



DIGITAL BEHAVIOUR AND YOUNG ADULT WELL-BEING: EVIDENCE FROM DIGITAL GADGET USAGE IN COIMBATORE

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Abstract

Digital technologies have become an integral part of young adults' daily lives, influencing their health, lifestyle, and interpersonal relationships. This study examines the association between demographic characteristics, digital attitudes, and the impact of digital device usage among young adults. A descriptive research design was adopted, and primary data were collected from 500 respondents using a structured questionnaire. Chi-square analysis was employed to examine the association between demographic variables and digital usage impact, while Pearson's correlation analysis assessed the relationship between digital attitude dimensions and their impacts on health, lifestyle, and personal relationships. The findings revealed significant associations between age, education, field of study, occupation, daily screen time, digital attitude, and the impact of digital usage ($p < 0.05$). Correlation analysis further indicated significant positive relationships between digital attitude dimensions and all three impact dimensions, with Emotional Reliance Attitude exhibiting the strongest association. The study concludes that both socio-demographic characteristics and digital attitudes play a significant role in determining the extent of digital usage impact among young adults and highlights the need to promote responsible and balanced digital engagement.

Keywords: Young Adults; Digital Attitude; Digital Device Usage; Health Impact; Lifestyle Impact; Personal Relationship; Chi-Square Analysis; Pearson Correlation

1. INTRODUCTION

Digital gadgets such as smartphones, laptops, tablets, and other internet-enabled devices have become an essential part of young adults' everyday lives. They support education, communication, employment, entertainment, and access to information. However, excessive and prolonged digital device usage may adversely affect sleep, psychological well-being, lifestyle patterns, and interpersonal relationships (Li et al., 2020). Young adults are particularly exposed to intensive digital engagement because of their dependence on technology for academic, professional, and social activities. Studies in India have reported considerable levels of smartphone and internet addiction among college students and identified associations with prolonged usage, sleep disturbances, social media engagement, and health-related concerns (Basu et al., 2018; Dhamija et al., 2021; Mariavinifa et al., 2021). Further, a systematic review found that digital media use among adolescents and young adults is associated with shorter sleep duration, poorer sleep quality, and daytime tiredness (Brautsch et al., 2023). Beyond the amount of time spent on digital devices, users' attitudes and motivations may influence their patterns of engagement and associated consequences. Therefore, the present study examines the association between selected demographic characteristics and the impact of digital gadget usage and analyses the relationship between digital attitudes and their effects on health, lifestyle, and personal relationships among young adults in Coimbatore.

2. REVIEW OF LITERATURE

Previous studies have consistently reported a high prevalence of smartphone, mobile phone, and internet addiction among college and medical students in India. Devi et al. (2025) reported a 39.9% prevalence of smartphone addiction among college students in Kerala, with late-night smartphone use, use before sleep, delayed sleep after phone use, and prolonged use after lights-off identified as significant associated factors. Similarly, Mariavinifa et al. (2021) found that 61.2% of college



Cover Page



students in Tamil Nadu had internet addiction, which was significantly associated with age, duration of daily internet use, social media, online communication, and online gaming.

Among medical students, Dhamija et al. (2021) reported a 52% prevalence of smartphone addiction and found a significant association between smartphone addiction and sleep disturbance, although no significant association was observed with low self-esteem. Jahagirdar et al. (2021) found that 52.7% of undergraduate medical students were at high risk of smartphone addiction, with prolonged smartphone use associated with health problems such as eye strain, blurred vision, and numbness or tingling in the palms. Basu et al. (2018) further identified addiction-like mobile phone behaviour in 39.9% of medical students and highlighted dimensions such as harmful use, intense desire, impaired control, and tolerance. In addition, Murugan et al. (2018) reported a high level of smartphone addiction among female college students and observed its association with health symptoms and changes in sleep patterns.

3. RESEARCH GAP

Previous studies have mainly focused on smartphone or internet addiction and its association with sleep, psychological health, and behavioural problems among students (Basu et al., 2018; Dhamija et al., 2021; Mariavinifa et al., 2021). However, limited research has examined the multidimensional impact of digital gadget usage on health, lifestyle, and personal relationships among young adults. Further, the role of different digital attitudes, such as perceived benefits, emotional reliance, compulsive engagement, and job-driven usage, remains underexplored. Evidence specific to young adults in Coimbatore is also limited. Hence, the present study examines the association between demographic characteristics, digital attitudes, and the impact of digital gadget usage among young adults in Coimbatore.

4. OBJECTIVES OF THE STUDY

1. To examine the association between selected demographic characteristics and the impact of digital gadget usage among young adults in Coimbatore.
2. To assess the relationship between digital attitude dimensions and the impacts on health, lifestyle, and personal relationships.

5. RESEARCH DESIGN

The study adopted a descriptive research design. Primary data were collected from 500 young adults in coimbatore district using a structured questionnaire. The questionnaire measured demographic characteristics, digital attitude dimensions (Perceived Benefit, Emotional Reliance, Compulsive Engagement, and Job-Driven Attitude), and the impact of digital device usage on health, lifestyle, and personal relationships. The collected data were analysed using Chi-square analysis to examine associations between demographic variables and digital usage impact, and Pearson's correlation analysis to determine the relationships between digital attitudes and impact dimensions.

6. RESULTS AND DISCUSSIONS

6.1 ASSOCIATION OF DEMOGRAPHIC PROFILE ON IMPACT OF DIGITAL DEVICE USAGE - CHI-SQUARE ANALYSIS

6.1.1 Age and Impact of Digital Device Usage

Hypothesis

Null Hypothesis (H₀):

There is no significant association between Age Group and Level of Impact (Low, Moderate, High) among young adults.



Table 1
Chi-Square Analysis on Age and Impact of Digital Usage

Age Group	Impact of Digital Usage			Total
	Low	Moderate	High	
18 –22 years	34 (8.6%)	137 (34.5%)	226 (56.9%)	397 (100.0%)
23–26 years	6 (7.9%)	15(19.7%)	55(72.4%)	76 (100.0%)
26–30 years	0(.0%)	12(44.4%)	15(55.6%)	27(100.0%)
Total	40(8.0%)	164(32.8%)	296(59.2%)	500(100.0%)
Chi-Square Tests				
Pearson Chi-Square	Chi-Value	df	p-value	Result
	10.376 ^a	4	.035*	Significant

Source : Computed Value ; value within () indicates row percentage; *Level of significance @ 5%

Table 1 indicates that the Chi-square test was conducted to understand the association between age group and Impact of Digital device use on health, Lifestyle and Personal relationship. The result revealed that there is a significant association between age group and the impact of digital device usage ($\chi^2 = 10.376$, $df = 4$, $p = 0.035$). Respondents aged 23–26 years reported the highest proportion of high digital usage impact (72.4%), compared with those aged 18–22 years (56.9%) and 27–30 years (55.6%). These findings suggest that the impact of digital device usage varies significantly across different age groups.

6.1.2 Education and Impact of Digital Device Usage

Hypothesis

Null Hypothesis (H_0):

There is no significant association between Education and Level of Impact (Low, Moderate, High) among young adults.

Table 2
Chi-Square Analysis on Education and Impact of Digital Usage

Education Level	Impact on Digital Usage			Total
	Low	Moderate	High	
High School	0(.0%)	11(32.4%)	23(67.6%)	34(100.0%)
Undergraduate	40(10.9%)	123(33.5%)	204(55.6%)	367(100.0%)
Postgraduate	0(.0%)	24(28.6%)	60(71.4%)	84(100.0%)
Professional course	0(.0%)	6(40.0%)	9(60.0%)	15(100.0%)
Total	40(8.0%)	164(32.8%)	296(59.2%)	500(100.0%)
Chi-Square Test				
Pearson Chi-Square	Value	df	p-value	Result
	18.593 ^a	6	.005*	Significant

Source : Computed Value ; value within () indicates row percentage ; *Level of significance @ 5%

Table 2 indicates that there is a significant association between education level and the impact of digital usage ($\chi^2 = 18.593$, $df = 6$, $p = 0.005$). Postgraduates reported the highest proportion of high digital usage impact (71.4%), followed by High School respondents (67.6%) and those pursuing Professional courses (60.0%), whereas Undergraduates reported the lowest proportion (55.6%). Since $p < 0.05$, the null hypothesis was rejected, indicating that education level is significantly associated with the impact of digital usage among young adults.



6.1.3 Field of Specialisation and Impact of Digital Device Usage

Hypothesis

Null Hypothesis (H₀):

There is no significant association between Field of specialisation and Level of Impact (Low, Moderate, High) among young adults.

Table 3
Chi-Square Analysis on Field of specialisation and Impact of Digital Usage

Field of study/specialization	Impact on Digital Usage			Total
	Low	Moderate	High	
Arts & Humanities	6(11.8%)	15(29.4%)	30(58.8%)	51(100.0%)
Commerce & Management	19(6.3%)	89(29.5%)	194(64.2%)	302(100.0%)
Science	9(12.0%)	36(48.0%)	30(40.0%)	75(100.0%)
Engineering / Technology	0(.0%)	21(46.7%)	24(53.3%)	45(100.0%)
Others	6(22.2%)	3(11.1%)	18(66.7%)	27(100.0%)
Total	40(8.0%)	164(32.8%)	296(59.2%)	500(100.0%)
Chi-Square Test				
Pearson Chi-Square	Value	df	p-value	Result
	33.407 ^a	8	.000*	Significant

Source : Computed Value ; value within () indicates row percentage; *Indicates 5% level of Significance

Table 3 indicates that there is a significant association between field of study and the impact of digital usage among young adults ($\chi^2 = 33.407$, $df = 8$, $p < 0.001$). Respondents from Commerce & Management (64.2%) and Other disciplines (66.7%) reported the highest proportion of high digital usage impact, followed by Arts & Humanities (58.8%) and Engineering/Technology (53.3%), whereas Science students (40.0%) reported the lowest proportion of high digital usage impact. Since $p < 0.001$, the null hypothesis was rejected, indicating a significant association between field of study and the impact of digital usage among young adults.

6.1.4 Occupation and Impact of Digital Usage

Hypothesis

Null Hypothesis (H₀):

There is no significant association between Occupation and Level of Impact (Low, Moderate, High) among young adults.

Table 4
Chi-Square Analysis on Occupation and Impact of Digital Usage

Occupation	Impact on Digital Usage			Total
	Low	Moderate	High	
Student	34(8.8%)	131(33.9%)	221(57.3%)	386(100.0%)
Employed	3(4.2%)	12(16.7%)	57(79.2%)	72(100.0%)
Self-Employed	0(.0%)	12(44.4%)	15(55.6%)	27(100.0%)
Unemployed	3(20.0%)	9(60.0%)	3(20.0%)	15(100.0%)
Total	40(8.0%)	164(32.8%)	296(59.2%)	500(100.0%)
Chi-Square Analysis				



Pearson Chi-Square	Value	df	p-value	Result
	25.913 ^a	6	.000*	Significant

Source : Computed Value ; value within () indicates row percentage; *Indicates 5% level of Significance.

Table 4 shows result of the Chi-square test that revealed a significant association between occupation and the impact of digital usage among young adults ($\chi^2 = 25.913$, $df = 6$, $p < 0.001$). Employed respondents (79.2%) reported the highest proportion of high digital usage impact, followed by Students (57.3%) and Self-employed respondents (55.6%), whereas Unemployed respondents (20.0%) reported the lowest proportion of high digital usage impact. Since $p < 0.001$, the null hypothesis was rejected, indicating that occupation is significantly associated with the impact of digital usage among young adults.

6.1.5 Hours Spent on Screen and Impact of Digital Usage

Hypothesis

Null Hypothesis (H₀):

There is no significant association between hours spent on screen and Level of Impact (Low, Moderate, High) among young adults.

Table 5
Chi-Square Analysis on Hours Spent on Screen and Impact of Digital Usage

Hours Spent on Screen	Impact on Digital Usage			Total
	Low	Moderate	High	
Less than 2 hours	7(6.3%)	51(45.9%)	53(47.7%)	111(100.0%)
2–4 hours	18(7.9%)	71(31.0%)	140(61.1%)	229(100.0%)
4–6 hours	15(14.0%)	33(30.8%)	59(55.1%)	107(100.0%)
More than 6 hours	0(.0%)	9(17.0%)	44(83.0%)	53(100.0%)
Total	40(8.0%)	164(32.8%)	296(59.2%)	500(100.0%)
Chi-Square Analysis				
Pearson Chi-Square	Value	df	p-value	Result
	27.712 ^a	6	.000*	Significant

Source : Computed Value ; value within () indicates row percentage; *Indicates 5% level of Significance

Table 5 highlights the result of Chi-square test that revealed a significant association between daily screen time and the impact of digital usage among young adults ($\chi^2 = 27.712$, $df = 6$, $p < 0.001$). Respondents spending more than 6 hours per day on screens reported the highest proportion of high digital usage impact (83.0%), while those spending less than 2 hours reported the lowest proportion (47.7%). Since $p < 0.001$, the null hypothesis was rejected, indicating that daily screen time is significantly associated with the impact of digital usage among young adults. Higher screen time was associated with greater digital usage impact.

Table 6
Chi-Square Analysis on Attitude and Impact of Digital Usage

Digital Attitude	Impact on Digital Usage			Total
	Low	Moderate	High	
Low	6 (50.0%)	3(25.0%)	3(25.0%)	12(100.0%)
Moderate	16(8.1%)	112(56.9%)	69(35.0%)	197(100.0%)
High	18(6.2%)	49(16.8%)	224(77.0%)	291(100.0%)



Total	40(8.0%)	164(32.8%)	296(59.2%)	500(100.0%)
Chi-Square Analysis				
Pearson Chi-Square	Value	df	p-value	Result
	1.226E2 ^a	4	.000*	Significant

Source : Computed Value ; value within () indicates row percentage; *Indicates 5% level of Significance

Table 6 demonstrates that there is a significant association between digital attitude and the impact of digital usage among young adults ($\chi^2 = 122.600$, $df = 4$, $p < 0.001$). Respondents with high digital attitude reported the highest proportion of high digital usage impact (77.0%), whereas those with low digital attitude reported the lowest proportion (25.0%). Conversely, respondents with moderate digital attitude were more likely to experience moderate digital usage impact (56.9%). Since $p < 0.001$, the null hypothesis was rejected, indicating that digital attitude is significantly associated with the impact of digital usage among young adults.

6.2 CORRELATION ANALYSIS OF ATTITUDE OF YOUNG ADULTS AND IMPACT OF HEALTH, LIFESTYLE AND PERSONAL RELATIONSHIP

Null Hypothesis(H_0):

There is no significant relationship between attitude of young adults and its impact on health, Lifestyle and personal relationship.

Table 7

CORRELATION ANALYSIS OF ATTITUDE OF YOUNG ADULTS AND IMPACT OF HEALTH, LIFESTYLE AND PERSONAL RELATIONSHIP

Digital Attitude / Impact		PBA	ERA	CEA	JDA	HI	LI	PRI
PBA	Pearson Correlation	1	.343**	.393**	.496**	.298**	.312**	.298**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
ERA	Pearson Correlation		1	.544**	.300**	.371**	.504**	.446**
	Sig. (2-tailed)			.000	.000	.000	.000	.000
CEA	Pearson Correlation			1	.327**	.337**	.374**	.329**
	Sig. (2-tailed)				.000	.000	.000	.000
JDA	Pearson Correlation				1	.325**	.310**	.292**
	Sig. (2-tailed)					.000	.000	.000
HI	Pearson Correlation					1	.721**	.597**
	Sig. (2-tailed)						.000	.000
LI	Pearson Correlation						1	.663**
	Sig. (2-tailed)							.000
PRI	Pearson Correlation							1
	Sig. (2-tailed)							

Source : Computed Value ; **. Correlation is significant at the 0.01 level (2-tailed).

PBA =Perceived Benefit Attitude ;ERA =Emotional Reliance Attitude ; CEA = Compulsive Engagement Attitude;

JDA=Job Driven sAttitude; HI =Health Impact ; LI =Lifestyle Impact;PRI =Personal Relationship Impact

To examine the relationship between digital device usage attitudes and their impact on health, lifestyle, and personal relationships among young adults, Pearson's correlation analysis was performed. The variables included Perceived Benefit Attitude, Emotional Reliance Attitude, Compulsive Engagement Attitude, Job-Driven Attitude, Health Impact, Lifestyle Impact, and Personal Relationship Impact.



The results indicate that all the variables are positively and significantly correlated at the 0.01 level ($p < 0.01$). This implies that higher levels of digital device usage attitudes are associated with greater impacts on health, lifestyle, and personal relationships.

- **Relationship among Attitude Variables:** Perceived Benefit Attitude is positively correlated with Emotional Reliance Attitude ($r = 0.343$), Compulsive Engagement Attitude ($r = 0.393$), and Job-Driven Attitude ($r = 0.496$). Emotional Reliance Attitude shows a relatively strong positive correlation with Compulsive Engagement Attitude ($r = 0.544$), indicating that young adults who emotionally depend on digital devices are more likely to exhibit compulsive usage behavior.
- **Relationship between Attitude and Health Impact:** The results reveal moderate positive correlations between Health Impact and all attitude variables. Emotional Reliance Attitude ($r = 0.371$) shows the strongest association with Health Impact, followed by Compulsive Engagement Attitude ($r = 0.337$), Job-Driven Attitude ($r = 0.325$), and Perceived Benefit Attitude ($r = 0.298$). This indicates that emotional attachment to digital devices may contribute more significantly to health-related consequences among young adults.
- **Relationship between Attitude and Lifestyle Impact:** Lifestyle Impact demonstrates a strong positive relationship with Emotional Reliance Attitude ($r = 0.504$). It also shows moderate positive correlations with Compulsive Engagement Attitude ($r = 0.374$), Perceived Benefit Attitude ($r = 0.312$), and Job-Driven Attitude ($r = 0.310$). These findings suggest that emotional reliance on digital devices plays a crucial role in influencing lifestyle patterns.
- **Relationship between Attitude and Personal Relationship Impact :** Personal Relationship Impact is positively correlated with Emotional Reliance Attitude ($r = 0.446$), Compulsive Engagement Attitude ($r = 0.329$), Perceived Benefit Attitude ($r = 0.298$), and Job-Driven Attitude ($r = 0.292$). Among these, Emotional Reliance Attitude again demonstrates the strongest association, indicating that emotional dependency may adversely influence interpersonal relationships.
- **Interrelationship among Impact Variables :** A very strong positive correlation is observed between Health Impact and Lifestyle Impact ($r = 0.721$), followed by Lifestyle Impact and Personal Relationship Impact ($r = 0.663$), and Health Impact and Personal Relationship Impact ($r = 0.597$). These strong associations indicate that the impacts of digital device usage are interconnected. Changes in lifestyle are closely linked with health concerns and disturbances in personal relationships.

6.3 RECOMMENDATIONS

- Educational institutions should promote digital well-being programmes to encourage responsible and balanced digital device usage.
- Parents and families should encourage healthy screen-time habits and support balanced online and offline activities.
- Employers and organizations should implement policies that promote responsible digital engagement and reduce excessive screen exposure.
- Healthcare professionals and counsellors should conduct awareness programmes on the physical, psychological, and social impacts of excessive digital device usage.
- Government agencies and policymakers should strengthen digital literacy campaigns and formulate guidelines for responsible digital device use among young adults.
- Researchers should undertake longitudinal and interdisciplinary studies to examine the long-term effects of digital device usage and identify additional influencing factors.

7. CONCLUSION

The study demonstrates that demographic characteristics, including age, education, field of study, occupation, and daily screen time, are significantly associated with the impact of digital device usage among young adults. Furthermore, digital attitude dimensions show significant positive relationships with health, lifestyle, and personal relationship impacts, with



Cover Page



emotional reliance emerging as the strongest correlate. These findings suggest that responsible digital behaviour and improved digital awareness are essential for minimising the negative consequences of excessive digital device usage while maximising its benefits.

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