



**Review Article**

**SCREEN TIME AND ITS IMPACT ON MENTAL HEALTH**

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**ABSTRACT**

The recent advancements in technology had led to increased screen-based activities among all groups of individuals. Constant exposure to devices like smartphones, personal computers, and televisions can severely affect the mental health, increasing stress and anxiety and causing various sleep issues in both children as well as in adults. It triggers dopamine and related pathways in the brain which are associated with attention-deficit and hyperactivity disorders. Oftentimes, it can cause the induction of a state of hyper-arousal, increase stress hormones, de-synchronization of the body clock, the circadian cycle, alter brain chemistry and create a drag on mental energy and development. In Ayurveda, stress is considered a root cause of *Krodha* (anger). *Krodha* arises due to indulgence in *Rakta-Prakopak nidan* (vitiation of blood) which vitiates *Raja guna* (ignorance) causing stress and deranged mental faculties. As per W.H.O., we know health is defined as a state of total physical, mental and social well-being and not merely the absence of disease or infirmity, which is in line with the traditional definition of health described in Ayurveda as “सम दोष समाश्रितश्च सम धातु मल क्रियाः प्रसन्नात्मेन्द्रियमनः स्वस्थ इत्यभिधीयते ||”. Health is defined as the equilibrium of *Dosas* (humours), *Dhatu*s (fundamental tissue), *Agnis* (digestive and metabolic fire) and *Malas* (waste products) as well as mental and spiritual well-being. Ayurvedic approach to mental health proves a promising result towards attaining mental integrity through the perfect blend of yoga, meditation, *Medhya-rasayan* (nootropic herbs), panchakarma therapies, lifestyle, and diet modifications in treating stress, anxiety, and other mental illnesses.

**INTRODUCTION**

**What is screen time?**

According to the World Health Organisation (WHO) screen time (ST) is defined as ‘time spent passively watching screen-based entertainment (television, computer, mobile devices, etc.), and it does not include active screen-based games where physical activity or movement is required. [1] According to the recent update of the W.H.O. in 2021, it is estimated that 14% of the young population between the age group of 10 and 19 years suffers mental health problems which represents globally 13% of all diseases that affect this population. The use of screens has been amplified in

the COVID-19 pandemic due to isolation and restrictions on other leisure activities. [2]



**Fig. 1: Screen addiction at early age, teenage, adult age and in older people**

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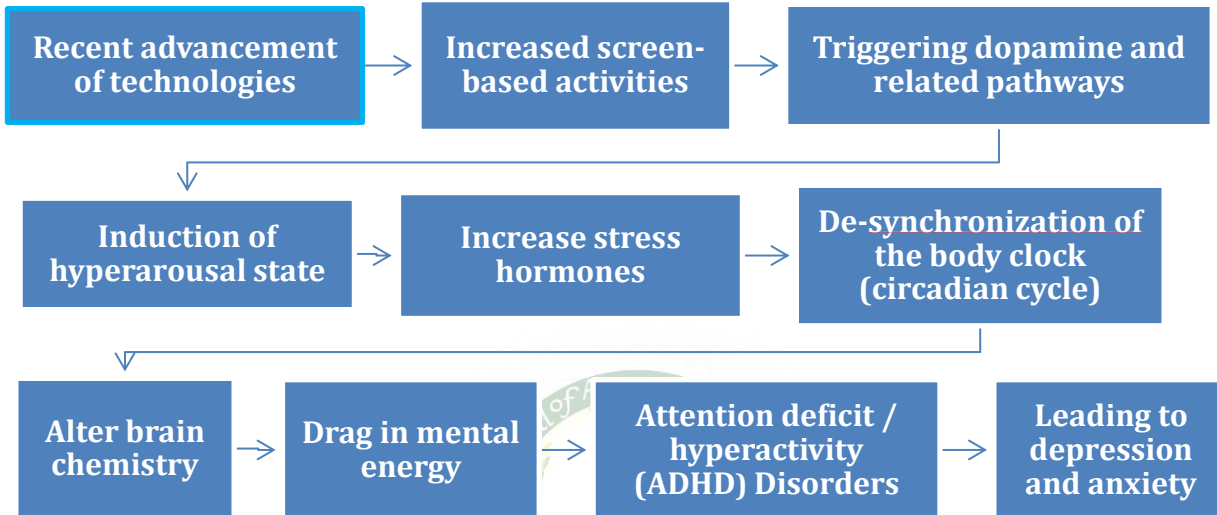
Since the widespread use of digital gadgets leads to a rise in sedentary behaviour and possible risks to one's physical, mental and general well-being. Excessive screen time can also affect in terms of social interactions and cognitive development<sup>[3]</sup>. According to Acharya Charaka, there are three primary causes of illness that affect both *Sareera* and *Manas*. It is *Asatmya- Indriyarthā samyoga* (unhealthy sensory perception) and *Prajnaparadha* (intellectual blasphemy) and *Parinama* (time/seasonal changes). The three recognized causes of *Trividha hetu* (imbalance or disorders) are- perverted union

(*Mithyayoga*), insufficient union (*Hinayoga*) and over-union (*Atiyoga*) of *Artha* (senses) and *Kala* (time), i.e. *Asatmyendriyarthā Samyoga and Karma* (act).<sup>[4]</sup>

**Impact on mental health<sup>[5,6]</sup>**

Excessive screen time causes decreased physical and cognitive abilities leading to lower levels of emotional understanding which in turns causes lower emotional reactivity with increased aggression and impulsive/aggressive behaviours leading way to depression and anxiety.

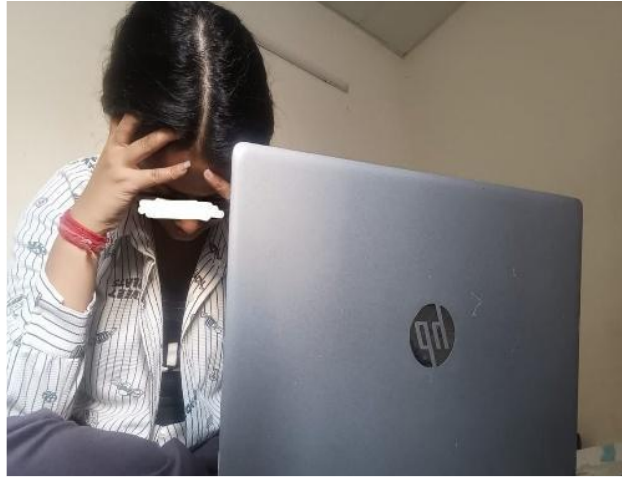
**Possible Pathway of degradation of mental health (Flow chart 1).<sup>[7]</sup>**



Research has shown a correlation between increased screen time and increased levels of depression, anxiety and other mood disorders. One study has found that adolescents who spend more than five hours per day on digital devices are 70% more likely to have suicidal thoughts or actions than those who spend less than an hour a day.<sup>[8]</sup> The Centre for Disease Control and Prevention (CDCP) reported in 2025 that teens who spend more than four hours per day on screens are significantly more likely to experience anxiety and depressive symptoms.<sup>[9]</sup> Additionally, excessive screen time can impact sleep which has been linked to depression and can also interfere with cognitive development among young individuals and reduces attention span, decrease creativity, and limits problem-solving abilities.<sup>[10]</sup>

**Prevalence of Screen-time-** Table no.1: Prevalence of screen time amongst children in India and globally <sup>[11] [12,13]</sup>

Category	Age group	Average Screen Time (Hours)
India	(Preschoolers 2-6 years)	2.7 hours
India	School-aged children 6-14 years	2.77 hours
Globally	Children between 0 – 21 years	2.67 hours (pre-pandemic) 4.38hrs (during pandemic)
Globally	Children more than 5 years	1.91 hours (pre-pandemic) 2.65hrs (during pandemic)
Globally	Children between 8-18 years	7.5 hours (entertainment)
Globally	8- to 12-year	5.5 hrs per day using screen media
Globally	13 to 18 years	8.5 h per day using screen media



**Fig 3: Showing depressive event among teenagers due to screen over use**

**Ayurvedic perspective of mental health**

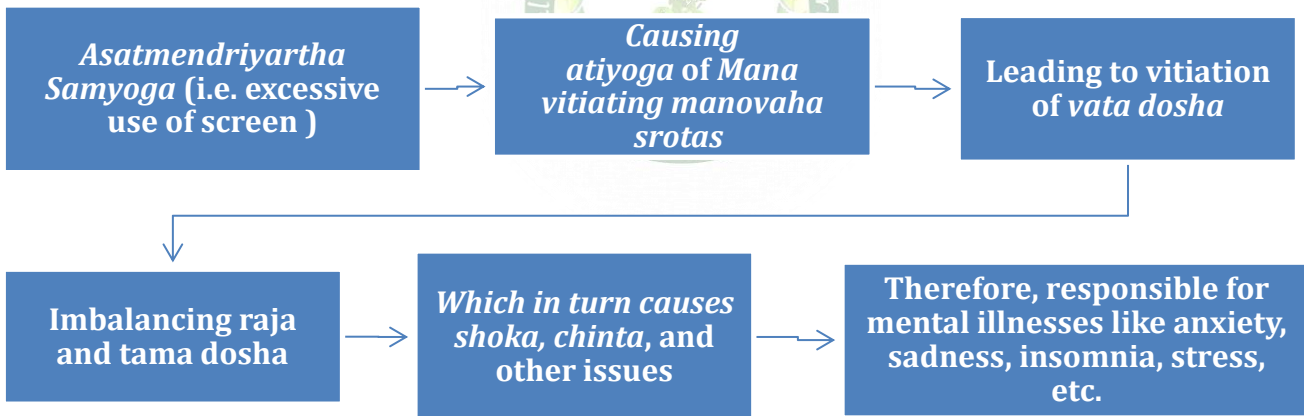
We know that mind is one of the substratums of diseases. It has its own one *Guna* i.e., *Satva* and two *Doshas* i.e., *Raja* and *Tama*. Stress in Ayurveda can be correlated with *Manas rogas*.

**Nidana of Manas roga**

विभ्रान्तबहुदोषाणामहिताशुचिभोजनात् । रजस्तमोभ्यां विहते सत्त्वे दोषावृते हृदि ॥ ४ ॥

चिन्ताकामभयक्रोधशोकोद्वेगादिभिस्तथा । मनस्यभिहते नृणामपस्मारः प्रवर्तते ॥ ५ ॥

*Nidana of Manas roga* are many folds- like *Ahita asuci bhojan* (unwholesome and dirty food) *Chinta* (excessive thinking), *Kama* (passion), *Bhaya* (fear), *Krodha* (anger), *Sokha* (unhappy thinking), *Chitto- udvega* (anxiety), *Lobha* (greed), *Mada* (arrogance), *Matasarya* (jealousy) *Moha* (confusion), *Irshya* (envy), *Harsha* (exhilaration). Unwholesome food and regimen, suppression of *Satva guna* (psychic qualities) (Cha Chi 10/4-5) etc. [14,15]



Excessive screen use disrupts the balanced functioning of *Vata Dosh*, leading to various neurological disturbances. It depletes energy by over stimulating dopamine pathways, resulting in reduced motivation and lethargy. Respiratory functions become irregular due to shallow breathing and stress-induced sympathetic dominance. Motor and sensory activities is affected as prolonged inactivity impairs coordination and increases sensory overload.[16,17],18]

**Treatment**

Today's altered human lifestyle is interfering with the equilibrium of mind and body and is a major source of stress. Treatment principles as per Ayurveda include a balanced diet, yoga, pranayama (deep, slow breaths calms the nervous system, signaling safety), meditation (calms the mind which reduces stress

hormones and enhances focus) which focuses on treating both mental faculties and bodily derangements.

Other aspects are *Daiva vyapashraya* (divine therapy), *Yukti vyapashraya* (pharmacological treatment), *Satva vajaya chikitsa* (promoting cognitive behavioral techniques), *Aachara Rasayana* (behavioral rejuvenation), *Dinacharya* (regular sleep/wake times), and Yoga (controlled breathing) treatment to treat these conditions. Ayurveda describes mental wellness philosophically and spiritually. Again, Ayurvedic management includes *Nidanparivarjan* (avoiding the cause), *Dinacharya* (maintain regular sleep/wake times, hygiene, and meals to create stability), *Ritucharya* (following seasonal cleansing therapies for mind), *Sadvrut* (good conduct), *Naishthiki Chikitsa*

(eliminating desires) *Satvavajaya Chikitsa* (mind centered therapy), *Satvika diet* (Fresh, whole foods, avoiding processed items that can aggravate mental imbalance) and *Aushadh Sevan* (Nootropic drugs), *Rasayan* (Rejuvenating therapy), *Abhayanga* (oil massage) and *Yoganidra* (a guided meditation practice by lying down) to calm the nervous system and induces deep relaxation.<sup>[19]</sup>

"Digital detox", which means to restrict from screen usage from their own including computers, smartphones, and social media are incorporated as well as with *Indriya nigraha* (self- control) that is

abstention from screen time by educating older children on the harmful effects of screen addiction on the mind and senses.<sup>[19,20]</sup>

**1. *Yukti vyapashraya chikitsa-*** *Medhya dravyas-* *Mandukaparni*, *Yashtimadhu*, *Guduchi*, and *Shankhapushpi* are mentioned in Charak Samhita. These drugs show antioxidant, neuro-regenerative, anxiolytic, anti-amnestic, nootropic, antidepressants, adaptogenic and improved cognitive properties. These brings down serotonin levels with reducing stress hormones such as adrenaline and nor-adrenaline and acts similar to meditation.<sup>[19,21]</sup>

**Table 1: *Medhya dravya* and their therapeutic actions**

S.No.	<i>Medhya Dravya</i>	Therapeutic action
1.	<ul style="list-style-type: none"> <li>• <i>Mandukaparni</i></li> <li>• <i>Yashtimadhu</i></li> <li>• <i>Guduchi</i></li> <li>• <i>Shankhapushpi</i></li> </ul>	Cognitive enhancement and reduces brain hyperactivity.
2.	<i>Aswagandha</i>	Adaptogenic, regulate cortisol (stress hormone).
3.	<i>Brahmi</i>	Supports brain function, reduces, improves concentration.
4.	<i>Tulsi</i>	Reduces stress, anxiety & depressive symptoms.
5.	<i>Jatamanshi</i>	Neuroprotective

**2. *Daivya vyapashraya chikitsa-*** It comprises of *Mantra* (prayer), *Ausadhi* (medicaments), *Mani* (wearing significant divine stones), *Mangala* (auspicious rituals), *Upahara* (offering to deity), *Homa* (religious rites), *Niyama* (strict self- disciplinary), etc., it eradicates diseases due to its divine influence i.e., empirical power (*Prabhav*).<sup>[20]</sup>

**3. *Satva vajaya chikitsa-*** It includes having control over the *Manas* (psyche) such as to control it or withdraw it from coming into contact of the *Nidan* (digital detox).<sup>[19]</sup>

the usage of screen-based activities increased amongst children. Earlier kids who engage in social media were of four years old in 1970 to now the age has been come to four months. Long term screen time usage showed many problems associated physically and mentally-behavioural problems, sleep irregularities, poor academic performance, derangement in cognitive areas such as executive functioning, sensorimotor development, and academic outcomes.<sup>[11,12,13]</sup> The Quebec Longitudinal Study of Child Development cohort study found a negative effect on cognitive activities associated with increased screen -based timings. Also, there is a significant reduction in maths solving activities by 6% and reduction in class performance by 7%. Another Research conducted in Spain and United States showed poor academic scorings of mathematics and English with increased usage of screen. In boys there is significant decrease in emotional understanding associated with gaming but not in girls. Major Depressive Events in adolescents have resulted from 8.7% in 2005 to 11.3% in 2014. And the blue light emerging from screen has a negative effect upon body's circadian rhythm by having negative effect on the melatonin hormone (sleep -promoting hormone). Screen usage for more than 2 hours can lead to drastically reduction on melatonin hormone and not only from 1 hour usage.<sup>[11,12,13,22]</sup> In case of excess screen time use it causes excessive and wrong utilisation of mind causing vitiation *Vata dosas* which in turns vitiates the substratum of mind leading to various mental derangements.



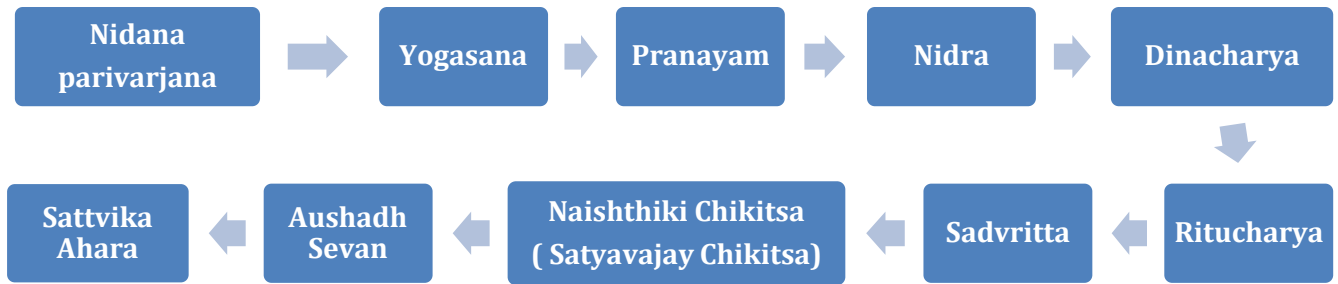
**Fig 4: Abstinance from social media and doing meditation**

**DISCUSSION AND RESULTS**

Some reports world-wide shown the following data-<sup>[11,12,13]</sup>

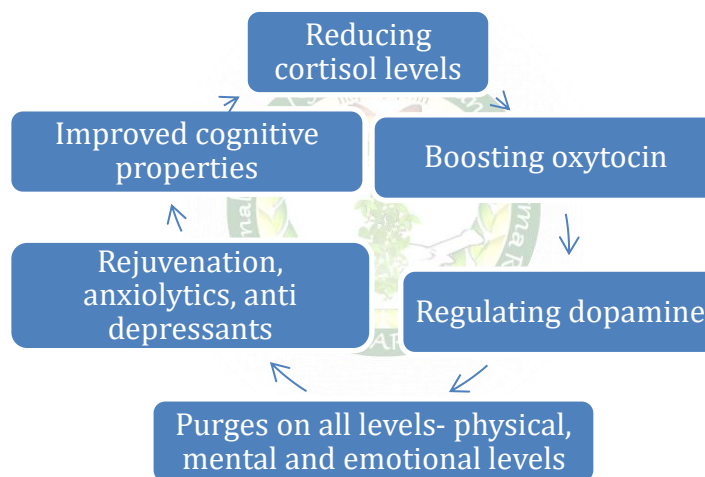
Update from W.H.O. 2021 showed 14% of young people between 10 and 19 years have mental problems and globally it represents 13% of all diseases that affect this population. During COVID-19 pandemic

### Stress management in Ayurveda



### It helps in

These practices show antioxidant, neuro-regenerative, anxiolytic, anti-amnesic, nootropic, antidepressants, adaptogenic and improved cognitive properties. *Panchakarma (Shiro-dhara)* therapies cause deep restfulness by bringing down *serotonin* levels with reducing stress hormones such as adrenaline and non-adrenaline. Thus, Ayurvedic approach is holistic and preventive and managing mental disorders caused by excessive screen time usage by balancing the *Dosas*, calming the nervous system and building *Ojus* (immunity) leading to boosting of happy hormones (serotonins) and induces deep relaxation. Lifestyle modifications are equally important in managing stress. Following a regular sleep routine and ensuring seven to eight hours of quality sleep balances the circadian rhythm. Spending time in nature and engaging in mindful activities contribute significantly to overall well-being.



### CONCLUSION

Present study implicates that smartphone addiction, with its associated health repercussions, can be effectively addressed through Ayurvedic principles and effectively mitigate the negative health consequences linked to mobile device addiction. As modern society continues to grapple with the challenges posed by technology, ancient wisdom from Ayurveda offers a valuable, holistic approach to managing smart gadgets addiction and promoting overall well-being. Ayurveda emphasizes on maintaining a healthy balance between mind and body by holistic approach including *Dinacharya*, *Sadvritta*, *Rasayana*, and yoga practices that can be tailored to modern needs. Integrating these in daily life provides a sustainable framework in preventing and managing screen addiction, thus promoting balanced mental health.

Conventional medicine often focuses on symptom management with medications while Ayurveda addresses the root causes of anxiety and stress and manages it by balancing doshas, using therapeutic techniques, and altering one's lifestyle. Ayurveda offers a useful adjunct to modern mental health treatments by combining traditional wisdom with scientific proof thus proving to be effective in treating deranged mental conditions with no side effects and calming the body and mind.

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