Assessment of correlation of Gadget Addiction with different Manas Prakriti among children: An observational study

Research Article

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Abstract

Background: *Prakriti* plays an important role in the maintenance of a person`s health. It also influences the life style and choices of a person. Any type of addiction is related to choosing the unwholesome thing over the wrong; hence, it is necessary to study the correlation between gadget addiction and *Prakriti.* Objectives: This study aims to investigate the correlation between gadget addiction and various *Prakriti* types among children, shedding light on potential connections between Manas *Prakriti* and the prevalence of gadget addiction in this demography. Methods: A cross-sectional observational study was conducted on 200 school-going children using Young's internet addiction test scale and *Prakriti* examination with the Ayusoft software. Statistical analysis, including t-tests, was employed to assess the correlation between gadget addiction and different *Prakriti* types. Result: The examination of participants' *Prakriti* revealed that 52% exhibited *Rajas Prakriti*, 37.5% displayed *Tamas Prakriti*, and 10.5% showed *Satvik Prakriti.* The statistical analysis demonstrated a robust t-value of 22.79 and a highly significant p-value (<0.01), indicating a strong and statistically significant correlation between gadget addiction and *Manas Prakriti* among the studied children.Conclusion: The findings suggest a compelling association between gadget addiction and specific *Prakriti* types, particularly *Manas Prakriti*. This insight contributes to our understanding of the intricate relationship between mental constitution and technology-related behaviors in children. Further research exploring the nuanced aspects of this correlation could inform targeted interventions and preventive measures for gadget addiction among children.

Keywords: *Ayurveda,* Addictions, Gadget Addiction, Internet, *Kaumarbhritya, Prakriti.*

Introduction

The term "*Prakriti*" describes an individual's "nature" or "natural constitution (1). Both *pra* and *kriti* allude to the "source of origin" or "beginning." According to Ayurveda, the *Panchamahabhutas* (*Akash, Vayu, Teja, Jala, and Prithvi*) are the fundamental components of the physical universe, which includes the human body (2). These *Mahabhutas* manifest as *Tridoshas,* both *Sharir (Vata, Pitta, and Kapha)* and *Manas Dosha* (*Raja, and Tama); while all these *Sharir (Vata, Pitta, and Kapha)* and *manas doshas* are present in every human, only one of them individually or combined, two or all, is dominant, and this determines the individual's *Prakriti*(3) (4). *Vata, Pitta, Kapha*, and *Manasika Doshas* (functional psychological variables) directly govern all physiological processes; hence, the predominant *Dosha* is a specific kind of *Prakriti*. In

general, a person's lifestyle is the outcome of their combined psychological and physical qualities, which are reflected in their habits, behaviour, nutrition, and way of life (5). *Prakriti* has a significant impact on therapies, preventative medicine, and diagnosis since it accentuates individuality (6). Hence, it is necessary to examine the *Prakriti* of any individual before starting the treatment. Examination of *Prakriti* is also important in the prevention of disease, as many diseases can occur due to the improper lifestyle of a person, which is influenced by his *Sharir* and *Manas Prakriti*. In this era of technology, children are suffering from a silent addiction identified as gadget addiction. It can be defined as excessive time devoted to gadget use, and behavioural narrowing can lead to dramatic psychosocial outcomes. This phenomenon is referred to as "gadget addiction" (7). Gadget addiction is an important contributing factor in nearly 50% of all relationship and family problems (8). It also has a physical impact, like severe headaches, carpal tunnel syndrome, eating disorders, and sleeping problems (9). Addiction can be defined as a process in which a behaviour, serving both to elicit pleasure and to alleviate internal discomfort, is repeatedly engaged in a pattern marked by an inability to control the behaviour (powerlessness) and its persistence despite the

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Published online in http://ijam.co.in

ISSN No: 0976-5921

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occurrence of significant adverse consequences (unmanageability)(10). Gadget addiction is an issue of social concern; its prevalence is variable among different geographical areas and socioeconomic conditions. Children are future adults; hence, it is necessary to de-addict them as early as possible. *Prakriti* plays an important role in the maintenance of a person`s health. Hence our ancient seers studied the association between various physical and mental diseases with *Prakriti. Prakriti* is not only the physical constitution of a person, but it also influences the individual's personal and social conduct in terms of thoughts, motivation, response, intellect, logic, and emotion(11). Any addiction is a problem of choice, that is, an addicted person chooses unwholesome substances over wholesome ones. This decision of choice or the nature to find pleasure is also the effect of *Prakriti*. Hence, to study the association between gadget addiction and *Prakriti* is a need of time. A research gap exists with special reference to the association between gadget addiction and *Prakriti*. This study aims to study the correlation between gadget addiction and *Prakriti* among children.

Aims & Objective

To evaluate the association between gadget addiction and *Prakriti* of children.

Materials and methods

Ethical consideration: The study was approved by Institutional ethics committee of Mahatma Gandhi Ayurved college Hospital and research centre Salod, Wardha (IEC no-MGACHRC/IEC /Jan-2023/668).The purpose and process of study was informed to the guardian of participants, and assents were obtained before data collection.

Study Design: Cross-sectional observational study.
Place of study: Mahatma Gandhi Ayurved College and Hospital Research Center in Wardha, Maharashtra, India.
Study period: 19-01-2023 to 26-12-2023.
Follow-up: The research involved a single-time examination of volunteers.

Method of data collection
a) Initial screening: It was carried out when patient visits the out patient department of Mahatma Gandhi Ayurved College Hospital and Research Centre Salod (H), Wardha using a proforma that included both inclusion and exclusion criteria.
b) Screening for Gadget Addiction: Those participants meeting the inclusion criteria were screened for to addiction gadget such as Smartphone, video game, by using the Young's Internet Addiction Test Scale questionnaire. A total of 200 participants, were identified as fulfilling the criteria for gadget addiction.
c) Prakriti analysis: 200 Gadget-addicted children underwent a detailed assessment for *Prakriti* (*Deha and Manas Pakriti*) analysis using Ayusoft software.

d) Statistical analysis: Data was arranged systematically according to gender, economic status, *Deha Prakriti* and *Manas Prakriti* then statistical analyses of data were done by using t-tests to assess the correlation between gadget addiction and different *Prakriti* types.

Avoiding bias: Information about gadget addiction was obtained from a variety of sources; including friends, parents and teachers, so order to mitigate participant bias. Participants were given the assurance of confidentiality to promote truthful and precise reporting. Leading and condemning questions were steered clear of in favour of neutral questioning. When healthy participants were included in the sample, we first performed a screening to make sure that none of the participants had any underlying medical issues that would have an impact on the *Prakriti* examination.
The following criteria were considered for inclusion and Exclusion.

Inclusion Criteria
- Subjects irrespective of gender, religion, and socioeconomic status.
- Age group between 6-16 years
- Participants and parents who will give written informed consent to include in the study.

Exclusion Criteria
- Subjects aged below 6 years and above 17 years.
- Subjects suffering from behavioral disorders.
- Subjects suffering from genetic disorders
- Subjects suffering from any systemic diseases.

Cite for Assessment
Subjective Criteria
Deha & Manas Prakriti parikshan with the help of ayusoft software(12) (13)

AyuSoft software has 90 items which are to be rated by the clinician trained in applying the software. The questionnaire in their convenient language includes aspects of both history taking and examination. Each person's *Prakriti* is determined by calculating the relative percentage of each *dosha* based on their unique set of characters. The output or dominating percentage of a *dosha*, is what determines that person's *Prakriti*.

Objective Criteria
Young's Internet addiction test scale (14): Young's Internet Addiction Test (IAT) scale, comprising 20 items rated on a Likert scale from 0 to 5 (0 = does not apply, 1 = rarely, 2 = occasionally, 3 = frequently, 4 = often, 5 = always), was translated into the local language for the purposes of this study. Based on the total score, participants are categorized into four groups according to Young's established cutoff values: <20 (below average users), 20–49 (average users), 50–79 (occasional/frequent problems with internet use), and 80–100 (significant problems with internet use). The questionnaire typically requires 5–10 minutes for completion.

Table 1: Association of Gadget addiction with Gender

	Frequency (N)	Percent	Mean	Std. deviation	Std. error	Interval for mean		Minimum	Maximum	t	p
						Lower bound	Upper bound				
Male	117	41.5	56.04	18.54	1.71	52.64	59.43	31	95		
Female	83	58.5	58.65	21.16	2.32	54.02	63.27	31	99	0.85	0.35
Total	200	100	57.12	19.66	1.39	54.38	59.86	31	99		

Table 2: Association of Gadget addiction with Economic status

	Frequency (N)	Percentage	Mean	Std. deviation	Std. error	Interval for mean		Minimum	Maximum	t	p
						Lower bound	Upper bound				
Below poverty	13	6.5	55.769	16.094	4.4637	46.044	65.495	33.0	79.0		
Lower income	23	11.5	52.826	15.33	3.1981	46.194	59.459	35.0	83.0		
Mid income	76	38	58.382	21.14	2.4253	53.550	63.213	31.0	99.0	0.49	0.68
Upper income	88	44	57.364	19.93	2.1252	53.140	61.588	31.0	96.0		
Total	200	100	57.125	19.66	1.3906	54.383	59.867	31.0	99.0		

Table 3: Association of Gadget addiction with *Deha Prakriti*

	N	Percentage	Mean	Std. deviation	Std. error	Interval for		Minimum	Maximum	t	p
						Lower bound	Upper bound				
Kapha Pittaja	45	22.5	60.289	21.56	3.21	53.81	66.76	31.0	97.0		
Kapha	31	15.5	57.226	20.07	3.60	49.86	64.59	32.0	94.0		
Pitta	45	22.5	56.600	18.93	2.82	50.91	62.29	32.0	96.0		
Pitta	28	14	55.964	19.66	3.71	48.33	63.59	31.0	99.0	0.46	0.80
Vata Kaphaja	20	10	58.100	15.60	3.48	50.79	65.40	37.0	95.0		
Vata	31	15.5	53.613	20.53	3.68	46.08	61.14	31.0	96.0		
Total	200	100	57.125	19.66	1.39	54.38	59.86	31.0	99.0		

Table 4: Association of Gadget addiction with *Manas Prakriti*

	N	Percentage	Mean	Std. deviation	Std. error	Interval for mean		Minimum	Maximum	t	p
						Lower bound	Upper bound				
Rajas	104	52	63.46	20.47	2.00	59.47	67.44	31.0	97.0		
Satvik	21	10.5	35.61	4.38	0.95	33.62	37.61	31.0	45.0	22.79	<0.01
Tamas	75	37.5	54.36	15.99	1.84	50.68	58.03	31.0	99.0		
Total	200	100	57.12	19.66	1.39	54.38	59.86	31.0	99.0		

Results

Out of the 200 participants, 83 (41.5%) were female, and 117 (58.5%) were male (Table no.1). A breakdown of economic status (Table no.2) revealed that 13 (6.5%) participants fell below the poverty level, 23 (11.5%) were categorized as having a low income level, 76 (38%) were in the middle-income bracket, and 88 (44%) belonged to the upper-income level group. Regarding *Deha Prakriti* distribution (Table no.3), 45 (22.5%) participants exhibited *kapha pittaja Prakriti*, 31 (15.5%) had *kapha vataja Prakriti* , 45 (22.5%) showed *pitta kapha Prakriti* , 28 (14.10%) demonstrated *pitta vata Prakriti* , 20 (10%) displayed *vata kapha Prakriti* , and 31 (15.5%) presented *vata pitta Prakriti* .An analysis of the association between gadget addiction and various factors revealed that the t value for gender association was 0.85 with a corresponding p value of 0.35(Table no.1). The association with economic status (Table no.2) yielded a t value of 0.49 and a p value of 0.68. *Deha prakriti* association with gadget addiction (Table no.3) produced a t value of 0.46 and a p value of 0.80. Lastly, the association between gadget addiction and *Manas Prakriti* (Table no.4) displayed a significant t value of 22.79 with a p value of <0.01.

Discussion

Conducted as an observational cross-sectional survey, the present study aims to explore the correlation between children's *prakriti* and gadget addiction. Numerous studies indicate a higher susceptibility to gadget addiction among children compared to adults,

Published online in http://ijam.co.in   ISSN No: 0976-5921

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prompting the selection of this particular age group for investigation. However, there is a scarcity of data and studies, especially concerning Ayurvedic perspectives. The gathered data in this study reveals that some children exhibited severe levels of gadget addiction. Given the one-time nature of data collection, it is acknowledged that these findings may be temporary, influenced by specific circumstances. Nevertheless, all the children were referred to the hospital for counseling and further management. Among the 200 participants (Table no.1), 117 (58.5%) were male, indicating a higher incidence of gadget addiction in male children compared to their female counterparts. Notably, no significant relationship was observed between the economic status (Table no.2) of gadget-addicted children and the addiction itself, possibly due to the affordability of gadgets in India. Furthermore, no significant associations were found between different *deha Prakritis* and gadget addiction (Table no.3). Upon assessing the *manas Prakriti* of children addicted to gadgets (Table no.4), it was revealed that 104 (52%) of them fell under the category of *rajas Prakriti*. This association can be explained by the inherent characteristics of *rajas Prakriti*, where individuals exhibit qualities such as passion, desire, and impulsive actions without prior consideration(15). Additionally, 75 (37.5%) were identified with *tamas Prakriti*, marked by traits like undisciplined behavior, mental imbalance, and misunderstandings(16). This alignment with *tamas Prakriti* aligns with the observed characteristics commonly found in children with gadget addiction. Furthermore, 21 (10.5%) were classified as having *satvik Prakriti*, a finding in accordance with expectations as individuals with *satvik Prakriti* typically display traits such as detachment and control over their senses(17).

A robust t-value (Table no.4) of 22.79 coupled with a very low p-value (<0.01) signifies a statistically significant and compelling correlation between gadget addiction and *Manas Prakriti*, as revealed by the results of the statistical study. These findings hold considerable importance in enhancing our understanding of the intricate interplay between mental constitution and gadget addiction.The substantial t-value of 22.79 indicates the magnitude and severity of the association between gadget addiction and *Manas Prakriti*. The high t-value suggests that the observed correlation is unlikely to be a result of chance, instilling confidence in the robustness of the connection between the two variables. On a practical level, the statistical findings suggest that individuals with a *Rajas* and *Tamas* mental constitution (*Manas Prakriti*) are more prone to displaying signs of gadget addiction.

This statistically significant association carries potential implications for our comprehension of the dynamic between technology use and mental health. Future investigations into the specific facets of *Manas Prakriti* linked with gadget addiction would be a logical next step in both research and practical application. Understanding these nuances could pave the way for targeted therapies or proactive measures. Moreover, considering the diversity in individuals' mental constitutions, this association may have broader implications for mental health practitioners, educators, and legislators aiming to address issues related to excessive gadget use. The interaction between Prakriti and gadget addiction might be influenced by a complex set of factors that are difficult to isolate and control for in a cross-sectional study.

Conclusion

The strong t-value (22.79) indicates a significant association between gadget addiction and Manas Prakriti. The very low p-value (<0.01) further supports the idea that the observed association is not likely due to random chance. Thus, it is possible to draw the conclusion that there is a statistically significant correlation between Manas Prakriti and gadget addiction based on these statistical results. Practically speaking, this implies that these two factors have a substantial relationship, and it might be crucial to investigate and comprehend the nature of this association in regard to mental constitution.

Data statement

Data was collected from a sample of 200 children aged 6-16 years from various schools in the regions of Wardha, India, during the period from 19-01-2023 to 26-12-2023. The collected data was anonymized to protect the privacy of the participants. Data was statistically analyzed to explore the correlation between gadget addiction scores and Prakriti of participants. The anonymized dataset supporting the findings of this study is available from the corresponding author upon reasonable request. Due to ethical considerations and privacy concerns, access is restricted to ensure the confidentiality of the participants' information.

Declaration of generative AI in scientific writing

In the preparation of this manuscript, the author(s) utilized language enhancement tools, including ChatGPT and Grammarly, to improve readability and linguistic clarity. Following the use of these tools, the author(s) conducted a thorough review and made necessary edits to the content, taking full responsibility for the final version of the publication.

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