

A REVIEW ON IMPACT OF SOCIAL MEDIA ADDICTION

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ABSTRACT

In recent years, as the number of smartphone users increases exponentially, the use of social media becomes an integral part of everyone's life. Social media websites and applications have attractive features such as recommendations, and endless scrolls that enforce people to stay on them. Social media makes it easier to connect to friends and family members, build a network with global communities, spread awareness on important issues, made learning platform available everywhere, and provides a new opportunity for local businesses, but excessive time spent on social media leads to being addicted to social networks and that affects job/studies, offline relations, interpersonal communication skills, the health of individual's life which is more concerned nowadays. Several screening scales are available to measure social media addiction as Bergen social media addiction scale contains 6 items based on six core addictive elements and the social media addiction scale are of 41 items with three addictive elements along with occupation and each item in both scales is of 5 points likert scale. This review aims to investigate the various research work that has been conducted so far to understand the social media addiction of the population, its impact on the population of different groups by age, gender, usage of social media, etc., and intervention/strategies for reducing social media addiction.

Keywords: Social Media Use, Social Media Addiction, Mental Health, Life-Satisfactions

1. INTRODUCTION

Social media is a revolutionary change for communication and connecting to people(Malak et al., 2021). Social media is a virtual platform with the capabilities of creating and sharing content over the internet. Social media can be accessed through web-based apps or mobile applications. Multiple platforms of social media have some common features such as it is interactive, allowing user-generated content, and developing social networks with individuals or groups. Since internet technology expanded, the use of social media platforms is increased.

According to a global statistics report (2021) in India, social media has 448 billion active users with an annual growth rate of 31.2% and 624 million internet users with an annual growth rate of 8.2%. The average time spent on social media is 2 hours 25 mins out of the total time of 6 hours 36 mins spent over the internet(*India Social Media Statistics 2021 | Internet & Mobile Statistics of India*, n.d.).

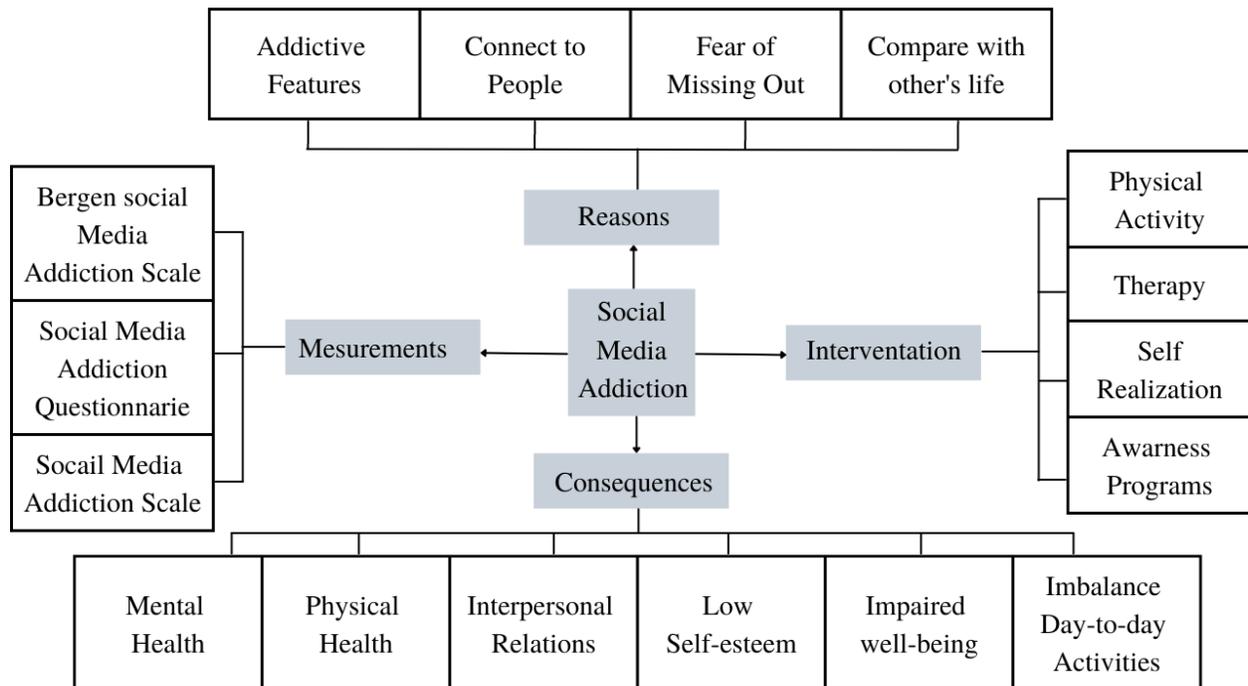
Over the last decade, social media changed the definitions of traditional education, shopping, businesses, etc. to some extent. During the pandemic, everything moves from offline to online, kids to adults everyone started spending more time on the internet, especially on social media and it became more popular from that time. Devoting more time to social media that it impairs day-to-day activities such as job/studies, psychological health, well-being, and individual relationships. Social media addiction is a sub-part of internet addiction in which an individual has an uncontrollable urge to use social media(Hou et al., 2019) and is excessively concerned about their virtual presence. Social media use is highly associated with somatic symptoms such as headaches, and back pain and individuals who have excessive usage time on

social media have a higher level of C-reactive protein(CRP)(Lee et al., n.d.). Social media addiction may lead to physical issues like eyestrain, rounded shoulder, and pain in elbows, hands, and wrists because of poor sitting positions. Mental health is as important as physical health for any humans. If someone have a mental health problem, it can affect behaviour, decision making, mood and perspective towards life. Through the digital presence on social media opens a new opportunity of earning and learning, but utilizing it for more time without any productive work, will lead to social media addiction and that can result in mental health diseases. Social media addiction has a direct and indirect impact on mental health including anxiety, depression, self-esteem, life-satisfactions because of comparing life with others even with people whom they don't know offline, emotional investment with virtual people etc. and that can affect sleeping quality, focuses on daily tasks. Although social media addiction has an impact on physical health, in this review, we will focus on life-satisfactions and psychological implication of problematic social media usage.

1.1 Purpose

The use of social media is beneficial but should be used in a limited way without getting addicted. This review aims to get a sight for measuring scale for social media addiction, determine the reasons for people being addicted to social media, investigate the impact of social media addiction on various factors, to look at the impact of an intervention program on social media addiction.

Figure 1: Social Media Addiction Reasons, Measuring scales, Consequences, and Interventions



1.2 Reasons why people being addicted to social media

As technology is growing and the system becomes intelligent day by day, social media has become the routine for most of the people. Over the internet, several different social media platforms are available from

which Facebook, WhatsApp, Instagram, and YouTube are the most popular ones. Social media have some addictive features such as endless scrolling, social pressure, behavioral suggestion, rewards system, continuous streaming, etc.(Montag et al., 2019) that make users stay on their platform. Each platform has a variety of features such as WhatsApp provides an easy and interactive system for messaging, Facebook gives the facility to connect with friends from past times, and family members and share information with them, and Instagram has an endless scrolling for posts and reels along with messaging and connecting features and YouTube delivers continuous streaming with recommendation and auto play services. According to (Emin Aksoy, 2018), social media addiction has a beginning (usage of social media for 6 months or less) and continuity (usage of social media for more than 6 months) phase. In the beginning phase, reasons for the addiction can be lack of friends, lack of socialization, and monotony of life, as it continues, individuals continue to use it for keeping up with the events, feeling of fulfillment of duty, and protection of social relationships, etc. Staying positive all the time won't be possible, everyone gets negative thoughts. Nowadays, people start scrolling over social media to distract from negative thoughts instead of analyzing thoughts and thinking about a different perspective. Escaping from negative emotions has positive tendencies toward social media addiction(Brailovskaia et al., 2020).

1.3 Measuring social media addiction

To measure the extent of addiction to the individual towards social media, there are different point Likert scales available such as:

1.3.1 Bergen Social Media Addiction Scale

The Bergen Social Media Addiction Scale is an adaption of the Bergen Facebook Addiction scale(Andreassen et al., 2012). It contains six items according to the six-core addictive element such as salience, tolerance, mood modification, relapse/loss of control, withdrawal, and conflict. BSMAS items are scored based on a 5-point Likert scale from 1 to 5 which is interpreted as 5 – very often, 4 – often, 3 – sometimes, 2 – rarely, 1-very rarely. The range of the BSMAS score is 6 to 30. According to the BSMAS score, when 4 or more items have a score of more than 3 out of 6, it is an addiction indicator and a cut-off score of 19 points was suggested as the ideal threshold at and above which individuals are classified as at-risk of social media addiction(Bá Nyai et al., 2017).

1.3.2 Social Media Addiction Scale

Social Media Addiction Scale (SMAS)(Tutgun-Ünal & Deniz, 2015) is a scale that consists of 41 items based on 4 factors. SMAS also has a 5-point Likert scale from 1 to 5 which is interpreted from 1 – never, 2 – seldom, 3 – sometimes, 4 – often to 5 – Always. The range of the score is from 41 to 205. A total score of more than 173 indicates very high addiction and 140-172 indicates high addiction.

1.3.3 Social Media Addiction Questionnaire

The social media addiction questionnaire(Hawi & Samaha, 2017) is an 8-item questionnaire derived from the Facebook Intrusion Questionnaire (FIQ). SMAQ consists of 8 important questions that are directly related to the addictive behavior toward social media. Items of this scale are measured against a 7-point scale with standard responses: 1(strongly disagree), 2(disagree), 3(somewhat disagree), 4(neutral), 5(somewhat agree), 6(agree), 7(strongly agree). The higher the SMAQ score, indicates higher the intrusion of social media affecting your daily life.

2. RELATED WORK

Social media creates a lot of opportunities in the field of business, education, society, and career and helps in improving individuals' life. But excessive use of social media has a demerit that impacts negatively on people's day-to-day life. Individuals' day-to-day life activities can be affected by their self-efficiency, motivation, work pressure, and stress and these aspects can be impacted by social media addiction.

In (Ahmed et al., 2021), ahmed et al. explored the relationship among social avoidance/distress, problematic social media use (PSMU), and self-esteem. More specifically, the study assessed the mediating role of PSMU on the association between social avoidance/distress and self-esteem. This work also examined the relationship between demographic characteristics (gender, residence type, family type, etc.), social avoidance/distress, PSMU, and self-esteem. Self-esteem is about realizing own worth. How do you feel about your capabilities and limitations(*Self-Esteem - Wikipedia*, n.d.). Sometimes you feel good and sometimes feel low about yourself according to situations. Self-esteem can be of mainly two types: low self-esteem and healthy self-esteem. People with healthy self-esteem have a positive view of themselves and have a good potential to tackle the challenges. In spite of the fact that viewing or altering one's web-based profile improves self-esteem, web-based entertainment clients are much of the time uncovered to other celebrated web-based self-introductions, which can, thus, decrease the watchers' self-esteem(Hou et al., 2019).

To conduct this study, sample data were collected from undergraduate students by taking psychometric scales including the BSMAS, the RSES (Rosenberg Self-Esteem Scale), and the SADS (Social Avoidance and Distress Scale). Cronbach's alpha was used to test the data reliability for Bergen social media scale, Rosenberg self-esteem scale, and Social Avoidance and distress scale. To process and analyze collected data, SPSS software is used. Descriptive statistics (e. g., frequencies, percentages, skewness, and kurtosis), independent sample t-tests, Pearson product-moment correlation coefficients, and process analysis using macros from Hayes were performed to get the results of the study.

The presented research study suggested social avoidance/distress as a possible risk factor for PSMU. Because individuals with high social avoidance/distress are likely to avoid social situations, they may feel more comfortable engaging in virtual interaction with other social media users. This engagement in social media negatively influences users' self-esteem. Also, it suggested that frequent social media use decreases users' self-esteem and that this relationship is mediated by upward social comparison. PSMU partially mediated the relationship between social avoidance/distress and self-esteem, while social avoidance/distress predicted the level of self-esteem. Both social avoidance/distress and the PSMU were significant predictors of self-esteem. Also, there is a non-significant difference in PSMU and self-esteem by gender.

In (Zhao, 2021), authors worked to find the impact of social media usage types on subjective well-being (SWB) and social media addiction, and the relationship between them. Types of social media use are considered social use and entertainment use. SWB refers to how a person feels and evaluates their lives in different activities and situations of their life. SWB has three components: 1. frequent positive affect (PA) such as joy, and optimism, 2. infrequent negative affect (NA) like sadness, anger, and 3. Life satisfaction (LS). Individuals are said to have high SWB if they experience LS and frequent PA and infrequent NA [17]. Social media have different types such as social networks, image/video sharing, blogs, news platforms, and professional discussion sites and so do individuals who use it for different purposes. Individuals are using social media for education, gaming, and entertainment, being social, knowing about trends, and many more. Based on the type of usage of social media, it can result positively and negatively in a human's life.

For this research, data were collected through a printed questionnaire which includes questions from the social use scale, Entertainment use scale, Bergen social media scale, and subjective well-being scale using a random sampling technique. This study uses demographic variables as control variables. After collecting the samples, it was divided into addicted and non-addicted students based on at least six items on the social media addiction scale and scored 3 or more. Descriptive statistics and correlation analysis were done through the SPSS. SmartPLS is used to evaluate hypotheses and measurement properties.

Figure 2: Path analysis for identify mediating effect

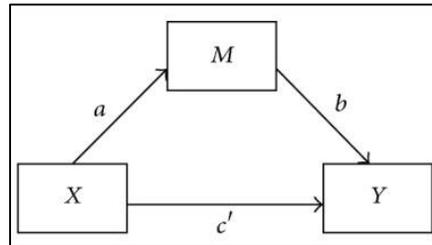


Fig 2 shows the mediating effect of M on the relationship between X and Y. where X is the independent variable, Y is the dependent variable, M is the mediator variable, a is the correlation between X and M, b is the correlation between M and Y and c' is the total effect from X to Y using M. The variables used in research model are social use, entertainment use, social media addiction, and subjective well-being.

Using the correlation between the main variables, the results of the three groups (total, addicted, and non-addicted) show that social use has a significant correlation with social media addiction, and social media addiction has a negative correlation with subjective well-being. Also, in the total group and addicted group, entertainment use is positively correlated with social media addiction, but this relationship is not significant in the non-addicted group. Different types of social media usage have a different effects social media addiction and subjective well-being: entertainment use is bound to prompt social media addiction, and social use will develop subjective well-being. Social media addiction and subjective well-being are negatively correlated with each other.

In (Malak et al., 2021), they want to analyze the direct effect of social media addiction on academic performance and the indirect effects on psychological factors among university students in Jordan. In that study, psychological factors stress, anxiety, and depression are taken into consideration. For this purpose, the hypothesis was formulated to find a signification positive relationship of SMA with stress, anxiety, and depression and a significant negative relationship between SMA and academic performance.

Data were collected through the survey questionnaire which consist of a social media addiction scale, self-rating screening scale, psychological stress scale, and academic performance (GPA). Also, some other variables are Age (range from 18-35), Gender (Male and Female), Academic Year (1st, 2nd, 3rd, 4th or more), and academic performance divided into excellent, very good, good, satisfactory, fair and poor. Using the random sampling technique, a total of 510 samples were collected from two universities. In this study, SPSS used for primarily analysis and to test and validate the conceptual research model, Structural Equation Modelling (SEM) is applied in this research. The SEM is a family statistical model that explains the relationships among multiple variables. SEM includes the PLS measurement model which represents the relationship between the observed data and the latent variables, and PLS structural model which can represent the relationships between the latent variables.

The conducted research study concluded that social media addiction had an indirect effect on academic performance, it has a direct impact on students' stress and anxiety levels. The stress could impact anxiety levels, which could straightforwardly affect students' academic performance. Students' stress levels had a direct effect on anxiety, which could result in depression.

In (Hou et al., 2019), inspected the relationship between social media addiction, mental health, and academic performance of college students, additionally tracking down the use of self-esteem to reduce the social media addiction and the effect of its outcomes. For this purpose, they have conducted 2 studies. In study 1, a survey was conducted to find the relationship between mental health, social media addiction, and academic performance. Moreover, they have used self-esteem as a mediator. For the study 2, a survey was conducted on students who met the criteria for addiction by applying for a two-stage self-intervention program. In both studies, they have used the BSMAS to measure social media addiction. They have taken 232 data samples of college students.

In Study 1, BSMAS for social media addiction and the General Health Questionnaire (includes three subscales: depression, anxiety, and sense of adequacy) for mental health were used for measurements. They conducted three steps of regression analysis to analyze the role of self-esteem. Results from Study 1 affirmed theories that social media addiction was adversely connected to mental health and self-esteem can be played as a mediator.

In Study 2, the survey used similar to study 1 in addition to daily social media use time, and sleep quality. Participants were divided into experimental groups and control groups for investigating the effectiveness of the intervention program. The one-week intervention program was there for candidates in the experimental group, while no instructions for people in the control group. As a result, mental health, self-esteem and sleep quality is improved and diminished social media addiction for candidates in the experimental group, whereas there wasn't any remarkable change in the control group.

In (Sujarwoto et al., 2021), they have worked for tracking down the linkage between social media addiction and the mental health of university students and to check whether family relationships and religiosity may mitigate the harmful effects of social media on the mental health of students at this time. Using an online survey platform, they collected data from 709 students. To determine respondents, they have used a stratified random sampling technique. Center for Epidemiological Studies–Depression (CES-D) scale used to measure mental health. Social media addiction was measured using the BSMAS. During the COVID-19 lockdown in Indonesia, 40% of total social media users were increased and average internet accessing time increased from 5.5 to almost 8 hours per day.

For the student's data, they have collected data for CES-D score, mildly depressed/ not depressed, age, gender, Live with parents or not, BSMAS score, relationship with parents and siblings are good or not, and perceive the self as religious. While for parents, data collected were job type (formal/informal), income (different range from < 2 million to >10 million), and marital status. Statistical analyses were done using these methods. Poisson's regression and logistic regression was used to analyze and test between different variables. Then, they tested religiosity and relationship with parents to check if they can reduce the association using interaction variables and Poisson's regression.

Higher social media addiction scores are more likely to be experiencing depression in university students. Social media addiction appears to be harmful to mental health, while religiosity and nice relationships with parents can boost mental health.

In (Wan Pa et al., 2021), authors worked to find impact of social media on academic performance of undergraduate medical student using social media use as a variable. To work on this study, they have collected data from 400 students over the period of three months using questionnaire that includes questions of demographic information, internal and final assessment score, types of social media used, daily duration of using social media, usage of social media for medical education and social media addiction scale to measure addiction. From the collected data, they have seen that WhatsApp and YouTube were commonly used social media application. Also, more than 40% students used social media 3 hours per day.

Data analysis was carried out by SPSS software. Descriptive statistics used to analyze the demographic characteristics. Chi-square test was used to compare academic performance of medical students by gender. Then measuring correlation between social media use types and social media addiction using Pearson's correlation coefficient. As a Result, it is found that as social media use increased, academic performance of students decreases. Also, Social media addiction is increased with increased use of social media. They concluded the study by saying, social media has a negative impact on undergraduate medical student in this century.

In (Haand & Shuwang, 2020), study conducted to inspect relationship between social media addiction and depression in university students in ghos. For this purpose, data collected from 384 students studying in 3 different colleges using stratified random sampling technique but 55 were excluded due to not a complete response. So, 329 samples considered for study. Social media addiction was measured using Internet addiction test and depression was measured by CES-D scale. After screened questionnaires for eligibility using Cronbach's alpha, collected data were used for the further analysis.

SPSS software was used to analyze the Pearson's correlation coefficient and linear regression between depression and social media addiction. As an output of this study, higher social media addiction level indicated the higher depression level/ higher chance of depression is. Although, there is weak negative correlation, depression can significantly predict social media addiction.

Table 1: Positive and Negative correlation between different variables

Literature	Variable	Positive Correlation	Negative Correlation
(Ahmed et al., 2021)	PSMU	-	SAD, Self-esteem
(Hou et al., 2019), (Malak et al., 2021), (Sujarwoto et al., 2021), (Haand & Shuwang, 2020)	SMA	Depression, Anxiety, Stress	Mental Health
(Bhandarkar et al., 2021), (Hou et al., 2019), (Wan Pa et al., 2021)	SMA	-	Academic Performance
(Zhao, 2021)	SMA	Entertainment Use	Social Use

Subjective well- Social Use SMA
being

SMA: Social Media Addiction

3. REDUCE SOCIAL MEDIA ADDICTION

Accepting the behavioral change, physical health and concentration issue be the first step toward defeating social media addiction. There is very few research available that shows the mediator, intervention, or remedy that can be efficient to overcome the addiction. In (Hou et al., 2019), they have conducted an intervention program for addicted individuals with experimental (didn't receive any suggestions) and control group (provide them different methods). Their study suggested that the program has a positive impact in reducing social media addiction for the control group and helps to improve their sleeping quality and mental health. Another study (Abbasi et al., 2021) used physical activity as a moderator for beating smartphone addiction, so it surely helps to reduce social media addiction and can improve concentration. According to (Sujarwoto et al., 2021), family relationships and religiosity can mitigate the impact of social media addiction and so it can improve mental health. To reduce social media addiction, one has to speak about what they feel to the people around them and one should listen to people around them. There can be another moderator that needs to be identified to assist addicted people. Also, at school, university, or at the workplace, arranging awareness programs may prevent people to addict to social media and intervention programs to reduce it.

4. CONCLUSION AND FUTURE WORK

This review paper gathered information from existing research on the impact of social media addiction on various aspects of life, the effects of different variables on social media addiction like daily social media usage, type of social media use, etc., and moderators that can reduce the impact of social media addiction. From the reviewed work, most research was conducted on university students and it is found that youngsters are at high risk of social media addiction. Also, there is no significant difference in addiction by gender. The purpose of social media usage has a notable correlation with social media addiction in addicted people. In university students, social media addiction has a direct impact on students' stress, and anxiety that can lead to depression and so does impact academic performance. It is shown that relationships with parents and religiosity can reduce the effect of social media addiction. Considering the impact of social media addiction, an important step is to make people realize their social media usage and the result of that. Controlling the craving for the usage of social media may not reduce the addiction and its outcome but being conscious about it can surely help to improve mental and physical health. The effect of online education on social media addiction can examine in further studies. From this review, using the different affected aspects can make a system that can suggest remedies for addicted people.

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