



Impact Of Digital Media Domains On Mental Health Of Gen-Z

¹Kailash Pawdel, ²Benita Chhetry, ³Kaustuva Vikash Nath

¹ Research Scholar, Gauhati University, Assam.

² Research Scholar, Dibrugarh University, Assam.

³LLM, Christ University, Karnataka.

¹Department of Commerce, Gauhati University, Assam, India.

Abstract: The digital revolution has seen an increasing trend in the use of digital media domains. These domains have now been tremendously working towards attracting an increasing number of users. From social media, gaming, smartphones, pornography, and internet video sites, the use of these digital media domains has been rising rapidly. In light of this, there is also a need to comprehend the role, these domains play, in the level of stress, anxiety, and depression of the users. With Gen-Z being tech-savvy, they are highly exposed to the risks these domains possess. Therefore this study intends to understand the impact of digital media domains, on the mental health of Gen-Z. The domains for the study include a) Gaming b) Mobile phone c) Social media d) Pornography, and e) Internet videos.

The study was conducted in Kamrup (M) District of Assam. A sample size of 100 respondents including university students, has been taken at the convenience of the researcher for the purpose of the study. Ethical considerations have been adhered to during the study where the respondent's anonymity has been strictly maintained. The study concludes that excessive usage, along with the lack of regulation of digital media domains, significantly impacts the mental health of Gen-Z, eventually leading to increased levels of stress, anxiety, and depression. The suggestions include mental health awareness campaigns, interventions, and programs to take control of the adverse effects of digital media usage.

Index Terms: Digital Technology, Mental Health, Digital Media Domains, Gen-Z.

1. INTRODUCTION

"All the sciences are for this one end, to bring happiness to humanity". - Swami Vivekananda

The world has marked enormous change in recent years. The exponential increase in the usage of digital technologies is one of the most notable changes. The technology has paved its mark in diverse sectors. Within the broader framework of digital technology, various digital media domains have emerged that are specifically tailored to cater a wide range of human needs. These include educational platforms, E-commerce platforms, streaming services, news and information, Virtual/Augmented Reality, gaming, social media, mobile phones, and internet videos, among others.

While technology has numerous benefits, the potential threats cannot be overlooked. Issues such as excessive use of mobile phones (Hipp et al., 2023), social comparison (Jung et al., 2021), doom scrolling (Rodrigues, 2023), online abuse (Vidgen et al., 2019), and pornography addiction (Saputra et al., 2018), among others, have been found significantly affecting people's lives. Digital technologies can profoundly influence behavioral patterns, making them more and more dependent on them for their daily activities and leisure. People are often seen absorbed at their mobile phones, immersing in the virtual world and distancing from the real. Montag & Walla (2016) emphasized that beyond its addictive nature, such technology inevitably alters our natural social lives, which may potentially pose a threat and harm the entire societies.

Gen-Z has been defined in varying ways by different authors and organizations (2020Ernst & Young; 2015McKinsey & Company, 2018; European Parliamentary Research Service, 2020). The generation is

greatly shaped by social media, and the internet (European Parliamentary Research Service, 2020; Priya and Agarwal, 2024). The constant online connectivity plays a leading role in shaping how they work, learn, communicate, and consume (Puiu et al., 2022). According to Sharma et al. (2023), the persistent interaction with the digital world has been linked to rising issues of anxiety, stress, and lower self-esteem among Gen-Z.

This study makes an attempt to understand the impact the digital media domains, including Gaming (GM), Mobile Phone Usage (MPU), Social Media Usage (SMU), Pornography (PG), and Internet Videos (IV) on the mental health: Stress (ST), Anxiety (AN), and Depression (DEP) among Gen-Z. By understanding the impact, this research aims to provide evidence-based insights for mental health professionals, educators, policymakers, and other stakeholders regarding challenges associated with the negative usage of digital technology.

2. OBJECTIVE OF THE STUDY

To study the impact of engagement of digital media domains: Gaming (GM), Mobile Phone Usage (MPU), Social Media Usage (SMU), Pornography (PG), and Internet Videos (IV) on the mental health outcomes: Stress (ST), Anxiety (AN), and Depression (DEP) among Gen-Z.

3. RESEARCH METHODOLOGY

3.1 Research design

This study adopts a quantitative research design with cross-sectional approach, targeted towards exploring the impact of engagement of digital media domains: Gaming (GM), Mobile Phone Usage (MPU), Social Media Usage (SMU), Pornography (PG), and Internet Videos (IV) on the mental health outcomes: Stress (ST), Anxiety (AN), and Depression (DEP) among Gen-Z.

3.2 Participants

The respondents in this study included a total of 100 respondents, aged 18-27 years, students of Gauhati University, Kamrup (M), Assam, India, consisting of 54 female and 46 males. Prior to the completion of the survey, all the respondents provided informed consent in the form of acceptance or rejection to take part in the study.

3.3 Data collection and analysis

An online structured questionnaire was distributed to the respondents to collect primary data. All ethical considerations were duly followed, with participants providing informed consent and anonymity of the participant were strictly maintained. The data was collected using Google Forms, and was subsequently analysed using descriptive statistics to summarise the respondents characteristics, correlational analysis to examine the relationships between variables and multiple regression techniques to assess the predictive influence of usage of digital media domains on mental health outcomes. This was done using SPSS Software.

3.4 Structure of the Questionnaire

The questionnaire was structured into two sections. Section A: Demographic variables including gender, age, and educational qualifications. Section B: Latent constructs related to the usage of digital media domains and mental health.

For assessing digital media usage, five questions were formulated for each of the domains: GM, MPU, SMU, PG, and IV. The constructs were measured using 5-point Likert Scale. For the evaluation of mental health, the Depression Anxiety Stress Scale (DASS-21) developed by Lovibond and Lovibond (1995) was adapted, consisting of 21 standardised items. The merge of domain specific and validated mental health assessment tool assured comprehensive data collection aligning with the objective of the study.

3.5 Reliability Analysis:

Reliability is a measure of the internal consistency of the constructs in the study. A construct is reliable if the alpha (α) value exceeds 0.70 (Hair et al., 2013). Construct reliability was assessed using Cronbach's Alpha associating with the usage of the digital media domains. The results revealed that the construct is found reliable ($\alpha=.0.847$). The reliability analysis results are summarized in Table 1.1 below:

Table 1.1 Reliability analysis

Constructs	No. of Items	Alpha (α)
Gaming (GM)	5	0.871
Mobile Phone Usage (MPU)	5	0.761
Social Media Usage (SMU)	5	0.771
Pornography (PG)	5	0.852
Internet Videos (IV)	5	0.785

Source: Primary Data, Compiled by Authors

4. HYPOTHESIS OF THE STUDY

The study examines the relationship between the constructs: GM, MPU, SMU, PG, and IV and the mental health outcomes: ST, AN, and DEP. It is hypothesized that the predictor variables collectively explain a significant portion of the variance in each of the dependent variables. This is shown below:

Hypothesis 1: The predictor variables (GM, MPU, SMU, PG, IV) collectively explain a significant variance in ST. ($R^2 > 0$).

Hypothesis 2: The predictor variables (GM, MPU, SMU, PG, IV) collectively explain a significant variance in AN. ($R^2 > 0$).

Hypothesis 3: The predictor variables (GM, MPU, SMU, PG, IV) collectively explain a significant variance in DEP. ($R^2 > 0$).

5. RESULTS AND DISCUSSIONS

The study examines the impact of various digital media domains on respondents' mental health, specifically focusing on Generation Z. To achieve this, multiple regression analysis was conducted to assess the relationship between digital media domains and mental health outcomes. Additionally, descriptive statistics was used to analyse and present demographic data. The results of the study are detailed below.

5.1 Demographic Variable

The respondents' gender distribution is provided in Table 1.2. Of the total sample (N=100), 54 were female and 46 males. The respondent's age is provided in Table 1.3. The mean age of the respondents is 21.17 years (SD = 2.19) and ranges from 18-27 years. This suggests that most of the respondents are young adults. Table 1.4. provide the educational qualification of the respondents. Most respondents (72.00%) are graduates, 24.00% completed higher secondary education. A smaller proportion (4.0%) completed post graduate degree. The results indicate that most participants have attained at least graduation level education, reflecting highly educated sample.

Table 1.2 Gender

Gender	Frequency	Percentage
Female	54	54.0
Male	46	46.0
Total	100	100.0

Source: Primary Data, Compiled by Authors

Table 1.3 Age

Mean	SD	Range	Minimum	Maximum
21.1700	2.19759	9.00	18.00	27.00

Source: Primary Data, Compiled by Authors

Table 1.4 Educational Qualifications

Educational Qualifications	Frequency	Percentage
Higher Secondary	24	24.0
Graduation	72	72.0
Post Graduate	4	4.0
Total	100	100.0

Source: Primary Data, Compiled by Authors

5.2 Comparative Analysis

Table 1.5 displays the level of engagement with different digital media domains: GM, MPU, SMU, PG, and IV. Respondents showed varying levels of engagement across the domains. For GM, 47.0% reported no engagement, with only 6.0% extremely engaged (Mean = 2.06). MPU had higher engagement, with 35.0% moderately engaged (Mean = 3.60). SMU showed significant engagement, with 37.0% moderately engaged and 32.0% very engaged, (mean = 3.07). PG had the lowest engagement, with 69.0% reporting no engagement (Mean = 1.59). IV showed consistent engagement, with 33.0% moderately engaged (Mean = 3.42).

Table 1.5 Level of Engagement with different Digital media domains

Level of Engagement		Frequency (Percentage)			
	Gaming	Mobile Phone	Social media	Pornography	Internet Videos
No Engagement	47	8	1	69	5
Somewhat Engaged	23	23	10	15	14
Moderately Engaged	13	35	37	6	33
Very Engaged	11	22	32	8	30
Extremely Engaged	6	12	20	2	18
Mean Value	2.06	3.60	3.07	1.59	3.42
Total	100	100	100	100	100

Source: Primary Data, Compiled by Authors

Additionally, Chi-square test statistics were used to examine the association between the two independent variables (Gender and Digital Media Usage). There is a significant association between Gender and level of engagement in GM ($X^2 = 14.387$, $df=4$, $p=0.06$), MPU ($X^2 = 3.937$, $df=4$, $p=0.415$) has no significant association, SMU ($X^2 = 13.056$, $df=4$, $p=0.11$) has a marginal association, PG ($X^2 = 5.892$, $df=4$, $p=0.207$) has no significant association, and IV ($X^2 = 8.464$, $df=4$, $p=0.076$) has no significant association. This is shown in Table 1.6 below:

Table 1.6 Gender-wise distribution of level of engagement

		Gender			
		Female		Male	
Gaming (GM)	No Engagement	33	70.2%	14	29.8%
	Somewhat Engaged	13	56.5%	10	43.5%
	Moderately Engaged	4	30.8%	9	69.2%
	Very Engaged	3	27.3%	8	72.7%
	Extremely Engaged	1	16.7%	5	83.3%
	Total	54	54.0%	46	46.0%
Mobile Phone Usage (MPU)	Rare Usage	1	100.0%	0	0.0%
	Occasional Usage	3	30.0%	7	70.0%
	Moderate Usage	19	51.4%	18	48.6%
	Frequent Usage	19	59.4%	13	40.6%
	Extreme Usage	12	60.0%	8	40.0%
	Total	54	54.0%	46	46.0%
Social Media (SMU)	Rare Use	1	12.5%	7	87.5%
	Occasional Use	16	69.6%	7	30.4%
	Moderate Use	16	45.7%	19	54.3%
	Frequent Use	11	50.0%	11	50.0%
	Almost Always Use	10	83.3%	2	16.7%
	Total	54	54.0%	46	46.0%
Not engaged at all		42	60.9%	27	39.1%

Pornography (PG)	Rarely engaged	7	46.7%	8	53.3%
	Occasionally engaged	2	33.3%	4	66.7%
	Frequently Engaged	3	37.5%	5	62.5%
	Almost always engaged	0	0.0%	2	100.0%
	Total	54	54.0%	46	46.0%
Internet	Not engaged at all	3	60.0%	2	40.0%
Videos (IV)	Rarely engaged	6	42.9%	8	57.1%
	Occasionally engaged	17	51.5%	16	48.5%
	Frequently Engaged	13	43.3%	17	56.7%
	Almost always engaged	15	83.3%	3	16.7%
	Total	54	54.0%	46	46.0%

Source: Primary Data, Compiled by Authors

5.3 Correlational Analysis between Dependent Variables:

A correlation matrix was computed (Table 1.7), to examine the relationship among the variables GM, MPU, SMU, PG, and IV. A weak positive correlation was found between GM and PG ($r = .231$, $p < .05$). Additionally, a moderate positive correlation was observed between MPU and both SMU ($r = .570$, $p < .01$) and IV ($r = .501$, $p < .01$). SMU also showed a moderate positive correlation with MPU ($r = .570$, $p < .01$) and weak positive correlation with IV ($r = .355$, $p < .01$). Finally, a weak positive correlation was found between PG and IV ($r = .271$, $p < .01$). All statistically significant correlations were reported at the 0.01 level, except for the correlation between GM and PG, which was significant at the 0.05 level. The analysis was based on a sample size of 100 (listwise $N = 100$).

Table 1.7 Correlational Analysis of Digital Media Domains

VARIABLES	GM	MPU	SMU	PG	IV
GM	1	-.055	.070	.231*	.107
MPU	-.055	1	.570**	.153	.501**
SMU	.070	.570**	1	.033	.355**
PG	.231*	.153	.033	1	.271**
IV	.107	.501**	.355**	.271**	1

Note. * $p < .05$, ** $p < .01$.

Source: Primary Data, Compiled by Authors

5.4 Impact Assessment

A multiple regression analysis was conducted (Table 1.8) to examine the relationship between the independent variables (GM, MPU, SMU, PG, and IV) and the dependent variable ST. The overall model was statistically significant, $F(5, 94) = 6.278$, $p < .001$, with an R^2 of .250 (Adjusted R^2 of .210), indicating that an approximate variance of 25% in ST was explained by the predictors. The results of the regression analysis also indicated that several predictors significantly contributed to the model. GM ($B = -0.213$, $\beta = -0.217$, $p = .022$), SMU ($B = 0.384$, $\beta = 0.361$, $p = .002$), PG ($B = 0.239$, $\beta = 0.214$, $p = .028$) and IV were significant predictor ($B = 0.245$, $\beta = 0.230$, $p = .035$). However, MPU did not significantly predict ST ($B = -0.131$, $\beta = -0.120$, $p = .321$). These results suggest that the null hypothesis (Hypothesis 1) for the overall model was rejected, indicating that the variables collectively are significant predictors of ST.

Table 1.8 Impact of digital media domains on Stress

Model 1	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	.934	.389		2.403	.018		
GM	-.213	.092	-.217	-2.324	.022	.911	1.097
MPU	-.131	.132	-.120	-.998	.321	.553	1.810
SMU	.384	.118	.361	3.263	.002	.652	1.535
PG	.239	.107	.214	2.230	.028	.870	1.149
IV	.245	.114	.230	2.145	.035	.695	1.439

Dependent Variable: ST

Source: Primary Data, Compiled by Authors

A multiple regression was conducted (Table 1.9), to determine the relationship between five independent variables (GM, MPU, SMU, PG, and IV) with dependent variable AN. The overall model was found statistically significant, $F(5, 94) = 3.009$, $p = 0.015$, with an R^2 of .138 (Adjusted $R^2 = 0.092$), indicating approximately 13.8% of variance in AN is explained by the predictors. However the analysis did not yield statistically significant results for any of the respective predictors as none of individual predictors were statistically significant: GM ($B = -0.053$, $\beta = -0.053$, $p = .599$), MPU ($B = 0.066$, $\beta = 0.058$, $p = .652$), SMU ($B = 0.$, $\beta = 0.211$, $p = .078$), PG ($B = 0.218$, $\beta = 0.189$, $p = .068$), and IV ($B = 0.103$, $\beta = 0.094$, $p = .414$). These results suggest that the null hypothesis (Hypothesis 2) for the overall model was rejected, as the variables collectively are significant predictors of AN.

Table 1.9 Impact of digital media domains on Anxiety

Model 2	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	.901	.429		2.100	.038		
GM	-.053	.101	-.053	-.528	.599	.911	1.097
MPU	.066	.145	.058	.452	.652	.553	1.810
SMU	.231	.130	.211	1.779	.078	.652	1.535
PG	.218	.118	.189	1.846	.068	.870	1.149
IV	.103	.126	.094	.820	.414	.695	1.439

A multiple regression was performed (Table 1.10), to determine the relationship between five predictor variables (GM, MPU, SMU, PG, and IV) with dependent variable DEP. The overall model was statistically significant, $F(5, 94) = 4.841$, $p < 0.001$, with an R^2 of .205 (Adjusted $R^2 = 0.162$), indicating approximately 20.5% of the variance in AN is explained by the predictors. However, the individual predictors showed varying results. Among the individual predictors, SMU ($B = 0.255$, $\beta = 0.254$, $t = 2.228$, $p = .028$) and PG ($B = 0.282$, $\beta = 0.266$, $t = 2.697$, $p = .008$) were significant positive predictors of DEP, while MPU ($B = -0.043$, $\beta = -0.041$, $t = -0.332$, $p = .741$), GM ($B = 0.096$, $\beta = 0.104$, $t = 1.079$, $p = .283$), and IV ($B = 0.121$, $\beta = 0.120$, $t = 1.085$, $p = .281$) were not significant. However, as the model has collectively predicted a significant portion of the variance in DEP, we reject the null hypothesis (Hypothesis 3).

Table 1.10 Impact of Digital Media Domains on Depression:

Model 3	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	.513	.379		1.353	.179		
GM	.096	.089	.104	1.079	.283	.911	1.097
MPU	-.043	.128	-.041	-.332	.741	.553	1.810
SMU	.255	.115	.254	2.228	.028	.652	1.535
PG	.282	.104	.266	2.697	.008	.870	1.149
IV	.121	.111	.120	1.085	.281	.695	1.439

a. Dependent Variable: DEP

Source: Primary Data, Compiled by Authors

6. CONCLUSION

This study attempts to understand the impact of digital media domains on the mental health of Gen-Z where empirical data from respondents has been collected. The study found that usage of digital technologies has a significant impact on ST and DEP. However, a lesser impact was seen on AN. Also, increasing involvement in SMU and PG has been associated with increased levels of ST and DEP indicating the potential risks of digital media overuse. Additionally, it was also observed that comparatively males have a slightly higher tendency towards excessive GM than females who are mostly engaged in SMU and MPU. A higher correlation was found between MPU, SMU, and IV. This highlights the interconnectedness of the digital media domains under this study and their potential cumulative effects on mental health.

This study suggests that policymakers, mental health professionals, educators, and stakeholders should consider these findings to develop specific strategies to mitigate the adverse effect of digital media on mental health. Additionally, interventions should also emphasize managing SMU and PG as it was found to have a

significant impact on mental health. Awareness campaigns on the adverse effect of the overuse of digital media may also be beneficial along with proper regulations over the usage of it.

7. FUTURE RESEARCH DIRECTIONS

This research is cross-sectional in nature and therefore does not monitor the behavioural pattern and record significant long-term changes. Longitudinal studies may provide a deeper understanding and take corrective actions in an effective manner. Additionally, a gender-specific study may provide a more nuanced understanding of the impact these digital media have on mental health. Other digital technology domains such as online learning platforms, Virtual Realities, Professional networking, and Online communication tools may also be used as new variables. Inclusion of confounding variables may also provide newer understanding to the current study.

REFERENCES

- [1] Ernst & Young. (2015). *What if the next big disruptor isn't a what but a who?* https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/digital/ey-rise-of-gen-z-new-challenge-for-retailers.pdf
- [2] European Parliamentary Research Service. (2020). *Next generation or lost generation? Children, young people and the pandemic* (Briefing PE 659.404). [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659404/EPRS_BRI\(2020\)659404_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/659404/EPRS_BRI(2020)659404_EN.pdf)
- [3] Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1–2), 1–12. <https://doi.org/10.1016/j.lrp.2013.01.001>
- [4] Hipp, D., Blakley, E. C., Hipp, N., Gerhardstein, P., Kennedy, B., & Markle, T. (2023). The Digital Media Overuse Scale (dMOS): A modular and extendible questionnaire for indexing digital media overuse. *Technology, Mind, and Behavior*, 4(3), Fall 2023. <https://doi.org/10.1037/tmb0000117>
- [5] Jung, Y., Ahn, J., & Sung, Y. (2021). The effects of social comparison in social media on high-intensity sensory consumption.
- [6] Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343. [https://doi.org/10.1016/0005-7967\(94\)00075-U](https://doi.org/10.1016/0005-7967(94)00075-U)
- [7] McKinsey & Company. (2018). *True Gen: Generation Z and its implications for companies*. <https://www.mckinsey.com/~/media/McKinsey/Industries/Consumer%20Packaged%20Goods/Our%20Insights/True%20Gen%20Generation%20Z%20and%20its%20implications%20for%20companies/Generation-Z-and-its-implication-for-companies.pdf>
- [8] Montag, C., & Walla, P. (2016). Carpe diem instead of losing your social mind: Beyond digital addiction and why we all suffer from digital overuse. *Cogent Psychology*, 3(1). <https://doi.org/10.1080/23311908.2016.1157281>
- [9] Priya, & Agrawal, V. (2024). Investigation of the impact of digital platforms on Gen Z purchase behaviour. *ES*, 20(1), 73–100. <https://doi.org/10.69889/w2265632>
- [10] Puiu, S., Demyen, S., Tănase, A.-C., Vărzaru, A. A., & Bocean, C. G. (2022). Assessing the adoption of mobile technology for commerce by Generation Z. *Electronics*, 11(6), 866. <https://doi.org/10.3390/electronics11060866>
- [11] Rodrigues, E. V. (2023). Doomscrolling – Threat to mental health and well-being: A review. *International Journal of Nursing Research*, 8(4), 127–130. <https://doi.org/10.31690/ijnr.2022.v08i04.002>
- [12] Saputra, M. F. A., Siregar, S. A., & Izdiyar, Z. N. (2018). Social effects of digital pornography. *Bulletin of Social Informatics Theory and Application*, 1(2), 79–85. <https://doi.org/10.31763/businta.v1i2.42>
- [13] Sharma, M., Kaushal, D., & Joshi, S. (2023). Adverse effect of social media on Generation Z user's behavior: Government information support as a moderating variable. *Journal of Retailing and Consumer Services*, 72, 103256. <https://doi.org/10.1016/j.jretconser.2023.103256>
- [14] Vidgen, B., Margetts, H., & Harris, A. (2019). How much online abuse is there? A systematic review of evidence for the UK: Policy Briefing – Full Report. The Alan Turing Institute, Public Policy Programme.

- [15] Vivekavani. (n.d.). One existence appearing as many: Swami Vivekananda. Retrieved January 14, 2024, from <https://ivekavani.com/one-existence-appearing-as-many-swami-vivekananda/>

