Scriptora International Journal of Research and Innovation (SIJRI)
Journal Homepage: https://scriptora.org

STRATEGIES TO REDUCE DIGITAL OVERUSE AMONG CHILDREN – SPECIAL EMPHASIS ON STRUCTURAL REFORMS AND REGULATORY RESPONSES AT BOTH HOUSEHOLD AND INSTITUTIONAL LEVELS

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Abstract

This study investigates the pattern surrounding digital overuse among children and analyses the nuance regarding both quantitative and qualitative factors that influence problematic digital behaviour by a child. As digital technologies become increasingly accessible through phones, televisions and computers, protecting children's well-being has become essential. Using an interdisciplinary, literature-based approach combined with cross-country policy comparisons, the research evaluates how balanced rather than prohibitive approaches to digital use can maximise developmental benefits while minimising the harm.

The findings reveal that interventions should be tailored to children's age-specific developmental stages and socio-economic contexts. Digital use affects children's physical, mental, and emotional well-being across micro, meso and macro-level environments, highlighting the need for coordinated responses beyond individual behaviour change. The study emphasizes on the importance of structural reforms and regulatory responses implemented at both household and institutional levels. While excessive digital use poses risks, an optimal level of engagement can contribute positively to cognitive development, critical thinking, language acquisition, creativity, and academic learning.

The paper concludes that although child-centred behavioural interventions are necessary, effective responses to digital overuse require coordinated efforts by households, schools, institutions, and global policy actors.

Keywords: Behavioural Pattern, Digital Overuse, Emotional Well-being, UNICEF

1. Introduction

The pressing issue of digital overuse by children is one which has gained significance lately, requiring immediate attention on an international scale. While the rise of technology and its accessibility across almost every demographic group worldwide have been a great boon, with a further reach, out of necessity during the COVID-19 pandemic, technology and digital access comes with its own banes. The advancement of technology and digital accessibility has indeed eased daily life and communication, improved quality of education, resulted in better healthcare services, helped maximise productivity and more. These benefits have greatly resulted in the progress of many economies and increased quality of life. However, an important facet that is to be looked into by the global community is the consequent deterioration of child well-being due to excessive use of digital media and electronic devices.

As per Article 1 of the United National Convention on the Rights of the Child, *child* is defined as any person under the age of 18 years for legal, normative and rights-based purposes. According to the World Health Organisation's paediatric age grouping which is based on a continuous developmental phase, children may be classified in terms of

age groups into 4 groups: infants (birth to 12 months), young children (1 to 4 years), older children (5 to 9 years) and adolescents (10 to 19 years).

According to the International Journal of Environmental Research and Public Health (MDPI), *Digital Overuse* includes excessive or problematic use of digital devices and technologies, such as smartphones, computers, and video games, which can be associated with addictive traits and mental well-being issues.

The mental well-being, physical health and skills of a child is affected by primarily, the world of the child, that is, the child's lifestyle, relationships, networks, resources available, policies and context of prevailing circumstances. 48 child-related Sustainable Development Goal (SDG) indicators are relevant in this respect and shall form the fundamental principles in this research, structured around five fundamental domains of child well-being: Survive and Thrive, Learning, Protection from Harm, Safe and Clean Environment, and Life Free from Poverty.

Entertainment and recreation via videos, movies and gaming; social interaction and communication via texting apps and voice/video calls; learning and educational activities for watching educational videos, homework research and digital submissions, language-learning and using skill-based activities; creative and expressive activities; information-seeking and exploration; consumption and transactions; self-tracking and digital management.

Children access the digital world through several social media platforms, gaming apps and more recently, using AI chatbots. According to recent data, sample space being 1,458 U.S. teens ages 13 to 17, young people turn to a variety of platforms, but YouTube stands out for being used by nearly all teens, roughly nine-in-ten report ever using it, about six-in-ten or more say they use TikTok and Instagram, a smaller share say they go on Snapchat (55%), fewer use Facebook (31%) and WhatsApp (24%). No more than about one-in-five say the same of Reddit or X (formerly Twitter) [Pew Research Centre, December 2025].

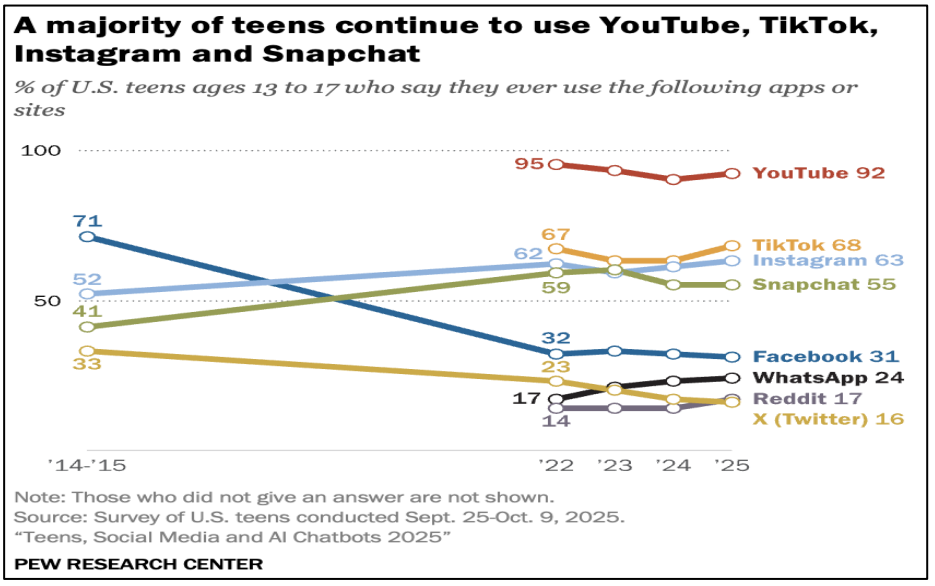

Fig. 1: Digital access to teenagers via social media apps

It may be observed clearly how children excessively use the said apps. Such overuse is a proven harm to a child's mental, physical and emotional well-being. At an age where resources in terms of facilities and infrastructure, are in fact, relatively more accessible to a sizeable portion of the population than they used to be, children tend to lead a sedentary lifestyle, exacerbated by the excessive use of phones, gaming devices, computers and televisions, despite having the scope to engage in active outdoor sporting activities.

2. Statement of Problem

Considering that the world approximately comprises 2.4 billion children under the age of 18 (about 25% of global population), the well-being of these young torchbearers of the future becomes a pivotal focus-point for families, educators, communities and policy-makers in an era of rapid rise and reach of technology in almost every household.

Digital use is often viewed as a blessing - it has far-reaching effects on a child's inter-personal skills, educational purpose, communication and language-acquisition skills; however, determining the nature of these effects, that is, positive or negative, attracts a multifaceted dimension, the nuance of which is to be clearly studied in order to provide legal and regulatory digital protection to children who might be vulnerable to adverse effects, while also striking a balance to reap the benefits of digital accessibility and use. Digital 'use' becomes 'overuse' when the child's digital activities begin to displace, disrupt, or dominate key aspects of a child's life.

The concept of 'screen time' is largely generalised and frequently associated with overuse. The failure to distinguish

the types of digital activities that children engage in, when defining 'excess' screen time provides a weak causal premise, leading to unfocussed and less effective regulatory response, both at a household as well as institutional levels. Overuse is contextual, functional, and outcome-based, not purely quantitative and so, it becomes fundamental to make such distinction.

3. Research Questions

1. How can digital overuse among children be effectively defined and indicated beyond aggregate screen-time metrics, accounting for activity type and functional impact?
2. What is the relationship between digital overuse and key developmental outcomes in children, including language acquisition, social interaction, emotional regulation, and sleep patterns?
3. How do parental and household digital regulation styles moderate the relationship between children's digital use patterns and their mental health and emotional well-being?
4. How do institutional policies, regulatory framework on AI-driven personalisation and engagement mechanisms, and national economic regulations governing digital platforms influence children's exposure to digital overuse and associated well-being outcomes?

4. Scope of Study

- This study examines digital overuse among children and its implications for child well-being through a balanced, non-prohibitive lens.
- It focusses on mental and emotional well-being, vulnerability, and resilience, and conceptualises digital overuse as distinct from both normative digital use and clinical addiction.
- The study is limited to secondary data sources, including academic literature, policy documents, and institutional reports, and does not involve primary data collection or clinical assessment.
- While the study engages with national policy and regulatory frameworks, including AI-driven platform design, it does so at a conceptual and policy level rather than through technical evaluation.
- The findings are therefore interpretive and exploratory in nature, intended to inform future empirical research and policy development.

5. Research Gap

Conceptual Gap

Though there is a large database comprising quantitative metrics such as screen time, most used digital applications by children, there is very limited conceptual work on the fundamental principle in determining when digital use becomes overuse through a multidimensional perspective and factors inducing a harmful digital behavioural pattern. There is limited literature with a streamlined focus on strategic governance-related intervention and regulation on tech companies owning digital platforms, which can have direct effects on a child's well-being. Majority of the studies focus on the clinical and educational aspects of well-being of the child, which address only a few aspects of the issue at hand.

Contextual Gap

Most of the existing research is based on samples aimed to study digital behaviour, overuse and consequent impacts, comprising children from specific geographical regions such as North America and Western Europe with a considerably small sample size, while regions such as Middle and East Asia, Africa, Latin America and Australia have had limited representation. Further, the socio-economic background and context of upbringing of a child is not considered sufficiently while determining the cause of digital overuse, besides solely the screentime.

Methodological Gap

While the literature on digital overuse by children is extensive for adolescents, there is less evidence, substantiation and strategies, specifically for persons in the phase of early or middle childhood, or those in the transitional stages such as pre-adolescence (9 to 10 years). Additionally, the period of emerging adulthood (18 to 24 years) remains largely under-examined within developmental trajectories, despite ongoing cognitive and emotional maturation. This age-related research gap limits understanding of developmental variation in digital engagement, risk exposure, and resilience processes. Data on adolescents have been studied more due to accessibility to their digital activity on various social media platforms, digital use pattern and surveys conducted on such platforms in this view. Similar feasible methods have not yet been adopted significantly to other age groups, limiting scope for strong premise-based responses.

6. Research Objectives

1. To examine how digital use among children transitions into digital overuse, and to understand the impact of excessive digital exposure to children through the various age-based phases of development.

2. To analyse the effects of digital overuse on multiple dimensions of child well-being, including mental health, emotional vulnerability, resilience, and daily functioning.
3. To assess the role of parental and household regulation practices in moderating the relationship between children's digital use patterns and well-being outcomes, with emphasis on balanced rather than prohibitive approaches.
4. To evaluate how national policy and regulatory frameworks, including those addressing AI-driven platform design and personalisation, can contribute to child-centred strategies for reducing digital overuse.

7. Research Hypothesis

- H01: Digital overuse is associated with lower overall child well-being across health, learning, and psychosocial domains
- H02: The association between digital overuse and child well-being is stronger in socio-economically constrained settings with limited access to offline recreational alternatives
- H03: Regulated use of digital media and electronic devices is positively associated with holistic and all-round development of a child
- H04: Government economic, regulatory and legal policies play a crucial role in digital protection of a child

8. Research Design

This study is analytical cum conceptual, based on the following:

a. Theories in psychology literature to understand the causal foundation of digital overuse by children
b. Statistical study of selected countries to infer the role of Socio-Economic Status (SES) in inducing problematic digital behaviour by a child
c. Conceptual analysis of existing national policies to curb digital overuse by children introduced by different countries and providing suggested strategies to promote digital safety and well-being of the child

Data Design

Data, where used and interpretated have been obtained from credible secondary sources such as UNICEF, World Bank and World Population Review. These data span country-wise population, proportion of child population, country-wise social media users and Gross Domestic Product (GDP) per capita. The data was selected to align directly with the research objectives and hypotheses.

9. Analysis and Discussion

As per a US-govt. authorised website, 'screentime' is a term used for activities done in front of a screen, such as watching TV, working on a computer, or playing video games. However, it cannot be the *prima facie evidence* in determining digital overuse. It is crucial to consider other attributes as well. In addition to the total time spent online, understanding the composition of screentime is necessary to study what type of impact the resultant screentime has on the child.

Unless specifically disaggregated, most studies do not make the conceptual distinction that screen time does not by default imply leisure screen time and such distinction is a must while formulating strategies to reduce digital overuse in a generation where technology has become an indispensable part of the education system. This can be explained by taking the example of the pandemic. In 2020, when lockdowns were imposed across the world, average screentime in India, for instance, jumped by 25%. It is not appropriate to conclude that this jump was only due to activities like gaming, binge-watching and others, as it was the same period during which education took a revolutionary transition into digital mode, from attending online classes to online homework submissions, which had contributed significantly to the rise of screentime.

Responses primarily depending on screentime, therefore, may not be fully effective in real-life complex scenarios. Strategies to thwart harmful effects of digital overuse must be formulated taking into account the following dimensions:

i. Psychosocial conditions affecting the child
ii. Socio-economic background of the child
iii. Digital activities of the child

The above dimensions shall be discussed below:

i. <u>Psychosocial conditions affecting the child</u>

Factors such as family environment, peer relationships, school, trauma & life events, the child's self-concept and coping skills are key in influencing a child into excess use of digital media and devices. Where a child experiences

poor familial support or is a victim of bullying at school, suffers from low self-esteem and emotional regulation, he/she who lacks coping skills, generally tend to avoidance and if the required support is not obtained offline, they often seek them online.

Therefore, if screentime of a child is high and these conditions are appliable to the child, then definitely the screentime is harmful.

The following theories further help substantiate the above:

a. Lazarus & Folkman - Stress and Coping Theory

According to Lazarus and Folkman, avoidance is an emotion-focused coping strategy used when the child perceives the stressor as uncontrollable. Avoidance reduces emotional distress temporarily. For instance, a child scared of exams avoids studying and scrolls on the phone to escape anxiety.

b. Behaviourism - Negative Reinforcement Theory by Skinner

Behaviour increases if it removes something unpleasant. Avoidance removes anxiety and so one tends to repeat this cycle. For example, a child sometimes starts binge-watching in the time he/she is required to work on homework. When homework is avoided, there is a temporary reduction in anxiety levels and the avoidance repeats.

c. Attachment Theory (Bowlby & Ainsworth)

Insecure attachment may lead children to adopt avoidant coping strategies due to lack of perceived emotional safety. Emotionally unsupported child withdraws into digital media instead of expressing distress.

d. Cognitive Theory (Beck)

Avoidance is driven by maladaptive cognitions that exaggerate threat and underestimate coping ability. Children who have core negative beliefs tend to engage in digital activities to protect their self-esteem.

e. Erikson's Psychosocial Development Theory

Viewed through Erikson's psychosocial theory, digital overuse among children can be understood not merely in terms of time spent on screens, but in relation to the developmental tasks characteristic of different life stages. Digital engagement becomes problematic when it displaces or distorts opportunities necessary for resolving stage-specific psychosocial tensions, such as autonomy, initiative, competence, and identity formation.

ii. Socio-economic background of the child

Digital overuse among children cannot be fully understood without considering socio-economic context, as similar levels of screen time may reflect substitution for constrained resources in some households and discretionary use in others, leading to divergent well-being outcomes. Understanding the 'context' of use facilitates adopting more streamlined approach towards reducing digital overuse by a child.

This dimension can be analytically studied by observing whether a relationship can be established between the degree of accessibility and number of child social media users on a country-wise basis.

Data regarding child population per country has been obtained from United Nations International Children's Emergency Fund (UNICEF) datasets, Gross Domestic Product (GDP) per capita data from World Bank datasets and the number of social media users per country from World Population Review website, all data being for the year 2023.

Table 1: Data used for computing Spearman's Rank Correlation Coefficient

		POPULATION			SOCIAL MEDIA USERS		GDP PER CAPITA (y)	RANK	
	COUNTRY	TOTAL	CHILD	CHILD%	TOTAL	CHILDREN (x)		RANK(x)	RANK(y)
1	United States	34,34,77,335	7,41,12,182	21.5770	24,60,00,000	5,30,79,475	82,305	48	48
2	United Kingdom	6,86,82,962	1,44,03,544	20.9711	5,71,00,000	1,19,74,474	49,201	36	42
3	Canada	3,92,99,105	72,93,189	18.5582	3,31,00,000	61,42,749	54,220	23	44
4	Germany	8,45,48,231	1,40,58,694	16.6280	7,09,00,000	1,17,89,264	53,940	35	43
5	France	6,64,38,822	1,36,24,729	20.5072	5,21,00,000	1,06,84,241	44,691	34	40
6	Japan	12,43,70,947	1,78,57,722	14.3584	9,20,00,000	1,32,09,761	33,836	37	38
7	South Korea	5,17,48,739	70,43,359	13.6107	4,76,00,000	64,78,687	33,121	24	36
8	Australia	2,64,51,124	57,38,750	21.6957	2,13,00,000	46,21,179	64,836	20	47
9	Netherlands	1,80,92,524	33,40,101	18.4612	1,55,00,000	28,61,489	64,572	15	46
10	Sweden	1,05,51,494	21,89,740	20.7529	87,00,000	18,05,501	55,567	10	45
11	Norway	55,19,167	11,09,943	20.1107	46,00,000	9,25,092	87,497	4	50
12	Singapore	57,89,090	8,83,186	15.2560	51,00,000	7,78,058	85,412	2	49
13	Italy	5,94,99,453	89,55,209	15.0509	4,39,00,000	66,07,349	39,065	25	39
14	Spain	4,79,11,579	78,81,820	16.4508	4,07,00,000	66,95,460	33,509	27	37
15	New Zealand	51,72,836	11,47,850	22.1900	42,00,000	9,31,978	48,655	5	41
16	China	1,42,25,84,933	28,57,92,681	20.0897	1,00,00,00,000	20,08,96,744	12,951	50	28
17	Brazil	21,11,40,729	5,10,43,668	24.1752	15,24,00,000	3,68,42,986	10,378	46	26
18	Mexico	12,97,39,759	3,90,19,529	30.0752	9,40,00,000	2,82,70,715	13,826	43	29
19	Czechia	1,08,09,716	20,43,093	18.9005	81,00,000	15,30,942	31591	8	35
20	Russia	14,54,40,500	3,01,81,250	20.7516	10,60,00,000	2,19,96,710	14,159	42	30
21	South Africa	6,32,12,384	1,97,11,587	31.1831	2,58,00,000	80,45,242	6,023	30	22
22	Malaysia	3,51,26,298	94,79,744	26.9876	2,68,00,000	72,32,676	11,379	28	27
23	Thailand	7,17,02,435	1,33,83,492	18.6653	5,23,00,000	97,61,965	7,195	32	24
24	Indonesia	28,11,90,067	8,41,98,626	29.9437	16,70,00,000	5,00,05,929	4,876	47	21
25	Argentina	4,55,38,401	1,22,32,291	26.8615	3,64,00,000	97,77,581	14,187	33	31
26	Chile	1,96,58,835	41,38,196	21.0501	1,66,00,000	34,94,309	17,067	17	32
27	Poland	3,87,62,844	70,63,046	18.2212	2,75,00,000	50,10,823	22,145	22	34
28	Romania	1,91,18,479	36,92,072	19.3115	1,35,00,000	26,07,057	18,404	13	33
29	Colombia	5,23,21,152	1,31,47,024	25.1276	3,85,00,000	96,74,107	7,001	31	23
30	Peru	3,38,45,617	99,87,065	29.5077	2,51,00,000	74,06,434	7,888	29	25
31	India	1,43,80,69,596	43,66,37,126	30.3627	46,70,00,000	14,17,93,929	2,530	49	14
32	Pakistan	24,75,04,495	10,76,62,243	43.4991	7,17,00,000	3,11,88,859	1,365	45	8
33	Bangladesh	17,14,66,990	5,89,54,927	34.3827	4,47,00,000	1,53,69,053	2,551	39	15
34	Philippines	11,48,91,199	3,96,53,031	34.5135	8,45,00,000	2,91,63,949	3,804	44	19
35	Vietnam	10,03,52,192	2,80,88,351	27.9898	7,00,00,000	1,95,92,841	4,323	41	20
36	Nigeria	22,78,82,945	11,02,36,397	48.3741	3,16,00,000	1,52,86,226	1,597	38	10
37	Kenya	5,53,39,003	2,46,37,049	44.5202	1,06,00,000	47,19,144	1,952	21	12
38	Ghana	3,37,87,914	1,43,33,982	42.4234	66,00,000	27,99,944	2,384	14	13
39	Egypt	11,45,35,772	4,35,82,614	38.0515	4,63,00,000	1,76,17,859	3,457	40	16
40	Morocco	3,77,12,505	1,17,38,998	31.1276	2,13,00,000	66,30,179	3,771	26	17
41	Sri Lanka	2,29,71,617	62,26,964	27.1072	72,00,000	19,51,719	3,799	11	18
42	Nepal	2,96,94,614	1,03,16,757	34.7429	1,26,00,000	43,77,600	1,382	19	9
43	Ethiopia	12,86,91,692	5,94,70,308	46.2115	64,00,000	29,57,533	1,241	16	7
44	Uganda	4,86,56,601	2,48,78,283	51.1303	20,00,000	10,22,607	1,002	6	4
45	Tanzania	6,66,17,606	3,29,61,774	49.4791	49,00,000	24,24,475	1,224	12	6
46	Rwanda	1,39,54,471	62,28,082	44.6314	8,00,700	3,57,364	1,027	1	5
47	Malawi	2,11,04,482	1,02,70,431	48.6647	78,38,000	38,14,338	602	18	2
48	Mozambique	3,36,35,160	1,73,03,688	51.4452	25,00,000	12,86,131	623	7	3
49	Afghanistan	4,14,54,761	2,07,82,648	50.1333	31,00,000	15,54,133	414	9	1
50	Haiti	1,16,37,398	43,75,602	37.5995	21,00,000	7,89,589	1,706	3	11

(Source: Own compilation)

By applying Spearman's Rank correlation coefficient using MS Excel, it may be observed that there exists an insignificant, weak yet positive correlation coefficient between a child accessing social media and the overall Socio-Economic Status (SES).

Table 2: Values used for hypothesis testing (Source: Own compilation)

Coefficient	0.058343337
N	50
T-statistic	0.404904221
Degrees of Freedom(DF)	48
p value	0.687346796

The correlation coefficient is positive and p-value obtained indicates (0.6875 > 0.05) that the correlation is insignificant. The findings may be observed as follows:

a. A higher GDP per capita (indicative of higher digital accessibility, which is a valid linkage as this value is suggestive of overall improved quality of life per capita) does not directly imply that digital overuse is rampant among children. This observation suggests that a regulator cannot consider only accessibility as the only factor while drafting policy responses to the issue of digital overuse.

b. Even if a country is ranked lower than another country in terms of the GDP per capita (representing digital accessibility, the same country could still rank higher in terms of number of social media users. For example, from the above sample, Kenya has lower GDP per capita than Chile, but has a higher rank in terms of total child social media users than Chile. This simply means that better SES does not directly imply digital accessibility to children.

c. Further, the study suggests that socio-economic constraints may shape children's digital engagement by limiting alternative forms of recreation and supervision, thereby increasing the likelihood of intensive or compensatory digital use. Socio-economic constraints can shape the nature of digital use in ways that increase the risk of overuse.

This underscores the need for differentiated digital policy frameworks that recognise both excess and deprivation as distinct pathways to digital overuse.

iii. Digital activities of the child

Contrary to general belief, digital use by a child can in fact contribute to the all-round and holistic development of a child. Purpose-driven engagement and active rather than passive participation can involve creative exploration, solving problems, coding, drawing, or collaborating online, which encourages higher-order thinking and self-expression. Studies show that educational content and certain cartoons prove effective in improving a child's linguistic skills and cognitive development. These benefits of digital use can be reaped, provided that the following are ensured:

a. Age-appropriate content and design
b. Time-bound and structured use
c. Socially meaningful interaction
d. Complementarity with offline life

Strategies to combat digital overuse by children

Keeping in consideration all of the above analysis – factors & issues identified, strategies may be formulated at three different levels:

- Micro-level interventions (child and household environment)
  i. *Stage 1 (0 to 1 years):* Structural caregiving flaw, not a behavioural issue on the child's part
  ii. *Stage 2 (1 to 3 years):* Lack of exploratory play due to easy accessibility to and control of digital devices at home
  iii. *Stage 3 (3 to 6 years):* Quality of content consumption matters more than the quantity
  iv. *Stage 4 (6 to 12 years):* Replacement of offline skill-building activities, resulting in deterioration of mental health and core belief system due to digital overuse via gaming/social media
  v. *Stage 5 (12 to 18 years):* Reinforced, limited and plausibly false sense of identity defined by social media/gaming app personalisation and not by self-driven exploration of the world around
- Meso-level interventions (school, community, and social institutions)
  i. *School-based interventions:* Academic digitalisation and peer norms unintentionally have unintentionally prolonged screen exposure.
  ii. *Community and Peer-Group Interventions:* Digital behaviour is socially contagious and so, community norms can serve as an effective tool to spread awareness to buffer overuse.
  iii. *Parental and Caregiver Support Systems:* Parents and caregivers are significant actors in the meso-level when supported by institutional and community structures rather than acting in isolation.
  iv. *Health and Social Service Interventions:* Organising early screening for problematic digital overuse among students in schools and primary health centres through counselling can help identify leading indicators that could help making timely responses for the same.
- **Macro-level interventions**

National level policy-driven action and institutional reforms can serve to build an effective mechanism wherein children can enjoy digital accessibility within optimum scope while being protected from the harmful impacts of digital overuse.

- **Germany**: The German Federal Ministry of Heath recommends that children have minimum screen time:
  a. no screen time for infants and toddlers;
  b. as little as possible, maximum of 30 minutes/day for preschool children;
  c. maximum of 60 minutes/day for primary school children; and,
  d. up to a maximum of two hours for adolescents.
- **United Kingdom:** there is no specific hourly limit, but guidelines emphasize the importance of ensuring that screen time does not interfere with sleep, physical activity, and time spent on other important activities [Health Promotion Knowledge Gateway - European Commission, 2021]. Further, the government has introduced the Online Safety Act & Proposed New Measures.
- **Australia:** Social media ban for children under the age of 16 years
- **European Union (EU):** Digital Services Act (DSA) and Child Protection Guidelines
- **United Arab Emirates:** Child Digital Safety Law, enforced on 1st January, 2026
- **Indonesia:** Indonesia's Government Regulation No. 17/2025 mandates that electronic system providers incorporate age verification, abuse reporting channels, parental consent for minors and risk assessments and data privacy safeguards.

- **Singapore:** Code for Online Safety & Age Assurance which requires app stores and digital platforms to screen and prevent minors from downloading or using inappropriate apps without age checks and implement safeguards to reduce exposure to harmful or adult content.

On the basis of analysis made through this study as well as drawing inspiration from existing policies as mentioned above, some suggested responses are as follows:

A. Regulatory Governance of Digital Platforms

a. Mandatory age verification system in every application, particularly social media platform, being downloaded
b. Parental consent for children to have an account
c. Restrictions on age-inappropriate and algorithmically addictive design features (such as infinite scroll, autoplay, and behavioural profiling) for child users, rather than blanket bans on platforms
d. Content reporting and redressal mechanisms for users under the age of 18
e. Strict financial penalties and compliance costs for technology companies failing to adhere to child safety and digital well-being regulations.
f. Mandatory Code of Conduct for tech companies, aligned with child rights and mental well-being principles

B. State-led Social and Environmental Interventions

a. Set up Government-funded outdoor activity clubs and programmes to encourage children to explore the outside world, beyond their digital gadgets
b. Public investment in non-digital recreational infrastructure, reducing reliance on screens as default engagement tools

C. Institutional Oversight and Accountability Mechanisms

a. An independent committee can be set up under the Central Government of every country as a Council that overlooks and drafts policies in respect of problematic internet use by children for their safety
b. International organisations such as UNICEF, OECD and other non-governmental agencies working towards the cause of child welfare can set up a metric or index that tracks a child's digital well-being on a country-wise to make cross-country comparisons and evidence-based intervention
c. Progress reports must be made annually to identify deviations from set benchmarks, analyse the cause for such deviation and take corrective action where deemed necessary, by every country through an independent body

10. Conclusion

This study set out to evaluate the multi-dimensional and highly nuanced issue of digital overuse by children at an age where technology has become an indispensable component of our daily lives, examining not only the overall impact of such overuse on a child, but also identifying the causal premise triggering such problematic internet usage behaviour, which is vital to design effective and holistic response to promote child digital protection. The findings affirm that a comprehensive inter-disciplinary approach can certainly help achieve reduced problematic digital use by users below the age of 18 years – psychosocial dimension of child's lifestyle and his/her world (psychology), socio-economic background (economics) and designing strategic response at institutional level (law and policy).

In closing, the evidence supports the hypothesis that digital overuse is negatively associated with child well-being, but optimum usage of technology-based learning and mentally stimulating games can prove essential in development of analytical and critical thinking skills, language acquisition ability and decision-making skills. When a balance is struck, a child can reap the benefit of both digital media as well as outdoor recreational activities that improve emotional regulation and mental health of the child. Finally, government economic, regulatory and legal policies, when structured properly can assure not only digital safety of the child, but also his/her enhanced physical, mental and emotional well-being.

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