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Research Paper

Media Multitasking and Cognitive Failures: Examining Attention Lapses and Memory Complaints among Indian Young Adults

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ABSTRACT

There is a general concern among professionals in clinical psychology that the cognitive and psychological effects of media multitasking are becoming a problem among young adults. Young adults who often engage in media multitasking, such as using a social networking site, watching streaming video, and playing video games at the same time, might experience problems with attention regulation and cognitive functioning. This study aims to determine if there is a correlation between media multitasking and memory issues and inattention among young adults in India. N=150 participants aged 18 to 29 years old were included in this study. These participants were administered the Media Multitasking Revised Scale (MMT-R), Memory Complaint Questionnaire (MCQ), and Cognitive Failures Questionnaire (CFQ). The findings of Pearson's correlation revealed significant positive associations between media multitasking and memory complaints, $r(148) = .29$, $p < .001$, and attentional lapses, $r(148) = .67$, $p < .001$. Furthermore, the findings revealed that media multitasking is a significant predictor of memory complaints, $R^2 = .09$, and inattention, $R^2 = .45$. The findings therefore suggest that media multitasking is associated with the decline in cognitive functioning of young adults in real life, which further features clinical inference for the young adults' attentional lapses and cognitive health.

Keywords: *Media Multitasking, Attentional Control, Perceived Memory Functioning, Cognitive Functioning, Digital Media Use, Young Adults, Indian Population*

Media Multitasking

Media multitasking is defined as the use of or switching between two or more forms of digital media concurrently and within seconds. In today's world of digital technology, people routinely move between multiple methods of communication, including text messaging, social networking sites, video streaming services and academic/professional information. Over the last 10 years, the growth of smartphones, relatively low-cost Internet and algorithm-based digital media has led to an increased number of individuals engaging in multi-tasking with various digital media platforms at a greater frequency than previously.

Recent studies show that young adults are the most common demographic group engaging in these types of multi-tasking behaviours (Boer et al., 2020; van der Schuur et al., 2018).

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The main difference between traditional multi-tasking and digital media multi-tasking is that digital media multi-tasking typically involves fragmented focus, where multiple tasks are continually switched from one to another based on notifications or real-time updates, rather than coordinated together with other tasks, as is the case with traditional multi-tasking. Research conducted in the last 10 years suggests that this type of digital media multitasking has now become the norm in the workplace, socially and academically, which has implications for the psychological impact of this process (Loh & Kanai, 2016; Uncapher et al., 2017). Because digital media has become such an integral part of day-to-day functioning, the effects of media multitasking on psychological functioning are becoming increasingly important for researchers to study.

Cognitive and Psychological Implications of Media Multitasking

In the past decade, researchers have begun to investigate the relationship between media multitasking (the use of multiple forms of media and technologies simultaneously) and the cognitive and psychological consequences associated with this behaviour. There is evidence that repeatedly switching tasks between different digital devices negatively impacts one's ability to concentrate, increases distractions, and reduces one's ability to remember things or to use one's short-term memory effectively (Baumgartner et al., 2017; Wiradhany & Nievenstein, 2017). The cognitive cost incurred by switching from one task to another requires an individual to reorient themselves to the new task and reallocate their mental resources back to the new task as well.

In addition to impacting an individual's cognitive function, media multitasking has also been linked to self-reported memory problems and cognitive inefficiency. Although no objective cognitive deficits were found across studies, individuals who self-report higher rates of media multitasking also self-report being more forgetful and having a higher rate of problems concentrating (Madore et al., 2020). There is also emerging evidence that problematic media multitasking is associated with additional challenges such as problems regulating emotions, increased levels of stress, and decreased levels of engagement with school (Boer et al., 2020; Domoff et al., 2019).

The current literature suggests that there are no significant differences in academic performance as a result of media multitasking; however, academic literature always finds a correlation between high levels of media multitasking behaviours and self-reported problems with concentration and sustained attention (Ralph et al., 2015; van der Schuur et al., 2018). The evidence documenting cognitive and emotional problems resulting from media multitasking must be systematically researched in populations experiencing high levels of media immersive behaviour.

Theoretical Foundations of Media Multitasking

Several cognitive theories provide a useful framework for understanding the processes involved in media multitasking. One such framework is Cognitive Load Theory, which posits that working memory has a limited processing capacity. When multiple streams of information compete simultaneously for cognitive resources, performance efficiency declines (Sweller et al., 2019). In the context of media multitasking, individuals continuously divide their attention across different digital inputs. This constant redistribution of cognitive resources increases extraneous cognitive load, thereby reducing the mental capacity available for primary tasks such as learning, comprehension, or problem-solving.

In a similar vein, the Limited Capacity Model of Attention proposes that attentional resources are finite and must be distributed among competing stimuli (Lang, 2017). Frequent task-switching, characteristic of digital media environments, can fragment attentional processes and disrupt sustained focus. As individuals shift repeatedly between tasks, the efficiency of attentional control may diminish, making prolonged concentration more challenging. Although emerging neurocognitive research has suggested a possible link between chronic media switching and alterations in attentional filtering mechanisms (Loh & Kanai, 2016), current evidence remains preliminary and does not yet permit definitive causal conclusions.

Taken together, these theoretical perspectives indicate that habitual digital multitasking—such as alternating between texting and academic work—may contribute to reduced attentional efficiency and heightened subjective cognitive strain, particularly in contexts that demand sustained cognitive engagement.

Media Multitasking and Young Adults

Digital media use is growing among young adults (ages 18 - 25) as they transition during a period of developing independence, identity exploration and academia (educational transition). This age group also has some of the highest rates of global digital connection and screen engagement (Boer et al., 2020).

Educational behaviours and patterns among young adults often involve simultaneous academic work, socialisation through media (relatedness) and entertainment use (leisure). Due to the above, many young adults develop media multitasking as a habit rather than engaging with media intentionally. Studies have shown that habitual media multitasking can lead to increased levels of distractibility and a decrease in metacognitive awareness about attention limitations (Wiradhany & Nieuwenstein, 2017).

Furthermore, young adults are faced with educational and/or work demands that require prolonged attention / cognitive function; therefore, they are at an increased risk of the negative cognitive effects of the frequent switching of media they engage with in their daily lives. Researching media multitasking behaviour among young adults has both developmental and educational implications.

Media Multitasking in the Indian Context

The widespread use of digital media across India over the last 10 years has led to significant increases in smartphone usage, internet access, and social media adoption among young people. The incorporation of digital technologies into various aspects of life is becoming an integral part of young Indian adults' daily activities, such as studying and working, as well as how they interact with each other socially.

Despite these rapid changes, there is little empirical research on media multitasking in India. Studies in other countries have typically focused on Western, highly developed societies, which raises questions about whether findings in North America and Europe can be generalised across different cultures (van der Schuur et al., 2018). Collectivist family structures, intensely competitive academic environments, and hybridised forms of social interaction (partly online and partly offline) may influence the extent to which people engage in multitasking behaviours within India.

The majority of empirical research conducted to date has been undertaken using laboratory or experimental designs rather than through large-scale surveys with representative samples within culturally diverse populations. As a result, more culturally-informed empirical research is needed regarding media multitasking behaviour and its psychosocial correlates for young Indian adults.

Subjective Memory and Attentional Lapses

Subjective memory refers to how people evaluate their own memory function in everyday life. It is how individuals perceive their ability to store information, remember appointments and tasks, and meet every day cognitive demands. Some examples might include forgetting an upcoming commitment, misplacing one's keys, or struggling to recall recently learned information. Although subjective memory reports do not always correspond to objective cognitive deficits, subjective memory concerns do provide meaningful insight into how people perceive their own cognitive function and psychological burden (Madore et al., 2020).

Attentional lapses refer to brief disruptions in sustained attention. These lapses may include episodes of mind-wandering, increased distractibility, or a general inability to focus on a task over an extended period of time. Attentional lapses can have a detrimental impact on academic success, professional productivity, and social interactions. Recent work has identified attentional control as a domain particularly susceptible to environmental demands and digital distraction, suggesting that the media environment may contribute to brief attention lapses (Ralph et al., 2015).

Together, subjective memory beliefs and attentional lapses provide a useful window into everyday cognition outside of the laboratory. By studying these constructs, we can gain a better understanding of how habitual use of multiple digital platforms may impact real-world cognition, particularly among individuals who frequently engage with digital media.

Rationale and Purpose

As media multitasking continues to get normalised among young adults, there is a dearth of empirical data in the Indian context. While international literature has suggested possible associations between media multitasking and attentional inefficiencies, there is a paucity of any culture-specific evidence. In this study, we aim to understand the relationship between media multitasking, subjective memory functioning and attentional lapses in young Indian adults by using self-report survey measures. This study, by adding to the growing empirical literature related to digital cognition and cognition in a rapidly industrialising developing country, aims to fill an important gap in the Indian sociocultural context.

The expansion of digital media today has shaped how young adults inculcate information, communicate and engage with their academic and daily tasks. Multitasking is often seen as a skill that reflects cognitive flexibility, empirical researches suggest that ongoing engagement in multimedia activities may adversely affect attention spans and subjective memory functioning.

Mark et al. (2008) showed how serious disruptions from ongoing tasks can increase stress and decrease productivity in tech-mediated environments. It noted that, when people are consistently interrupted, they have to redirect cognitive resources away from the primary task and will then spend additional mental effort in returning to it. This layered process adds

to the cognitive load and causes frustration. Time pressure and reduced efficiency in the tasks also slows the time taken to finish it and fragmented attention. These results have significant involvement in our media multitasking environments as people regularly move across multiple digital platforms and engage in tasks which can heighten the levels of cognitive load and compromise sustained attention and production on the task.

Ophir et al. (2009) examined whether heavy media multitaskers portray higher cognitive abilities. Individuals reporting frequent usage of multiple media simultaneously exhibited poorer performance in the tasks that needed filtered attention, switching of activities and working memory. People who used to multitask often showed trouble controlling their distractions and were found to be more vulnerable to irrelevant stimuli. The Limited Capacity Model of Attention, which holds that cognitive resources are limited and that divided attention lowers efficiency, was used to understand the findings.

Cain and Mitroff (2011) elaborated on these results by delving deep into attentional lapses among frequent media multitaskers. Although people who multitask daily demonstrated a wider attentional space but struggled with selective attention and inhibition control. The findings of this study, hence, suggested that an increase in environmental surroundings does not relate to improved cognitive performance. It portrayed a decline in attentional capacity that became more prominent under circumstances that required sustained focus.

Further findings show that neural correlates underlie multitasking-related cognitive differences. Uncapher and Wagner (2015) reported a decline in the density of grey matter, which is situated in the anterior cingulate cortex, among people who are daily multitaskers. The brain region plays an important role in cognition and the monitoring of conflicts. In a behavioural context, heavy multitaskers show weaker working memory and high distractibility. The findings of this study align with the theory of executive functioning, which focuses on working memory, inhibitory control and cognitive flexibility as interlinked cognitive capacities.

Similar to this, Ralph et al. (2015) stated that attentional lapses in multitaskers were connected to the failures in maintaining goal-relevant representations, which suggests instability.

Stothart et al. (2015) elaborated on the work of task disruptions; their results suggested mobile phone notification banner is related to an increase in impaired levels of attention even when not participating actively.

With the increased smartphone usage, experimenters and researchers explored the cognitive implications of it. Research by Kushlev et al. (2016) portrayed indications between smartphone notifications and a decline in attentional performance even when the item was not being actively used by people, which suggested cognitive abstraction.

Wilmer et al. (2017) studied the link between smartphones and the diminishing effects of attentional control and working memory capacity. Findings resulted in habitual behaviours that were connected with increased distractions for them.

As technology became integrated into educational surroundings, researchers started investigating multitasking in the workplace and classrooms. Studies conducted by May and

Elder (2018) showed that students engaging in social media use, along with the classes that were being held, performed significantly worse. It was found that they had a reduced level of attention and encoding efficiency, which limits their long-term retention of information.

These were interpreted via Cognitive Load Theory, which differentiates between intrinsic, germane and external cognitive load. Multitasking introduces add on to external load, thereby reducing the cognitive availability of resources for further processing of information.

Similar to this, Chen and Yan (2018) studied media multitasking that resulted in poorer academic and work performance, which was due to divided attention and a reduction in the capability of deep processing.

Wiradhany and Koerts (2020) investigated media multitasking and its link with attentional lapses and poorer performance of memory. The results stated that ineffective encoding was present more than storage reduction.

Firth et al. (2020) studied digital engagement extensively, which may alter attentional network and connection pathways. Neuroplasticity theory supports this take of continuous behaviour of switching between tasks may reinforce dysregulated attentional habits.

Schofield et al. (2021) investigated multiple tasking behaviours across various countries, and the findings suggested a negative correlation between multitasking behvaiour and attentional control, further implying cross-cultural validity of cognitive functions.

Baethge and Rigotti (2022) found that continuous interruptions decrease the amount of efficiency in working memory and high attentional remainder, described in the Task-Switching Cost Framework.

Das-Chaudhari (2023) studied the usage of social media networking, which implied decreasing control on attention and lower intensity of functional memory among youth. There was a need to analyse them through objective and subjective measures of cognition.

Lui and Wong (2023) outlined substantial multitasking of media that demonstrated weak episodic memory.

Similarly to this, Abu Baker et al. (2024) analysed the data of university-going students with respect to their digital multimedia usage. Findings of the present study implied a decline in the levels of accuracy of working memory and prolonged speed for cognitive processing.

Kumar (2024) examined extreme levels of digital multitasking in Indian Students that anticipated a reduction in the levels of sustained attention and heightened academic distractions. Furthermore, Kamraju (2024) reports cognitive fatigue and memory decline in the Indian Youth that consumes high levels of digital media.

India is a representation of the largest population of individuals who are digital users at a global level. There has been a swift increase in digital media usage among young adults. Since the affordability of the internet the access to it has increased, and so has the multimedia engagement, which further normalised multitasking actions. Moreover, there has

been limited experimental research within the samples from the Indian population, in contrast to the samples taken from the West for research.

Studies done by Indian researchers Kumar and Kamraju (2024) indicate increasing distress about reduced attention in students who attend college. Already existing studies depend mainly on self- reported estimates, which means not incorporating assessments related to attentional lapses. Apart from these anthropological factors, like the environment in relation to academics and collective engagement in digital media, can mould Indian youth individually in a unique manner for multitasking behaviour.

METHODOLOGY

Objective of the study

- To examine the relationship between media multitasking and deterioration in cognitive processing among young adults in India.
- To explore if media multitasking can foresee failures in cognitive processes in daily functioning.

Research Design

The present study employs a cross-sectional correlational research design to explore the relationship between media multitasking, subjective memory functioning, and attentional lapses in young adults. The study collected data at a single point in time to explore naturally occurring variations in these variables in the target population.

We used a correlational research design to explore the strength and direction of relationships among variables without manipulating them or having an experimental control group.

In addition, our primary aim was to explore naturally occurring relationships between variables rather than their causal effect. The cross-sectional design was chosen because it is a time- and cost-effective design. The cross-sectional design allowed us to gather data on the current digital media engagement and perceived cognitive functioning in Indian young adults, who have limited empirical research in this area.

Sample

This study explores the correlation between the phenomenon of using two or more forms of media to complete a task and participants' subjective assessment of memory failures and attentional lapses. The responses collected are reported to be consistent throughout the sample population, which consisted of 150 participants between 18 and 29 years of age who were recruited through convenience sampling. Included in this sample population were full-time and part-time students, employees and those who were unemployed. Subjective measures were obtained regarding media multitasking behaviours, memory experiences, and attention difficulties. The planned sample size to identify statistically significant relationships among the variables through the use of a cross-sectional correlational design was sufficient to meet the needs for analysis; thus, naturally occurring relationships among the variables could be explored.

Procedure

A standardized online questionnaire with three sections was created to investigate the relationship between media multitasking and cognitive functioning in people between the ages of 18 and 29 the survey included demographic data standardized tools for subjective

memory and attentional functioning and a media multitasking measure to evaluate digital media use patterns the participants were selected from the target population using convenience sampling and the research supervisors prior approval was obtained before the study was carried out. Data was collected through Google Forms. The study's goal and the projected time to complete the survey was roughly five to ten minutes. Individuals were briefly described in the introduction and additional voluntary participation and anonymity were ensured.

Google Sheets was used to automatically record the replies, which were then statistically examined using the appropriate techniques to determine the relationship between media multitasking, attention, and subjective memory. In order to derive significant conclusions and implications for future study and potential actions, the data were appropriately analysed.

Hypotheses

Null Hypothesis

H_0: There is no statistically significant relationship between the frequency of media multitasking and failures in cognitive processing including subjective memory complaints and attentional lapse in young adults.

Alternate Hypothesis

H_1: There is statistically significant positive correlation between media multitasking and failures in cognitive processing. Elevated levels of media multitasking are linked with increase in the problem in subjective memory and attentional lapses in young adults.

Variables

- **IV:** Media Multitasking
- **DV 1:** Subjective Memory
- **DV 2:** Attentional lapses

Tools and Measures

- **Cognitive Failure Questionnaire**: The Cognitive Failures Questionnaire (CFQ) is an instrument developed for self-administration to assess frequent examples of lapses in the realms of attention, perception, and memory that occur during daily activities. It consists of a total of 25 items that describe commonly occurring errors such as losing focus, forgetting to do what you intended to do and making a minor mistake while completing daily activities. Each respondent rates how frequently they have experienced each of the situations listed on a scale of 0 to 4 (0 = never; 4 = very frequently), and scores are summed to provide a total score that represents the number of times the respondent experienced a cognitive failure. Higher total scores reflect more frequent cognitive failures relating to attention or memory. The CFQ has been used extensively in research and has consistently exhibited strong psychometric characteristics. Many studies have demonstrated that the CFQ possesses good psychometric characteristics across a variety of different populations and has shown the best psychometric characteristics among young adults. Psychometric characteristics across a variety of populations, with the best among young adults.
- **Media Multitasking – Revised Scale (MMT-R):** The media multitasking behaviour of the participants was assessed using the Media Multitasking—Revised Scale

(MMT-R). The MMT-R is a self-report measure that assesses how often a participant engages in media multitasking (e.g., texting while watching TV, browsing the web while studying, or using two screens at once) and involves responses from a Likert-type scale, indicating how often the behaviours occur. Participants' overall scores were calculated by summing the individual item responses. The MMT-R revised version has been found to have acceptable levels of internal consistency and has been previously used in empirical investigations of media use behaviour among college students and young adults.

- **Memory Complaint Questionnaire**: The MCQ (Memory Complaint Questionnaire) was created to assess people's opinions about their memory in real-life situations. It contains questions about things that happen in people's daily lives, like forgetting things, not remembering where they put them or missing appointments. The participants respond to each item about how often they feel this way on a Likert scale, and a total score is computed by adding all the answer values together, with higher scores indicating greater perceived problems with memory. The MCQ has been used in research and is a reliable measure of self-reported memory problems over time.

Data Analysis

The research aimed to collect evidence to examine whether the level of media multitasking that young adults employed was associated with their subjective complaints of memory problems and attention lapses. The target population of the study was youth in the age range of 18 to 29 years old y in India. A quantitative correlational research methodology was adopted, and data were analysed using Jamovi software. The Media Multitasking Revised Scale was used to operationalise the independent variable, media multitasking. The dependent variables, subjective memory complaints, were assessed using the Memory Complaint Questionnaire and attention lapse was assessed using the Cognitive Failures Questionnaire.

Descriptive statistics were employed to calculate mean, standard deviation, minimum, maximum, skewness, and kurtosis for each of the variables of interest. Frequency analyses were performed to calculate the age, gender, education, occupation, and living situation of the sample based on the data collected. Normality analysis was conducted to determine the assumptions of the data before any inferential tests were carried out.

Pearson's correlation was employed to examine the relationship and the strength of the relationship between media multitasking and subjective memory complaints, and media multitasking and objective attention lapse. Two individual simple linear regression analyses were employed to examine whether media multitasking predicted subjective.

RESULTS

Table 1 Demographic Characteristics of Participants (N = 150)

Variable	n	%
Gender		
Female	113	75.3
Male	37	24.7
Education		
Post Graduate	75	50.0

Undergraduate	57	38.0
Senior Secondary	17	11.3
Pursuing a Master's	1	0.7
Occupation		
Student	105	70.0
Employed	28	18.7
Unemployed	12	8.0
Others	5	3.3
Living Condition		
With parents/family	99	66.0
Hostel/PG	19	12.7
Friends/roommates	11	7.3
Independent	7	4.7
Partner/spouse	8	5.3
Institutional	5	3.3

Note. Mean age = 23.10 years *(SD = 5.19).*

Table 1. Distribution of the sample across gender, education, occupation, and living conditions. The participants were distributed across gender, education, occupation, and living conditions as presented in Table 1. A total of 150 participants were included in the study, with 75.3% being female and 24.7% being male. 50% of the participants were postgraduates, 38% were undergraduates, and 11.3% were senior secondary graduates. The majority were students (70%), 18.7% were employed, and 8% were unemployed. 66% of the participants lived with parents/family, and 12.7% lived in a hostel/PG. Therefore, the sample largely consists of young adult students who live with family, and this needs to be considered when generalising.

Table 2 Descriptive Statistics of Study Variables (N=150)

Variable	M	SD	Min	Max
CFQ Total	47.10	17.20	3	100
MMT-R Total	50.80	11.70	22	78
MCQ Total	10.10	2.17	6	18
Age	23.10	5.19	17	51

The primary study variables' summary of descriptive statistics is presented in Table 2. The mean media multitasker (MMT-R Total) score of 50.80 (SD = 11.70) indicates an average level of media multitasking behaviour among participants (MMT-R). The mean attentional lapse (CFQ Total) scores of 47.10 (SD = 17.20) suggest moderate to high instances of cognitive failures within the sample of participants (CFQ). The mean for the MCQ total scores of 10.10 (SD =2.17) indicates participants experience relatively low to moderate memory loss. Additionally, the distribution of CFQ, MMT-R, and MCQ scores was all found to be approximately normally distributed, thus allowing for the appropriate use of parametric analyses.

Table 3 Pearson Correlations Among Study Variables (N = 150)

Variable	1	2	3	4
CFQ Total	−0.14	—		
MMT-R Total	−0.14	0.67***	—	
MCQ Total	0.06	0.36***	0.29***	—

Note. *p < .05, *p < .01, **p < .001.*

Table 3. Shows correlations among media multitasking, attentional lapses, and memory complaints. Pearson's correlation analysis indicated significant correlations among our study variables. Media multitasking (MMT-R Total) was strongly positively correlated with attentional lapses (CFQ Total), $r = .67$, $p < .001$, suggesting that individuals who were higher in media multitasking reported considerably higher levels of cognitive failures. Media multitasking was moderately positively correlated with subjective memory complaints (MCQ Total), $r = .29$, $p < .001$, indicating that individuals who were higher in media multitasking were also higher in subjective memory complaints. There was a moderate positive correlation between attentional lapses and subjective memory complaints, $r = .37$, $p < .001$, indicating that individuals who reported higher levels of cognitive failures also reported higher levels of subjective memory complaints.

Table 4 Simple linear regression predicting subjective memory complaints (MCQ Total) from media multitasking (N=150)

Predictor	B	SE B	β	t	p
Intercept	7.32	0.75	—	9.68	< .001
MMT-R Total	0.05	0.01	0.29	3.72	< .001

Model Summary:
$R^2 = 0.09$, $F(1, 148) = 13.90$, $p < .001$

Table 4 shows the simple linear regression analysis of whether media multitasking significantly predicts subjective memory complaints. Media multitasking significantly predicts subjective memory complaints in the simple linear regression model, $F(1, 148) = 13.90$, $p < .001$, $R^2 = 0.09$. Media multitasking positively predicts subjective memory with $\beta = 0.29$, $t(148) = 3.72$, $p < .001$. The $B = 0.05$ (unstandardized coefficient) shows that, on average, a one-unit increase in the media multitasking score on the MRMI resulted in a 0.05 unit increase in the subjective memory complaints.

Hypothesis:
H_{01}: Media multitasking has no significant impact on subjective memory.
H_1: Higher levels of media multitasking are significantly associated with poorer subjective memory.

The null hypothesis (H_{01}) is rejected because the regression model is statistically significant ($p <_.001$) and media multitasking significantly predicts subjective memory complaints. Therefore, the alternative hypothesis (H_1) is accepted. Higher levels of media multitasking are significantly related to poorer subjective memory.

Table 5 Simple linear regression predicting attentional lapses (CFQ Total) from media multitasking (N=150)

Predictor	B	SE B	β	t	p
Intercept	−2.86	4.65	—	−0.61	0.53
MMT-R Total	0.98	0.09	0.67	11.04	< .001

Model Summary:
$R^2 = 0.45$, $F(1, 148) = 122.00$, $p < .001$

Table 5. Results of the simple linear regression analysis testing whether media multitasking predicts attentional lapses significantly.

Simple linear regression analysis was used to test whether media multitasking predicts attentional lapses significantly. The overall model was significant, F(1, 148) = 122.00, p < .001, which means that media multitasking predicts attentional lapses significantly. R^2 = 0.45 indicated that our predictor explained 45.1% of the variance in attentional lapses scores. Media multitasking is a strong positive predictor of attentional lapses, β = .67, t(148) = 11.04, p < .001. The unstandardized coefficient (B = 0.98) means that each one-unit increase in media multitasking score was associated with an increase of 0.98 units in attentional lapse score. In other words, individuals who are more prone to media multitasking behaviours are more likely to experience attentional lapses during everyday life.

Hypothesis:
H_{02}: Media multitasking has no significant impact on attentional lapses
H_2: Higher levels of media multitasking are significantly associated with greater attentional lapses.

As the regression model and media multitasking were significant predictors (p < .001), we reject our H_{02}, and accept our H_2. Thus, we found that there is a relationship between media multitasking and attentional lapses, which is significant. Younger adults who multitask more frequently are more likely to experience attentional lapses.

DISCUSSION AND ANALYSIS

Discussion

In context of rising smartphone use, social media interaction and digital media exposure, young adults often participate in several digital tasks at one time. Though digital technologies provide greater access to information and communication, there is increasing concern that these technologies will have negative impacts on cognitive performance.

A cross-sectional correlational design was used in the current study to examine the relationship between media multitasking and subjective memory functioning and attention lapses, among young adults in India. The research provided data from 150 young adults, aged 18-29 years.

Three standardised instruments were used to collect data for analysis: the Media Multitasking Revised Scale, the Memory Complaint Questionnaire and the Cognitive Failures Questionnaire. Descriptive statistics, Pearson correlation analyses and Regression Analyses were used to analyse the results of the quantitative data.

Findings suggested that there was a significant positive correlation between media multitasking and both subjective memory complaints and attention lapses, with moderate *($r = .29, p < .001$)* and strong positive correlations *($r = .67, p < .001$)*, respectively.

Further, Regression Analyses demonstrated that media multitasking significantly predicts subjective memory complaints *($R^2 = .09$)* and attention lapses *($R^2 = .45$)*, suggesting that greater participation in media multitasking behaviours is associated with increased everyday cognitive difficulties.

This research paper adds to the current landscape of research regarding the impacts of media multitasking on cognitive performance and presents future research opportunities.

Interpretation

The present study's most significant finding is the strong positive correlation between the frequency of multitasking with media and the incidence of attentional lapses. A Pearson correlation analysis portrayed a significant correlation between MMT-R and CFQ scores *($r = .67, p < .001$)*, which indicated that individuals who regularly engage in media multitasking have increased occurrences of cognitive failures within everyday activities.

The regression analysis also provided further validation of this relationship. Media multitasking was a statistically significant predictor of attentional lapses ($\beta = .67, t = 11.04, p < .001$) and accounted for 45% of the variance in scores for attentional lapses *($R^2 = 0.45$)*.

These results indicate that individuals who regularly engage in media multitasking activities may be significantly impacted by attentional disruptions in their daily lives. Individuals may have difficulty sustaining attention during task completion when they routinely switch between various digital platforms, causing symptoms such as lapses of memory, distraction and task errors.

Other research supports the idea that individuals habituated to multitasking environments have likely trained their brains to use divided attention across numerous stimuli, rather than focusing on one task.

The study found a moderate connection between the individuals' worrying about their memory and their habit of doing multiple things on media simultaneously, such as checking emails and watching videos. This link was strong enough to be statistically significant *($r = 0.29, p < .001$)*. Regression analysis showed that media multitasking is a key factor that can predict memory concerns, with *($\beta = .29, t = 3.72, p < .001$)*. However, the overall amount of memory complaints explained by media multitasking is 9% *($R^2 = .09$)* of the total variance. Which suggest that media multitasking might help explain why some people feel their memory is not working well, but other important factors also affect how people view their own memory.

The study also suggests that digital multitasking, such as using multiple media at once, can interfere with how information is stored in the brain. When people try to handle many tasks at the same time, their ability to process and keep information in working memory might be reduced. This could make it harder for them to remember things or recall them when needed. Another important finding was that there's a significant link between attention problems and people's worries about their memory. The correlation was *($r = 0.37, p < 0.001$)*. This means

that when people have trouble focusing, they might also feel like they're having memory issues. Often, memory problems aren't because the information is actually lost, but because it wasn't remembered properly in the first place. So, the role of attentional control directly contributes to subjective memory functioning.

Implication

Academic Implications: The results of the present study have important effects on the daily functioning of individuals (students). Young adults often use multiple devices or switch between tasks while doing the assigned tasks, during online lectures or work meetings. This behaviour can significantly result in declining ability to focus, increased mistakes in thinking, and lower how well they learn and perform in their academic setup. Integration of digital literacy programs will help students to be aware of the cognitive consequences of the same.

Clinical and Psychological Implications: From a mental health point of view, problems with attention and memory can lead to higher amounts of stress and lower levels of confidence in school or the workplace. This can make things harder for young adults. When helping young adults, mental health professionals should look at how much they use technology and how that creates a connection to problems like difficulty focusing, forgetfulness, or trouble thinking clearly.

Societal Implications: The study also shows broader effects for society. As digital media is now such a huge part of our everyday lives, the population needs to understand how using multiple things at once affects how our minds work. Campaigns that encourage mindful use of technology and a good balance with digital tools can help people build healthier relationships with their devices.

Limitations

There are many limitations associated with this study, despite the invaluable information it provides. The study only used a cross-sectional design, therefore does not allow for the creation of a strong cause-and-effect relationship between cognitive functioning and media multitasking. This study relied on surveys that were self-reported by participants; therefore, they could be subject to bias from the responders, memory problems or bias on the part of the responder in providing a more positive response.

Mainly, students and young adults participated in the study and were recruited by convenience sampling; therefore, it is difficult to generalise the results of the study to older individuals and/or other types of people. People will use digital media in a different manner depending on their culture and/or socio-economic status, and future studies should therefore investigate these differences and include a diverse group of individuals to provide a greater understanding of their relationship.

Recommendations for future research:

Directions that further research should consider:

- **Longitudinal research:** Longitudinal researches might help in influencing the multimedia usage that might lead to prolonged and chronic cognitive changes.
- **Experimental studies**: experimental research can help in determining and analysing how reducing multimedia usage could increase memory retention and attention.

- **Cross-cultural studies:** future studies should also delve deep into how people from different cultures and ethnicities will be affected by media multitasking. In contrast to developing digital communities.

CONCLUSION

This research examined the relationship between media multitasking and the daily functioning of cognitive processes in young adults in India. Specifically, highlighting subjective memory problems and dysregulated attention. There were increased levels of distress with respect to hampered cognition due to multiple digital media. The present study aims to evaluate if high levels of engagement in multiple media use behaviour, such as multitasking, are related to increased levels of cognitive failures in everyday life.

The outcomes of this study demonstrated a significant positive relation between media multitasking and attentional lapses, alongside complaints related to subjective memory. Analyses done by regression highlight multimedia tasking activities prominently projected both lapse in attention and problems with subjective memory. The results encouraged the set hypotheses and put forward that people who engage in multimedia tasking on a daily basis are much more susceptible to dysregulated experience with respect to attentional lapses and impaired functioning of memory.

Comprehensively, this study provides an expanding research frame for digital media behaviour and cognitive processes in the young adult population of India. Which purposefully sheds light on the benefits of using media technology mindfully and suggests future research about probing longitudinal outcomes of cognitive processes linked with technological media multitasking

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Conflict of Interest

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