

Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females across Wide Age Ranges

Ms. Mahua Roy^{1*}, Prof. (Dr.) Sonali De², Dr. Dolon Dawn³

ABSTRACT

Social media provides us with a way to connect with others who share our interests and values. Over engagement with social media has become increasingly prevalent, leading to various impacts on cognitive functions. The aim of the present study is to examine the effect of overinvolvement in social media on different cognitive functions in female students. The study was conducted with 80 participants, divided into two groups based on their involvement with social media. Social Media Addiction Test, Prospective Retrospective Memory Questionnaire, Working Memory Questionnaire, Clock Test sequences and Span of Attention measuring tool were used. Analysis of the data was done by computing t test, using SPSS 23, keeping p-value at 0.05. Findings show that Prospective memory was significantly lower in the participants who were over involved with social media. However social media engagement did not show any detrimental influence on other cognitive functions like working memory, span of attention and sustained attention. Easy access to social media, impulsiveness and lack of self-control may be the probable cause of the findings related to prospective memory. On the other hand, strategic use and certain positive aspects of social media may nullify the possible negative effects, while working memory, span of attention and sustained attention were compared.

Keywords: *Social Media, Prospective Memory, Span of Attention, Sustained Attention, Working Memory*

Social media is any human communication that enables us for sharing information on internet through computers, tablets, mobile phones etc. It makes this communication process much easier and faster than offline communication system. It has the quality to attract millions of users on the globe irrespective of different ages, gender and socioeconomic status. Over involvement refers to being excessive immersed into any activity, when people concentrate more on the attractive materials than on other important activities of everyday life that may hamper their performance and social life. People these days, especially after the lockdown period due to Covid -19, prefer to be sociable than to be social. They are immersed in social media just to maintain the social relationships adequately and be surrounded by people. It impacts individuals in both positive and negative way.

¹Lecturer, Department of Psychology, Vidyasagar College, University of Calcutta, Kolkata, India

²Professor, Department of Psychology, University of Calcutta, Kolkata, India

³Head, Department of Psychology, Victoria Institution College, University of Calcutta, Kolkata, India

*Corresponding Author

Received: December 10, 2023; Revision Received: February 10, 2024; Accepted: February 14, 2024

Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females across Wide Age Ranges

Social media use on a large scale can have negative consequences on people that are on par with negative impacts of drug use in terms of their severity. Further, researches show that social media addiction may lead to abuse of addictive substances. A study found youngsters who engage in excessive use of social media in comparison to infrequent or non-users are much more likely to use drugs: five times more likely to smoke cigarettes, three times more likely to drink alcohol, and twice as likely to use marijuana (Hillard, 2019). Over the past decade, online social networking has significantly transformed how people communicate and interact. However, questions arise about whether these changes might influence normal human behavior and steer psychiatric disorders. Prolonged use of social networking sites (SNS), might be linked to internet addiction, signs of depression and changes in self-esteem (Pantic, 2014).

The students who use social media, generally study less that results in lower grade (Abaleta et al., 2014). However, social media use may have positive impact when students use it for acquiring knowledge. The negative effect of social media can be turned into positive, rather than just minimised by moderating access and time spent on social media (Raut and Patil, 2016). Social media addiction is a behavioural addiction, characterized as spending too much effort and time on social media, being extremely concerned about social media, and also driven by an uncontrollable desire to use social media (Hillard, 2023).

A comparative cross-sectional study on 1870 students, revealed that 36.9% of them were addicted to social media with additional complications related to problems in eyes, episodes of anger and sleep disturbance. In addition, smoking habit, consumption of tobacco, alcohol and junk food were reported in male social media addicted participants (Masthi et al., 2018). Overuse of social media may lead to social media addiction when it is used just for entertainment purpose producing low subjective well-being, whereas strategic use of social networking sites may help to improve subjective well-being (Zhao, 2021)

Social media is reported to influence a person's capacity to concentrate and memorize (He, 2021; Thompson, 2017) It is necessary to maintain focused attention on pertinent stimuli in order to perform well. Social media usage to a great extent negatively affect attention which in turn effects in declination of academic performance in students (Thompson, 2017). Barry He (2021) observed wide array of social media usage in younger generation resulted in drop of average human attention span from 12 seconds to 08 seconds in 13 years period.

Prospective memory and working memory are two memory systems that contribute significantly to any cognitive activity and used extensively as it is crucial for everyone to function effectively. The area of consciousness termed as working memory, where knowledge that is currently being used is maintained and processed. Prospective memory, on the other hand assists us in remembering to complete a previously planned action that must be completed at a future occasion while carrying out an ongoing work. Individuals, with heavy usage of social media reported having higher memory problems (Sharifian, 2020). The present study aimed to find out the effects of high and low social media usage on the cognitive components of selective and sustained attention, and prospective and working memory.

MATERIALS AND METHODS

Ethics

The study was accorded Ethical Committee Approval (reference no.: CUIEC/02/33/2022-23) dated 05.01.2023 by Institutional Ethics Committee for Bio Medical and Health Research involving Human Participants, C.U.

Study design

Selection and Description of Participants: 80 female participants of age 18-24 years participated in the present research, divided into two groups, those overinvolved with social media and those who were not. Purposive sampling method was used for recruiting participants. This study did not include any participant who was not a student and who did not use social media.

Tools:

- **Social Media Addiction Test** (Esgü, 2006) to assess the social media addiction of the participants.
- **Prospective Retrospective Memory Questionnaire** (Smith, 2000) to assess prospective memory of the participants.
- **Working Memory Questionnaire** (Azouvi, 2012) to assess the working memory of the participants
- **Clock Test** (Moron, 1997) to assess sustained attention of the participants. It was a paper-based test containing 400 stimulus-icons of which 40 were target icons and 40 distractors. Rest of the 400 icons were different from the target and distractor icons. The time limit to complete each trial was three minutes.
- To assess span of attention of the participants a power point presentation containing ten slides with increasing numbers of randomly selected alphabets had been prepared by the present researcher. The exposure time of each slide was 0.1 second (Woodworth, 1971).

The data for all the variables had been collected through online mode using Google form and Microsoft power point presentation.

Statistics

To calculate the obtained data descriptive statistics and t-test were done using SPSS 23.

RESULTS AND OBSERVATIONS

Table 1: Showing the mean, SD and t test values of the scores of Prospective Memory, Working Memory, Span of Attention and Sustained Attention of the female participants who were addicted to social media and those who were not.

	Prospective Memory		Working Memory		Span of Attention		Sustained Attention	
	SMA*	NSMA†	SMA*	NSMA†	SMA*	NSMA†	SMA*	NSMA†
Mean	21.05	17.20	27.57	28.22	4.65	4.62	22.84	23.55
SD	5.69	5.51	14.09	16.42	0.89	0.62	6.11	5.66
N	40	40	40	40	40	40	40	40
t	3.07		0.90		0.14		0.53	
Significance level	.01		0.85		0.88		0.59	

*SMA: Social media addiction

†NSMA: Non-social media addiction

Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females across Wide Age Ranges

From the above table, it can be said that in case of the prospective memory, there lies a significant mean difference between the two groups of participants. However, in case of Working Memory, Span of Attention and Sustained Attention there exists no significant mean difference between the two groups.

DISCUSSION

Based on mixed findings reported by previous studies, this study hypothesized that there would be no difference in terms of prospective memory, working memory, span of attention, and sustained attention scores between the groups of female participants who are overinvolved with social media and those who are not. In this research significant mean difference was observed only in case of prospective, while no significant difference observed in the scores of working memory, sustained attention and span of attention. There are various elements that must be taken into consideration to interpret the present findings. Majority of the research on media multi-tasking has been done with people who are simultaneously using multiple digital media platforms (May et al., 2018). The purpose of this study was to investigate only social media users; media multitasking behaviours were beyond the scope of this research.

Since prospective memory requires performing some forthcoming actions, getting intensely involved in one task may affect this type of memory for other tasks; (McDaniel et al., 1990) consequently it is expected that digital addiction may lead to declination of prospective memory (Prathap et al., 2021). The instant messaging facility provided by different social media applications are widely used for communication and information exchange. The use of different social media platforms has been shown to have both positive and negative effects on cognitive processes, including prospective memory (Steiger et al., 2022; Prathap et al., 2021; Porwal et al., 2019; Tullis et al., 2015).

However, the constant availability of information through different social media platforms may also facilitate prospective memory performance by providing memory cues for future task performance. But by and large, excessive use of social media platforms has been reported to disrupt prospective memory, by way of distractions and disruptions of daily life activities, studies, interpersonal relationships etc. One of the factors that led to major spike in social media usage among individuals is the availability smart phones. It has become an integral part of our lives and plays a big role in our social interactions. In today's world, people are increasingly becoming more and more dependent on their smart phones. India is having increasing numbers of smart phone users every quarter, and in every month mobile data consumption rate per user is on the rise (Abbas, 2021).

People are heavily reliant on their smart phones and spend a significant amount of time accessing social media. This dependency is continuously increasing alongside steady increase in the consumers of smart phones. Smartphone users typically check their phones 150 times per day, which is more than the frequency of other activities such as eating or sleeping (Ahonen, 2013). Although this statistic is a bit old, it is still relevant today as functionality of smart phone usage is showing an exponential growth.

People who spend most of their time communicating with people through social media may find it difficult to resist their craving for instant feedback from other people. This craving for social feedback can be dangerous if it is not controlled. Many people are addicted to social networks and spend hours scrolling through their feeds without even realizing what they are

Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females across Wide Age Ranges

doing or what they are missing out on. The excessive use of social media, which in turn fuels social media addiction, may be significantly influenced by this impulsivity. Research has demonstrated the detrimental effects of high smart phone usage on event-based prospective memory performance (Chiang et al., 2019) and continuous access to social media has a detrimental effect on many cognitive skills and functions (Steiger et al., 2022; Porwal and Sharma, 2019; Wilmer et al., 2017).

When social media enables individuals to connect with people across the globe, it still has great potential to cause physical real-world detachment from family and friends, leading to negative effects on individual's personal and social life. Connections grow in numbers with strangers at the cost of existing relationships thwarting development of new relations through direct face-to-face interactions. The pervasiveness of social media usage has thus replaced traditional forms of communication.

In the current study, prospective memory was assessed to know the types of errors individuals tend to make while attempting to recall pre planned tasks that must be completed in some specified course of time in future. Here, in this study no significant difference was found between the two groups of participants (SMA and NSMA) on prospective memory. The impact of social media platforms on prospective memory is likely to be multifaceted and influenced by multiple factors, such as usage behaviour, individual variations, and situational context. Although the ubiquitous access to information and reminders via social media platforms could potentially enhance prospective memory performance, it may also lead to over-reliance on external cues and weaken the neural pathways responsible for memory recall.

Working memory, a core cognitive function allows an individual to retain information in mind for a short period of time while one may work with the stored information (Nütley et al., 2017). In the present research no significant difference in working memory was observed between the two groups of participants. Although social media's impact on working memory is still being researched, some studies have found negative impacts while others showed no correlation (Almarzouki et al., 2022; Lara and Bokoch, 2021; Tilvis et al., 2004). Social media acts as the dynamic tool that accelerate the setting of open learning with group discussion, encouraging collaboration and exchange of ideas among students that reinforce their learning behaviour and performance (Ashraf et al., 2021). These interaction, social engagement and learning various technology in turn encourage certain areas of executive functions like attention, inhibitory control, working memory and processing speed (Quinn, 2018).

Social media has become increasingly popular and for some, it has even become a vital part of their everyday lives - especially for younger people and this usage has accelerated dramatically during the COVID -19 pandemic and is likely to continue long after (Almarzouki et al., 2022). As the present research was done in the lockdown period, when everyone was stuck in their homes, no outside activities were there and there was only one medium to stay connected with the outer world was social media. So at that time social connection was very much important to avoid isolation. This had similarity with the older people, who face difficulties to maintain social connections due to mobility issues or different diseases, at the same time due to retirement, loss of loved ones and eventually find themselves becoming more isolated. Findings suggest rather being socially active results in

Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females across Wide Age Ranges

better cognitive ability among the older adults than those who are isolated (Myhre et al., 2017).

Since sociability is an important factor, being isolated may have adverse effect on overall health, both physical and psychological (Hafner, 2016). Social media platforms enhance social connection that in turn has the potential to improve the life quality of the individuals. Studies suggested that complex working memory functions can be enhanced by using Facebook (Myhre et al., 2017). With the rapid growth of internet use, there is now a space for people to engage with almost all aspects of life online. For those who use social media excessively, it has become a habit instead of just acute exposure (Almarzouki et al., 2022). So, like other daily life activities surfing social media is also a very common task for the individuals and does not influence them differently. This might help us understand the findings of the present research, where no intergroup difference was observed in most of the cognitive functions.

Excessive usage of social media has been linked to adverse effects on individuals' attentional capacity (Cardoso et al., 2021). However, the impact appears to vary based on the individual's usage patterns and the nature of the content they engage with. If individuals can effectively manage the distractions caused by their high level of involvement in social media, the negative consequences may be mitigated. Therefore, to explain its impact of attentional capacity, it is crucial to examine how people use social media and the strategies they employ to regulate their attentional focus.

Few individuals exhibit high level of social media usage while effectively doing other tasks concurrently. In such cases, the impact of social media on multitasking becomes apparent as individuals need to focus their attention on each activity. Despite its seemingly simple nature, multitasking is a complex skill that is difficult to develop. Social media platforms offer various multitasking features that allow users to participate in different activities at the same time. These features include sharing status updates, participating in live chats, broadcasting live videos, sharing extracurricular activities, expressing thoughts through posts, and more. Social media platforms serve as facilitators for multitasking across diverse fields. These platforms offer a range of features and functionalities that allow users to engage in multiple activities simultaneously, enabling efficient task management and productivity. In today's world, screen-based technology has become an integral part in our daily lives, significantly impacting our reliance on screen-based technologies and making multitasking more imminent and accessible.

It's become increasingly common these days to find people who use social media heavily while also doing well in other professional and personal responsibilities. Teenagers more frequently report social media makes them feel more included and confident (Anderson and Ziang, 2018). Social media provides them a platform to showcase their diverse talents, skills and activities, and can act as a source of satisfaction and relaxation. These activities have positive consequences for the users and for the viewers as well. The benefits of social media usage, however, depend on the extent to which it is employed strategically. Strategic social media usage involves being conscious of the potential negative impacts on cognitive functioning and task performance and taking measures to minimize these risks. One way to achieve this is by avoiding excessive usage of social media that interferes with other tasks and employing some measures to minimize these potential risks. Undoubtedly, these technologies have improved the lives of many people, but it is essential to ensure that we do

Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females across Wide Age Ranges

not neglect other important daily tasks due to excessive social media engagement. It is crucial to strike a balance between the use of social media and other necessary activities.

Social media often has indicated a negative image, but its importance cannot be denied. During the pandemic, online learning platforms and social media have served as important lifelines for students, helping them connect with people and foster personal relationships. Without these platforms, many daily tasks would have been significantly more difficult (He, 2021) Further, limited and purposeful use of social media might not negatively impact cognitive functions. For example, studies reported that even impulsive multitasking with social media does not cause any attention deficit issues (He, 2021) In the present study we found no significant differences in sustained attention and attention span between female participants with and without social media overengagement. Rather, multitasking might be an effective measure for cognitive flexibility (Seddon et al., 2022).

Nevertheless social media has the potential to grab attention to an extent that interferes with other task performance, and thus has addictive property. When social media use becomes addictive it may be treated as any other substance use disorder that include changes in an individual's emotional states. They show emotional, behavioural and cognitive preoccupation with social media and the use of social media gets amplified day by day. Like other substance use disorders, signs of psychological dependence and difficulty in withdrawing in terms of physical and emotional symptoms can be seen when restrictions are imposed on social media use. Interpersonal conflicts may arise and the individuals with social media addiction may retrogress in excessive media use after the restraining period (Hillard, 2023). Different health issues like anxiety, depression, loneliness, eating disorders and even suicidal thoughts may be connected to social media overuse (Robbinson and Smith, 2023).

CONCLUSION

The study reveals that there lies a marked difference between the individuals with social media involvement and those who are less involved in social media with respect to their prospective memory. This may increase procrastination and adversely affect performance, interpersonal relationship. The negative feedback and criticism may create a feedback loop that can cause both short term as well as long term mental health issues.

The probable cause of social media overuse could be easy access to social media, impulsiveness and lack of self-control.

In this research social media engagement did not show any detrimental influence on other cognitive functions like working memory, span of attention and sustained attention. In the previous five to ten years, social media has conceivably grown in popularity among people of different age groups. It got embedded into people's lives, especially during the covid-19 related lockdown. The participants in the current study ranged in age from 18 to 24 years, and therefore, it makes sense that they haven't been active on social media for a very long period of time. So, this study cannot predict if these cognitive functions will remain unimpaired even after long-term social media addiction.

Research reports are there that shows beneficial effects of social media with its strategic use when certain positive aspects may nullify the possible negative effects.

Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females across Wide Age Ranges

REFERENCES

- Abaleta, A.B., Centaza, S.M., & Calimlim, M.E. (2014). Impact of Social networking on the Academic Performance of College Students in Anellano University. *Anellano University Journal of Education*, 4(2), 123-136
- Abbas, M. (2021). India's growing data usage, smartphone adoption to boost Digital India initiatives: Top bureaucrat. *The Economic Times*.
- Ahonen, T. (2013). Smartphone users check mobiles 150 times a day: study. *The Economic Times*. <https://economictimes.indiatimes.com/tech/hardware/smartphone-users-check-mobiles-150-times-a-day-study/articleshow/18443780.cms?from=mdr>
- Almarzouki, A., Alghamdi, R., Nassar, R., Aljohani, R., Nasser, A., Bawadood, M. & Almalki, R. (2022). Social Media Usage, Working Memory, and Depression: An Experimental Investigation among University Students. *Behavioral Sciences*. 12(16).
- Anderson, M., & Jiang, J. (2018). Teens and their experience on social media. Teens' social media habits and experiences. *Journal of Adolescent Health*. 62(6)
- Ashraf, M.A., Khan, M.N., Chohan, S.R. & Khan, M. (2021). Social Media Improves Students' Academic Performance: Exploring the Role of Social Media Adoption in the Open Learning Environment among International Medical Students in China. *Healthcare*. 9(10).
- Azouvi, C. V., Diehl, P. P., Azouvi, P. (2012). The Working Memory Questionnaire: A scale to assess everyday life problems related to deficits of working memory in brain injured patients. *Neuropsychological Rehabilitation: An International Journal*.
- Cardoso-Leite, P., Buchard, A., Tissieres, I., Mussack, D., Bavelier, D. (2021). Media use, attention, mental health and academic performance among 8 to 12 year old children. *Public Library of Science One*, 16(11). doi: 10.1371/journal.pone.0259163.
- Chiang, H. S., Dong, Z. Y., Chen, M. Y., & Chen, A. P. (2019). Exploring the impact of smartphone addiction in prospective memory. *Journal of Advances in Information Technology*, 10(1).
- Esgi, N., (2006). Development of Social Media Test (SMAT17). *Journal of Education and Training Studies*, Vol. 4.
- Hafner K. (2016). Researchers confront an epidemic of loneliness. *New York Times*, pp. 1–7.
- He, B. (2021). Social media multitasking could affect attention span. *Chinadainly.com.cn*.
- Hillard, J. (2019). The Influence of Social Media on Teen Drug Use. Available from: <https://www.addictioncenter.com/community/social-media-teen-drug-use/>
- Hillard, J. (2023). Social Media Addiction. Available from: <https://www.addictioncenter.com/drugs/social-media-addiction/>
- Lara, R.S., Bokoch, R. (2021). Cognitive functioning and social media: Has technology changed us? *Acta Psychologica*.
- Masthi, N.R.R., Pruthvi, S., & Phaneendra, M.S. (2018). A Comparative Study on social Media Usage and Health Status among Students Studying in Pre-University Colleges of Urban Bengaluru. *Indian Journal of Community Medicine*, 43(3).
- May, K.E. & Elder, A. D. (2018). Efficient, helpful, or distracting? A literature review of media multitasking in relation to academic. *International Journal of Educational Technology in Higher Education*, 15.
- McDaniel, M.A. & Einstein, G.O. (1990). Normal aging and prospective memory. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 16(4).
- Moron, M. (1997). Unpublished MA thesis. Krakow, Poland: Jagiellonian University. *Contemporary Iranian Novel "Women without Men"*.
- Myhre, J.W., Mehl, M.R., & Glisky, E.L. (2017). Cognitive Benefits of Online Social Networking for Healthy Older Adults. *The journals of gerontology. Series B*,

Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females across Wide Age Ranges

- Psychological sciences and social sciences*, 72(5):752-760. DOI:10.1093/geronb/gbw025.
- Nütley, S. & Söderqvist, S. (2017). How Is Working Memory Training Likely to Influence Academic Performance? Current Evidence and Methodological Considerations. *Frontiers in Psychology*, 8.
- Pantic, I. (2014). Online social networking and mental health. *Cyberpsychology, Behaviour and Social Networking*, 17(10), 652-7. doi: 10.1089/cyber.2014.0070.
- Porwal, K. & Sharma, T.K. (2019). Effect of social media on memory among teenagers. *International Journal of Indian Psychology*, 7(4).
- Prathap, V. & Singh, S. (2021). Impact of Digital Addiction and Cognitive Offloading on Prospective Memory of Young Adults. *Indian Journal of Health & Wellbeing*, 12 (4), 439-445
- Quinn, K. (2018). Cognitive Effects of Social Media Use: A Case of Older Adults. *Social Media and Society*.
- Raut, V., & Patil, P. (2016). Use of Social Media in Education: Positive and Negative impact on the students. *International Journal on Recent & Innovation Trends in Computing & Communication*, 4(1).
- Robinson, L. & Smith, M. (2023). Social Media and Mental Health. Available from <https://www.helpguide.org/articles/mental-health/social-media-and-mental-health.htm#:~:text=However%2C%20multiple%20studies%20have%20found,about%20your%20life%20or%20appearance>
- Seddon, A.L., Law, A.S., Adams, A.M., & Simmons, F.R. (2021). Individual differences in media multitasking ability: The importance of cognitive flexibility. *Computers in Human Behavior*, (3).
- Sharifian, N., & Zahodne, L.B. (2020). Social Media Bytes: Daily Associations Between Social Media Use and Everyday Memory Failures Across the Adult Life Span. *National Library of Medicine*, 75 (3).
- Smith, G., Del Sala, S., Logie, R. H., & Maylor, E. A. (2000). Prospective and retrospective memory in normal ageing and dementia: A questionnaire study. *Memory*, 8(5), 311-321.
- Stieger, S. & Wunderl, S. (2022). Associations between social media use and cognitive abilities: Results from a large-scale study of adolescents. *Computers in Human Behavior*, 135.
- Thompson, P. (2017.) Communication technology use and study skills. *Active Learning in Higher Education* 18(3).
- Tilvis R. S., Kähönen-Väre M. H., Jolkkonen J., Valvanne J., Pitkala K. H., & Strandberg T. E. (2004). Predictors of cognitive decline and mortality of aged people over a 10-year period. *The Journals of Gerontology. Series A, Biological Sciences and Medical Sciences*, 59, 268–274.
- Tullis, J.G. & Benjamin, A.S. (2015). Cueing others' memories. *Memory and Cognition*.
- Wilmer, H. H., Sherman, L.E. & Chein, J.M. (2017). Smartphones and Cognition: A Review of Research Exploring the Links between Mobile Technology Habits and cognitive Functioning. *REVIEW article*.
- Woodworth, R.S., & Schlosberg, H. (1971). *Experimental Psychology*. (3rd ed), New Delhi: Oxford & IBH Publishing Co. PVT. LTD.
- Zhao, L. (2021). The impact of social media use types and social media addiction on subjective well-being of college students: A comparative analysis of addicted and non-addicted students. *Computers in Human Behaviour Reports*.

**Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females
across Wide Age Ranges**

Acknowledgment

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Roy, M., De, S.& Dawn, D. (2024). Exploring the Influence of Excessive Social Media Engagement on Cognitive Abilities in Females across Wide Age Ranges. *International Journal of Indian Psychology*, 12(1), 867-876. DIP:18.01.081.20241201, DOI:10.25215/1201.081