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Integrating MedTech Innovations and Bhagavad Gita Insights to Address *Shadripu*: Implications for Occupational Health and Ecophysiological Well-Being

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Abstract

Human suffering is an intrinsic part of existence, with external challenges often manageable through preparation and safety measures. However, the root of persistent suffering lies in the mind, specifically in the Hindu scriptures six negative attributes known as "*Shadripu*" (*Ṣaḍripu* in Sanskrit language): Desire, anger, greed, attachment, pride, and jealousy. This study explores the integration of advanced medical technologies (MedTech) and Bhagavad Gita (BG) teachings to address these mental afflictions, focusing on their implications for occupational health and ecophysiological well-being. The research examines how workplace stressors and environmental factors interact with *Shadripu*, potentially impacting employee health, productivity, and environmental sustainability efforts. The study employs a comprehensive literature review and content analysis of credible journals and reports to examine the physiological and psychological impacts of *Shadripu*. It investigates current MedTech innovations in emotion detection and monitoring, such as Facial Action Coding System (FACS), Facial Electromyography (EMG), and EQ-Radio, while exploring their limitations in fully decoding the complexities of human emotions. Furthermore, this study delves into the teachings of the Bhagavad Gita, presenting them as a holistic approach to overcoming *Shadripu*. It examines the potential of integrating these spiritual insights with MedTech innovations to develop more effective strategies for managing mental afflictions in the workplace, potentially leading to improved employee well-being, productivity, and environmental consciousness. The research also considers the occupational health implications of *Shadripu*, discussing how these mental afflictions can impact workplace performance, safety, and sustainability efforts. It proposes cultivating virtues like contentment and selflessness through Bhagavad Gita principles, which may foster more outstanding environmental stewardship in occupational settings. This study provides a foundation for further empirical research, suggesting the need to investigate how mindfulness practices derived from the Bhagavad Gita might modulate physiological stress responses and reduce the allostatic load associated with chronic environmental exposure. The ultimate goal is to offer a cost-effective, safe, and holistic solution to address the root causes of mental afflictions, enhancing individual well-being and organizational health. **Major Findings:** This study reveals that integrating MedTech innovations with Bhagavad Gita teachings offers a promising approach to addressing *Shadripu* (six mental afflictions) in occupational settings. The combination of physiological monitoring technologies and spiritual practices may enhance stress management and emotional regulation in the workplace. Furthermore, cultivating virtues from the Bhagavad Gita could potentially foster greater environmental stewardship and improve overall occupational health outcomes.

Keywords: Bhagavad Gita, Ecophysiology, Mental Foes, Mind Afflictions, MedTech Innovations, *Shadripu*, Occupational Health

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1. Introduction

From the first breath in the womb, humans experience suffering. The physical pain, hormonal imbalances, and psychological changes of pregnancy can affect both mother and unborn child. Throughout life, illnesses, surgeries, tragedies, and other hardships continue to impact human well-being and lifespan. While precautions and awareness can help treat and control many of these physical afflictions, the root causes of human suffering often lie deeper.

Psychosomatic researchers worldwide have conducted extensive clinical and theoretical studies to understand and address these external human issues. However, a more fundamental source of human suffering comes from within the six mental enemies known as "*Shadripu*." Derived from "*Shat*" (six) and "*Ripu*" (enemy), *Shadripu* encompasses desire, anger, greed, attachment, pride, and envy. Also called "*Arishadvarga*," these mental afflictions can lead to a cascade of physical and psychological problems.

The manifestation of *Shadripu* can result in various physical and psychological health issues. For example, anger has been associated with increased risk of cardiovascular diseases[1]. Greed and attachment to material gains have been linked to addictive behaviours and mental health disorders[2]. Pride and jealousy have been found to negatively impact social relationships and overall well-being[3].

These physical ailments, in turn, can trigger anxiety, stress, depression, and even suicide. As Pfeffer and Williams note that depression significantly increases suicide risk[4]. The gravity of this issue was underscored in 2016 when the World Health Organization (WHO) declared depression the leading cause of disability globally[5].

Conventional treatments for mental health disorders often fall short, proving ineffective and potentially harmful, because they target the gross physical body rather than the subtle mental sheath where these "enemies" are deeply embedded[5]. While anti-depressants may temporarily stabilize hormones, they come with significant drawbacks. These treatments are often expensive, and long-term use can lead to adverse health effects. A study of 180 people on anti-depressants for 3 to 15 years reported troubling side effects, including withdrawal (73.5%), sexual problems (71.8%), emotional numbness (64.5%), and addiction (43%) (Cartwright *et al.*)[6].

Recent advancements in AI, Robotics, and Telehealth have improved our ability to measure and monitor mental illness. However, a comprehensive cure remains elusive. The manifestation of *Shadripu* in occupational settings can significantly impact workplace health, safety, and productivity, highlighting the need for a more holistic approach. A comprehensive approach to addressing the *Shadripu* can be found in ancient Hindu scriptures, particularly the Bhagavad Gita, which offers profound insights and practical wisdom for overcoming these psychological challenges

The Bhagavad Gita, often referred to as the Gita, is a 700-verse Hindu scripture that forms part of the Indian epic Mahabharata. Composed in Sanskrit, it presents a dialogue between prince Arjuna and lord Krishna on the battlefield of Kurukshetra. The Gita is revered as a comprehensive guide to Hindu philosophy, ethics, and spirituality, offering insights on duty, righteousness, and the nature of reality.

Krishna, a central figure in Hindu tradition, is venerated as the eighth incarnation of lord Vishnu. In the Bhagavad Gita, Krishna serves as Arjuna's charioteer and spiritual guide. Beyond his role in the Gita, Krishna is widely worshipped in Hinduism and is often portrayed as a divine teacher, statesman, and philosopher whose teachings encompass various aspects of life and spirituality.

The present research objectives are as follow: Analyzing the six mental afflictions and their impact on individual well-being and societal interests, examining the teachings of the Bhagavad Gita relevant to overcoming *Shadripu,* exploring the integration of Bhagavad Gita insights with MedTech innovations for addressing *Shadripu,* proposing directions for future empirical research on the effectiveness of combining spiritual teachings with modern technology in managing mental afflictions.

2. Literature Review

Happiness requires good health. Researchers define mental health differently. WHO defines mental health as a positive emotion full of happiness, self-esteem, mastery, and resiliency, as well as the ability to cope with daily stresses, work productively and fruitfully, and contribute to the community[7]. "Mental health encompasses the ability to enjoy life, create harmony between life activities and build psychological resilience," says Prof. Kumar in

Diagnostic and Statistical Manual of Mental Disorders[8]. Heath and Berman, attributed modern mental health issues to a lack of sleep, omega-3, exercise, rumination, sunlight, and socialization[9]. According to the WHO report, physical abuse, narcotics, prejudice, unhygienic living conditions, and stressful jobs all affect mental health.

2.1 The Concept of Occupational Health and *Shadripu*

2.1.1 What is Occupational Health?

Occupational health is a multidisciplinary field focused on promoting and maintaining the highest degree of physical, mental, and social well-being of workers across all professions[10]. It encompasses the prevention of work-related injuries and illnesses, improvement of working conditions, and development of work cultures that support health and safety. Key objectives include maintaining workers health and working capacity, enhancing workplace safety through risk assessment and control measures, and providing health surveillance for work-related issues[11]. It involves various disciplines such as occupational medicine, ergonomics, psychology, and industrial hygiene. It aims to create a balance between work demands and worker capabilities, ensuring that employees can perform their jobs safely and efficiently.

2.1.2 Implications of Shadripu on Occupational Health

The six mental afflictions known as *Shadripu* can significantly impact workplace performance, occupational health, and environmental sustainability. The manifestation of these afflictions in the workplace can have far-reaching consequences for both individual employees and the organization.

Anger and pride, two of the *Shadripu*, may lead to increased workplace conflicts and stress. These negative emotions can create a hostile work environment, hindering collaboration and communication among team members. On the other hand, greed and attachment to material gains could result in unethical practices or overwork, as individuals prioritize personal gain over organizational well-being or work-life balance. These mental states contribute to occupational stress, burnout, and decreased productivity[13]. The constant pressure to achieve more or acquire more incredible wealth can lead to dissatisfaction and exhaustion, ultimately impacting employees physical and mental health.

From an environmental perspective, the manifestation of *Shadripu* can have detrimental effects on sustainability efforts. Greed and attachment to material gains may drive excessive resource consumption and waste generation in pursuit of profits[14]. This short-sighted approach can lead to unsustainable business practices that harm the environment[15]. Additionally, anger and pride could lead to resistance against adopting more sustainable practices, as individuals may be unwilling to change established habits or admit to past mistakes[16].

The impact of *Shadripu* extends beyond the immediate workplace environment. Environmental factors resulting from unsustainable practices can trigger physiological responses in individuals, creating a feedback loop that amplifies the expression of these mental afflictions. For instance, increased cortisol levels, elevated blood pressure, and altered immune function can result from exposure to environmental stressors[17].

Specific examples of this interplay between the environment and *Shadripu* include:

1. Chronic exposure to air pollution has been linked to increased inflammation in the brain, potentially exacerbating anger and irritability[18].
2. Noise pollution can disrupt sleep patterns, leading to fatigue and decreased emotional regulation, which may in turn intensify feelings of greed or attachment[19].

Understanding the occupational health implications of *Shadripu* is crucial for developing comprehensive strategies to improve workplace well-being, productivity, and environmental sustainability while mitigating mental health concerns.

2.2 Mental Afflictions

2.2.1 What Causes Mental Health Concerns?

Maintaining sound mental health is integral to the individuals social and economic development and, consequently, that of a nation. However, the advent of the information technology revolution in the late 20th century and the subsequent digital revolution post-2020 have caused a significant shift in society's culture, lifestyle, and beliefs.

The allure of modern living often lures individuals into an endless pursuit of wealth and resources, whether

through ethical or unethical means, which ultimately engenders negative emotions such as avarice, anger, and arrogance that become the root cause of mental health problems.

The human mind has been the subject of research and experimentation since the evolution age, *i.e.*, the *Vedic* era[20]. Ancient Indian literature and contemporary academics have portrayed the mind and its fluctuations in diverse ways.

1. *Kathopanisad* compares the mind to a rein *manah pragrahameva ca* which controls five horses representing the five human senses *indriyani hayanahurvisayam*[21].
2. Yoga-Vasistham (YV) identifies physical pain and mind agitation as the leading cause of suffering[1].
3. As per the Ayurveda, the mind influences the physiology and pathology of the physical body (Srivastava)[22].
4. In BG., Krishna described the mind as a friend, "*bandhur atma*", as well as an enemy, "*satru-vat*" (BG. 6.6).
5. Modern-day researchers Singh and Bhattacharjee, have likened the afflicted mind to a prison and consider it the most significant obstacle to self-realization[20].

2.2.2 *What are Themental Afflictions? How do They Originate in the Mind?*

The mind's afflictions hinder normal and balanced functioning, impeding humans from reaching their full potential[20]. The genesis of these afflictions is contingent upon an individuals perception of a person, place, thing, or environment. The human body possesses five fundamental sensory abilities: Hearing, sight, smell, taste, and touch. These senses enable the sensory organs to interact with the brain to interpret and comprehend the physical world, significantly impacting a person's overall well-being. Envisioning the world as a place of kindness, happiness, and good people infuses the mind with positivity, whereas envisioning it as a place of poverty, suffering, *etc*., leads to negativity.

Another reason that originates mental foes is the 'Sense of Distinction', a destructive habit that arises from constant comparisons with others in terms of success, status, power, beauty, money, *etc*., which results in jealousy, hatred, and many other evils.

2.2.3 *Impact of Mental Afflictions on the Well-being*

A comprehensive description of each affliction and its adversities on the human body is given below:

1. **Lust**- Lust is the first mental adversary responsible for the misery of human beings. It is typically a physiological force or a strong desire for sexual pleasure or to get anything; it can be any material property, money, wealth, or a basic yearning for sustenance[23].

However, most studies have defined lust as sexual cravings. Dr. Helen Fisher has identified three phases of love that begin with the phase of lust:

Lust ----→ Attraction ----→ Attachment.

A distinct set of hormones characterizes each phase, *viz.*, lust is driven by testosterone and estrogen, while attraction is regulated by dopamine, norepinephrine, and serotonin. Attachment is mediated by oxytocin and vasopressin[24,25].

Oxytocin is commonly referred to as a 'love hormone, cuddle hormone, and bonding hormone'. It promotes male sexual receptivity and aids in treating impotence. Additionally, oxytocin and vasopressin stimulate female and male sexual mating desire, respectively[26]. To measure the intensity of love, the 2004 version scale titled "Being in Love: A questionnaire", created by Helen Fisher, assesses infatuation, romantic and passionate love based on a fifty-four points questionnaire[27].

2. **Anger**- Anger can be regarded as either a positive or negative energy. As a source of good energy, it inspires a person to overcome problems. However, its negative form, chronic uncontrollable rage, is highly toxic, followed by anxiety and grief. Anger is directly associated with the *Amygdala* (Limbic system), which regulates fear, sadness, and pleasure[28]. Among all the negative emotions (such as disappointment, fear, anxiety, jealousy, or sadness), anger is the most destructive; that weakens the body's defense mechanism and ultimately makes a person stressed or depressed. Anger increases arterial tension and stress hormones such as adrenaline, testosterone, and cortisol, which elevates heart rate and respiration. Furthermore, anger's direct effect on the functioning of the frontal lobes results in a loss of mental control and judgment ability.

1 adhayo vyadhayascaiva dvayam duhkhasya karanam" (YV. 6.81.12)

Typically, it is recommended that aggressive individuals should suppress their anger. Unfortunately, chronic anger repression is associated with depressive symptoms, while leading to unexpressed fury, hostile behaviour, anxiety attack, and other adverse outcomes[29,30].

Researcher Mead in cited two studies that demonstrate that anger suppression in females elevates serum Immunoglobulin A, which is associated with autoimmune illness[31]. In males, such inhibition can lead to the development of prostate cancer. Furthermore, this study discovered a significant proportion of Natural Killer cells, *i.e*., cytotoxicity, among men who did not regulate their anger.Bottom of Form

Psychologists have designed an eighty-question test titled "Self-administered State-Trait Personality Inventory (STPI)", which is beneficial to measure the transitory and dispositional anger, anxiety, curiosity, and depression on a four-level Likert scale[28]. Additionally, researchers developed a wrist band gadget, 'Wearable Anger-Monitoring System' (WAMS), that uses bio-sensors to monitor the intensity of rage by measuring the three vital bodily characteristics: Skin temperature, body motion, and heart rate. This device offers mobile communication capabilities *via* Global System for Mobile (GSM) communication module and has an android-based user interface for publishing data on graphical channels. In an empirical study of 10 random samples, this device yielded 91% authentic findings[32].

3. **Greed**- Throughout human history, there have been countless examples of greed. Great battles and wars, such as the Trojan War and World Wars I and II, have been fought due to the avarice of kings, monarchs, and dictators. In modern times, people's levels of greed have skyrocketed, driven not just by a desire for money but also by power, lust, fame, fortune, *etc*.

Researchers have studied greed as "dispositional greed" from a psychological stand point in recent years, which is characterized by a desire to acquire more than one currently possesses, whether it be money, success, or wealth. Other defining features of dispositional greed include insatiability, retention, and acquisition motives[33].

Webster's New World Dictionary, defines greed as "an excessive desire for more than one needs ordeserves". This concept of "having more than one deserves" adds a relational dimension to greed, highlighting its interpersonal nature[34].

Greed for money is an age-less phenomenon that emerged long before the modern money economy[35]. . Famous American financial journalist Michael Lewis has explained money greed as, "It's crazy for a man with a billion dollars to dedicate his life to earn another billion, but that's what most individuals repeatedly do"[36]. Compared to other psychoanalysts globally, British psychoanalyst Melanie Klein has explicitly focused on comprehending greed by characterizing it as a ferocious and unquenchable hunger that exceeds the subject's needs and what the object can provide. Greedy individuals are never pleased with what they have; instead, their intrapsychic is continuously saturated with envy and jealousy for others. Envy and jealousy are, therefore, two bodily components of avarice (Akhtar)[34]. Such people possess a one-dimensional personality driven solely by personal gain and never form genuine bonds with others[37]. Such greed directly affects the prosperity of society. Acquiring enormous wealth for self-betterment leads to an imbalance in society's social and economic purpose, as cited by the researcher Nikelly[14].

Greed is regulated by dopamine, a pleasure hormone. A higher level of dopamine brings a high amount of pleasure to the mind. As greed increases, the body's demand for dopamine also increases, which cannot be met with the normal hormonal generation process of the glands[15]. Consequently, low dopamine level causes fatigue, restlessness, depression, and brain fog[16].

Unlike anger, there is no specific device to measure the intensity of greed; however, researchers like Hans Breiter and his colleague from Harvard University used the MRI (Magnetic Resonance Imaging) technique to explore the influence of greed or craving on the brain. Their study found that the desire for money activates the same brain regions as the craving for cocaine, sex, or any other intense pleasure[17,18].

From the psychological perspective, the Heintzelman Greed Scale (HGS), a 5-point Likert scale, was developed to assess an individual's degrees of dispositional greed[33].

4. **Attachment**- Attachment is a complex emotion characterized by intense affection towards a person, object, place, or experience. Various factors, including age, gender, and life experiences, influence this feeling. It is not restricted to expensive or antique objects, as even ordinary things can evoke attachment with a psychological appropriation where the object is perceived as "mine". People tend to see these possessions repeatedly, clean and display them and want to talk about them, as cited by (Kleine and Baker)[38] Attachment is associated with the hormones

oxytocin and vasopressin. Oxytocin stimulates the more "passive" parts of attachment, while vasopressin stimulates the more "possessive" and, in some cases, more "aggressive" aspects of attachment[39]. While positive attachment is beneficial, it can lead to physical and psychological issues when it becomes an obsession. Currently, no device can quantify the extent of mental attachment. Instead, few psychological assessment scales are available to quantify it.

5. **Arrogance**- Arrogance can be defined as a derisive and unjustified attitude of superiority over other people[16]. While some arrogance may be appropriate in certain situations, such as a candidate bragging about his qualifications and work experience during job interviews, but boasting about wealth, money, power, *etc*., is very unethical[16]. Such arrogance can be a form of disdain for others and produce a false sense of overconfidence and superiority, leading to inefficiency or sloth. This feeling of superiority is a sign of NPD (Narcissistic Personality Disorder) as cited in the Diagnostic and Statistical Manual of Mental Disorders Report[8]. People with NPD traits are often insecure, lonely, and empty inside.

Researchers discovered serotonergic (5-HT) neurotransmission associated with arrogance and deceitful traits that correlate positively with 5-HT function and may be an adaptive component of psychopathy[40]. Psychologists use implicit attitude tests to identify implicit measures of arrogance and humility. However, this field has proven troublesome so far[41]. The Workplace Arrogance Scale (WARS) is used to quantify arrogance in the workplace[42]. Additional empirical research is needed to understand the concept of arrogance and its relationship with narcissism.

6. **Envy or Jealousy**- Envy is a complex emotion that Aristotle defined as "pain at the sight of another's good fortune," and feelings of inferiority, yearning, and evil thoughts towards the object of envy characterize it. Petric cited that the envious person either desires higher abilities, achievements, or possessions or desires the other person's lack of them[43]. He further referred to British philosopher Bertrand Russel, who defined jealousy as the primary source of unhappiness. It is such a potent, unpleasant feeling that an envious individual is not only miserable inside but also desires to inflict misery on others through emotional assault.

Jealousy is never experienced as a single distinct psychological event; instead, it is jointly evoked along with other emotions like grief, rage, fear, anxiety, *etc*. Further, due to its complex nature, it is challenging to map it neuro- scientifically in specific brain regions, as cited (Sardelic and Perak)[44].

Envy is not precisely a psychiatric problem but a theological, philosophical, social, and psychological issue that centres on the perceived threat where another person's "gain" is interpreted as a "loss" for the self.

A study conducted by Shamay-Tsoory on a sample of fifty-six individuals concluded that the oxytocinergic hormone plays a crucial role in modulating Envy and gloating[45]. Envy, a negative emotion associated with depression, anger, anxiety, rumination, and interpersonal hostility, is broadly categorized into four types:

1. Hostile envy is a feeling of enjoyment from another person's suffering.
2. Depressive envy- A feeling of defeat hearing the triumph of a rival's adversary.
3. Benign envy (A non-malicious envy)- It aims to improve one's situation by learning from the success of a competitor, as cited by Leahy[46].
4. Malicious envy involves discrediting, condemning, or denigrating the other person's advantages.

The Benign and Malicious Envy Scale (BeMaS), designed by Lange and Crusiusi, assists in determining if jealousy is "useful" (*e.g*., motivating) or "harmful" (leading to rumination, hopelessness, and humiliation). This scale found that dispositional benign envy was associated with an aspirational hope for success, whereas malignant envy was related to fear of failure (an avoidant motive).

Similarly, another study conducted by Yang and Tang in concluded that both forms of Envy originate from distinct motivations and result in unpleasant experiences and strong inferiority feelings[47]. While benign envy is driven by self-improvement, malevolent envy seeks to harm others.

Overall, these findings provide insights into the complex nature of envy and its associated emotions. By understanding envy's underlying mechanisms and motivations, researchers can help individuals better manage these emotions and prevent negative consequences.

3. Shadripu as per Ancient Hindu Texts

The concept of 'affliction of mind' or *'Shadripu'* and *'Arishadavarga'* is as old as humankind.

1. The Maitreya Upanishad (MU), contains a dialogue between lord Shiva and sage Maitreya that mentions the *Arishadavarga* (six enemies)[2].

2. The Devi Bhagavatam (DB) mentions about the *'Shadripu'* that a yogi needs to conquer[3,4].

3. Sage Patanjali in Yog Sutra (PY) described 'Five afflictions,' *i.e.*, ignorance, attachment, aversion, ego, and insecurity[5].

4. Gita described 'six afflictions' *i.e.*, desire (lust), anger, greed, attachment, pride (arrogance), and envy as written by Sril Prabhupada in his Gita commentary[6,7,48].

5. Christian religion described these afflictions as the "seven sins of the medieval period," *i.e.*, pride, greed, wrath, envy, lust, gluttony, and sloth as described in Aquinas.

BG described the human mind as the root cause of all evils. Arjuna characterizes it as restless, turbulent, and more challenging to control than the wind[8]. However, Krishsna describes it as a friend and enemy.

Mind can build space stations, launch satellites, and find cures as a friend. As an enemy, it can create weapons that can wipe out humanity in seconds. The senses shape the mind. Contemplation is the desire to relive a pleasurable experience. The below table represents how contemplation leads to a never ending chain of human sufferings.

In BG, Krishna referred to "*dhyayato*" which means "continuous thinking"[9]. Contemplation of past pleasures engenders attachment, which develops into desire and eventually into lust. This destructive cycle of lust leads to eternal sorrow. Satisfying lust is similar to pouring fuel on the fire. If gratified, it becomes greed or leads to intense rage[23]. BG describes lust, anger, and greed as the three gates to hell[10]. The captivity of lust is exemplified by a black bee attracted to the fragrance of a lotus flower, which renders it too frail to escape the closing petals that entrap it[49].

Similarly, people who consider worldly pleasure as the ultimate goal of life are never satisfied and lack mental equilibrium. The root cause of all these miseries is the 'ignorance' which bewilders the memory and fills the mind with a false ego of superiority and jealousy '*asmi ko nyo sti sadrisho maya*' (BG). Psychology describes it as a 'Wealth Accumulation Disorder' (WAD), where people view money as the key to all happiness.

4. Available Medical Technologies and Their Limitations

The medical profession offers numerous sophisticated approaches that can directly influence the psychology and physiology of the mind and body, resulting in emotional changes. These technologies have evolved significantly over the years, with each advancement bringing new insights and capabilities.

In the 1970s, psychologist Paul Ekman developed the 'Facial Action Coding System' (FACS), an anatomically based system to read powerful emotions such as happiness, sorrow, fear, rage, surprise, and disgust through muscle movements. However, this prototype had limitations in interpreting a person's real diversified feelings, as a smile on the face doesn't necessarily indicate true happiness[50].

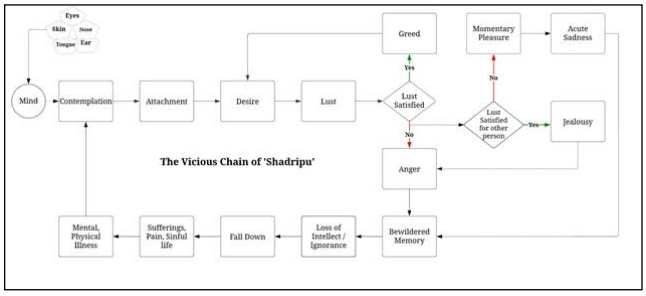


Figure 1. The vicious chain of '*Shadripu*'.

[2]*sadvikaravihino 'smi satkosarahito' smyaham | arisadvargamukto 'smi antaradantaro' smyaham || MU 3.18 ||*
[3]*tatpratyuhah sadakhyata yogavighnakaranagha |kamakrodhau lobhamohau madamatsaryasamjnakau || DB 35.3 ||*
[4]*avidyasmitaragadvesabhinivesah klesah || PY 2.3 ||*
[5]*kamah krodhas tatha lobhas tasmad etat trayam tyajet || BG. 16.21 ||*
[6]*Indriyasyendriyasyarthe raga-dvesau vyavasthitau || BG. 3.34 ||*
[7]*chanchalaṁ hi manah krishna pramathi balavad dridham | tasyaham nigraham manye vayor iva su-dushkaram || BG. 6.34 ||*
[8]*dhyayato vishayan pumsah sangas teshupajayate | saṅgat sanjayate kamah kamat krodho bhijayate || BG. 2.62 ||*
[9]*tri-vidhaṁ narakasyedaṁ dvaraṁ nashanam atmanaḥ | kamah krodhas tatha lobhas tasmad etat trayaṁ tyajet || BG. 16.21 ||*
[10]*tri-vidhaṁ narakasyedaṁ dvaraṁ nashanam atmanaḥ | kamah krodhas tatha lobhas tasmad etat trayaṁ tyajet || BG. 16.21 ||*

Later studies revealed that emotional alterations directly affect the body's physiology, which has led to the development of more advanced technologies. Scientists created 'Facial Electromyography (EMG),' a high-tech machine that uses electrodes to monitor the extension and contraction of facial muscles 1,000 times per second[51].

Further advancements came with Graham Cox, the founder of Emteq Labs, who designed a more patient-friendly EMG device. This multi-sensor Virtual Reality (VR) headset measures individual facial and eye movements, as well as pulse rate, providing more precise data on emotions such as joy, excitement, or dissatisfaction[51].

The Computer Science and Artificial Intelligence Lab (CSAIL) developed an even more advanced emotion detection gadget called EQ-Radio. This technology uses "on-body" sensors or "facial-recognition technology" to measure slight respiration and heart rhythm variations. Wireless signals and beat-extraction algorithms can determine positive and negative emotions, detecting primary emotions with 87 % accuracy[52].

Recent advancements in wearable technology allow for real-time monitoring of physiological responses associated with emotional states in occupational settings. For instance, Heart Rate Variability (HRV) measurements can provide insights into stress levels and emotional regulation[53]. These physiological markers could potentially be used to assess the effectiveness of Bhagavad Gita- based interventions in managing *Shadripu* in the workplace.

However, despite these technological advancements, limitations persist. While these devices can produce results based on physiological changes in the body, they cannot decipher the specific emotions and thoughts racing through a person's head. As a result, despite powerful brain mapping techniques, the mind remains a mystery in many ways. Besides technological advancements, biotechnology and pharmaceutical giants have made significant advancements in the drug development process to deliver instantaneous relaxation by inhibiting unpleasant and pessimistic impulses, as cited by (De Castro)[54]. However, most medications for mental disorders are anti-depressants, mood stabilizers, and antipsychotics, which temporarily lessen nervous system sensitivity and can cause fatal health symptoms.

Hence, Prof. Boora and Singh suggested that the solution to all mental miseries is available in the BG., which provides a pragmatic approach to dealing with daily life stressors, which have become the ultimate reason for *'Shadripu'*[55].

5. Need of the Study

According to the world economic forum, mental health issues cost the global economy $2.5 trillion in 2010 and are projected to cost $6.0 trillion by 2030[56].

To overcome this issue, 'MedTech' has developed numerous AI devices capable of scanning and generating emotions-based data using complex machine-learning algorithms. Still, their accuracy is not foolproof and may have technical boundaries. For example, these technologies demonstrate racial bias by attaching more negative emotions to black faces[57]. In black faces, anger is recognized more quickly than happiness, whereas the opposite is true for white faces[58].

It is essential to recognize that science and its creations lack compassion and care; consequently, science alone cannot address the root causes of health issues. In addition, advanced "MedTech" is prohibitively expensive and requires long-term, constant monitoring; while it may aid physiologically, it may not address underlying mental health issues.

This study aims to integrate the teachings of the Bhagavad Gita with MedTech to provide a cost-effective solution for treating "*Shadripu*". The Gita emphasizes perfect knowledge, equanimity, and human values, which are essential management aspects. This area has not been thoroughly investigated in the past, which makes our proposed solution significant.

6. Solution

6.1 Bhagavad Gita Teachings to Overcome *'Shadripu'*

To overcome mental issues, one must first understand the two essential laws of nature: 'The Law of Karma' and 'The Law of Attraction'.

Law of Karma- We reap what we sowed yesterday. Every action has consequences. Good deeds bring prosperity and nobility, while sinful ones can lead to poverty or rebirth as an animal or tree. Karma requires that one pay for their sins in multiple lifetimes.

Law of Attraction- The philosophical principle "Similar attracts Similar" explains why some people are born into wealthy families and others into poverty. People

with solid attachments or enmity in previous lives are often reborn close by to settle past deeds.

To overcome mental afflictions, it is crucial first to understand these eternal laws and practice the three essential principles of the BG. These three principles are –

Knowledge; 2) Equanimity; and 3) Human Values

People falsely believe themselves to be masters of material assets and accumulate wealth, ignoring the inevitability of death. This false knowledge is called ignorance and vanishes only with the absolute knowledge of the self.

What is Absolute Knowledge- Absolute knowledge is understanding, absorbing, and following the principles of life that lead to mental bliss.

1. The Principle of Body and Soul - The physical body is temporary and ends today or a hundred years later (BG. 2.18).
   a. Result - It will help people avoid running after the external beauty of the human body, which is nothing but a bag of flesh.
2. The Principle of Invincible Death - Death means that the soul cast off the old body to bear a new one as per the 'Karma' (BG. 2.22).
3. Result- It will help create a sense of human values[11,12,13].
4. The Principle of Selfless Action- Performing all actions as a matter of duty and for the pleasure of the supreme soul (BG. 3.19).
5. Result- Selfless action frees the mind from materialistic competitiveness.
6. The Principle of Perfection - Performing actions with perfection for the glory of Krishna "*Yogh karmasu kausalam*" (BG. 2.50).

Result - Such thought will ultimately improve the concentration power.

Krishna has compared this absolute knowledge with fire, a boat and a weapon. As fire, this knowledge can burn all actions to ashes '*jnanagnih sarva-karmani bhasma-sat kurute tatha*' (BG. 4.37). As a boat, it can help sail a person from the ocean of ignorance '*jnana-plavenaiva vrijinam santarishyasi*' (BG. 4.36). And as a weapon, it helps to cut the absurd web of doubts and ignorance '*jnanasinatmanah chhittvainam sanshayam yogam*' (BG. 4.42).

Finally, equanimity-staying the same through life's ups and downs-helps eliminate "Shadripu," which will remain in mind but inactive. Thus, Techno-Spiritual solutions are powerful mental health tools. Technology measures emotional imbalances, and spirituality explains body-soul reality.

6.2 Combining the Gita teachings with Medical Innovations –

Various studies have examined the intersection of Hindu scriptures and medical innovations to measure spiritual teachings and practices physiological and psychological effects (Bhatia *et al.*)[59]. A few studies are summarized below:

1. This study concluded that regular *Vedic* chanting helps boost memory and mental strength and removes fear, anger and depression[60].
2. This study used functional Magnetic Resonance Imaging (fMRI) to investigate the neural response while practising meditation. The results showed increased activation in brain regions involved in attention, self-referential processing, better spatial memory, *etc*[61].
3. The doctoral thesis, entitled "Effects of the Hare Krishna Maha-Mantra on Stress, depression and the Three Gunas", conducted at Florida State University, concluded that the regular chanting of the Maha-Mantra significantly reduces stress and depression[62].

Reading or chanting BG verses may improve mental health and well-being, but more research is needed to confirm these findings and determine how to integrate these practices into clinical care best. Hence, integrating Hindu scriptures and MedTech innovations shows promise in addressing occupational health concerns. For example, biofeedback devices combined with meditation practices derived from the Bhagavad Gita could help workers manage stress and improve emotional regulation in high-pressure work environments[60].

3. Conclusion

The six afflictions of desire, anger, greed, attachment, pride, and jealousy, collectively known as *Shadripu*, are highly detrimental to individual well-being and societal interests. While modern medical science can provide

[11]*abhayaṁ sattva-sanshuddhir jnana-yoga-vyavasthitiḥ | danaṁ damash cha yajnash cha svadhyayas tapa arjavam* || (BG. 16.1)
[12]*ahinsa satyam akrodhas tyagaḥ shantir apaishunam | daya bhuteshv aloluptvaṁ mardavaṁ hrir achapalam* || (BG. 16.2)
[13]*tejah kshama dhritih shaucham adroho nati-manita | bhavanti sampadaṁ daivim abhijatasya bharata* || (BG. 16. 3)

temporary relief, the teachings of the Bhagavad Gita offer a comprehensive solution to eradicate the root causes of these afflictions. Its principles can help individuals achieve an equipoised state of wisdom, morality, and virtues, leading to a simple, stress-free life. The findings of this study have significant implications for occupational health and ecophysiology. By integrating MedTech innovations with the teachings of the Bhagavad Gita, organizations can develop more effective strategies to address mental afflictions in the workplace. Implementing mindfulness practices based on these teachings may help mitigate issues related to *Shadripu* and improve overall workplace well-being, potentially leading to improved employee productivity and environmental consciousness. From an environmental health perspective, the mental afflictions of *Shadripu* can negatively impact workplace sustainability efforts and ecological consciousness. Cultivating virtues like contentment and selflessness through Bhagavad Gita principles may foster greater environmental stewardship in occupational settings. Organizations that address *Shadripu* holistically can improve worker well-being and environmental health outcomes. Integrating eco-friendly practices with spiritual teachings could offer a holistic approach to addressing these challenges, potentially mitigating ecological stressors and their physiological impacts. Future research should explore the potential connections between environmental factors and the manifestation of *Shadripu*. Environmental stressors such as pollution, noise, and urban congestion may exacerbate mental afflictions, impacting personal and occupational health. Future studies should investigate how mindfulness practices derived from the Bhagavad Gita might modulate the physiological stress response, potentially reducing the allostatic load associated with chronic environmental exposure and thereby diminishing the manifestation of *Shadripu* in daily life. The findings presented in this paper can serve as a basis for further empirical tests to measure the effects of Gita teachings in statistical figures, paving the way for a more comprehensive understanding of the intersection between ancient wisdom and modern occupational and environmental health practices.

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