



## The role of yoga for digital addiction

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### ABSTRACT

Technology is rapidly evolving, becoming more automated and simplifying lives. Smart phones are one of those rapidly evolving technologies that enable people to work remotely. Smartphone dependence and frequent use have grown, which in turn has led to changes in psychosocial behavioral elements. Addiction has a significant impact on people's ability to change their good behaviors. Problematic smartphone use has an impact on one's physical and mental well-being and is a major contributing factor to psychosocial disorders. Nevertheless, there is a lack of information to comprehend the fundamental ideas of smartphone addiction, and a more comprehensive understanding is required. By encouraging self-control, yoga is regarded as one of the effective methods for paving the road for digital detoxification from technology and smartphone addiction. By encouraging self-control, yoga is regarded as one of the effective methods for paving the road for digital detoxification from technology and smartphone addiction. With the help of yoga, people can regain a healthy lifestyle that includes enough physical activity through asanas, emotional stability, and awareness through breathing exercises and meditation. Our hypothesis is that a comprehensive approach to yoga helps control the symptoms of smartphone addiction by enhancing mental and physical stability and encouraging self-control and emotional detachment, both of which are critical components of the de-addiction process

**KEYWORDS:** Biopsychosocial model, digital-detoxification, review, smartphone addiction, yoga

### INTRODUCTION

Technology is pervasive. Regardless of age, gender, or socioeconomic background, the development of cellphones has changed the dynamics of usage. The features might include anything from making a phone call to checking email, making purchases online, sending texts, browsing the web, playing games online, and listening to music. Frequent checking of the smartphone has become an addiction as a result of this hazardous misuse. Addiction is frequently used to describe behavioral addictions like internet and gaming, despite the original definition of addiction being "a pathological condition that one cannot tolerate without continuous administration of substances." The use of cell phones is increasingly common among emerging adults, who are between the ages of 18 and 29, according to a growing body of research.

Despite not being listed as a clinical disease in the International Classification of Diseases (ICD-10) or Diagnostic and Statistical Manual of Mental Disorders (DSM-V), smartphone addiction is thought to affect 10% to 20% of people. According to studies, up to 10% of kids and teenagers in the UK, 16.7% in Taiwan, 16.9% in Switzerland, 30.9% in Korea, and 31% in India use smartphones problematically. Additionally, a survey conducted across six Asian nations revealed that the highest frequency of internet addiction was smartphone ownership is 62%.

According to studies, a lot of the characteristics of problematic smartphone behavior are comparable to other behavioral addictions that are known to exist, like gambling disorder and other conventional





addictions (like substance abuse, smoking, and drinking). A new type of maladaptive behavior has been produced by the pathological use of smartphones, which is also becoming a major factor in psychosocial problems. Since then, many experts are interested in researching smartphone addiction. The symptoms of problematic smartphone use include low psychological well-being, sadness, loneliness, social anxiety, and cognitive difficulties, all of which have a detrimental impact on physiological and psychosocial behavior.

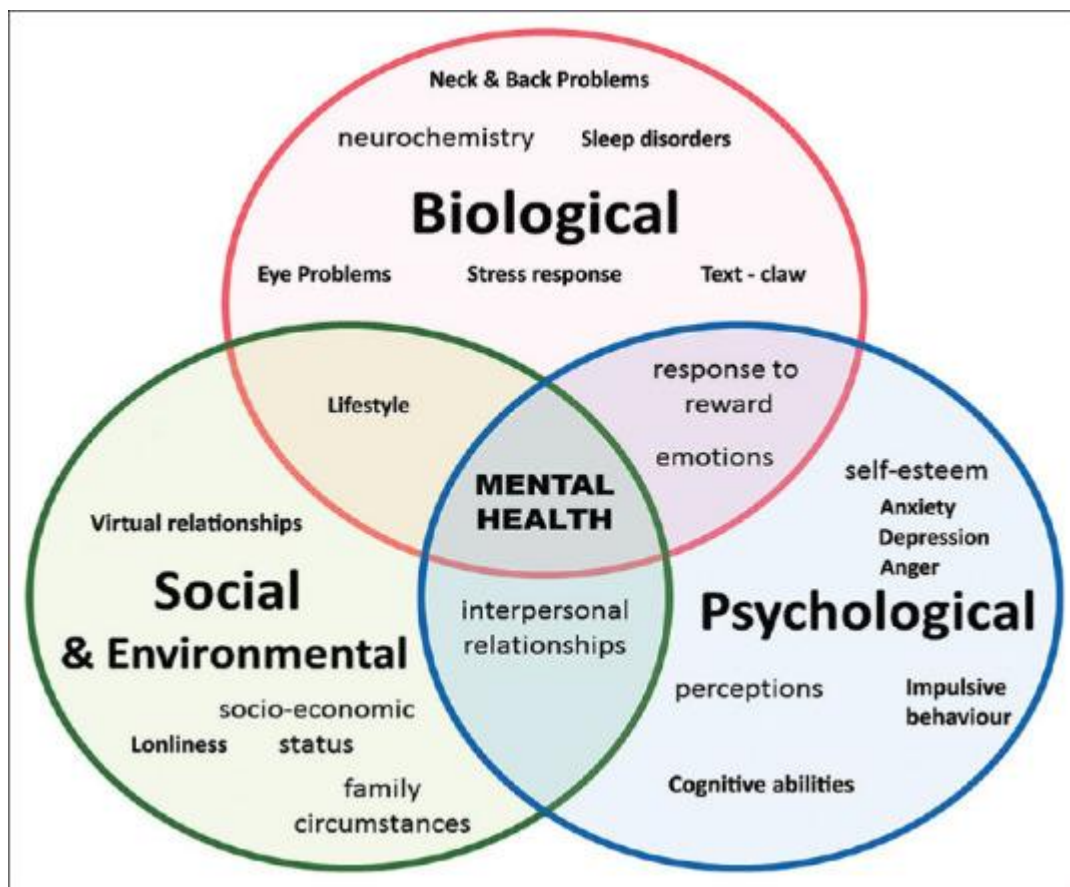
Researchers are actively investigating the value of yoga and meditation as a practical means of treating psychological issues and addictive behaviors in light of the available literature. Yoga is a form of body-mind communication. The significance of problematic smartphone use in influencing psychosocial behavior is gradually growing. There is not enough information available in this field to comprehend the essential features. We therefore postulate that in order to propose yoga literature as a primary care intervention, it is necessary to comprehend the issue from a far wider perspective.

### **Gaining an Understanding of Smartphone Addiction through Biopsychosocial Analysis**

According to the biopsychosocial model of addiction, substance use is influenced by biological/genetic, psychological, and sociocultural aspects, all of which need to be taken into account during prevention and treatment initiatives.

According to the explanation provided in the figure1 smartphone addiction is a complicated and diverse issue that requires a biopsychosocial understanding. According to Griffith's components model of addiction, all addictions are predicated on a set of standards that incentivize both physiological and psychological behaviors. In order to comprehend the biopsychosocial process of smart phone addiction, he put forth six essential elements. Saliency, mood swings, tolerance, withdrawal, conflict, and relapses are some of these.





## Salience

Predominance of smartphone use over other daily activities affects social behavior decline, cognitive distortions, and emotions (cravings). According to a study on college students, those who are addicted to smartphones have high levels of cognitive absorption. Temporal dissociation, concentrated immersion, increased enjoyment, control, and curiosity are characteristics of cognitive absorption. Additionally, a study using functional magnetic resonance imaging revealed that smartphone addiction affects social interaction and impairs cognitive control during emotional processing. Higher impulsive scores are also associated with altered gray matter volume and white matter integrity, according to a neuroimaging study conducted on teenagers who are addicted to mobile phones. Similar to this, those who are addicted to gaming have demonstrated increased lateral and prefrontal cortex brain activity and demand for gaming stimuli.

### 1) Mood modification

According to the subjective experiences, people use smartphones as a coping mechanism to prevent feelings of loneliness and dysphoria. According to a study, students who use their phones as a coping strategy



may receive minor relief from conditions brought on by boredom, loneliness, and worry. Long-term use, however, may have a detrimental effect on mental health. According to a study, anxiety, despair, and poor smartphone use are mediated by defective cognitive and emotional processes. In addition, there is smartphone addiction and psychological abuse in children. According to a recent survey of university students in India, 43% of respondents said that their phones allow them to escape from issues, and 70% said that they use them to combat negative emotions like anxiety, despair, guilt, helplessness, and inferiority complexes.

### 2) *Tolerance*

The frequent or extended use of cellphones to produce the former mood-altering effects. According to earlier research, the quick access to rewards is the reason why people check their smartphones so frequently. Furthermore, it has been reported that perceived social support now comes from social media. Nowadays, likes, shares, and icon-based communication on social media platforms like Facebook, Instagram, and Twitter are used to gauge perceived social support. According to a study, Facebook connectivity is linked to improved social capital, less anxiety and despair, and higher life satisfaction. On the other hand, social interactions and life satisfaction are adversely affected by extroverts and neurotics who use Facebook excessively.

### 3) *Withdrawal*

FOMO, or "fear of being without a mobile phone," is a term that has been coined by recent studies to describe the anxiety that people experience when they miss their cellphones. Another term is nomophobia, or "no mobile phone phobia." This disorder is commonly observed in children who exhibit high degrees of extroversion and introversion, anxiety, impulsivity, and low self-esteem. Another study found that important predictors of nomophobia included interpersonal sensitivity and obsession-compulsion

### 4) *Relapse*

The relapsing state in smartphone addiction is not well supported by the literature. After a prolonged time of abstinence, this condition prefers to check the smartphone to relive the prior hedonic experience. Low self-esteem is linked to checking smartphones for updates both before bed and after waking up.

## *B. Understanding the Nature of Smartphone Addiction Through Yoga*

The definition of addiction is a behavior that a person has poor control over and that has negative effects. It can also be seen as the outcome of "mindless" states that include limited self-regulation, emotional reactivity, automatic thinking, social isolation, and escapist views. According to research, yoga encourages self-regulation, which helps manage the symptoms of addiction. The World Health Organization (WHO) states that one of the most important factors in determining health is psychological well-being. The nature of the mind and its ailments (Kleshas) are central to the fundamental ideas of yoga. Hatha Yoga Pradipika (HYP),

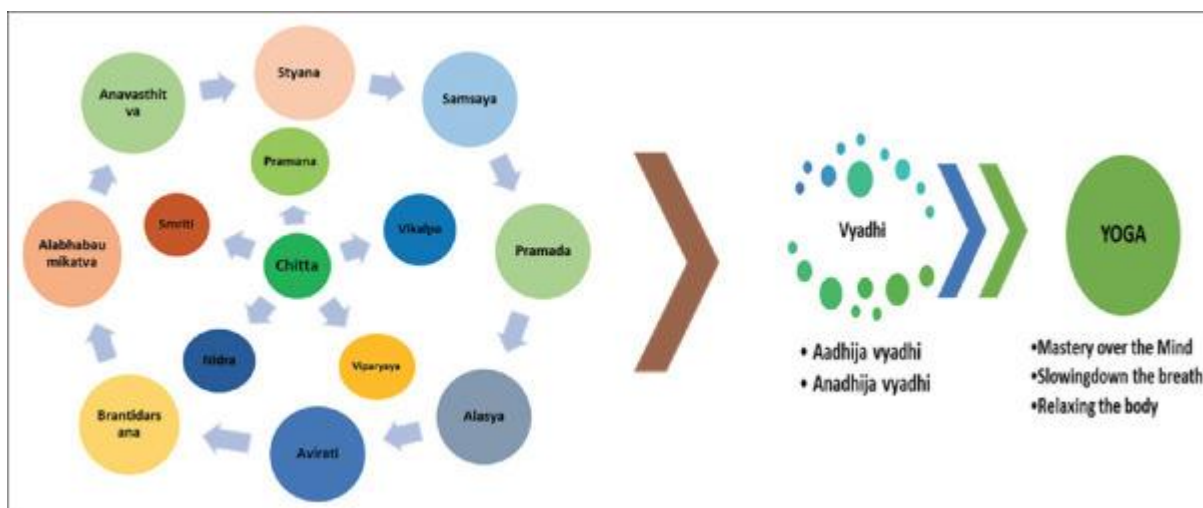


Patanjali Yoga Sutras (PYS), Bhagavad Gita (BG), and Yoga Vasistha (YV) are examples of traditional literature that emphasize the mind (Chitta), the interaction of an individual's attributes (Gunas) on mental health, and the ailments produced by in the absence of self-control and self-regulation

According to Sage Patanjali, yoga is the state in which the mind achieves its pristine state when the intricacies of the thoughts are subdued by self-regulation. The mental illnesses brought on by these confusing ideas are produced by egoism or identity (Asmita), attachment (raga), aversion (Dweshha), fear of losing (Abhinivesha), and ignorance of the truth (Avidya). According to Ayurveda, "asatmyaindriyarthasannikarsha," an imbalance in the body's senses results in either a rise or fall in humor (doshas).

According to Sankhya's philosophy, a person's temperament (Swabhava) is largely determined by their attributes (Gunas). There are three categories for Guans. Dullness, inactivity, illusion, despair, laziness, impulsivity, and excessive sleep are traits of tamas. When Rajas is in charge, it represents egoism, self-centeredness, passion and desire, ambition, restlessness, avarice, and a sense of fulfillment. Lastly, stability, self-control, mental clarity, discipline, self-regulation, one-pointedness, contemplative mind, and detachment are all linked to sattva.

Constant smartphone use has led to sensory overload, which stimulates the mind for recurrent subjective experiences. The likelihood of these experiences is having negative consequences. The pleasures of these sensual indulgences create an attachment that fuels the urge for more, claims BG. Anger results when it is not met. Anger breeds delusion, which in turn causes memory loss, which in turn causes intellect to be destroyed, ultimately resulting in a dead mind. Patanjali went on to describe how these challenges materialize into ailments.







The above picture [Figure 2] illustrates how these disturbances of the mind (Chittavikshepas) lead to mental agitation (Adhi) and further as a disease in the body (Vyadhi).

Researchers have discovered a correlation between problematic smartphone usage and personality traits such as extroversion, neuroticism, and openness to new experiences. The symptoms of smartphone addiction, including mental laziness (Styana), idleness, and dullness; indecision and doubt (Samsaya); carelessness, negligence, and procrastination (Pramada); laziness (Alasya); craving for pleasure and sensuality (Avirati); and erroneous perception, are explained by mental afflictions.

### *1) Yoga for digital detoxification*

Erroneous beliefs (Brantidarsana); instability (Anavasthitatva); and failure to achieve desired objectives (Alabdhabumikatva). Unrhythmic respiration (Svasaprasvasa Vikshepa), depression (Daurmanasya), shaking off the body (Aangamejayatva), and sadness (Dukha) are all manifestations of the disease (Vyadhi) that results from these. Yoga identifies two categories of disease (vyadhi): mental illness, stress-induced psychosomatic disorders, and neurotic issues (Adhija Vyadhi). According to Anadhija Vyadhi, the second category consists of external factors including injuries, diseases, accidents, and non-stress. The Yoga Vasistha holds that pain originates from both illness (vyadhi) and the mind (Adhi). They sometimes cause one another, and other times they follow one another. Both of them first stem from ignorance and a lack of self-control.

The concept of autonomy is incompatible with addiction. Yoga facilitates the development of our capacity to connect with life, cleanse our bodies, minds, and emotions, and lead a fulfilling and peaceful existence. According to recent research, yoga can be a useful strategy for managing mental and physical ailments by promoting self-regulation through the integration of asana, pranayama, pratyahara, relaxation, and meditation. A more thorough explanation of them would be as follows:

### **Asana**

The Sanskrit word for physical posture that strengthens willpower and builds mental and physical endurance is asana. Patanjali explains in his yoga sutras (PSY) that the major goal of asana is to maintain an upright spine for the free flow of energy during meditation and to achieve steadiness with ease in the sitting posture (PSY 2.46). Dedication, consistent practice, and a sense of reverence are necessary to receive the blessings of asana (Asana siddhi) (PSY 1.14). The somatopsychic effects of asana include the release of endorphins, which make the practitioner feel tranquil, at rest, and fulfilled. According to a study, GABA





(gamma-aminobutyric acid) increased by 27% following a one-hour yoga asana session. acid) levels. Further, induced stress levels were rescinded with Shavasana compared to supine postures and resting in a chair. Another study reported that techniques using a combination of stimulation followed by relaxation had reduced oxygen consumption, energy expenditure, and physiological arousal compared to other relaxation techniques.

### 2) *Pratyahara*

The fifth limb of Astanga yoga is called pratyahara. Pratyahara is essential to the de-addiction process. According to PSY 2:54, pratyahara is the deliberate disengagement of the mind from physical pleasures. It is difficult to control the mind that has been trained to seek out sensual pleasures. Sublimating the senses inward to reach the depths of the mind is the ultimate kind of pratyahara, not repressing them (PSY 2.55). Gaining control over the senses can also be accomplished by breathing steadily while concentrating on the area between the two eyebrows. The main causes of addiction are cravings and a lack of self-control. The primary form of entertainment that is prevalent among smartphone addicts is sensory enjoyment. Indriya (senses) Pratyahara helps understand the nature of craving and restrain the senses from external gratification by abstaining from these devices to rejuvenate the mind through awareness and self-control.

### 3) *Meditation*

Abhyasa (practice) and Vairagya (detachment) are the first steps in meditation (PSY 1. 13&16). Pratyahara encourages a dispassionate attitude toward sensuous objects. In yoga, meditation is called dhyana. Dhyana is the state of having an unbroken stream of consciousness in the mind (PSY 3.2). Different schools of thought have developed a variety of mediation approaches over time. Transcendental meditation and mindfulness have drawn more attention from the West. Their therapeutic advantages for both physiological and psychosocial diseases have been the subject of much research. According to studies, mindfulness meditation improves sleep, somatosensory processing, life quality, and lowers emotional reactivity. Additionally, it successfully regulates levels of stress, anxiety, and sadness. According to research on addiction, meditation raises prefrontal activation, which may aid in improving cognitive abilities, reaction inhibition, self-control, psychological well-being, and craving abstinence as well as de-automatizing addictive responses.

### C. *Discussion*

According to the American Society of Addiction Medicine (ASAM), addiction is a main, long-term illness of the reward, motivation, memory, and associated brain circuits. Different biological, psychological,





social, and spiritual manifestations arise when these circuits malfunction. One study found that, similar to substance addiction, internet addiction raises dopamine levels in the brain. Overuse of smartphones to access the internet is a relatively new kind of addiction. The American Psychiatric Association does not formally recognize the illness. However, a large number of experts and medical professionals worldwide acknowledge it as a behavioral addiction.

Numerous studies have shown that excessive smartphone use, including gambling, can alter and have a detrimental effect on a person over time. Furthermore, problems brought on by excessive smartphone use are a developing social concern that is being discussed all over the world. Young individuals have a high prevalence, according to numerous research. Mental illness during the crucial stage of emerging adulthood can hinder a person's social, professional, and educational development, leading to lifelong handicap. People are currently complaining of anxiety, loneliness, sadness, and sleep issues when they attend general care and psychological clinics. According to reports, the prevalence of musculoskeletal pain, including shoulder, neck, and lower back pain, is also increasing.

By encouraging self-regulation and self-control, yoga, on the other hand, has been shown to be an effective strategy for addressing physiological, psychological, and addictive behaviors. Yoga is a comprehensive practice that unites the body, mind, and soul. It has almost 5000 years of ancestry. By fostering subjective well-being, it has been demonstrated to have a favorable impact on young adults' perceived stress and quality of life when practiced regularly. Research indicates that consistent yoga practice in schools improves self-esteem, emotion management, and dysphoric moods. According to a review, consistent yoga and meditation practice has improved attention and its functional anatomical linkages. It has also been shown to increase gray matter volume, which allows people to control their emotions, memory, and movement. Including yoga as an adjunct treatment modality by the primary care centers and doctors would help in upholding the biopsychosocial dimensions of health in society

#### *D. Conclusion*

Recent data indicates that studies on behavioral addictions are receiving increased attention from researchers. Recent years have seen a rise in research on smartphone addiction due to its hazardous and maladaptive behavior. However, according to certain research, the prevalence is only 10% to 20%. Due to its widespread use and pervasiveness in contemporary society, a more comprehensive knowledge of the issues surrounding it from a biopsychosocial standpoint is required.







On the other hand, yoga seems to hold promise as a treatment for addiction and other mental health conditions. Its capacity to connect with life promotes emotional control and mental and physical purification, both of which enhance our general wellbeing. This is a crucial component in treating the craving, compulsive behavior, tolerance, and relapse symptoms associated with addiction. Therefore, practicing yoga and meditation on a regular basis will help control the signs of maladaptive behavior linked to smartphone addiction.

1) *Key message*

The excessive use of smartphones is negatively influencing people's behavior. Looking at the problem from a bio-psychosocial standpoint would help us understand its complexities. Yoga is a mind-body medicine, allows us to understand the nature of behaviour in a holistic way, as well as a possible solution to this maladaptive behavior, by promoting self-regulation and by cultivating subjective well-being

2) *Highlight*

Understanding smartphone addiction from the perspectives of yoga and contemporary psychology; presenting yoga as a workable way to manage the symptoms of smart phone addiction. The family and primary care physicians might benefit from using yoga as an additional therapy technique

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