ORIGINAL ARTICLE

AN EXPLORATION OF USE OF SOCIAL NETWORKING SITES AMONGST USERS WITH PSYCHOLOGICAL PROBLEMS

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Abstract

Objective: **Social Networking Sites (SNS) are gaining popularity across different cultures and age groups with its increasing role in the day-to-day life of its users. Objective of the present investigation is to study the SNS use and its relationship with online and real-life social capital, self-esteem and interpersonal relationships in normal and clinical population.** ***Methods:*** **The sample consisted of 93 participants of the age range 17-37 years, 63 participants from the general population and 30 from the clinical population with a diagnosis of any depressive or anxiety spectrum disorder. The tools used for this study are Basic Data Sheet, the Facebook Intensity Scale, Internet addiction Test, Internet Social Capital Scale.** ***Results:*** **The Rosenberg Self-Esteem Scale and Sentence Completion Test Results show that Facebook use has a positive correlation with online bonding and bridging capital. A significantly higher percentage of participants from the clinical group met the criteria for problem use of the Internet. Compared to average users, problem users of the Internet are found to have higher mean scores for online bridging capital and conflicts in inter-personal relationships and lower mean scores for real life bonding capital and self-esteem.** ***Conclusions*****: It necessitates an exploration of Facebook's use patterns in routine evaluation and management of clinical conditions and implies the need for further research to develop explanatory models and management strategies for problematic use of the Internet.** ***ASEAN Journal of Psychiatry, Vol. 18 (2): July – December 2017: XX XX.***

Keywords: Social Networking Sites, Social Capital, Self esteem, Internet Problematic Use

Introduction

Social Networking Sites (SNS) is a web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom they share a connection, and view and traverse their list of connections and those made by others within the system [1]. With the wide spread use of SNS the correlation between use and various psychosocial variables such as personality traits, self esteem, perceived social support and feelings of loneliness and depression had been of interest to mental health professionals.

The studies on positive versus negative impact of use of internet were fueled by the popular

findings of the 'Internet Paradox' study, that internet use reduces one's real life social interactions and increases depression and loneliness [2]. After three years follow-up, the negative effects were found to be dissipated .There had been an increase in communication, social involvement and well being [3]. It also led to decrease in loneliness and depression, increase in self esteem and social support,[4]; increase in time spent with friends, increased quality of these friendships and increased general well-being were also reported with the use of internet [5].

More in-depth studies on mediating variables between internet use and general well-being suggests that the pattern of use of internet (social versus non-social use) and pre-existing social world and social interactions of the person are found to be important variables associated with internet use and well-being. It can be understood from the perspectives of the poor-gets-poorer hypothesis, i.e., people who are introverts or who have poor social support are likely to show this poor ability or interest in interactions on-line also so that they are not likely to be benefitted by the use [6, 3]. This finding was associated with the introvert's non-social use of internet. Introverts were found to develop a compulsive pattern of internet use, in surfing or downloading [6 - 8]. When it comes to SNS use over general internet use, the social functions come to the forefront.[9]Use of SNS has been associated with increased social capital [10, 11], life satisfaction, social trust, civic participation and political engagement [12 – 14, 16, 17]. The use of Facebook as a means to solve relationship conflicts were found to be correlated with lower self esteem and higher levels of depression. With increased time spent on SNS people, started spending lesser and lesser time for other social activities and community [18].

It is also possible that SNS can also be conceptualized as a means of supplementing the existing social capital without increasing or decreasing it. Just as any other means of communication SNS also help in maintaining existing contact as a faster way to interact [15, 19, 20]. With the contrasting findings seen in the literature, it was assumed that the impact of SNS use on social capital might depend on various factors which may vary from individual to individual. Self-esteem had been found to be a mediating variable with people with lower self esteem gaining more from SNS use [10, 11]. High level of social activity in SNS and more self promoting content was found to predict higher levels of narcissistic traits [21]. 'Grandiose Exhibitionism' that includes self-absorption, vanity, superiority and exhibitionistic tendency was found to be positively correlated to self promoting Facebook behaviors like frequently posting status updates, photos of self, updating profile information, changing profile pictures and tagging pictures of self [22].

The concept of Internet Addiction (IAD) became popular in the field of psychology after the extensive works after 1995 [23]. Though many diagnostic dilemmas exist even now regarding this disorder. Although conceptually unclear, psychosocial correlates associated with SNS addiction have been studied. Loneliness, social activities and relationship building were found to be positively correlated with SNS addiction [24]. Those who identified themselves as SNS users and those who looked for a sense of belongingness on SNS also appeared to be at risk for developing addiction [25]. Personality correlates of extroversion were found to be positively correlated with SNS addiction where as conscientiousness was negatively correlated [26].

Positive correlation had been seen between past mental health treatments and suicidal intent with frequency of internet use [27]. As per cognitive behavioral model for Problematic Internet Use (PIU), existing underlying psychopathology was viewed as a diathesis for PIU [28]. Individuals with psychosocial problems hold negative perceptions of their social competence and substitute Computer Mediated Communication for Face-to-Face communication and thus engage in compulsive use of the same [29].There was a need to explore to the pattern of use in normal & clinical group as well as its relationship with other psychological variables. It would be helpful in evolving intervention for this group. The present work got the approval of National Institute of Mental Health & Neurosciences, Bengaluru,

Karnataka, India Institute Ethic Committee for exploring these patterns among normal and clinical group.

Methods

Objective of the present investigation was to study the intensity of Facebook use, internet addictive/problematic use and online & real life social capital in normal and clinical population. Relationship of internet problematic use with online & real life social capital, self esteem and interpersonal relationships also analyzed. Sample was taken from normal (n=63) population and clinical population (n=30) using purposive sampling method. The normal group included people who used SNS in the age range of 17 to 37.They did not have any history of Axis I mental disorders, scored below 13 on Beck Depression Inventory (BDI) [30] and below 7 on Beck Anxiety Inventory (BAI) [31]. The clinical group included people who met the ICD-10 criteria for any depressive or anxiety spectrum disorders with no history of any organic, psychotic or manic episodes. They were assessed on Basic Data Sheet, The Facebook Intensity Scale, Internet addiction Test, Internet Social Capital Scale [32]. The Rosenberg Self Esteem Scale (Rosenberg, 1965) [33] and Sentence Completion Test [34]. The Facebook intensity scale which is a measure of Facebook usage which includes two self-reported assessments of Facebook behavior, designed to measure the extent to which the participant was actively engaged in Facebook activities: the number of Facebook "friends" and the amount of time spent on Facebook on a typical day. It had a Chronbach's-α of 0.83 Internet Addiction Test that made use of a five point likert scale that measures the degree to which one's internet use affects their daily routine, social life, productivity, sleeping pattern and feelings. Internet Social Capital Scale was intended to measure two different types of social capital-bridging and bonding. The alpha for the full online bridging and bonding scale was .900, and for the offline version, .889. Participant is asked to rate in the five point likert scales his agreeableness for online friend and offline friend separately. The Rosenberg Self-esteem Scale is a ten item questionnaire that makes use of a likert scale. A week interval test-retest coefficient of .85 is [36]. Sentence Completion test explores specific clusters of attitudes or significant areas of an individual's life. It is a 60-item instrument with four subscales (Family, Sex, Interpersonal Relationships (IPR), and Self-Concepts). Reported inter-rater agreement coefficients range from .48 to .57 and 77% of the statements were rated in close agreement with clinical findings. For statistical analysis of the obtained data descriptive statistics, Student's t test and Karl Pearson's correlation are used.

Results

Table 1 shows the socio-demographic details of the sample. The mean age of the sample was found to be 23.38 ± 4.18 years for normal group is 24.27 ± 4.39 years for clinical group. The age distribution was not found to be significantly different in the normal and clinical group ($t = 0.94$, $p > 0.05$). The groups were found to differ in terms of gender distribution ($\chi2 = 4.02$, $p < 0.05$) with 44.4% of males in the normal group and 66.7% in clinical group. 82.5% of the participants from normal group are unmarried and in the clinical group 80% are unmarried. The two groups did not differ significantly in terms of marital status ($\chi2 = 0.09$, $P>0.05$). In terms of education ($\chi2=11.93$, $p < 0.01$), the normal and clinical groups differ. 83.90% of sample belongs to an urban residential area and 16.10% belongs to the rural residential area. The normal and clinical groups did not differ significantly with respect to their residential area (urban vs. rural) ($\chi2=0.26$, $P>0.05$).

Table 1. Socio-demographic details of the sample

Variable	**Mean**			**Standard Deviation**			**statistical-test**	**p-value**
	Normal	Clinical	Total	Normal	Clinical	Total	0.94*	0.35
Age	23.38	24.27	23.67	4.18	4.39	4.24		
Variable	Frequency			Percentage				
Gender	Normal	Clinical	Total	Normal	Clinical	Total		p-value
Male	28	20	48	44.40	66.70	51.60	4.02**	0.05*
Female	35	10	45	55.60	33.30	48.40		
Marital Status								
Married	11	6	17	17.50	20.00		0.09*	0.78
Unmarried	52	24	76	82.50	80.00			
Education								
High school	0	3	3	0.00	10.00	3.20	11.93*	0.01**
PUC	27	13	40	42.90	43.30	43.00		
Degree	8	8	16	12.70	26.70	17.20		
Above degree	28	6	34	44.40	20.00	36.60		
Residential Area								
Urban	53	26	78	82.50	86.70	83.90	0.26*	0.77
Rural	11	4	15	17.50	13.30	16.10		

*t-test; ** χ2-test

Table 2 showed comparison of normal and clinical group on intensity of Facebook use, social capital and internet use. A significant difference was found in real life bonding capital ($t = 4.91$, $p < 0.01$), real life bridging capital ($t = 2.75$, $p < 0.01$) and internet use ($t = 2.06$, $p < 0.05$). Real life bonding and bridging capital is found to be more in the normal group. Internet use scores were more in clinical group.

Table 2. The comparison of normal and clinical group on intensity of Facebook use, social capital and Internet use

Variable	**Groups**	**N**	**Mean**	**SD**	**t-test**	**p-value**
Intensity of SNS use	Normal	63	4.02	1.18	1.02	0.31
	Clinical	30	3.73	1.39		
Online bonding capital	Normal	63	24.05	7.38	1.27	0.21
	Clinical	30	26.20	8.10		
Real life bonding capital	Normal	63	40.67	4.29	4.91	< 0.01**
	Clinical	30	35.07	6.62		
Online bridging capital	Normal	63	33.76	8.42	0.125	0.90
	Clinical	30	34.00	8.96		
Real life bridging capital	Normal	63	39.00	4.07	2.75	0.01**
	Clinical	30	34.77	7.96		
Internet use	Normal	63	31.43	10.20	2.06	0.04*
	Clinical	30	35.93	17.18		

*P<0.05, **P<0.01; N = sample number; SD = standard deviation

Table 3 showed cross tabulation of internet addiction test scores in normal and clinical group. The two groups were found to differ in terms of extent of problematic use (χ2=8.11, $p < 0.05$). A total of 82.5% of the participants of normal group belong to 'average user' category and 17.50% belong to the 'cause frequent problems' category. In the clinical group 56.70% were average users and 40% have frequent problems due to internet use. One participant from clinical group met the criteria for 'cause significant problems' category.

Table 3. Cross tabulation of Internet use scores in normal and clinical group

	Average user (20-39)		Cause frequent problems (40-69)		Cause significant problems (70-100)		$\chi 2$	p-value
	F	%	***F***	%	***F***	%		
Normal	52	82.50	11	17.50	0	0.00	8.11	0.02*
Clinical	17	56.70	12	40.00	1	3.30		
Total	69	74.20	23	24.70	1	1.10		

*P<0.05, **P<0.01; N = sample number; SD = standard deviation

Table 4 showedt test for comparison of the internet users on intensity of Facebook use, social capital, self esteem and areas of conflict. Significant difference was found between the two groups in intensity of Facebook use (t = 2.48, p < 0.05), real life bonding capital (t = 2.08, p < 0.05), online bridging capital (t = 2.08, p < 0.05), self esteem (t = 2.88, P=0.01) and conflicts in inter-personal relationships (t=2.50, P=0.01) with problem users showing higher scores for intensity of Facebook use, online bridging capital and conflicts in inter-personal relationships and significantly lower scores for real life bonding capital and self esteem.

Table 4. The comparison of average and problem internet users on intensity of Facebook use, social capital, self esteem and areas of conflict

Variable	SNS problematic use groups	Number (N)	Mean	Standard deviation (SD)	t-test	p-value
Intensity of SNS use	Average user	69	3.72	1.11	2.48	0.02*
	Problem user	24	4.53	1.46		
Online bonding capital	Average user	69	23.86	7.22	1.89	0.06
	Problem user	24	27.25	8.39		
Real life bonding capital	Average user	69	39.57	5.04	2.08	0.04*
	Problem user	24	36.79	7.16		
Online bridging capital	Average user	69	32.76	8.07	2.08	0.04*
	Problem user	24	36.91	9.27		
Real life bridging capital	Average user	69	37.50	5.57	0.35	0.72
	Problem user	24	38.00	6.94		
	Problem user	24	19.91	4.65		
Self esteem	Average user	69	19.91	4.65	2.88	0.01**
	Problem user	24	16.62	5.25		
Conflict in family area	Average user	69	1.41	1.39	1.90	0.06
	Problem user	24	2.12	2.07		
Conflict in sexual area	Average user	69	0.91	0.99	1.35	0.17
	Problem user	24	1.25	1.18		
Conflict in IPRs	Average user	69	0.72	1.08	2.50	0.01**
	Problem user	24	1.50	1.81		
Conflict in 'self'	Average user	69	2.69	2.65	0.42	0.67
	Problem user	24	2.95	2.52		

*P<0.05, **P<0.01; N = sample number; SD = standard deviation

Table 5 showed the inter-correlation between eleven variables under study for the total sample. Significant correlation was found to be present between intensity of Facebook use and online bonding capital, intensity of Facebook use and online bridging capital (r = 0.40, p < 0.01) and intensity of Facebook use and internet addiction (r = 0.36, p < 0.01). There was significant positive correlation with online bonding capital and online bridging capital (r = 0.59, p < 0.01) and online bonding capital and internet addiction (r = 0.26, p < 0.05). Real life bonding capital was found to have significant positive correlation with real life bridging capital (r = 0.54, p < 0.01) and self esteem (r = 0.43, p <0.01) and significant negative correlation with internet addiction (r = -0.22, p < 0.05), conflict in the family area (r

= -0.22, p < 0.05) conflict in interpersonal relations (r = -0.27, p <0.05) and conflict in the area of 'self' (r = -0.32, p < 0.01). Online bridging capital was found to have significant positive correlation with internet addiction (r = 0.32, p < 0.01), sexual area (r = 0.27, p < 0.01) and inter-personal relationships (r = 0.27, p <0.01) and negative correlation with conflicts in the family area (r = -0.22, p <0.05). There was negative correlation between real life bridging social capital and conflict in the area of 'self'(r = -0.20, p <0.05). Internet addiction had negative correlation with self esteem (r = -0.33, p < 0.01) and positive correlation with conflict in family area (r = 0.30, p < 0.01) sexual area (r = 0.28, p <0.01) and inter-personal relations (r = 0.35, p < 0.01).

Table 5. Inter-correlations of Facebook use, social capital, Internet use, self esteem and areas of conflict in total sample

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
I	--										
II	0.40**	--									
III	0.03	0.06	--								
IV	0.44**	0.59**	0.00	--							
V	0.20	0.04	0.54**	-0.02	--						
VI	0.36**	0.26*	-0.22*	0.32**	0.11	--					
VII	-0.01	0.00	0.43**	-0.13	0.17	-0.33**	--				
VIII	-0.09	0.14	-0.22*	-0.22*	-0.19	0.30**	-0.29**	--			
IX	-0.02	0.12	-0.20	0.27**	-0.11	0.28**	-0.24*	-0.36**	--		
X	0.09	0.15	-0.27*	0.22*	-0.13	0.35**	-0.31**	0.30**	0.45**	--	
XI	-0.06	0.14	-0.32**	0.11	-0.20*	0.14	-0.60**	0.48**	0.44**	0.40**	--

[I – Intensity of SNS use, II – Online bonding capital, III – Real life bonding capital, IV – Online bridging capital, V – Real life bridging capital, VI – SNS problematic use, VII – Self esteem, VIII – Conflict in family area, IX– Conflict in sexual area, X – Conflict in inter-personal relations, XI – Conflict in area of 'self']
N=93, *P<0.05, **P<0.01

Significant correlation was found to be present between intensity of Facebook use and online bonding capital (r = 0.49, p < 0.01), intensity of Facebook use and online bridging capital (r = 0.32, p < 0.01) and intensity of Facebook use and internet addiction (r = 0.58, p < 0.01) (Table 6). There was significant positive correlation with online bonding capital and online bridging capital (r = 0.62, p < 0.01) and online bonding capital, internet addiction (r = 0.28, p < 0.05) and conflicts in interpersonal relationships (r = 0.31, p < 0.05). Real life bonding capital was found to have significant positive correlation with self esteem (r = 0.31, p < 0.05). There was positive correlation between real life bridging social capital and internet addiction (r = 0.26, p < 0.05). Internet addiction had negative correlation with self esteem (r = -0.33, p < 0.01) and conflict in inter-personal relations (r = 0.27, p < 0.05).

Table 6. Inter-correlations of Facebook use, social capital, internet use, self esteem and areas of conflict in the normal group

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
I	--										
II	0.49**	--									
III	-0.01	0.08	--								
IV	0.32**	0.62**	0.03	--							
V	0.23	0.05	0.17	-0.07	--						
VI	0.58**	0.28*	-0.23	0.13	0.26*	--					
VII	-0.17	0.03	0.31*	0.02	-0.12	-0.33**	--				
VIII	-0.01	0.02	0.00	0.15	0.11	0.03	-0.05	--			
IX	0.04	0.11	-0.05	0.19	0.07	0.12	0.06	0.14	--		
X	0.20	0.31*	-0.15	0.20	0.06	0.27*	-0.19	0.16	0.37**	--	
XI	-0.01	0.13	-0.17	0.19	-0.05	0.19	-0.25	0.33**	0.31*	0.44**	--

[I – Intensity of SNS use, II – Online bonding capital, III – Real life bonding capital, IV – Online bridging capital, V – Real life bridging capital, VI – SNS problematic use, VII – Self esteem, VIII – Conflict in family area, IX– Conflict in sexual area, X – Conflict in inter-personal relations, XI – Conflict in area of 'self']
N=63, *P<0.05, **P<0.01

Table 7 showed the inter-correlation between eleven variables under study in the clinical group. Significant correlation was found to be present between intensity of Facebook use and online bonding capital ($r = 0.66$, $p < 0.01$). There is significant positive correlation with online bonding capital and online bridging capital ($r = 0.55$, $p < 0.01$). Real life bonding capital was found to have significant positive correlation with real life bridging capital ($r = 0.67$, $p < 0.01$). Online bridging capitals found to have significant positive correlation with internet addiction ($r=0.60$, $P<0.01$), and conflict in sexual area ($r = 0.43$, $p < 0.05$). Internet addiction had positive correlation with conflict in family area ($r = 0.39$, $p < 0.05$) and inter-personal relations ($r=0.40$, $P<0.01$).

Table 7. Inter-correlations of Facebook use, social capital, internet use, self esteem and areas of conflict in the clinical group

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
I	--										
II	0.31	--									
III	-0.05	0.22	--								
IV	0.66**	0.55**	-0.01	--							
V	0.14	0.14	0.67**	0.04	--						
VI	0.19	0.19	-0.03	0.60**	0.18	--					
VII	0.03	0.19	0.15	-0.04	0.05	-0.16	--				
VIII	-0.11	0.19	-0.08	0.35	-0.17	0.39*	-0.11	--			
IX	0.06	0.06	-0.14	0.43*	-0.09	0.36	-0.31	0.46*	--		
X	-0.02	-0.18	-0.31	0.26	-0.23	0.40*	-0.36	0.38*	0.53**	--	
XI	-0.01	0.03	-0.04	0.06	-0.01	-0.12	-0.53**	0.33	0.42*	0.36	--

[I – Intensity of SNS use, II – Online bonding capital, III – Real life bonding capital, IV – Online bridging capital, V – Real life bridging capital, VI – SNS problematic use, VII – Self esteem, VIII – Conflict in family area, IX– Conflict in sexual area, X – Conflict in inter-personal relations, XI – Conflict in area of 'self']
N=30, *P<0.05, ** P<0.01

Discussion

The present study did not demonstrate significant difference in the intensity of social networking sites use between normal and clinical. This finding is consistent with the results of the study conducted by which reports no significant association between depressive and anxiety symptoms and time spent on Facebook [37].

Significant positive correlation was identified between intensity of use of Facebook and the following variables; online bonding capital, online bridging capital and internet use. The findings of the current study were supportive of the hypothesis of Facebook use increasing the online social capital [10 - 12]. The positive correlation between Facebook intensity and online bridging capital remains significant for both normal and clinical group. But correlation between Facebook intensity and online bonding capital was found significant only for normal group. The strongest association was found between bridging capital and intensity of use even after controlling for other variables of life satisfaction and self esteem [10, 11]. The present study documented that intensity of Facebook use had no significant correlation with real life bonding nor it had any correlation with conflicts in any real life interpersonal relationships. But use of Facebook use could be an added privilege for the individual to enhance his social capital, especially the bridging social capital, through online medium with no significant increase or decrease in offline social capital.

A significant difference was found between normal and clinical group in terms of internet use, with problematic use scores more for the clinical group. The positive correlation between internet addiction and symptoms of depression and anxiety had been identified in previous studies also. Internet addiction as positively related to depression, anxiety, and stress [38].

In the current study, internet use scores showed significant negative correlation

between real life bonding capital and self esteem and positive correlation with online bonding and conflicts in interpersonal relationships. In the t-test also average users of internet significantly differ from problem users in real life bonding capital, online bridging capital, self esteem and conflicts in inter-personal relationships, with problem users getting higher mean scores for online bridging capital and conflicts in inter-personal relationships and average users getting higher mean scores for real life bonding capital and self esteem. These findings seem to support the Cognitive Behavioral Model of problematic internet use [28] that because of poor self esteem, people who are unable to build real life social capital and who already have conflicts in multiple areas of inter-personal relations depend on Facebook to compensate for their poor real life social capital. But inter-personal conflicts and ruptures in relationships caused by internet addiction has also been well documented. Dependents are reported to have difficulties in marriage, parent-child relationships, and close friendships due to the excessive time spent on internet [35]. So compulsive use of SNS leading to conflicts in inter-personal relationships and resultant poor real life social capital can be an alternative explanation for the same. There are a few studies which reported that people with low self esteem were more benefitted by SNS use compared to others [4, 10, 11].

Conclusions

The use of SNS is found to enhance the social capital of an individual in the online medium, whereas real life social capital is found to be unaffected due to use of SNS. SNS use is an area that is usually left unexplored in the management of clinical conditions. But higher percentage of problem users of SNS identified in the clinical group and association of SNS problematic use with low self esteem and increased conflicts in inter-personal relationships necessitates exploration of SNS use patterns in routine evaluation and management of clinical conditions. The study also implies need for further research to develop explanatory models and management strategies for SNS problematic use. The study sample is more skewed towards younger age and also the study sample is not screened for personality disorders which are the major limitations of the study.

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Received: 15 July 2016 Accepted: 1 July 2017