

# Social Networking (SNS) Addiction among University Students: A Literature Review and Research Directions

## ABSTRACT

The main objective of this literature review is to provide empirical and conceptual insight into SNS addiction by exploring potential SNS addiction, examining the personalities of SNS addicted users, and exploring SNS addiction's negative consequences. The results revealed that males are significantly more addicted to Facebook than females. Moreover, the risk factors correlating with SNS addiction were cognitive and behavioral salience, conflict with other activities, euphoria, loss of control, withdrawal, and relapse/reinstatement. Previous SNS's studies determined high percentage of addiction to SNS among university students. These studies also found that being open to new experiences emerged as an important personality predictor of SNS use. Although many previous studies have highlighted evidence of potential negative correlation of extensive SNS usage and addiction, they focused on its negative impact on student's academic performance. However, other studies found that SNS usage was beneficial for university student's academic and social life. Only a few studies found no impact of SNS on student's academic performance.

*Keywords: SNS addiction, SNS addicts personality, SNS addiction negative consequences.*

## 1. INTRODUCTION

There is no doubt that SNS have gained wider acceptability, usability and have probably become the most important communication tool among university students [7, 43, 63]. Many researchers have tried to identify SNS's addiction. However, [69] claimed that it is different from other online addictions. They gave a reasonable explanation for the formation of SNS addiction, and emphasize the mediating role of SNS use habit in addition process. They contend that those who frequently engage in SNS are poor at socializing in real life. [10] defined SNS's addiction as "being overly concerned about SNS, to be driven by a strong motivation to log on to or use SNS, and to devote so much time and effort to SNS that it

impairs other social activities, studies/job, interpersonal relationships, and/or psychological health and well-being”, p. 4054. Thus, SNS were viewed as having bridged the gap in the communication that had already existed. Within the SNS, Facebook, Twitter and others are gaining benefaction. These websites and social forums are a way of communicating directly with other people socially. SNS have the potential to influence decision-making in a very short time, regardless of the distance. SNS can now be accessed via multiple platforms, including mobile devices; hence, they become some of the most popular online concourse for youngsters, especially university students.

## **2. THE CURRENT STUDY**

With the growth in popularity of SNS, the world has witnessed a significant number of studies explaining the reasons why individuals adopt and use SNS [8, 12, 19, 22, 28, 31, 36]. However, fewer studies have focused on the problematic use of SNS and its negative impact. To date, only a limited number of empirical studies on addiction to SNS have been conducted and published [24, 25, 35, 37, 38, 41, 44, 51, 59, 65, 68, 69, 70]. My review of prior literature showed that there are very few published papers examining the SNS addiction and most of these studies tended to be exploratory in nature, and only a limited number of studies provided a theoretical explanation of SNS's addiction. Therefore, the main objective of this literature review is to provide empirical and conceptual insight into SNS addiction by examining personalities of SNS addicted users, and exploring SNS addiction's negative consequences.

## **3. METHOD**

The methodology is composed of three stages. The first stage shows the research of works related to SNS's addiction in selected databases of scientific journals. I focused on papers published by academic journals published between 2009 and 2019, and international conference proceedings we considered to be reliable and worthy. The main keywords employed were: SNS addiction, SNS addicts personality, SNS addiction negative consequences. The works not directly related to Big Data or not suitable for the study were discarded. The second stage concerned the classification of these works in the different fields of knowledge according to the research questions. Finally, the third stage of the methodology involved the report of detailed literature review. For this review, four online academic research databases, Scopus, EBSCO, Springer Link and Science Direct, were scanned for relevant articles. In order to increase the reliability of the search results and ensure that articles from various scholarly fields will be included, the search was repeated with Google Scholar, which resulted in some new included articles. All searches were narrowed down to empirical studies reported in peer-reviewed full conference papers and journal articles. As a result, a total of 68 articles meeting the inclusion criteria were selected for the review. The selected articles were drawn from the following databases in the years indicated in Fig. 1 below.

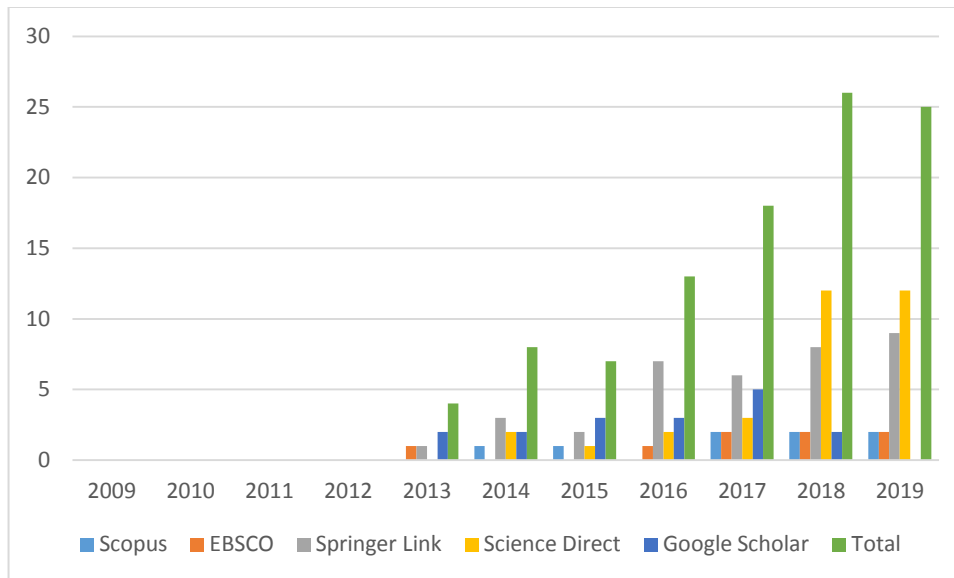


Figure 1: Selected articles and databases according to publication year

## 4. RESULTS OF REVIEWING THE LITERATURE

### 4.1. SNS addiction among university students

#### 4.1.1. SNS addiction symptoms and risk factors

Previous studies have focused on the factors of the addiction. In a literature review, [25] addressed the specific risk factors for SNS's addiction among young people. They claimed that those people addicted to using SNS experience symptoms similar to those who suffer from addictions to substances or other behaviors. However, [17] identified SNS addiction risk factors using Griffiths' six components that determine behavioral addiction and indicated that addicted users suffers from three components; tolerance, salience and relapse. Likewise, [22] suggested that compulsive use of Facebook is mainly determined by negative reinforcement motive (i.e., feeling of withdrawal), but not the positive reinforcement motive (i.e., need for mood alteration). Similarly, [41] developed a Facebook Addiction Scale (FAS) to assess addictive Facebook usage, comprising of eight items related to the core components of addiction. These were cognitive and behavioral salience, conflict with other activities, euphoria, loss of control, withdrawal, and relapse/reinstatement. Moreover, they indicated that time spent on Facebook varied between 10 minutes and 70 hours a week with a mean of 7 hours a week. However, [19] focused on two dimensions of SNS's addiction factors: frequency of use (i.e., how often people use SNS) and amount of use (i.e., how much time people spend on SNS). He found that the time spent on SNS was the best way of predicting SNS addiction. According to [54], those who looked for a sense of belongingness on SNS appeared to be at risk for developing an addiction to SNS. [34] Found that SNS addiction was negatively associated with the students' mental health and academic performance and that the relation between social media addiction and mental health was mediated by self-esteem.

#### 4.1.2. SNS prevalence rate

Interestingly, some previous studies determined the prevalence rate of SNS addiction among university students. [70] classified 24% of the college students as addicted. Likewise,

[65] indicated that 34% of the students were classified as addicted. [51] carried out a study of SNS's behavior among Nigerian university students aged 16–30 years. They indicated that 27% of the students strongly agreed that they were addicted to SNS.

However, as Facebook showed the most SNS usage, many studies investigated the prevalence rate of Facebook addiction among university students. In this regard [37] showed that 47% of the students were addicted to Facebook. [6] reported that the prevalence rates of Facebook addiction among Nigerian university undergraduates was 1.6 %. According to [63] SNS addiction has a high prevalence rate among college students in Singapore. The prevalence rates of SNS, food and shopping addiction were 29.5%, 4.7% and 9.3% respectively for the total sample. [55] revealed that three hundred thirty-eight (87.1%) students used SNS and spent an increased amount of time on these networks. Addiction was seen in 70.7% and was more common in the age group of 17 years and above.

#### **4.1.3. Gender and age differences in SNS addiction**

[59] indicated that males reported more SNS friends and were more likely to play online games than females, who were more likely to upload self-photos and update their status. Likewise, [66] found that gender played an important role in predicting SNS addiction. In addition, [4] concluded that there is a significant difference of use of SNS between male and female students. Male students are more inclined towards to use these sites than female students. [23] found gender and age difference in SNS use among users. Furthermore, [13] indicated that gender and educational levels appear to be important factors explaining some of the variation in students' SNS use. [11] found that SNS addiction was higher in male students than in female students.

#### **4.2. The personalities of SNS addicted users**

A number of personality traits appear to be associated with the excessive use of SNS. Studies have shown a connection between the individual personality of the user and the way he or she behaves online. [28] found that problematic SNS usage is significantly and positively related to depression and Neuroticism, while negatively associated with Agreeableness. A group of studies used Big-Five Personality to investigate SNS user's behaviour. Likewise, [66] found that extraverts were more likely to use the communicative function of SNS including status update, comment, and adding more friends. However, [21] indicated that external Locus of Control predicts all three forms of Internet abuse. The results suggested that factors predicting some forms of Internet abuse might not predict other forms of Internet abuse. Moreover, [23] found that individuals high in extraversion and openness to experience use SNS more frequently.

A set of studies explored the relationship between personality traits and SNS behavior. [53] indicated that different groups of users demonstrated distinct patterns of SNS use. Specifically, undergraduates used the profile service more than the community service, while graduates used the community more than the profile service. Furthermore, [8] found a strong connection between personality and SNS usage behavior. The results revealed that extraverts and people open to experiences were members of significantly more groups on SNS use socializing functions more and have more SNS friends than introverts. Likewise, [57] claimed that the relationship between the personalities of users and their behavior on SNS was not strong. However, they indicated that individuals with large offline social networks, who are more extroverted, and who have higher self-esteem, use SNS for social enhancement. However, [67] indicated that extroverted and unconscientious individuals reported higher levels of both SNS use and addictive tendencies. Similarly, [38] explored the

factors influencing SNS addiction tendency among university students. The findings indicated that SNS addiction tendency showed a significant correlation with loneliness and secure attachment tendency. Finally, the literature review revealed the similarities and differences between the previous studies and summarizes SNS studies related to addicts personality table (1).

*Table 1: An overview of previous SNS studies related personalities of SNS addicted users*

<b>Author(s)</b>	<b>Results</b>
[8, 67]	A strong connection was found between personality and SNS behavior. The personality factors significantly predicted both level of SNS use and addictive tendency but did not explain a large amount of variance in either outcome measure.
[38]	SNS addiction tendency showed a significant correlation with loneliness and secure attachment tendency.
[28]	SNS problematic usage is significantly and positively related to depression and Neuroticism, while negatively associated with Agreeableness.
[8, 23, 29, 57, 66, 67]	Individuals high in extraversion to experience use SNS more frequently extraverted men and women were both likely to be more frequent users of SNS tools, only the men with greater degrees of emotional instability were more regular users Extroverted and unconscientious individuals reported higher levels of both SNS use and addictive tendencies.
[53, 66]	Six factors were affected different usage patterns as follows: desire for expression, peer influences, familiarity with information technologies, sensitivity to privacy, nature of using the internet, and perception of the SNS.
[23, 57,66]	Users scoring high on openness and sensation seeking are more likely to play online games on SNS.
[66]	Narcissistic users are more likely to upload their attractive photos on SNS and tend to use update status more frequently for self-presentation.
[21, 42]	External Locus of Control predicts all three forms of Internet abuse. The desire to use the Internet for diversion and entertainment purposes predicts only online shopping and searching for non-work-related information.
[57, 67]	The personality and self-esteem factors significantly predicted both level of SNS use and addictive tendency but did not explain a large amount of variance in either outcome measure.

#### **4.3. SNS addiction impacts on the students' academic and social/psychological well-being**

##### **4.3.1. SNS addiction impacts on the students' academic performance**

Although many previous studies have highlighted potential negative correlation of extensive SNS usage and addiction, they focused on its impact on student's academic performance. Many studies examined whether student's academic performance was impacted by SNS or not. [7] revealed that there is no linear relationship between SNS usage and academic performance. [49] indicated that Facebook has positive effects on the academic performance of undergraduate students, the students gain a lot of information from it and easily communicate with each other's, interaction with peers, perceived usefulness, study notes or share information about research resources etc. [1] revealed that the usage of social media in Pakistan has a negative influence on a student's behavior as compared to positive

aspects. [11] found a negative and significant relationship between students' addiction to SNS and their academic performance. [62] indicated that university students have very little exposure to the use of SNS content in relation to their academic life. In contrast, [60] analysed the impact of SNS on student's academic performance in Malaysia. Using a conceptual approach, the study discovered that more students prefer the use of Facebook and Twitter in academic related discussions in complementing conventional classroom teaching and learning process. However, [26] demonstrate that there is no relationship between SNS and academic performance. According to [38], SNS can positively or negatively affect the educational performance of students and hence must be managed efficiently. Adolescents consume a lot of time on SNS sites uploading/downloading, getting information concerning their career/academic work, chatting with friends and watching online movies. In contrast, [32] found that the majority of respondents agreed that SNS sites have a positive impact on their academic performance. Conversely, [29] found that SNS have a negative impact on study habits and completion of homework assignments, but there was not a drastic difference between students who spend a lot of time on these sites and those who do not. According to [40], Facebook users had lower Grade Point Averages and spent less time studying than students who did not use this SNS. Of the 26% of students reporting an impact of their usage on their lives, three-quarters (74%) claimed that it had a negative impact, namely procrastination, distraction, and poor time-management. In contrast, [58] indicated that extensive use of Facebook by students with extraverted personalities leads to poor academic performance. However, students who are more self-regulated control their presence on these platforms more effectively. [46] argued that use of SNS have been associated with both positive and negative effects on students. [4] explored the relationship between SNS practices and academic performance and studying habits. Studying habits of the students were found to be significantly affected by the time spend on leisure activities, time spent on Internet, time spent on using SNS and the basic purpose of using SNS, while there was not any significant effects of leisure activities and purpose of using internet on studying habits of the student users [14] conducted a case-control study, involving 70 students with grade point average (GPA) less than 16 of 20 (Case group) and 140 students with GPA equal 16 of 20 and higher (Control group). Interestingly, [30] assessed the effect of SNS on student's academic performance and student's behaviour. The results showed a positive and significant relationship between the SNS and students' academic performance and their behaviour. [44] examined the various SNS mostly used by students and the frequency at which they make use of such services. The results found that excessively use of SNS negatively affects the student's performances in Northern Nigeria. In contrast, [68] revealed that those who spent more time on SNS also reported higher addictive tendencies. Addictive tendencies were positively correlated with both outcome expectancies and impulsivity, but negatively associated with Internet self-efficacy. Lastly, the literature review revealed the similarities and differences between previous studies and summarizes the SNS negative impacts on the academic and social lives table (2).

*Table 2: An overview of previous studies on SNS' usage impacts on the academic and social lives*

<b>Positive impacts</b>	<b>Negative impacts</b>	<b>No impacts</b>
<ul style="list-style-type: none"> <li>• The majority of respondents agreed that SNS sites have a positive impact on their academic performance.</li> <li>• More students use Facebook and Twitter in academic related discussions and</li> </ul>	<ul style="list-style-type: none"> <li>• SNS addiction tendency was significantly affected by secure attachment tendency and loneliness.</li> <li>• Frequent and too much use of SNS negatively affects the students' performances in tertiary education across Northern Nigeria.</li> <li>• The results identified the negative effects of SNS Facebook</li> </ul>	<ul style="list-style-type: none"> <li>• No relationship between SNS and academic performance</li> <li>• University students have very little exposure to use SNS content into their academic life</li> <li>• Despite spending time on SNS, students did not face</li> </ul>

<p>learning process.</p> <ul style="list-style-type: none"> <li>• A positive and significant relationship have been found between the SNS use and students' academic performance and their behaviour.</li> <li>• Greater reliance on online interactions for social and emotional support was found in some cases beneficial for high school students.</li> <li>• SNS differentially empower academics and students at different times, and students employ various forms of sophisticated authorial language to territorialise power in their interactions with lecturers and peers.</li> <li>• Positive association between SNS use, smartphone communication, and face-to-face social interaction.</li> <li>• Students greatly benefit from the social capital and friendship maintenance that SNS provides.</li> </ul>	<p>users.</p> <ul style="list-style-type: none"> <li>• Addictive tendencies were negatively associated with Internet self-efficacy.</li> <li>• The result of this study has shown a negative relation between use of SNS and GPA.</li> <li>• Rather than enhancing well-being, however, Facebook may undermine it</li> <li>• Extensive Facebook usage was associated with more negative school and peer attitudes. SNS' greater reliance for social and emotional support was found disadvantageous for college students.</li> <li>• These research strands speak to high-profile concerns and controversies that surround youth participation in these online communities.</li> <li>• Compulsive use rather than heavy, intense, or habitual use was found to account for maladjustment.</li> <li>• Extensive use of Facebook by students with extraverted personalities leads to poor academic performance.</li> <li>• Negative relationship between the use of various types of electronic media and first-semester grades.</li> <li>• Facebook users had lower Grade Point Averages and spent less time studying than students who did not use this SNS. Cyberbullying and sexting have the greatest negative impact on students.</li> <li>• People who spend more time on SNS were less involved with their real life communities.</li> </ul>	<p>any difficulty in meeting their academic requirements.</p> <ul style="list-style-type: none"> <li>• Use of SNS does not have an adverse impact on their academic performance.</li> <li>• No significant effect of area of study, educational level, study year, on the extent of SNS' usage.</li> <li>• There was not a drastic difference between students who spend much time on SNS and those who do not.</li> <li>•</li> </ul>
[16,32, 60, 64, 68]	[2, 16, 23, 29, 38, 40, 47, 48, 50]	[7, 26, 28, 38, 61]

## 5. DISCUSSION AND CONCLUSIONS

The aim of this literature review was to present an overview of the emergent empirical research relating to SNS addiction. Many SNS scales were developed based on Brown's behavioral addiction symptoms, Griffiths components model of addiction, and diagnostic addiction criteria [9, 17, 27, 37, 45]. Some studies on SNS addiction found that males are significantly more addicted to Facebook than females [4, 18, 58].

However, some studies explored the risk factors that correlated with SNS addiction such as cognitive and behavioral salience, conflict with other activities, euphoria, loss of control, withdrawal, and relapse/reinstatement [18, 19], while other previous studies have focused on the addiction symptoms [17, 22, 41, 54, 20].

Interestingly, other previous studies determines a high percentage of SNS addicted among university students [65, 70, 51]. A range of studies found gender and age differences in SNS addiction among university students [4, 18, 23, 59, 13].

A group of past studies investigated the personalities of SNS addicted users [8, 15, 20, 22, 28, 33, 39, 41, 52, 53, 57, 66, 67]. They found that being open to new experiences emerged as an important personality predictor of SNS's use.

Although many previous studies have highlighted a number of potential negative correlation of extensive SNS usage and addiction, they focused on the negative impact on students' academic performance [3, 5, 14, 24, 26, 28, 38, 40, 46, 58, 61]. However, other studies found that SNS usage was beneficial for university student's academic and social life [13, 16, 30, 32, 36, 56, 60, 68]. Only a few studies found there was no impact of SNS's on student's academic performance [3, 4, 26, 28, 38, 62]. Therefore according to [43] both researchers and clinical practitioners can work together and establish productive communication between the involved parties that enable reliable and valid assessments of SNS addiction and associated behaviors and the development of targeted and specific treatment approaches to ameliorate the negative consequences of such disorders.

## 6. FUTURE RESEARCH DIRECTIONS

According to this review, there were still some limitations in the prior studies that should be mentioned. Firstly, the SNS scales that used in these studies were mostly self-reported questionnaires, therefore, further researches could consider the use of multiple methods to reduce potential bias. Secondly, although these studies provided sufficient information, nevertheless the descriptive design made it difficult to clarify the causal or temporarily associated relationships between the variables. Longitudinal studies on SNS addiction that test the mediating effects of academic performance and life satisfaction across different ages are needed. Finally, future research needs to consider the impact of SNS addictions levels as a confounding variable in the mediating models. More studies must be conducted in order to improve our understanding of the social and cultural factors related to SNS addiction among the youth. There is a need to educate the students on the potential use of SNS as well as the risks factors of SNS addiction through separate curricula, thus more experimental studies should be focus on this purpose. Furthermore, more studies have to focuses on SNS addiction's social/psychological impact on the students' well-being.

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