## **SPEKTA**



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# Social Media Addiction in The Young Community: Elucidation of The Development of Behavioral Responses

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#### **ABSTRACT**

**Background**: University students have been using social media in an uncontrolled manner without knowledge of the negative impacts on their cognitive functionality. Therefore, an assessment of the alterations in the behavior pattern of the university students is required to associate the linkage between social media use and subsequent aggressiveness. **Contribution**: Current work has for the first time conducted a sociobehavioral study on the younger university students for gaining an insight into their inclination towards using different social media platforms and changes in their behavioral patterns.

**Method**: University students (73 total; 35 males and 38 females) were chosen who had history of using social media for the last three to five years. These students were affiliated with higher education institutions in Pakistan and the time of analysis was September 2022 – January 2023. An open-ended questionnaire was filled and statistically analyzed for significance using Origin software and SPSS software

**Results:** This work has identified significant relationship between the social media utilization and alterations in the behavior of university students. Different determinants worked upon in this research are the impacts of the social media on cognitive occupation, emotive functions, relapse, conflict, anger, and hostility.

**Conclusion:** The study has associated and evaluated such behavioral factors as determinants of aggression in the younger generation. Also, the study has compared and contrasted the appearance of aggression as a pattern taking in consideration different gender roles to comprehend the role of gender in perceiving and adopting social media trends.

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## INTRODUCTION

Social media falls under the major category of the mass media which has been considered as influential entity marked by the gradual advancement in terms of technology and science. In 2000, media has been classified in different categories which are inclusive of the print, pamphlet, newspaper, recordings i.e. magnetic tapes, data disks, gramophone, cinema, radio, and

television. The invention of television brought revolution in society. Among the other revolutionary media entities were internet, which is the global system of interconnected computer networks, used to communicate between network and devices. It has laterally changed and turned the world into a global village. Internet was made public by 1990. In this regard, mobile phone is the last most conspicuous mode of communication and media dissipation which cannot be overlooked. The first mobile phone set was introduced by Motorolla in 1984. Smart Phone. The IBM introduced first smart device with email connectivity in 1994 [1]-

Social media is the prime source through which different people interact with one another by means creation, sharing, and exchanging different contents, ideas, and expressions. Also, there is an element of the discussion and expression of approval or disapproval which is popularly known as 'comment' or 'react' in the current era. Such interactions are primarily knitted over different soft platforms like applications, websites, links, and other networks [4]. Commonly "social networking sites" is the compound term used with scope covering all social media and computer-run communication links /machineries, including social websites (e.g., Face book, Twitter, LinkedIn, Instagram) digital communication supported applications (WhatsApp, Telegram, Viber etc.) Cyworld, Bubo and Friendster [5], [6].

The network sites made for the social interaction are the web-based soft services that facilitate and permit their users to make their respective profiles, affect real time interactions, display user connections among them. It is an online platform for users who wish to share their different activities with their social media friends. Educational uses of social networking are quite important to be explored quoted that social networking site represents a consecutive enhancing target for think tanks, 47% of American adults are actively associated with social network. Previous studies are indicative of the greater number of the teenagers and younger population using social media in an addictive manner. Social media is a stage allowing anyone from around to register and interact with other social media consumers by developing a connection. It allows users and participant real time learning and engagement within curriculum. It can be termed as a modernized and participatory designed culture for uniformly sharing views [7]-[9].

Different researches advocate the negative impact of social media on the intellectual ability of university students which is reflected in the form of their lower grades. The study revealed that the primary motive for student was to communicate with friends through chat. Time utilization for social media was noted as only 20% [10]. Different systematic studies have been done in this regard to explore the impact of the social media usage among students and the consequent reduction in their academic performance and achievements. The results of all studies in this regard are indicative of the lower inclination of the students towards academic accomplishments, while they enjoyed more being on the social media platforms creating content or aimlessly scrolling down [11], [12]. Such studies investigated and noted that usage of social media for personal purposes, very little proportion of students uses that for educational exercise. Extending the studies and similar observations.

Extending the term "internet addiction" to "Social Media Addiction ", there is an addition of six essential components to describe a behaviour as addiction. The behaviour may be termed as addiction if it exhibits the following six components Salience: It happens when the social networking remains the only most important activity in a person's daily life routine and it completely dominates his/ her thinking, lifestyle, nature of feelings, and the way he / she behave. Mood modification: It is the subjective experiences in which people report significance of the social networking and can be seen as a surviving factor. Tolerance: it is a phenomenon

according to which people associated with the social networking on different platforms, gradually manage to make up the amount of the time and energy, required for being associated with social networking on daily basis. Withdrawal Symptoms: It refers to unpleasant feelings experienced by people when they are unable to engage in social networking. Conflict: It can be stated as the conflict between a person's interpersonal and intrapsychic preferences (i.e. people around vs. activities and time spending on social media) Relapse: it depicts the tendency for repeated reversions to earlier patterns of activities after periods of personal control.

An estimated 2.89 billion monthly active users have been noted during second quarter of 2021, among which Facebook stand on top of all in the world. The statistics disclosed that 3.51 billion active users were engaged with at least one of products (i.e., Facebook, Messenger, WhatsApp, Instagram) every month. Facebook, being the most successful social networking site, created in 2004, is hosting around 2.8 Billion users till Aug 2021 across the world. Since social media is not just about the face-to-face interactions of platform members' users, yet researches in this field showed highly-connected interpersonal relationships [13].

According to social identity model of deindividuation effects (SIDE), there is a change in the behavior of different groups and individuals that have anonymous identity. That is the reason different individuals are more relaxed to express their opinion when are anonymous. For example, this is most apparent when it comes to expression of political or religious views in case of some marginalized areas. According to "uses and gratifications theory" people enjoy and use access to variety of platforms suitable as per their needs. For an image-driven user, Instagram while for text-driven person Facebook can well fulfil their needs to communicate with members. Uses and gratifications theory discusses about active media-consuming audience, the media competitive platforms for the users, their self-awareness, interests and seeking attention. In this regard, a study has found that due to Facebook usage habits and addiction, men were found addicted to solitary behavior while women faced risk of behavioural addiction [14], [15].

In the light of different studies done pointing towards the role of social media in altering human behaviour by means of triggering different reactions and thought patterns, it is quite clear that human generation cannot give up using social media. However, before the excessive use of media, there is an impingent need for understanding the fact that it is associated with the negative transformation of human thought patterns, behaviours, and overall approach towards life. In order to understand this in terms of gender and development of aggressiveness, current work has for the first time developed a model and tested it on the university students inclusive of males and females to evaluate their attitude towards social media use and consequent alterations in their mood leading to aggressiveness. To the best of our knowledge this is the first study to explore the thought patterns and extent of aggressiveness explored among the university students from different educations institutes taking undergraduate courses. More specifically, this research aims to fulfill the major objectives i.e. to find out the addiction extent of the youth on social media, to comprehend the alterations in the behavior of university students as the result of the social media utilization, and to understand changes leading to aggressiveness in youth. The contribution of this research is designed to generate the baseline data outlining the behavioral changes in the youth in response to the social media addiction. Therefore, this data will benefit the stakeholders in academia and other settings to relate the linkage between social media and occurrence of the addictive patterns. Subsequently, the results of this study will be helpful in the formation of the framework to outline preventive measures and controlled use of the social media.

#### **METHOD**

To accomplish the targeted objectives, a cross-sectional research design has been chosen for collection of the data by means of using quantitative approach through utilization of the questionnaire. The norm for study design is quantitative research design based on the logical tests, where the majority of research results depend on the numerical estimation and complex measurable calculations. Quantitative method has been adopted for obtaining precise outcomes. The overall methodology and steps taken are shown in Figure 1.

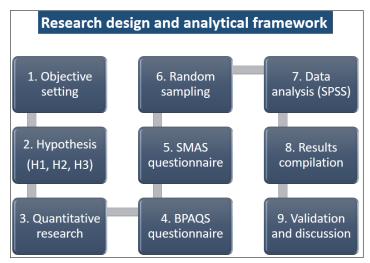


Figure 1. Generalized design of the research work

Hypotheses Figure 2 shows the model employed for the current investigation which comprehends the relationship between social media utilization and development of aggressiveness thought patterns and behaviour. In this regard, the hypothesis consider were:

- ☐ H1: There is an expected outcome of the social media influencing the university students' aggression caused as the result of addiction.
- H2: Significant differences are expected in terms of aggression associated with social media utilization from gender point of view
- ☐ H3: There is an expected difference arising in the extent of aggressiveness among both sexes considering their socio-economic factors, physiological make up, and overall perspective.

## 1. Research Design and Data Analysis

The excessive use of social media is creating high level of aggression among adult students at university. As an observation the aggression is adversely affecting the mental health of the students in terms of creating active aggression. The aim of this study is to explore the association between social media usage and subsequent aggression. In this regard, investigation was done to explain the social media addiction in enhancing the level of aggression among university students, exploring gender difference in the use of social media addiction, and to elucidate the aggressiveness extent in terms of gender. In this regard, university students were chosen who had history of using social media for the last three to five years. An open-ended questionnaire was filled and statistically analysed for significance using Origin software (OriginPro: Version 8.1) and SPSS software (Version 24.0). For analysis of the data via SPSS, standard t-tests were run and the data expressing mean difference (M), standard deviation (SD), t-value, p value, and

Cohen's d were stated in the form of tables. These tests were run for different variables examined in the current research. Furthermore, the types of the questionnaires were also varied following different methods as.

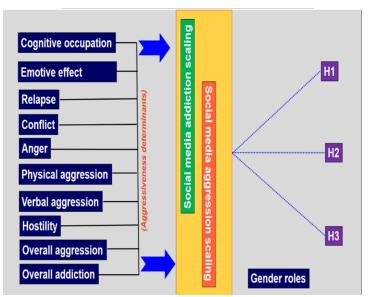


Figure 2. Proposed conceptual model

## 2. Social Media Addiction

In the present study, social media addiction questionnaire was applied to measure social media addiction in university students. Higher scores on social media aggression questionnaire indicated higher level of addiction and vice versa.

# 3. Aggression

In present study, Buss and Perry aggression questionnaire was applied to measure the aggression in university students. Higher scores on Buss and Perry aggression questionnaire indicated higher level of aggression and vice versa. The research tool i.e. questionnaire used in this research was disseminated among students. Specifically, the questionnaire types were varied as:

#### 4. Social Media Addiction Scale (SMAS)

The Social Media Addiction Scale (SMAS) by Tutgun Unal consists of four subscales with the name of 1) occupation 2) modification 3) relapse 4) conflict. This scale having 41 items. Occupation subscale items are 1 to 12. Modification subscale items are 13 to 17. Items of Relapse subscale are from 18 to 22 and the Conflict subscale items are from 23 to 41.

## 5. Buss and Perry Aggression Questionnaire 1992 (BPAQS)

BPAQ scale consists of four subscales with the name of 1) physical aggression 2) verbal aggression 3) anger 4) hostility. This scale having 29 items. Physical aggression subscale items are 2, 5, 8, 11, 13, 16, 22, 25, and 29. Verbal aggression subscale items are 4, 6, 14, 21, and 27. Items of Anger subscale are 7, 9, 12, 18, 19, 23, and 28. Hostility subscale items are 3, 7, 10, 15, 17, 20, 24, and 26.

# 6. Demographics

The questionnaire also included a section of demographic information sheet. It was administered to gather information of the respondent regarding their age, gender, residence and social class.

## 7. Type of Research for Analysis

The research design of the study is purely quantitative taking into consideration the social media consumers of both sexes. Quantitative research has been employed because it is more accurate and marked by precision. Particularly in logical tests, where the majority of work depends on the numerical estimation and complex measurable calculations Quantitative method is constantly liked since it gives careful and precise outcomes reflecting the exact thought patterns and behaviors.

## 8. Sample and Sampling Techniques

A sample of 73 university students (35 males, 38 females) enrolled in the undergraduate degree programs of different scientific domains were chosen for quantitative study.

## 9. Sample Inclusion and Exclusion Criteria

Current work has majorly focused on the analysis of behavioral changes in the youth. The inclusion criteria were preferably based on the selection of the university students. The exclusion criteria were based on the students enrolled in the higher postgraduate degrees like PhD scholars. Therefore, the current work is based on the behavior of the students enrolled in the bachelors' degree.

## **RESULTS AND DISCUSSION**

Current work has explored the linkage between the social media and the subsequently appearing aggression in the younger generation of university students. The results are in line with the targeted objectives expressing profound linkage between social media among young university students. This linkage between social media addiction and aggressiveness in terms of behavioral changes possess direct proportionality.

Social media and humans' need for validation cum instant gratification has tied the bond stronger than ever. One of the major issues of the current world in terms of mental health is the indiscriminate use of the social media without having a knowledge about the serious implications it has. Though number of the researchers and other private companies and individuals are pressing hard upon the fair use of technology and social media but the attractive applications and cheap dopamine release does not allow a consumer to leave his or her phone [16], [17]. It is inevitable and proved through different researches that urbanized world has more number of the social media consumers who are suffering different mental health issues than compared with the third world countries where access to the technology and social media is comparatively less.

Even if the social media consumers have idea about the negative implications and associated health problems, yet they fail to address their social media utilization hours just because such applications have been designed to keep the users coming back. In the present era, the famously known as millennials and gen-z are the most victimized individuals if compared with the older adults because they find social media alluring without thinking about the long term bad impacts [18], [19].

In order to specifically quantify the role of social media in rendering its younger users as

aggressive and impatient generation, current work has evaluated the thought patterns and aggressiveness extent of the university students who are enrolled in different degree programs. Before the exploration of the real aggressiveness and determinants for it, it is integral to have an idea regarding the psychometric and socio-demographic characteristics of the sample students selected for this work.

Psychometric and sociodemographic features, the statistical evaluation for comprehending the significance of the data was done by analysis of the psychometric parameters (shown in Table 1) taking into consideration the addiction and aggression scale. For both variants, the Cronbach's α is 0.94 and 0.82 which shows an impressive consistency in the addiction and aggression, respectively. Such a higher Cronbach's α values validate the cyclic behaviour of the selected students towards development of addiction and consequent aggression. In terms of the association between the social media addiction and aggression, different studies have validated the linkage obtained in this work. For instance, in a recent report, the fact was revealed that people who are more addicted to the social media are also marked by the exhibition of the rude behavior and aggressiveness. Often such behaviours or rudeness is not shown by the individuals in real life but this shown on social media [20]. Another studies exploring the impacts of the excessive social media addiction is also suggestive of the similar results [21], [22]. Studies done in the other demographic regions have expressed the rise of the addictive and aggressive behavior among different individuals [23], [24].

**Table 1.** Psychometric properties for scales for determination of social media's impact on students' behavior

Psychometric properties, Pakistan, 2022-2023								
Scale	М	SD	Range	Cronbach's α				
Social media addiction	121.96	27.19	64 - 168	0.94				
Aggression scale	86.51	14.86	48 - 137	0.82				

The clinical evidence for developing such addiction and consequent aggression points towards the human behaviour where he is constantly looking for something to sooth his mind through dopamine releasing chemicals. However, with passage of time, their addiction does not sooth their mind, in fact with the advancing time, they will need more dose to satisfy their addictive thought pattern. Upon super-saturation, the university students expressed aggressive output because the level of cheap dopamine was not meeting their required level. Due to such behaviour and psychological pain, they tackled their daily life in an aggressive manner as reflected from the higher Cronbach's  $\alpha$  values.

Table 2 and Figure 3 points towards the socio-demographic characteristics of the university students who were researched. It is important to take into consideration different social and demographic features because there is a substantial difference between male and female if considered in terms of their inclination towards social media utilization triggering aggressiveness. Since random sampling procedure was adopted for this investigation therefore, there is a variance as reflected from Table 2.

The results show that greater number of the females participated in this work (n = 38, 52.1%) when compared to male students (n = 35, 47.9%). In terms of residential status, higher the number of students from urban area (n = 44, 60.3%) responded when compared to the number of students from rural areas (n = 29, 39.7%). In terms of age, greater number of students from age of 21 to 24 (n = 62, 84.9%) responded us when compared with the students age of 17 to 21 (n = 11, 15.1%).

Characteristics	Category	N	%
Gender	Male	35	47.9
Gender	Female	38	52.1
Λαο	17-20	11	15.1
Age	21-24	62	84.9
Residence	Urban	29	39.7
Residence	Rural	44	60.3
	Lower	2	2.7
Social class	Middle	65	89.0
	Upper	6	8.2

Finally, the social status of the students was also taken into consideration. Majority of students belonged to the middle class (n = 65, 89.0%) than compared to the upper class (n = 6, 8.2%) and lower class (n = 65, 89.0%). Medical histories based on the behavioural studies clearly indicate the role of different factors in influencing human response towards anything. Therefore, it is integral to evaluate the aggressiveness and addiction extent of the students by taking into consideration their overall condition encompassing health, education level, income extent, and type of area they are residing.

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In order to evaluate the implications of social media utilization on the behaviour of university students triggering addiction and aggressiveness, different determinants were used. The most conspicuous determinants in this regard are shown in Table 3.

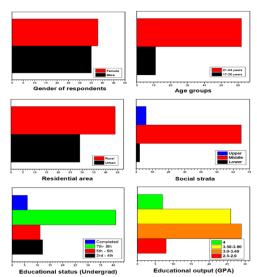


Figure 3. The diversity of university students

Table 3 is indicative of the responsiveness of the individuals from both genders showing considerably variable responses. The simple linear regression analysis of the different determinant factors leading to aggressiveness and addiction has shown the profound role of

social media usage. Furthermore, the level of variance among the university students can be approximated from the considerable significance with F (1, 71) = 22.879, p = .000, R2 = .244, and R2adjusted = .233. The regression coefficient (B = .270, 95% and CI (.157, .382), indicated that increase in social media addiction corresponded, on average, increase in aggression scores of .270 points. The results of linear regression proved that H1 is true, stating that students who are addicted to social media are experiencing higher level of aggression.

**Table 3.** Tabular relationship between different factors influencing university students' aggressiveness associated with the social media utilization (N=73)

Association between social media and aggressiveness, Pakistan, 2022-2023								
Aggressivenessdetermination factor	Gender				Statistical significance			
	Males		Females	Females		Statistical significance		
	М	SD	М	SD	t (71)	Р	Cohen's d	
Cognitive occupation	40.26	7.582	41.47	6.837	721	<.473	0.167	
Emotive effect	15.17	3.706	16.82	3.917	-1.839	<.070	0.432	
Relapse	15.37	4.271	13.16	4.913	2.047	<.044	0.480	
Conflict	57.74	16.22	44.45	16.48	3.469	<.001	0.812	
Anger	20.66	4.518	20.21	4.307	.432	<.667	0.101	
Physical aggression	27.57	5.164	24.74	5.530	2.258	<.027	0.528	
Verbal aggression	16.11	4.064	14.89	3.431	1.389	<.169	0.324	
Hostility	25.23	5.397	23.84	4.547	1.190	<.238	0.179	
Overall aggression	89.57	15.685	83.68	13.668	1.713	<.091	0.27	
Overall addiction	128.54	25.706	115.89	27.449	2.027	<.243	0.475	

(M= mean, SD = standard deviation, P = Pearson correlation coefficient)

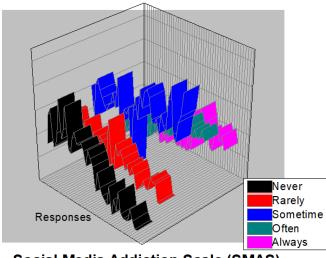
Cognitive functionality of an individual is his or her's capacity to use brain in different conditions. For student to gain good grades and accomplish well, it is necessary to have better cognitive functionality which comes from laser sharp focus. Cognitive occupation scores of males and females were compared. On average females (M = 41.47, SD = 6.837) performed better than males (M = 40.26, SD = 7.582). This difference -1.217,95% CI (-4.582, 2.148) was statistically not significant, t (71) = -.721, p <.473. Such behavior can be attributed to the positive utilization of social media for educational purposes due to which the cognitive ability of students is not deteriorated, if not improved (Jong et al., 2021; Quinn, 2018). Therefore, social media addiction or utilization has not impacted the cognitive occupancy of the students and this result is in conformity with the previously obtained results. Emotive effect scores of males and females were also compared in effort to quantity the impact of social media on aggressiveness appearance. On average females (M = 16.82, SD = 3.917) performed better than males (M = 15.17, SD = 3.706). This difference –1.644,95% CI (-3.428, .139) was not statistically significant, t (71) = -1.839, p <.070. The emotive effect via sub scale of SMAS shows that social media addiction does not affect the emotive level of students to a greater extent, however individual differences and type of social media consumption may vary (Figure 4).

Relapse scores of males and females were compared for the selected university students who responded to the questions. On average males (M = 15.37, SD = 4.271) performed better than females (M = 13.16, SD = 2.047). This difference 2.214, 95% CI (.057, 4.370) was not statistically significant, t (71) = 2.047, p <.044. Relapse scale of SMA shows that social media addiction affects the relapse mechanism in users especially students in university. Level of aggressiveness can be easily comprehended from an individual's response at the time of conflict. Therefore, we used conflict as the determinant in the current work. Conflict scores of males and females were compared to gain an insight in the aggressiveness and addiction extent. On average males (M = 57.74, SD = 16.223) performed better than females (M = 44.45, SD = 16.484). This difference 13.295, 95% CI (5.653, 20.938) was statistically significant, t (71)

= 3.469, p < .001. Conflicts subscale of SMA reflect that student using social media are experiencing higher level of conflicts leading to aggression [25].

Another relevant determinant of the aggressiveness development due to social media utilization is anger. Anger is the clearest symptom leading to aggressiveness in some cases. However, the results of the current work contradict with this response because the respondents did not show signs of anger due to social media utilization. Such behaviour can be associated with the busy routine and other commitments of the students which tend to tame their angry response if they triggered by something they do not like on social media. Most of the times, the social media algorithms show the content that user want to see. In short, social media platforms take our keywords and give us such content. For example, anyone who search through clothing brands will see their YouTube thronged with relevant videos. Therefore, younger generation prefer to see things which make them happy and which is related to them. Therefore, getting no evidence of anger in the studied group of students is a good notion.

Anger scores of males and females were compared. On average males (M = 20.66, SD = 4.518) performed better than females (M = 20.21, SD = 4.307). This difference .447, 95% CI (- 1.613, 2.506) was statistically not significant, t (71) = .432, p < .667. Anger sub scale of aggression shows that students have been noted with no negative effect due to use of social media. Perhaps the lower anger response of male students can be related with the left brain due to which they see things logically rather than emotional contemplation [26]-[28].



Social Media Addiction Scale (SMAS)

**Figure 4.** SMAS responses recorded for various variables of curiosity, enthusiasm, attachment, and addition shown in a 3D ribbons graph sketched on Origin software

The comparison of physical aggression scores of males and females shows that on average males (M = 27.57, SD = 5.164) performed better than females (M = 24.74, SD = 5.530). This difference 2.835,95% CI (.332, 5.337) was statistically significant, t (71) =2.258, p < .027. The data shows there is significant effect of use of social media on physical aggression found in students. Verbal aggression scores of males and females has also been compared. On average males (M = 16.11, SD = 4.064) performed better than females (M = 14.89, SD = 3.431). This difference 1.220, 95% CI (-.531, 2.970) was statistically not significant, t (71) = 1.389, p < .169. The scale shows no evidence of verbal aggression in the social media addicted students. Hostile behaviour is another determinant factor for estimation of overall aggression and addiction.

Therefore, hostility scores of males and females were compared. On average males (M = 25.23, SD = 5.397) have a comparatively better performance than females (M = 23.84, SD = 4.547). This difference 1.386, 95% CI (-.936, 3.709) was statistically not significant, t (71) = 1.190, p < .238.

Hostility scale was found with no significant effect as result of social media use. Overall aggression and addiction scores of males and females were compared for comprehending the final behaviour. Currently obtained results clearly indicate the differences between two genders in their aggressiveness development due to excessive social media utilization. In terms of the hypothesis H1. the results have proved conformity with two of them showing the role of social media in enhancement of aggressive behaviour.

While H2 is nullified because both genders are active users of the social media and thus there is no probability associated with gender-based aggression. Furthermore, H3 is also rejected because there is no relationship between greater extent of aggression between social media use and apparent aggression in terms of gender [29]-[31].

## CONCLUSION

Current work has accomplished the goal of comprehending the association between the social media addiction and rise of the aggressive behaviours in the younger individuals studying different subjects at the undergraduate level. Social media has become an imperative part in the current era of globalization. However, the impacts of social media on human brain are diverse which depends on the number of the factors. Using social media in a controlled manner with the occasional digital detox can be an effective strategy to prevent the negative impacts.

The current study is more contributing in terms of awareness and information about the use of social media, addiction caused due to social media and aggressive behaviors observed. In fact, the cause and relationship effect within the triangle is very important to understand it with its core factors the variables. This study will help the educational institutions to include sufficient material on progressive growth of social media in their course contents so that students can be well monitored, and they could be able to use social media for constructive purposes. In this way an awareness this counselling campaign to be initiated that shall be useful for college and university students. Furthermore, this study shall be of great importance in terms of making strategies for psychiatric and psychological treatment centers where it can be made part of the modus operand and rehabilitation of patients. The study can be strategic part for taking into consideration the correlation between Use of social media and Aggression. The fact that excessive use of social media lead to aggressive behaviors in university students could be an alarming situation for academic progress. Proper guidance shall be required to keep the students away from the negative impacts of excessive use of social media.

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