

Nomophobia in the Digital Era: An Ayurvedic Perspective on Mental Health and Holistic Management

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Perspective

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Abstract

Nomophobia, abbreviated as no-mobile phobia, is a developing behavioural and psychosocial disorder characterised by anxiety, discomfort, fear or nervousness due to a lack of access to mobile phones or digital devices. Rapid technological progress and the excessive dependence on smartphones have turned nomophobia into a growing public health problem, especially among adolescents and young adults. Excessive use of smartphones is associated with anxiety, depression, sleep disorders, decreased academic performance, decreased concentration, social isolation and reduced self-confidence. Contemporary management strategies include behavioural interventions and digital detoxification, but sustainable holistic approaches are still insufficiently explored.

Ayurveda provides a comprehensive framework for understanding the causes of psychosomatic disorders, through such concepts as pranayama, asatmya, and samyarth (disturbances of the rasa and tasa). Continuous sensory overload from digital devices can impair Vata Dosha, impair mental faculties including Dhi, Dhriti and Smriti, and disrupt the mental balance. Ayurvedic interventions such as Sattvajaya Chikitsa, Dinacharya, Sadrta Rasayana, Achara Rasayana, Medhya Rasayana, Yoga, Meditation and Mindfulness practices offer promising preventive and curative options for digital addiction and Nomophobia.

This review critically analyses Nomophobia from a modern and Ayurvedic perspective and explores the potential role of Ayurveda in digital health and mental health. Integrating Ayurvedic principles with modern psychological interventions can provide a safe, culturally acceptable and sustainable strategy to manage modern-day Nomophobia.

Introduction

Technological advances have dramatically changed modern life styles, communications systems, educational practices and professional activities. Smartphones have become an integral part of people's lives, offering continuous connectivity, social networking, entertainment and access to information. Although this development has improved comfort and communication, excessive smartphone addiction has also led to a number of psychological, behavioural, and social disorders.[1]

Among these emerging concerns, Nomophobia has received considerable attention around the world. Nomophobia was first coined in 2008 to describe the anxiety and discomfort felt by people when they cannot use or access mobile phones.[2] This condition is characterised by fear of losing connectivity, inability to communicate, battery depletion anxiety, and obsessive control behaviour.[3]

Recent evidence suggests that nomophobia is becoming widespread among adolescents, university students, health care professionals and young adults, owing to increased reliance on digital communication and social media involvement. [4] A recent systematic review and meta-analysis carried out in India reported a combined prevalence of nomophobia of 77.6 percent, underlining the alarming scale of the problem in the Indian population. The study also showed a strong association between

nomophobia and anxiety, sleep disorders, academic performance impairment, loneliness, depression and decreased meditation. [5]

Excessive use of smartphones has an impact on mental and physical health. Musculoskeletal disorders, including tympanic neck syndrome, wrist pain, shoulder pain and sleep disorders, have been increasingly observed in users of smartphones [6] In addition, compulsive digital involvement contributes to social isolation, reduced interpersonal communication, emotional instability, and cognitive dysfunctions. [7]

Modern medicine tends to treat nomophobia as a behavioral addiction, requiring psychotherapy, digital detoxification, and cognitive behavioral interventions. However, the chronic psychosocial burden of digital addiction requires a more comprehensive and preventive health care model.

Ayurveda offers a holistic understanding of psychosomatic disorders through concepts that encompass the interaction of the mind and the body, sensory regulation, ethical behaviour and the discipline of the way of life. [8] Although nomophobia is not specifically described in Ayurvedic texts, its pathogenesis can be understood by Prajnaparadha (intellectual blasphemies), Asatmya Indriyarth Samyoga (unwarranted use of the senses), and Manovah Srotodushti (unwarranted use of the senses). [9]

Continuous exposure to digital stimuli causes excessive activation of the senses and mental faculties, which eventually disrupts the psychological equilibrium. Ayurveda promotes preventive and therapeutic strategies including Dinacharya, Sattvavajaya Chikitsa, Sadvritta, Achara Rasayana, Yoga, meditation, and Medhya Rasayana to maintain mental health and restore cognitive balance.[10]

This review aims to critically analyse nomophobia from both a biomedical and an Ayurveda perspective and to examine the role of Ayurveda principles in preventing and treating behaviours associated with digital addiction.

Materials and Methods

A thorough literature search was performed in PubMed, Scopus, Google Scholar, ResearchGate, and DHARA Database using the following keywords: nomophobia, smartphone addiction, digital addiction, Ayurveda, mental health, Sattvavajaya, Yoga, mindfulness, and Medhya Rasayana. Classical Ayurvedic texts such as Charaka Samhita, Sushruta Samhita, and Ashtanga Hridaya were reviewed for concepts pertaining to mental health and behavioral disturbances.

Understanding Nomophobia

Definition

Nomophobia is defined as the fear, discomfort, anxiety, or nervousness that occurs when people are unable to use their mobile phones or access digital communication.[11] Although not formally classified

as an independent psychiatric disorder in DSM-5, it is increasingly recognized as a behavioural dependence with anxiety-related manifestations.[12]

Epidemiology of Nomophobia

Nomophobia prevalence varies considerably between different populations and countries. Estimates of global prevalence vary between 29.5 percent and 100 percent. [13] Studies have shown a particularly high prevalence among adolescents and university students, as a result of their heavy reliance on social media and online communication. [14]

A recent systematic review in India, involving 10,607 patients in 25 studies, reported an overall pooled prevalence of 77.6%.[5] The burden was particularly heavy on students in medicine and engineering. [5]

The review also highlighted: the positive correlation between nomophobia and anxiety, poor quality of sleep, depression, loneliness, loss of self-control, and academic performance. [5]

Etiopathogenesis of Nomophobia

Psychological Factors

Fear of social exclusion, Emotional insecurity, Low self-esteem, Anxiety disorders, Fear of missing out (FOMO)[15]

Behavioral Factors

- Excessive use of social media
- Compulsive phone checking
- Internet compulsivity.
- Continuous Notification Involvement [16]

Neurobiological Basis

Research suggests that excessive use of smartphones activates dopaminergic reward pathways, which are similar to those involved in addiction. [17] Repeated digital stimulation increases dopamine release in reward circuits including the nucleus accumbens and prefrontal cortex, resulting in compulsive behaviour. [18]

Chronic exposure to the screen also alters melatonin secretion and circadian rhythms, which contribute to sleep disorders and cognitive impairment. [19]

Ayurvedic Understanding of Nomophobia

Although nomophobia is not explicitly mentioned in the Ayurvedic classics, its pathogenesis can be understood in the context of several basic Ayurvedic concepts.

Prajnaparadha

Ayurveda identifies Pranjnaparadha as one of the major causes of illness. [20] It refers to the inability of intellect, memory and self-control to work in a coordinated manner which leads to harmful behaviours.

Compulsive smartphone usage despite awareness of harmful consequences represents impairment of: Dhi (intellect), Dhriti (restraint), Smriti (memory).

Asatmya Indriyarth Samyoga

Improper utilization of sensory organs is considered to be a major etiological factor in the development of the disease.[21]

Continuous exposure to: visual stimuli, auditory notifications, emotional overstimulation, Social media involvement; this leads to overstimulation of the Indriya (sense organs), especially Chakshu and Shrotrendriya.

Manovaha Srotodushti

Nomophobia may be correlated with disturbances of Manovaha Srotas, characterized by:

anxiety, irritability, impaired concentration, emotional instability, disturbed sleep.[22]

Role of Dosha

Vata Dosha

Excessive mental activity, irregular sleep, continuous sensory stimulation, and psychological instability aggravate Vata Dosha, producing: restlessness, anxiety, insomnia, fearfulness, irritability.[23]

Rajas and Tamas

Ayurveda recognizes Rajas and Tamas as psychological aggravating factors.

Increased Rajas; hyperactivity, impulsiveness, constant engagement, emotional agitation.

Increased Tamas; emotional dullness, lethargy, reduced motivation, social withdrawal.[24]

Clinical Manifestations

Common symptoms of nomophobia include: compulsion to check the phone, anxiety during phone not working, phantom vibration syndrome, irritability, sleep disorders, decreased focus, neck pain, eye pressure, social withdrawal.[25]

Severe cases may result in: Panic attacks, depression, low academic achievement, emotional instability, conflicts with people.[26]

Impact of Nomophobia on Health

Mental Health

Anxiety disorders, depression, loneliness, decreased mindfulness, emotional instability [27]

Physical Health

Text neck syndrome, Musculoskeletal pain, Visual fatigue, Sedentary behaviour, Sleep disorders[28]

Social Impact

Reduced family interaction, Impaired communication, Social isolation, Reduced empathy[29]

Ayurvedic Management of Nomophobia

Sattvavajaya Chikitsa

Sattvavajaya Chikitsa is an Ayurvedic approach to psychotherapy that focuses on controlling harmful mental impulses and restoring mental balance. [30]

Its principles include: mind control, withdrawal from harmful sensory pleasure, emotional regulation, cognitive restructuring, positive reinforcement cultivation.

This is very similar to modern cognitive behavioral therapy and interventions based on mindful meditation.

Dinacharya-Based Digital Detox

Ayurveda strongly emphasizes Dinacharya (daily regimen) for mental and physical well-being.[31]

Recommended measures include: fixed sleep-wake cycles, avoidance of screen time before bedtime, planned digital fasting, meals without devices, morning meditation, outdoor physical activity.

Sadvritta and Achara Rasayana

Sadvritta and Achara Rasayana promote ethical & moral discipline, emotional stability, healthy social behaviour.[32]

These principles encourage: Self-control, moderation, emotional regulation, healthy relationships, mindful living.

Medhya Rasayana

Brahmi helps improves memory, concentration, and cognitive performance while reducing anxiety.[33]

Ashwagandha possesses adaptogenic and anxiolytic properties beneficial in stress-related disorders. [34]

Shankhpushpi promotes mental relaxation and functions as a nervine tonic [35]

Jatamansi has neuroprotective and calming effects that are useful for anxiety and sleep disorders [36]

Yoga and Meditation

Yoga-based interventions help to restore autonomic equilibrium and relieve stress.

Pranayama :Breathing exercises improve parasympathetic activity and decrease anxiety. [37]

Meditation :Meditation improves attention control, emotional stability and the regulation of compulsive behaviour.[38]

Yogasana :Practices such as: Shavasana, Bhujangasana, Vajrasana, Tadasana help reduce musculoskeletal and mental fatigue.[39]

Integrative Model for Digital Wellness

An integrative approach combining Ayurveda and behavioural sciences can help to manage nomophobia in a sustainable way.

Such a model may include: psychological counselling, mindful therapy, Ayurvedic lifestyle modification, stress management yoga, digital hygiene education, community awareness programmes.[40]

Future Research Perspectives

Despite the growing evidence on the psychosocial burden of nomophobia, clinical trials specifically addressing digital addiction in Ayurveda are still limited. Future interdisciplinary research, integrating psychiatry, neuroscience, digital health and Ayurveda, is crucial to develop evidence-based treatment paradigms.

Areas requiring exploration include: Ayurvedic psychotherapeutic interventions, the role of the Medha Rasayana, digital detox models based on yoga, the neurocognitive effects of Ayurveda therapy, strategies for prevention of mental health problems in adolescents.

Conclusion

In the modern digital age, name-calling has emerged as a major psycho-social and behavioural challenge. Overuse of smartphones has a significant impact on mental, physical and social health, especially among adolescents and young adults. The growing incidence of nomophobia highlights the urgent need for effective prevention and treatment interventions.

Ayurveda provides a unique holistic framework for understanding technology-induced behavioral disorders, through concepts such as Prajnaparadha, Asatmya Indriyarth Samyoga, Manovaha Srotodushti, and disturbances of Rajas and Tamas. Ayurvedic interventions such as Sattvavajaya Chikitsa, Dinacharya, Sadvritta, Achara Rasayana, Medhya Rasayana, Yoga, and meditation offer promising preventive and curative strategies to restore mental balance and promoting digital well-being.

The integration of Ayurvedic wisdom with modern psychological approaches can be a safe, sustainable and culturally relevant solution for combating nomophobia and to maintain mental health in the digital age. Further interdisciplinary clinical research is needed to scientifically validate Ayurveda interventions and to develop evidence-based integrative treatment protocols for digital dependence disorders.

Declarations

This study is a perspective research and not a clinical trial, therefore no registration required for the study.

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Author Contribution

All four authors made substantial contributions to this work. GJ and NS conceived the study idea and designed the review methodology. GJ and NK performed the systematic literature search across PubMed, Scopus, Google Scholar, ResearchGate, and the DHARA database, and extracted relevant data from both contemporary studies and classical Ayurvedic texts (Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya). GJ and NS conducted the narrative synthesis and interpreted the findings from modern biomedical and Ayurvedic perspectives. GJ, NS & NK drafted the original manuscript. GJ & NS critically revised the manuscript for intellectual content, with particular attention to the accuracy of Ayurvedic concepts including Prajnaparadha, Asatmya Indriyarth Samyoga, Manovaha Srotodushti, and the roles of Vata Dosha, Rajas, and Tamas. NK reviewed and verified the epidemiological data, including the pooled prevalence estimate of 77.6% and all associated correlates. MV provided supervision, validated the classical text interpretations, and contributed to the final revision of the discussion and conclusions. All four authors reviewed and approved the final version of the manuscript, agree to be accountable for all aspects of the work, and confirm that there are no conflicts or disagreements regarding the accuracy or integrity of the content.

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