ORIGINAL RESEARCH

Evaluation of Relationship Between Social Media Addiction, Self-Esteem and Depression in Adolescents

Dr. Krishna Patel

Associate Professor, Department of Psychiatry, Swaminarayan Institute of Medical Sciences and Research, Ahmedabad-Mehsana Highway, Kalol, Gandhinagar, India

Corresponding author
Dr. Krishna Patel
Associate Professor, Department of Psychiatry, Swaminarayan Institute of Medical Sciences and Research, Ahmedabad-Mehsana Highway, Kalol, Gandhinagar, India

ABSTRACT
Use of social media is growing widely to the point of developing addiction inyoungsters.Adolescents are more vulnerable to develop any kind of psychiatric illness due tothe criticalgrowth period. Lying in the grey zone between dependence and independence for taking wise decisionsfor themselves, there is a high possibility of developing unhealthy behavior. This paper highlights social media addiction and its relationship with self-esteem and depressionin adolescents (school students studying in Secondary School in Surendranagar). Socio-demographic data sheet, Social Media Addiction Scale – Student Form, RosenbergSelf-Esteem Scale and Beck Depression Inventory were used to collect data, which wasfollowed by analysis using SPSS version 16.Amongst 60 students social media addiction was probably present in 20.5% and it hadstrong negative association with self-esteem of students ($\chi 2$=4.364, γ=-0.449, P</=0.05) andhad positive association with depression ($\chi 2$=12.656, γ=-0.692,P</=0.05).Spearman Correlation value of -0.495 between social media addiction and self-esteem issignificant at p<0.001.Amongst students, odds of having social media addiction is 4.5 timeshigher in those who have below average Self-esteem as compared to those who have aboveaverage self-esteem. Hence, it was concluded that addressing self-esteem issues in adolescence is of prime importance to preventdevelopment of social media addiction and subsequent depression.
Keywords: Social Media Addiction, Self-esteem, Depression, Adolescents

INTRODUCTION
Social media use is growing exponentially and is posing risk for development of addiction in youngsters. Social Media Addiction is a growing mental health problem as per recent evidence[1,2,3]. Adolescence age marks the window of critical growth period, rendering children falling under this age group vulnerable to develop pathology. Moreover, with advancement in technology, the age of exposure to various electronic gadgets has been reducing further. Their intellect has not matured enough to take appropriate decision when in dilemma and are likely to engage in unhealthy behavior due to drive to develop independence, while still they are considered dependent by the authorities. Griffiths has argued that all addictions comprise of six core components (i.e., salience, mood modification, tolerance, withdrawal, conflict, and relapse) [4]. As per Andearson and Pallesanaddictive use is characterized by "being overly concerned about online activities, driven by an uncontrollable motivation to perform the behavior, and devoting so much time and effort to it that it impairs other important life areas" [5]This study was undertaken considering global concern of various authors on understanding the concept of Addiction and its application on current technological scenario. Social Media Addiction being a wider area and more relevant in our culture was explored, especially in adolescents who would build the future of our country.

AIM & OBJECTIVE
The aim of the study is to study the Social Media Addiction amongst adolescents and the objective of the study is to study the relationship of socialmedia addiction withself-esteem anddepression amongst adolescents

METHODS

A cross-sectional study was carried out on adolescents studying in class X in an englishmedium School in Surendranagar during August,2019. Class X students at an English medium school in Surendranagar who provided the written consent were included in the study, excluding those who refused to consent.Data were collected using self-administered surveyforms which includedStructured Proforma: Participant's Profile, Bergen Social Media Addiction Scale (BSMAS) – 6 item scale [4], Rosenberg Self-Esteem Scale (RSES) - 10 item scale [5] and Beck's Depression Inventory (BDI) – 21 item scale[6].

Out of 94 students approached, 83 gave the written consent. 83 forms were filled out of which 23 forms were discarded because of incomplete details.Analysis of the data was done by SPSS version 16 for Windows.Frequencies with mean were calculated for categorical data. Pearson Chi Square Test was used to know whether there is any association between level of Social Media Addiction and Self-Esteem as well as Depression. P value of <0.05 was considered statistically significant. Gamma test could establish the direction of the relationship between above mentioned variables.Odds Ratio was used to predict probability.Anonymity and confidentiality of the participants were maintained throughout the study.Approval from Ethics Committee of the institution was taken.

RESULTS

Table 1: Sociodemographic variables and social media addiction among adolescents

Sociodemographic Variables		N = 60	%	Low Addiction		High Addiction	
				N=38	%	N =22	%
Age	15 years	60	100	38	63.33	22	36.67
Sex	Male	35	58.33	25	22.2	10	38.3
	Female	25	41.67	13	17.3	12	22.2
Domicile	Urban	60	100	38	63.33	22	36.67
Marital Status	Single	60	100	38	63.33	22	36.67
Family Type	Nuclear	48	80	33	55	15	2
	Joint	12	20	5	8.33	7	11.675

As demonstrated in the table-1, all the students have age of 15 years and 58.33% of the students were male.80% of the respondents belonged to nuclear family and all the students belong to urban locality. All the adolescents had a total score indicating **low (63.33%) or high (36.67%) level addiction** associated with social media.

Table 2: Association between Social media addiction and Self esteem

Variables N = 60			BSMAS		χ^2	d.f	p-value for χ^2	γ	p-value for γ
			Low Addiction	High Addiction					
RSES	Low	<μ	09	13	**6.881***	1	**0.008****	**-0.576***	**0.005****
	μ = 12.9	>μ	29	12					
	High	<μ	08	14	**7.148***	1	**0.007****	**-0.573***	**0.004****
	μ = 22.6	>μ	30	11					
	Global	<μ	12	16	**4.364***	1	**0.031****	**-0.449***	**0.032****
	μ = 92.8	>μ	26	9					

Significance level *p<.05 level, ** p< .001

Table-2 shows significant association was found between social media addiction andself-esteem. Out of the 2 components of Rosenberg Self Esteem scale, both low (χ2=6.881, P</=0.05) and high (χ2=7.148, P</=0.05) level of self-esteem significantly associated with the social media addiction. This relationship was further substantiated using Gamma test and the direction of the relationship could be established significantly.There was a strong negative association between social media addiction score and the levels of self-esteem (γ= 0.449, P</=0.05).

Table 3: Association between Social media addiction and Depression

Variables N = 60			BSMAS		χ^2	d.f	p-value for χ^2	γ	p-value for γ
			Low addiction	High addiction					
Beck's Depression Inventory (BDI)	Mild	<μ	07	12	**3.298***	1	**0.050****	**-0.395***	**0.05****
	μ = 12.9	>μ	31	10					
	Borderline	<μ	24	17	1.199	1	0.193	-	-
	μ = 13.6	>μ	14	5					
	Moderate	<μ	15	16	**7.148***	1	**0.007****	**-0.573***	**0.004****

μ = 12.2	>μ	23	6					
Severe μ = 31.5	<μ	15	14	3.999*	1	0.038**	-0.431*	0.042**
	>μ	23	8					
Extreme μ = 22.6	<μ	10	15	11.928*	1	0.001**	-0.681*	0.0001**
	>μ	28	7					
Global μ = 92.8	<μ	11	16	12.656*	1	0.001**	-0.692*	0.0001**
	>μ	31	16					

Significance level *p<.05 level, ** p< .001

As observed in table-2 significant association was found between global score of social media addiction scale and depression ($\chi2$=12.656, P<$/$=0.05). Out of the 5 components of Beck's Depression Inventory, 4 are significantly associated with social media addiction. They are mild ($\chi2$=3.298, P<$/$=0.05), moderate ($\chi2$=7.148, P<$/$=0.05), severe ($\chi2$=3.999, P<$/$=0.05) and extreme ($\chi2$=11.928, P<$/$=0.05).This relationship was further substantiated using Gamma test and the direction of the relationship could be established significantly.There was a strong positive association between social media addiction global score and the severity of depression (γ= -0.692,P<$/$=0.05). With increase in the levels of social media addiction experienced by the respondents, the increase in the mild,moderate, severe and extreme level of depression.

DISCUSSION

Andreassen and Pallesen defined social media addiction as "being overly concerned about social network sites (SNSs), to be driven by a strong motivation to log on to or use SNSs, and to devote so much time and effort to SNSs that it impairs other social activities, studies/job, interpersonal relationships, and/or psychological health and well-being." [6][7]

Many factors can contribute to social media addiction, such as neurobiology, self-determination theory (the need for competence, autonomy, and relatedness), personality traits (neuroticism, conscientiousness, narcissism, etc.), cognition (automatic thoughts, self-esteem), learning (reinforcements, social learning), culture, and such (Andreassen, 2015). [6][8][9]

Branden has claimed self-esteem to have two interrelated aspects: sense of personal efficiency and sense of personal worth. These refer to the integral summation of self-confidence and self-respect (Branden, 2001). [10]Taylor, Peplau, and Sears (2007) defined self-esteem as the summation of beliefs regarding the individual's self. [11]As defined by Erikson (1963), self-esteem is the feeling of assurance that is established through the comparison of self-recognition and societal confirmation. [12]

Studies regarding social media addiction and self-esteem have indicated addictive usage to be empirically linked to a negative self-concept, and therefore to low self-esteem. On the other hand, social media has been used to bridge a social capital for feeling less lonely and more connected.

Steinfield (2008) found the intensity of Facebook usage and bridging of social capital to be higher for groups with lower self-esteem due to underlying fears of rejection. This study supports Shaw and Gant's (2002) findings that suggest people with low self-esteem tend to use social media to modify their mood, meet new people, decrease loneliness, and seek social support. [13][14]Faraon and Kaipainen (2014) also have found that participants with a high intensity of Facebook usage reported lower self-esteem on average. [15]

Likewise, several other scholars have reached the conclusion that addictive social media usage relates to lower self-esteem (Baturay& Toker, 2017 & Wilson et al., 2010). [16][17]This is in keeping with finding of our study.

Social media is seen in the literature to have positive effects on self-presentation and self-esteem regulation.However, and as in every behavioral process, excessive use and lack of self-control can lead to serious consequences such as relational, emotional, health, and performance problems. These results may dramatically change the daily rituals of the individual, thus creating a catalyzing effect on problems such as depression, disruptions in self-perceptions, narcissism, and impairments in relationships with others, as well as performance problems such as disruptions in school or achievements, sleep deprivation, impaired sleep, or their related health problems. [18]

Depression was positively related to a proneness to addictive technology.The fact that depression often entails social withdrawal (American Psychiatric Association, 2013) may explain why depressive symptomatology wasslightly associated with addictive social networking sites.[19]

The association between addictive video game playing on social media and depression was found in the study done by Brunborg and Ferguson.[20][21]This is coinciding with our study.

CONCLUSION AND FUTURE PROSPECTS

Thus, it could be concluded from our study that recognizing Social Media Addiction in early phase of life can help us direct the psychological growth of an adolescent in a correct direction.Growing data of low self-esteem and depression amongst adolescence can be linked to excessive use of social media, thus addressing it can be a preventive measure for depressive illness.

In future research, designing longitudinal and cross-cultural studies may draw a broader picture for understanding the evolution of social media addiction.Empirical studies on the treatment or prevention of this kind of addiction would be an asset for the literature. Self-help interventions such as preventing apps, relaxation techniques along with therapeutic methods (cognitive behavioral therapy, mindfulness exercises, etc.) or pharmacological methods have already been mentioned by authors. Creating awareness in college students and adolescents whose personalities are still in a stage of development is especially important.

LIMITATION
Small sample size and inclusion of schools of one region will limit the generalization of the result.

REFERENCES
1. Griffiths M. D., Kuss D. J., Demetrovics Z. (2014). Social networking addiction: An overview of preliminary findings. In Rosenberg K., Feder L., editors. (Eds.), Behavioral addictions: Criteria, evidence and treatment (pp. 119–141). New York, NY: Elsevier. [Google Scholar]
2. Ryan T., Chester A., Reece J., Xenos S. (2014). The uses and abuses of Facebook: A review of Facebook addiction. Journal of Behavioral Addictions, 3(3), 133–148. doi:10.1556/JBA.3.2014.016 [PMC free article] [PubMed] [Google Scholar]
3. Pantic I. (2014). Online social networking and mental health. Cyberpsychology, Behavior, and Social Networking, 17(10), 652–657. doi:10.1089/cyber.2014.0070 [PMC free article] [PubMed] [Google Scholar]
4. Griffiths M. D. (2000). Internet addiction – Time to be taken seriously? Addiction Research, 8(5), 413–418. doi:10.3109/16066350009005587 [Google Scholar]
5. Andreassen, C. S., &Pallesen, S. (2014). Social network site addiction: An overview. Current Pharmaceutical Design, 20, 4053–4061. http://dx.doi.org/10.2174/13816128113199990616
6. Andreassen, C. S. (2015). Online social network site addiction: A comprehensive review. Current Addiction Reports, 2(2), 175–184.
7. Andreassen, C. S., Griffiths, M. D., Gjertsen, S. R., Krossbakken, E., Kvam, S., &Pallesen, S. (2013). The relationships between behavioral addictions and the five-factor model of personality. Journal of behavioral addictions, 2(2), 90–99.
8. Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. Addictive Behaviors, 64, 287–293.
9. Andreassen, C., Torsheim, T., Brunborg, G. S., Pallesen, S. (2012). Development of a Facebook Addiction Scale. Psychological Reports, 110, 501–517.
10. Branden, N. (2001). The psychology of self-esteem. New York, NY: Wiley Company. Taylor, S. E., Peplau, L. A., & Sears, D. O. (2007). Sosyalpsikoloji [Social psychology] (A. Dönmez, Trans.). Ankara, Turkey: İmgeKitapevi.
11. Erikson, E. (1963). Childhood and society. New York, NY: Norton Shaw, L. H., & Gant, L. M. (2002). In defense of the Internet: The relationship between Internet communication and depression, loneliness, self-esteem, and perceived social support. Cyberpsychology & Behavior, 5(2), 157–171.
12. Steinfield, C., Ellison, N. B., & Lampe, C. (2008). Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. Journal of Applied Developmental Psychology, 29(6), 434–445.
13. Faraon, M., &Kaipainen, M. (2014). Much more to it: The relation between Facebook usage and self-esteem. Proceedings of the 2014 IEEE 15th International Conference on Information Reuse and Integration (pp. 87–92).
14. Baturay, M. H., & Toker, S. (2017). Self-esteem shapes the impact of GPA and general health on Facebook addiction: A mediation analysis. Social Science Computer Review, 35(5), 555–575.
15. Wilson, K., Fornasier, S., & White, K. M. (2010). Psychological predictors of young adults' use of social networking sites. Cyberpsychology, Behavior, and Social Networking, 13(2), 173–177.
16. Davenport, K., Houston, J. E., & Griffiths, M. D. (2012). Excessive eating and compulsive buying behaviours in women: An empirical pilot study examining reward sensitivity, anxiety, impulsivity, self-esteem and social desirability. International Journal of Mental Health and Addiction, 10, 474–489.
17. American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Washington, DC: Author.
18. Brunborg, G. S., Mentzoni, R. A., &Frøyland, L. R. (2014). Is video gaming, or video game addiction, associated with depression, academic achievement, heavy episodic drinking, or conduct problems? Journal of Behavioral Addictions, 3, 27–32.
19. Ferguson, C. J., Coulson, M., & Barnett, J. (2011). A meta-analysis of pathological gaming prevalence and comorbidity with mental health, academic and social problems. Journal of Psychiatric Research, 45, 1573–1578.