quality. (2015). Behavioral health trends in the United States: Results from the 2014
National Survey on Drug Use and Health (HHS Publication No. SMA 15-4927, NSDUH Series H-50). Retrieved
from http://www.samhsa.gov/data/
<sup>2</sup> Ibid
3 Ibid
<sup>4</sup> Mayo Clinic Staff, "Diseases and Conditions: Mental Illness: Definition," The Mayo Clinic, (Accessed September 14, 2016)
http://www.mayoclinic.org/diseases-conditions/mental-illness/basics/definition/con-20033813
<sup>5</sup> Mayo Clinic Staff, "Diseases and Conditions: Mental Illness: Treatment" The Mayo Clinic, (Accessed September 14, 2016)
Mayo Clinic Staff, Diseases and Conditions: . (Accessed September 14, 2016) http://www.mayoclinic.org/diseases-
conditions/mental-illness/basics/treatment/con-20033813
<sup>6</sup> Martin, Emily and Lorna A. Rhodes. "Resources on the History of Psychiatry," History of Medicine Division of the National
Library of Medicine, August, 2004. https://www.nlm.nih.gov/hmd/pdf/historypsychiatry.pdf
<sup>7</sup> Pratt LA, Brody DJ, Gu Q. "Antidepressant use in persons aged 12 and over: United States, 2005–2008," NCHS data brief, no
76. Hyattsville, MD: National Center for Health Statistics. 2011. http://www.cdc.gov/nchs/data/databriefs/db76.htm
<sup>8</sup> Whitaker, Robert. Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in
America, (New York: Broadway Books, 2010), p. 7
9 Evrensel, Alper, and Mehmet Emin Ceylan. "The Gut-Brain Axis: The Missing Link in Depression." Clin Psychopharmacol
Neurosci Clinical Psychopharmacology and Neuroscience 13, no. 3 (2015): 239-44. doi:10.9758/cpn.2015.13.3.239.
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4662178/
10 Andrew H. Miller, Vladimir Maletic, and Charles L. Raison, "Inflammation and Its Discontents: The Role of Cytokines in the
Pathophysiology of Major Depression," Biological Psychiatry 65, no. 9 (2009): , doi:10.1016/j.biopsych.2008.11.029.
http://www.ncbi.nlm.nih.gov/pubmed/19150053
11 David Frawley, "Ayurveda and the Mind: An Overview," American Institute of Vedic Studies, June, 2012,
https://vedanet.com/2012/06/13/ayurveda-and-the-mind-an-overview/
12 Charaka. Charaka Samhita Handbook on Ayuryeda. Ed. Gabriel Van Loon. Vol. 1. (Chaukhambha Orientalia, 2002), P. 38
13 Lad, Vasant, Textbook of Ayurveda: Fundamental Principles of Ayurveda: Volume One, (Albuquerque: The Ayurvedic Press,
2002) p. 193
<sup>14</sup> Dr. Marc Halpern, Principles of Ayurvedic Medicine: Tenth Edition (September, 2010), p.190
15 Ibid, p. 195
16 Ibid, p. 247.
17 Charaka, Volume 1, p. 38
<sup>18</sup> Halpern, p. 5-6
19 Charaka, Volume 1, p. 83
<sup>20</sup> Thomée, Sara, Annika Härenstam, and Mats Hagberg. "Mobile Phone Use and Stress, Sleep Disturbances, and Symptoms of
Depression among Young Adults - a Prospective Cohort Study." BMC Public Health 11 (2011): 66. PMC.
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3042390/
<sup>21</sup> Charaka, Vol. 1, p. 216
<sup>22</sup> Halpern, Table 53, p. 198
<sup>23</sup> Charaka. Charaka Samhita Handbook on Ayurveda. Ed. Gabriel Van Loon. Vol. 2. (Chaukhambha Orientalia, 2002), p. 478
24 Ibid
25 Ibid
<sup>26</sup> Charaka, Vol 2, p.478
<sup>27</sup> Sarngadhara Samhita. Section 3. Chapter 1 & 3
<sup>28</sup> Charaka, Vol 2, p. 487
29 Ihid
30 Charaka, Vol 2 p. 493
31 Frawley, David, and Marc Halpern. Ayurvedic Psychology: Anxiety and Depression. Rec. 18 Nov. 2006. California College of
Avurveda, 2006. CD.
32 Charaka, Vol 1, p. 38
33 Ashtanga Hrdayam, Vol 3 Chapter 5. Treatment of Insanity. V 59
<sup>34</sup> Behere, Prakash B. et al. "Ayurvedic Concepts Related to Psychotherapy." Indian Journal of Psychiatry 55. Suppl 2 (2013):
S310-S314. PMC. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3705701/
35 Frawley, David, and Marc Halpern. Ayurvedic Psychology: Anxiety and Depression. Rec. 18 Nov. 2006. California College of
Avurveda, 2006, CD.
<sup>36</sup> David Frawley, Ayurveda and the Mind: The Healing of Consciousness (Lotus Press, 1997), p. 39
<sup>37</sup> Halpern, p. 247-8
38 Frawley, David, and Marc Halpern. Ayurvedic Psychology: Anxiety and Depression. Rec. 18 Nov. 2006. California College of
```

³⁹ Karatsoreos, Ilia N. "Links between Circadian Rhythms and Psychiatric Disease." *Frontiers in Behavioral Neuroscience* 8

(2014): 162. PMC. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4018537

40 David Frawley, Ayurveda and the Mind: The Healing of Consciousness (Lotus Press, 1997) p. 103

¹¹

- ⁴³ Logan, Alan C, and Felice N Jacka. "Nutritional Psychiatry Research: An Emerging Discipline and Its Intersection with Global Urbanization, Environmental Challenges and the Evolutionary Mismatch." *Journal of Physiological Anthropology* 33.1 (2014): 22. PMC. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4131231/
- ⁴⁴ David Frawley, Ayurveda and the Mind: The Healing of Consciousness (Lotus Press, 1997) p. 183-186
- ⁴⁵ Frawley, David, and Marc Halpern. *Ayurvedic Psychology: Anxiety and Depression*. Rec. 18 Nov. 2006. California College of Ayurveda, 2006. CD.
- 46 Frawley, p.263
- ⁴⁷ Ibid, pg 259
- ⁴⁸Novotney, Amy. "Yoga as a Practice Tool." *Monitor on Psychology* 40, no. 10 (November 2009): 38. doi:10.1037/e598452009-018. http://www.apa.org/monitor/2009/11/yoga.aspx
- ⁴⁹ Jeter Pamela E., Slutsky Jeremiah, Singh Nilkamal, and Khalsa Sat Bir S.. "Yoga as a Therapeutic Intervention: A Bibliometric Analysis of Research Studies from 1967 to 2013," *The Journal of Alternative and Complementary Medicine*. October 2015, 21(10): 586-592. doi:10.1089/acm.2015.0057. http://www.ncbi.nlm.nih.gov/pubmed/26196166
- ⁵⁰ Frawley, p. 225
- ⁵¹ Kulkarni, Reena, K. J. Girish, and Abhimanyu Kumar. "Nootropic Herbs (*Medhya Rasayana*) in Ayurveda: An Update." *Pharmacognosy Reviews* 6.12 (2012): 147–153. *PMC*. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3459457/
 ⁵² Sarris, Jerome, David J Kavanagh and Gerard Byrne, "Adjuvant use of nutritional and herbal medicines with antidepressants, mood stabilizers and benzodiazepines" *Journal of Psychiatric Research*, Volume 44, Issue 1, 32 41. doi: 10.1016/j.jpsychires.2009.06.003. http://www.ncbi.nlm.nih.gov/pubmed/19616220
- ⁵³ Chandrasekhar, K., Jyoti Kapoor, and Sridhar Anishetty. "A Prospective, Randomized Double-Blind, Placebo-Controlled Study of Safety and Efficacy of a High-Concentration Full-Spectrum Extract of *Ashwagandha* Root in Reducing Stress and Anxiety in Adults." *Indian Journal of Psychological Medicine* 34.3 (2012): 255–262. *PMC*. http://www.ncbi.nlm.nih.gov/pubmed/23439798
- ⁵⁴ Pratte, Morgan A. et al. "An Alternative Treatment for Anxiety: A Systematic Review of Human Trial Results Reported for the Ayurvedic Herb Ashwagandha (*Withania Somnifera*)." *Journal of Alternative and Complementary Medicine*20.12 (2014): 901–908. PMC. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4270108/
- 55 Jahanbakhsh, Seyedeh Pardis, Ali Akhondpour Manteghi, Seyed Ahmad Emami, Saman Mahyari, Beheshteh Gholampour, Amir Hooshang Mohammadpour, and Amirhossein Sahebkar "Evaluation of the efficacy of *Withania somnifera* (Ashwagandha) root extract in patients with obsessive-compulsive disorder: A randomized double-blind placebo-controlled trial" *Complementary Therapies in Medicine*, Volume 27, 25 29. doi: http://dx.doi.org/10.1016/j.ctim.2016.03.018 http://www.complementarytherapiesinmedicine.com/article/S0965-2299(16)30050-4/abstract