

Lost in the Validations: Examining Studies on Social Media Addiction and its Impact on Students

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Abstract

The mainstay of the paper is to identify and provide an in-depth analysis of the literature on Social Media Addiction in students. The filtration of the research papers selected for the detailed analysis is the papers based on their citations. The top ten most cited papers in the field enlisted in Scopus have been analyzed. The focus of the study is to present the findings and methodology of the most respected papers in the field in a crux. Future work in the field can take the way forward directions from the paper. The paper also encapsulates the most prolific authors, collaborations, and countries contributing to the research on Social Media Addiction in students.

Keywords

Social media addiction, Students, Youth, Internet addiction, and Research.

1. Introduction

Social Media is a phenomenon that has changed the way society interacts, entertains, and even earns. It provides entertainment, connection, and information, but there is growing concern over its addictive potential. Social Media Addiction is defined as a form of behavioral addiction generally understood to be compulsive use of social media platforms to the point where it seriously impairs a user's ability to function in key areas of their lives, including relationships with others, performance at work or in school, and physical health. (Andreassen, 2015). Online gaming has been categorized as an addiction by the medical fraternity, Social Media though known to have addictive properties (Bányai et al., 2017; Hawi & Samaha, 2017; Hou et al., 2019) and researchers are making a case for it to be included as an addiction.

Covid-19 caused a lot of damage to the world, as we know it but in the background, mental space was being marred by the prevalence of social media

usage, which increased due to the mandate of physical distancing. This aspect has been finding a lot of traction with the researchers in the field. The effects of excessive social media usage is not limited to any specific age group, gender to geographic location. The impact on the younger generation is of a prime concern since their attention span has reduced due to excessive use of social media (Nussenbaum, 2023), lower self-esteem has been reported ((Abi-Jaoude et al., 2020; El-Khoury et al., 2021), with reduced academic performance, (Hou et al., 2019), etc.

Various studies have been conducted in the field of social media addiction and its impact on the students and this paper delves into the intricacies of the research done in the field, discussing the features, psychological foundations, and possible repercussions of social media addiction. The paper tends to suggest future research in the area.

2. Objectives of the Study

The paper takes the research at a deeper level, by assimilating the work done in the field of Social Media Addiction in the case of students. The following two research objectives are analyzed in the paper

2.1 To analyze top-cited research in the field of SMA in students.

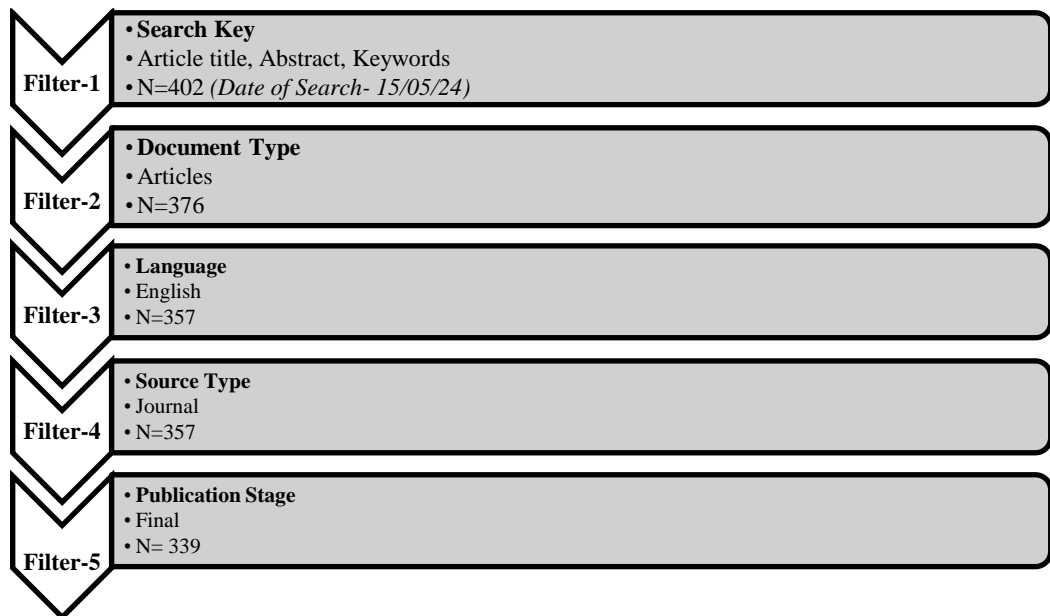
2.2 To suggest venues for the researchers to collaborate for research with specific reference to the publication trend and the prolific authors in the field.

These two objectives are framed to help future researchers in the area of SMA in students, to further the research and not duplicate it; to build on the research already conducted, and to identify the prolific authors in the field for guidance and collaborations.

3. Research Methodology

In this study, the Scopus dataset (developed by Elsevier) is analyzed using a quantitative exploration with bibliometric analysis that identifies and analyzes the literature on SMA in students to provide a map of knowledge structure (Álvarez-García et al., 2018). The bibliometric analysis provides an insight into the research that has been conducted in the area of interest. A total of 339 documents from 190 different sources between 2014-2024 were analyzed. The findings from Bibliometric analysis aid in terms of citations of the papers, contributing authors, their collaborations, identifying the universities or organizations pursuing research in the area and which countries are more interested in conducting research in the given area, and many more. The papers indexed in the Scopus

database go through a rigorous quality review by applying filters (Figure 1) and hence the findings of the papers can help understand the research done and also help the future researchers bridge the gaps as indicated by the analysis.



Source:- Prepared by Authors

Figure 1:- Search Strategy

4. Findings and Discussion

4.1 Research Objective (RO1)

To analyze top-cited research in the field of SMA in students.

The Scopus search of the papers with the criteria as laid down and discussed in the methodology section, The top cited papers have been extracted and their analysis along with their findings and methodology is given in detail. The research is discussed in descending order of the citations.

- Andreassen (2017) in their paper "The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey" with 649 citations discusses the association between narcissistic tendencies, self-esteem, and addictive use of social media is examined in the paper. Based on a broad nationwide survey with 23,532 participants, the study finds that those with lower self-esteem and higher degrees of narcissism are

more likely to engage in addictive behavior on social networking sites. Also, addictive use of social media may result in further lower self-esteem. The results point to a possible vicious cycle in which people with high levels of narcissism are lured to social media, but over time, their excessive use may have a detrimental effect on their self-esteem.

The study employs three scales to measure the three traits,

Bergen Social Media Addiction Scale (BSMAS): The scale is used extensively to measure the social media addiction severity.

Narcissistic Personality Inventory-16 (NPI-16): The NPI-16 psychometric scale was employed to study the narcissistic personality traits.

Rosenberg Self-esteem Scale (RSES): The scale has been used in the study to assess the level of self-esteem of the respondents.

The results point to a complicated interaction between these variables, suggesting that underlying psychological characteristics like narcissism and self-esteem may have an impact on social media addiction.

- Hawi (2017) in their study “The Relations among Social Media Addiction, Self-esteem, and Life Satisfaction in University Students” with 225 citations explore the relationship between social media addiction, self-esteem, and life satisfaction in university students. The sample collected was of 364 university students, through systematic random sampling. The study employed three scales on the three parameters viz., **Social Media Addiction Questionnaire for SMA, Rosenberg’s Self-esteem Scale** for analyzing level of self-esteem, and the Satisfaction with Life Scale to measure life satisfaction in the representative sample. Data analysis was done using Pearson correlations between the variables, regression analysis, and structural equation modelling. The research suggests that social media addiction is negatively linked to self-esteem. In other words, students who struggle with social media addiction tend to have lower self-esteem. There was not a direct effect of social media addiction on life satisfaction. But according to the research, there is probably a mediation effect of self-esteem in the association between life happiness and social media addiction. This implies that social media addiction may have an indirect detrimental effect on life satisfaction through lowering self-esteem.
- The paper “Social media addiction: Its impact, mediation, and intervention” Hou (2019) with 218 citations delves into the effects of social media addiction

and explore potential interventions. The paper discusses how excessive use of social media can lead to addiction, which in turn can have negative impacts on individuals' mental health, relationships, and overall well-being. The study employed the 6 item **Bergen Social Media Addiction Scale (BSMAS)** (Andreassen,2017); **A 20-item questionnaire that Li and Kam (2002) modified from the 30-item General Health Questionnaire (GHQ-30; Goldberg, 1972)** was used to measure mental health.

The participants' self-reported ranking in relation to their individual classmates was used to gauge their academic success because they were from a variety of grades with different majors. Self-esteem was measured using the **10-item Chinese version of the Self-esteem Scale**, which was modified from Rosenberg (1965).

It also examines how factors such as personality traits, social influences, and environmental factors can mediate the development of social media addiction. The study has been conducted in two parts, with part 1 conducted as a survey approach with a sample of 232 college students. The part of the study discovered that social media addiction was correlated with poor mental health and academic performance, with self-esteem acting as a mediating factor in this relationship. In step 2, a two-stage self-help intervention program was administered. In order to provide the intervention, a sample of 38 college students were taken who satisfied the criteria for social media addiction. The students' mental health and academic performance improved, and their social media addiction decreased as a result of the intervention, according to the findings implying that various interventions, including cognitive-behavioural therapy, mindfulness-based interventions, and educational programs, would help individuals overcome social media addiction and improve their mental health.

- Karadag (2015) paper titled, “Determinants of Phubbing, Which is the Sum of Many Virtual Addictions: A Structural Equation Model” has 217 citations. The study investigates the factors influencing phubbing, which is the act of snubbing others in favour of one's phone. The study uses a correlational design to look at the cause-and-effect relationships between the variables in the theoretical model. 409 college students that were chosen at random served as participants. The Phubbing scale was analyzed through the use of scales that included the following: internet addiction, social media addiction, game addiction, SMS addiction, and mobile phone addiction. The analysis was done through the Structural Equation Model, Correlation, and Regression. It also identified other factors, including fear of missing out and predictors of

phubbing. The findings suggest that phubbing is a multifaceted issue influenced by several factors related to technology use and individual characteristics. According to the study, the most reliable indicator of phubbing behavior was mobile phone addiction. The study also discovered a significant association between phubbing and addictions to particular virtual activities, such as social media, text messaging, and internet use.

- Wong's (2020) paper titled, "Relationships between Severity of Internet Gaming Disorder, Severity of Problematic Social Media Use, Sleep Quality and Psychological Distress" has a citation of 214. The study analyses the relationship between problematic online gaming and severity of problematic social media usage on sleep quality and psychological distress. The impact of severity of Internet Gaming Disorder (IGD) and Social Media Addiction (SMA) on daily life is negative. Daily life is measured in terms of sleep quality and mental health. The cross-sectional study was conducted on 300 participants who were students in the age group of 18-24 years, through google forms. Four scales have been employed to study all aspects

Internet Gaming Disorder (IGD): To gauge the intensity of IGD symptoms, a measure similar to the Internet Gaming Disorder Scale-Short Form (IGDS-SF9) may have been employed.

Problematic Social Media Use (PSMU): The degree of social media addiction might have been assessed using a scale similar to the Bergen Social Media Addiction Scale (BSMAS).

Sleep Quality: The patterns and quality of sleep may have been evaluated using a technique such as the **Pittsburgh Sleep Quality Index (PSQI)**.

Psychological Distress: Depression, anxiety, and stress symptoms might have been measured using a scale similar to the **Depression Anxiety Stress Scales (DASS-21)**.

Correlation and regression analysis were employed and the research findings indicate that the level of problematic social media use (SMA) may have a more detrimental effect on sleep quality than internet gaming disorder (IGD). Conversely, there appeared to be a comparable correlation between psychological distress and the severity of both SMA and IGD.

- Van Den Eijden (2018), "The impact of heavy and disordered use of games and social media on adolescents' psychological, social, and school function" with 146 citations is an interesting take on the impact of excessive and

disordered use of online games and social media on social, psychological, and school functioning. According to the paper, a pattern of behavior that resembles an addiction and has detrimental effects on day-to-day functioning is referred to as "disordered use." The study discovered that social media and gaming addiction symptoms have a detrimental impact on teenagers' mental health and academic achievement. This leads to reduced contentment with life and a reduction in the sense of social competence. Fascinatingly, extensive usage of social media and games also revealed some beneficial correlations i.e. elevated sense of social competence but extensive usage of social media was also connected to lower ranking.

The study used a longitudinal research methodology design to determine the effects of social media usage and online gaming on the well-being of adolescents'. In the context of the University of Utrecht's Digital Youth Project, a three-wave longitudinal sample of adolescents aged 12 to 15 (N = 538) was used. The data collected through the questionnaires was analyzed applying correlation and regression analysis. correlation analysis to find connections between the outcome variables (psychological, social, and school functioning) and gaming and social media use.

To find out how well changes in gaming and social media use forecast changes in the outcome variables over time, regression analysis is used.

The findings of the study were that the adolescent symptoms of anxiety, depression, and low life satisfaction have been connected to disordered gaming and social media use. Also, overuse of screens can have a detrimental effect on interpersonal connections and social growth. Adolescents may struggle to make friends in the real world or feel socially isolated.

Research proved that the academic performance suffers as it points to a link between excessive usage of social media and poorer academic achievement. This might be the result of things like having trouble focusing or procrastinating schoolwork in favor of social media.

- Throuvala (2019), "Motivational processes and dysfunctional mechanisms of social media use among adolescents: A qualitative focus group study", with 143 citations is an exemplary study of the adolescents analyzing the contributing factors towards social media use and its problematic usage. The two aspects of social media usage i.e. what are the motivators of usage as well as the problematic or dysfunctional mechanism of social media usage.

The motivators were identified as an urge to:

- **Gathering Information:** The adolescents use social media for all the information including news and related knowledge about the issues.
- **Social Connections** i.e. connecting with family and friends with no geographical constraints.
- **Comparison:** Adolescents use social media to share their achievements in order to compare their lives which may be positive and negative.
- **Passive and Active usage**
 - Passive usage of social media i.e. content viewing for entertainment is another motivator. It also keeps them entertained.
 - Active Usage- Creation of content by adolescents to express themselves is yet another reason to use social media.

The dysfunctional mechanism i.e. the reasons for overuse or addiction have been pointed out as (the pointers are presented not in any specific order)

- **Distraction:** Social media usage serves as a distractor from all productive activities mainly studying and leads to procrastinating as well.
- **FOMO i.e. the Fear of Missing Out:** FOMO resulting from missing out on updates and also FOMO in life about missing out on various events being posted by their friends online.
- **Validation:** Another causative reason for excessive social media usage is an urge to constantly seek social validation from the users in terms of likes, or subscription.
- **Coping Mechanism:** It is sometimes used as a mechanism to cope with their mood swings or a distraction from the existing problems.
- **Beyond Control:** It has been observed that in-spite of the realization that it is causing problems, the users find the urge of using social media beyond their control.

The methodology used in the paper is a qualitative approach that uses small focus groups of adolescents to discuss usage of social media habits and the challenges that they face. A semi-structured interview questions were monitored by a trained facilitators and all discussions were audio-recorded (with the consent of the

participants). Thematic analysis was done on the transcribed discussions. Thematic analysis pointed to the patterns and themes in the data collected. Themes were identified to point at their core motivations and expected challenges.

- Yam (2019), “Psychometric Testing of Three Chinese Online-Related Addictive Behavior Instruments among Hong Kong University Students” study is instrumental in helping the researchers use various scales which have proven themselves in Chinese versions specifically in HongKong university students viz., **Bergen Social Media Addiction Scale (BSMAS); Nine-item Internet Gaming Disorder Scales - Short Form (IGDS-SF9) and Smartphone Application-Based Addiction Scale (SABAS)**. Confirmatory Factor Analysis was used to prove the effectiveness of the scales. The paper makes it convenient for researchers in the field to use these scales since they have demonstrated evident psychometric acumen to measure the online social media addiction among students of their respective countries. The study also suggests that it leaves the area of studying different age groups to measure the efficacy of these scales in the researches.
- Balakrishnan (2017), “Social Media Addiction-What is the role of content in YouTube?” with 124 citations is an interesting analysis of 410 Indian students on specific SMA addiction of YouTube usage in terms of viewing as well as content creation. YouTube has 467 million users as of July 2023, as compared to 246 million in the United States of America. 410 Indian students were studied to analyze the relationship between content creation, viewing and addiction to YouTube.

The findings of the study are Content Creation is known to be more addictive than just watching the content passively. Social Validation in terms of views, likes and subscriptions are causative agents of addiction. Personal Gratification in terms of enjoying the content creation process (process gratification) along with social gratification are also found to be addictive.

The paper uses the UG (Uses and Gratification) theory to analyse YouTube addiction and has already been established as working well to study Facebook and Myspace addiction. (Joo, J., & Sang, Y. (2013). Exploring Koreans’ smartphone usage: An integrated model of the technology acceptance model and uses and gratifications theory.

Table 1:- Most Cited 9 Papers

S. No.	Title of Paper	Author & DOI	Source & Year	Total Citation	Total Citation / Year
1.	The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey.	Andreassen, C. S., Pallesen, S., & Griffiths, M. D. https://doi.org/10.1016/j.addbeh.2016.03.006 .	Addictive behaviors 2017	649	81.13
2.	The Relations Among Social Media Addiction, Self-Esteem, and Life Satisfaction in University Students	Hawi, N. S., & Samaha, M https://doi.org/10.1177/0894439316660340 .	Social Science Computer Review 2017	225	28.13
3.	Social media addiction: Its impact, mediation, and intervention	Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. https://doi.org/10.5817/CP2019-1-4 .	Cyberpsychology: Journal of Psychosocial Research on Cyberspace 2019	218	36.33
4.	Determinants of phubbing, which is the sum of many virtual addictions: a structural equation model	Karadağ, E., Tosuntaş, Ş. B., Erzen, E., Duru, P., Bostan, N., Şahin, B. M., Çulha, İ., & Babadağ, B https://doi.org/10.1556/2006.4.2015.005 .	Journal of behavioral addictions 2015	217	21.70
5.	Relationships between Severity of Internet Gaming Disorder, Severity of Problematic Social Media Use, Sleep Quality and Psychological Distress	Wong HY, Mo HY, Potenza MN, Chan MNM, Lau WM, Chui TK, Pakpour AH, Lin C-Y. https://doi.org/10.3390/ijerph17061879 .	International Journal of Environmental Research and Public Health. 2020	214	42.80
6.	The impact of heavy and disordered use of games and social media on adolescents' psychological, social, and school functioning	Van den Eijnden, R., Koning, I., Doornwaard, S., van Gorp, F., & ter Bogt, T https://doi.org/10.1556/2006.7.2018.65	Journal of Behavioral Addictions 2018	146	20.86
7.	Motivational processes and dysfunctional mechanisms of social media use among adolescents: A qualitative focus group study	Throuvala, M. A., Griffiths, M. D., Rennoldson, M., & Kuss, D. J https://doi.org/10.1556/2006.7.2018.65 .	Computers in Human Behavior 2019	143	23.83

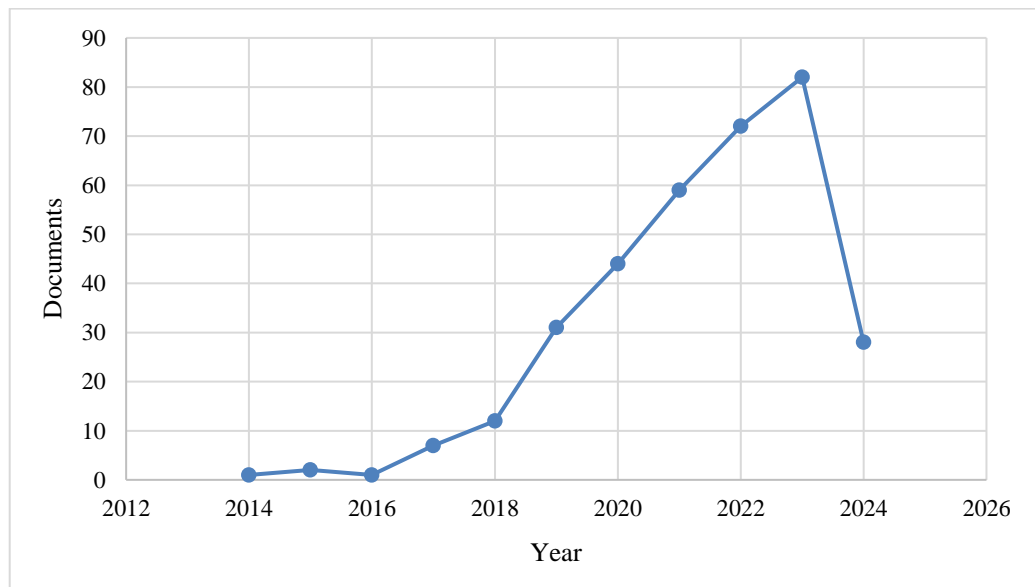
S. No	Title of Paper	Author & DOI	Source & Year	Total Citation	Total Citation / Year
8.	Psychometric Testing of Three Chinese Online-Related Addictive Behavior Instruments among Hong Kong University Students	Yam, C.-W., Pakpour, A. H., Griffiths, M. D., Yau, W.-Y., Lo, C.-L. M., Ng, J. M. T., Lin, C.-Y., & Leung, H https://doi.org/10.1007/s1126-018-9610-7	Psychiatric Quarterly 2019	126	21.00
9.	Social media addiction: What is the role of content in YouTube?	Balakrishnan, J., & Griffiths, M. D https://doi.org/10.1556/2006.6.2017.058	Journal of Behavioral Addictions 2017	124	15.50

Source:- Author's own compilation

4.2. Research Objective (RO2)

To suggest the venues to the researchers to collaborate for research with specific reference to the publication trend and the prolific authors in the field.

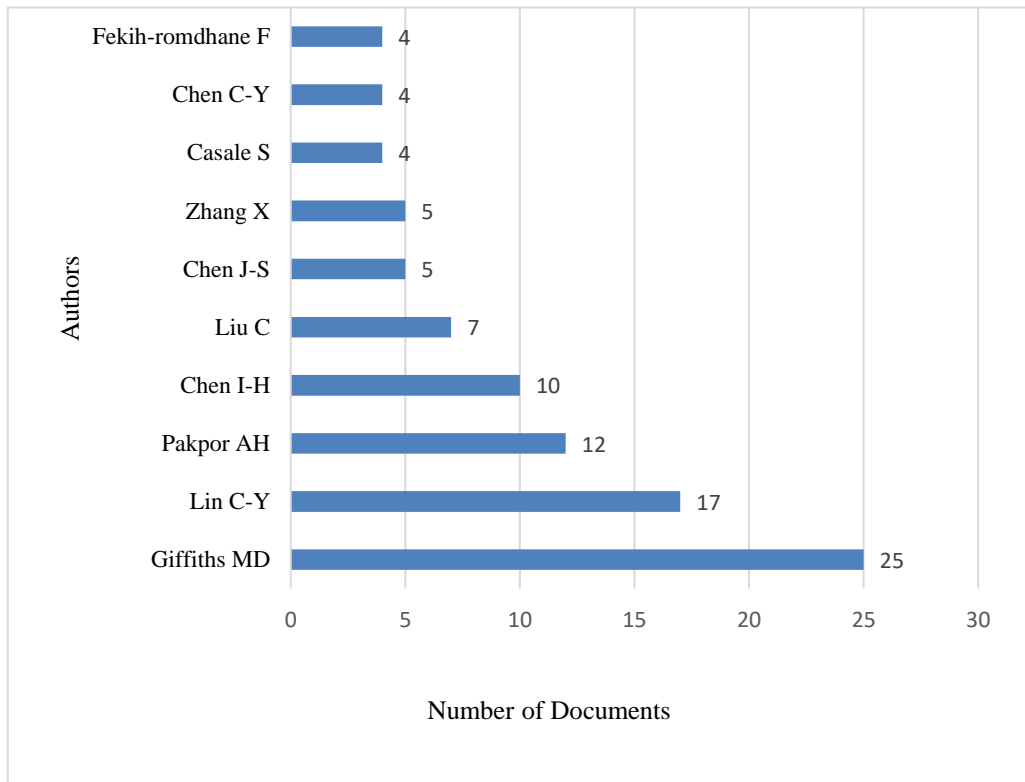
Documents by year



Source:- Author's own compilation

Figure 2:- Publication Trend

Figure-2 elaborates on the fact that research in the field of social media addiction among students has been on the rise since 2014 (10 years after Facebook was launched in 2004). 2023 saw 80 publications which is the highest, indicating that the interest in the addictive nature of social media research has been increasing. Till May 15, 2024, 28 publications have already been reported in Scopus.



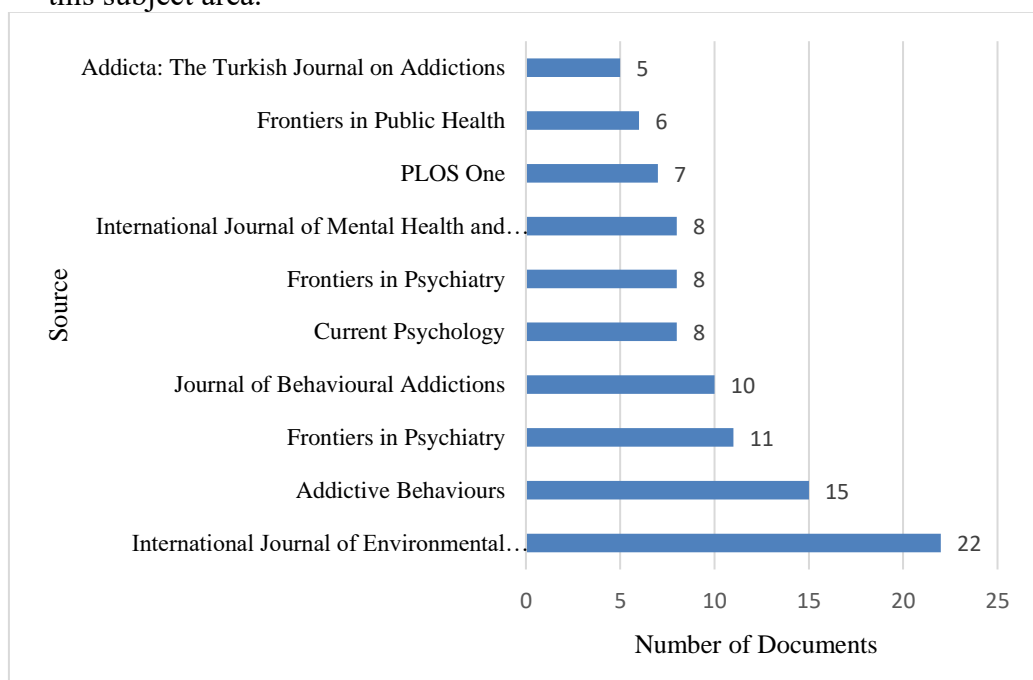
Source:- Author's own compilation

Figure 3:- 10 Prolific Authors

The figure 3. shows 10 authors with their number of publications, M.D. Griffiths has the maximum publications in the niche area of SMA in students (25); followed by C.Y. Lin with 16 publications. The least are 4 publications by Fioravanti.

Figure 4 displays the 10 most relevant sources. 22 Research articles in the area of in Social Media addiction in students have been published in International Journal of environmental research and public health followed by Addictive behaviors (15), Frontiers in Psychiatry (11) and Journal of Behavioral Addictions (10) these figures will help the researchers undertaking research in this subject area to target these journals to showcase their work.

The publication sources, trend, and the most prolific author analysis is helpful in gaining insights into whether the research interest is persisting, who is leading the quality research and which journals are promoting publication in this subject area.



Source:- Author's own compilation

Figure 4:- 10 Most Relevant Sources

5. Conclusion

The increase in the publications since 2014 and with a maximum in 2023 (80) are an indication that the research topic is gaining traction since the impact of SMA on students is real and impacting their quality of life and the negatives outweigh the positives due to the addiction-inducing nature of Social Media.

M.D. Griffiths and C.Y.L. in with 25 and 16 publications respectively are the lead authors.

Research suggests that social media can be used to compensate for low self-esteem or feed narcissistic tendencies. (Andreassen et.al, 2017). Social media addiction can indirectly harm students' well-being by lowering their self-esteem, which then leads to decreased life satisfaction. (Hawi, N.S.et.al.,2017). Another most cited paper suggests that self-esteem plays a mediating role. In simpler terms, students struggling with social media addiction tend to have lower self-esteem, which in turn contributes to poorer mental health and academic performance. (Hou, Y., et.al, 2019. The research found that people with stronger addictions to their phones in general (including texting, social media, internet, and games) are more likely to phub.

Wong et al.'s research (2020) finding point to a dual relationship between young people's psychological discomfort, problematic social media use (SMA), internet gaming disorder (IGD), and sleep quality. The study discovered that among young adults, psychological distress (symptoms of depression, anxiety, and stress) and lower sleep quality were linked to both IGD and problematic social media use. The research points to a partial moderating role for sleep quality in the association between psychological discomfort and problematic internet use. This suggests that part of the detrimental effects of excessive internet use (gaming, social media) on mental health can be attributed to poor sleep quality.

A longitudinal study of adolescents by Van Den Eijnden (2018) to analyze the impact of online gaming and social media practices on their well-being. It's interesting to note that excessive gaming and social media use demonstrated a favorable correlation with perceived social ability without ever approaching the threshold of disordered use. However frequent usage of social media also indicated a decline in academic achievement. According to the study, teens who displayed symptoms of compulsive gaming and social media use reported lower levels of perceived social competence and life happiness.

A focus group study of adolescents (Throuvala et al., 2019) presents the findings through thematic analysis. The research highlights the multi layered approach and nature of indulgence in social media usage by adolescents which is driven by emotional, practical, and social needs.

Specific Social Media channels like YouTube have been studied and it has been established by the study that content creators are more susceptible to addiction as compared to passive viewers. Social and personal gratification are causative of addiction. (Balakrishnan & Griffiths, 2017)

Bergen Social Media Addiction Scale (BSMAS); Nine-item Internet Gaming Disorder Scales- Short Form (IGDS-SF9) and Smartphone Application-based Addiction Scale (SABAS) have been established for university students in Hong Kong. The study implies that the established tools can be used in other countries as well but their efficacy has been tested only on the students. For other age groups, the same study can be used as a basis and Confirmatory Factor analysis performed to prove their efficacy. (Yam et al., 2019).

6. Scope of Further Research

The analysis of the most trending or cited papers in the field of SMA in students can be used for further research in any of the following ways.

- The researchers can do the same analysis on a similar data set in different geographical locations, thereby analyzing that though global phenomena, is the impact on different geographic locations same or different. In a study by Karadag (2015), Turkish university students participated in the study; the findings' potential applicability to different populations and cultural contexts can be explored.
- The researchers can take up the research gaps as explicitly mentioned in the most cited papers as the case for their research.
- Future research can also be done on the same parameters in the present timeline (if the study is not longitudinal and was done 5-10 years back). This would help the policymakers in taking decisions around SMA in students in real-time.
- The analysis can be used for using the established and accepted scales of addiction viz., BSMAS, Narcissism scale, Self-esteem scale, etc.
- It is suggested that in addition to focus groups, in-depth interviews or surveys can be added to get a better understanding of the phenomena. Focus groups can be used to identify the themes and surveys to consolidate the themes and develop sub-themes.
- In the case of focus group studies, the researchers can take forward the study of the same group of people over time to see the studied aspect e.g. how their motivations, usage, and addictive behavior pans over time with the help of a longitudinal study.
- Online gaming needs to be studied in more depth since the research has highlighted the negative impact on the mental health of the users.

- Some highly cited studies like Andreassen (2017) are based on correlation, which does not measure or prove the cause-and-effect relationship. Some detailed studies can be done to analyzing the mechanism for these associations or correlations between addictive use of social media, narcissism, and self-esteem. This can entail promoting healthy social media habits.
- Given the negative aspects of SMA, phubbing, low self-esteem, narcissism, etc research on developing interventions to reduce the addictive and harmful behavior would be valuable. This could involve many aspects including mindfulness training, promoting healthy phone use habits, or social awareness campaigns and many more.

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