

## Psychological Predictors of Facebook Use

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The popularity of facebook is unprecedented. However, in spite of its huge popularity and user base, a considerable portion of internet users are not facebook users. The present study therefore examined the difference between facebook users and non-users with respect to personality, attachment style, social interaction anxiety and self-esteem; to obtain a depiction of the type of people who are likely (or not likely) to use facebook. The sample consisted of 120 male and female facebook users and non-users between 18-35 years. The General Health Questionnaire (GHQ-12), the Facebook Intensity Scale (FBI), the Neo Five- Factor Inventory (NEO-FFI), the Relationship Scales Questionnaire (RSQ), the Social Interaction Anxiety Scale (SIAS) and the Rosenberg Self-Esteem Scale (RSES) were used. The results revealed that facebook users were more extravert and open, while non-users were more conscientious than users. Facebook users had high self-esteem and low social interaction anxiety than non-users. Users possessed secure attachment style, while non-users had a fearful attachment style.

**Keywords:** Facebook use, Personality, Attachment Style, Social Interaction Anxiety, Self-esteem

Facebook is an online social networking service launched in February 2004. It was founded by Mark Zuckerberg with his college roommates and fellow Harvard University students. Facebook is designed to foster social interaction in a virtual environment. It allows a user to create profile, display personal information, upload pictures, access other users' profiles, accumulate online friends, and interact with those friends through messages, or other applications (Kalpidou, Costin & Morris, 2011). Facebook is the number one social networking site as of May 2011 with 157.2 million visitors per month (Lipsman, 2011). India has the largest number of facebook users (over 60 million) in Asia and it ranks 3rd among the top 50 countries on facebook ("India Facebook Statistics", 2013). However, so far very negligible study has been done on the Indian population regarding facebook use.

According to the Internet and Mobile Association of India (IAMAI) and Indian Market Research Bureau (IMRB), out of 80 million active Internet users in Urban India, 72% (58 million individuals) have accessed some form of social networking (Press Trust of India, 2013). However, it is interesting to note that the rest 27% have chosen not to join a social networking

site (including facebook). While some of this lack of adoption may result from lack of access to Internet or lack of skills associated with using these services, differences between adopters and non-adopters may also be explained by differences in individual characteristics and motivations.

Two contradictory views co-exist with respect to how individuals' social/interpersonal characteristics relate to Internet communication, including social networking site use: complementary (RICH-GET-RICHER OR SOCIAL ENHANCEMENT HYPOTHESIS) versus compensatory (POOR-GET-RICHER OR SOCIAL COMPENSATION HYPOTHESIS). On one hand, some researchers (such as Correa, Hinsley & de Zúñiga, 2010; Lee, 2009; Wilson, Fornasier & White, 2010) predicted and found that more socially active individuals, such as extraverts, would be more inclined to utilize social networking sites as an additional means to expand their social network even further. On the other hand, others (such as Kalpidou et al., 2011; Orr et al., 2009) hypothesized that those more socially inept (such as introverts, socially anxious, shy, or individuals with low self-esteem) and thus less satisfied with their current

relationships would be more strongly motivated to compensate for the deficiency by turning to social networking site as an alternative to face-to-face interaction.

Existing literature shows “personality” to be the most studied variable with respect to facebook use. It was found to be a major predictor of facebook use (Amichai-Hamburger & Vinitzky, 2010; Ryan & Xenos, 2011; Seidman, 2013; Skues, Williams & Wise, 2012; Wilson et al., 2010). Ryan and Xenos (2011) suggested that gratifications of facebook users may differ as a function of their individual personality characteristics. As a result, they recommended comparison of personality of facebook users and non-users, to obtain a more accurate representation of the type of people that facebook appeals to (or does not appeal to).

Previous researches revealed that just like real life communication, facebook communication is also influenced by attachment style, social interaction anxiety and self-esteem. However, researches are few (especially on attachment style and facebook) and limited to facebook users only. Attachment style developed in childhood is an important factor influencing adult interpersonal relationships and social interactions. Thus, it is expected that securely and insecurely attached adults will differ in their preference for the real and the virtual world. Keeping in view the two hypotheses (Complementary versus Compensatory) and the findings of the study by Rao and Madan (2013) chances are equally likely that facebook users may be either those who are securely attached or those who are insecurely attached. They found that insecurely attached individuals enjoyed the privacy and independence of facebook, while securely attached ones enjoyed the presence of family members on facebook.

The results of studies on facebook in relation to social interaction anxiety and self-esteem were mixed. The study by Fernandez, Levinson and Rodebaugh (2012) supported the social compensation hypothesis i.e., socially anxious individuals reported higher facebook importance, while that by Sheldon (2008, 2012) were consistent with the social enhancement

hypothesis i.e., facebook users were those who actively participated in real life interactions. Most studies (Kalpidou et al., 2011; Mehdizadeh, 2010; Tazghini & Siedlecki, 2013) on facebook and self-esteem were in sync with the social compensation hypothesis i.e., people who spent more time on facebook had lower self-esteem, except for one by Skues et al. (2012) which found no significant association between the two variables.

The present research intends to explore which of the two hypotheses (Complementary versus Compensatory) will hold true for the current population of facebook users and non-users.

#### **Objectives:**

To determine the difference in personality between adult male and female facebook users and non-users.

To determine the difference in attachment style between adult male and female facebook users and non-users.

To determine the difference in social interaction anxiety between adult male and female facebook users and non-users.

To determine the difference in self-esteem between adult male and female facebook users and non-users.

#### **Method**

##### **Sample:**

The sample consisted of 60 male and 60 female (N=120) facebook users and non-users between 18-35 years. All participants were (at least) class XII qualified, Hindu, residents of Kolkata, belonged to nuclear-middle income (Rs. 25,000-40,000 per month) family, had no history of chronic physical or mental illness, were internet users (for at least 2 years) and had internet access at own residence and/or, mobile. For facebook users, only those who's period of membership in facebook was 1 year or more and intensity of use was high-average were included and for non-users, only those who were not members of any social networking site (including facebook) were included.

**Tools:**

*General Health Questionnaire (GHQ-12)* by Goldberg and Williams (1988): It is a self-administering screening test used to quantify the risk of developing psychiatric disorders. This instrument targets two areas- the inability to carry out normal functions and the appearance of distress-to assess well-being in a person. The split-half coefficient is 0.83.

*Facebook Intensity Scale (FBI)*: FBI was developed by Ellison, Steinfield and Lampe (2007). Cronbach's alpha of FBI is 0.83. FBI has eight questions designed to measure active engagement and emotional connection with Facebook. The first six items are measured by using a five-point Likert scale (1=strongly disagree and 5=strongly agree). The last two items gauge the number of friends on facebook and the time spent on facebook each day. The facebook intensity score is computed by calculating the mean of all of the items in the scale. This scale was administered to facebook users only, to screen low users.

*NEO Five- Factor Inventory (NEO-FFI)*: It was developed by Costa and McCrae (1992). It consists of 60 descriptive statements rated on a 5-point Likert scale (ranging from 0 to 4). The inventory provides a brief and comprehensive measure of the five domains of personality- Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A) and Conscientiousness (C). Internal consistency coefficients of the factors range from 0.68 to 0.86.

*Relationship Scales Questionnaire (RSQ)*: RSQ developed by Griffin and Bartholomew (1994) contains 30 short statements. On a five-point scale (1=not at all like me to 5=very much like me), participants rate the extent to which each statement best describes their characteristic style in close relationships. Five statements contribute to the secure and dismissing attachment patterns and four statements contribute to the fearful and preoccupied attachment patterns. Cronbach's alphas ranged from 0.41 for the secure scale to 0.70 for the dismissing scale.

*Social Interaction Anxiety Scale (SIAS)*: SIAS developed by Mattick and Clarke (1998) has been used to assess prevalence, severity,

and treatment outcomes of social phobia and social anxiety disorders. The SIAS is a twenty-item measure on which respondents rate their experiences in social situations associated with social anxiety and social phobia Diagnostic and Statistical Manual (DSM-IV) criteria. Experiences are rated on a 5-point scale from 0 (not at all characteristic of me) to 4 (extremely characteristic of me). The internal consistency of the scale exceeds  $\alpha=0.88$  across five patient and control groups. The score ranges from 0 to 60, with cutoffs of 34 or more indicative of social phobia (specific situations of irrational social fears with avoidance and impairment) and 43 or more indicative of social anxiety (generalized irrational fears across numerous social situations with avoidance and impairment).

*Rosenberg Self-Esteem Scale (RSES)*: Developed by Rosenberg (1965), the scale is a ten-item Likert scale with items answered on a four point scale- from "strongly agree to strongly disagree". Test-retest correlations typically range from 0.82 to 0.88, and Cronbach's alpha for various samples range from 0.77 to 0.88 (Blascovich & Tomaka, 1991). Items 2, 5, 6, 8, and 9 are reversed scored. The higher the score the higher is the level of self-esteem.

**Procedure:**

This research utilized snowball sampling technique. Initially, some potential subjects who met the inclusion criteria and were willing to give data were chosen. Subsequently, through them other potential subjects were contacted and those ready to participate were included in the sample. They again served as informants for other potential subjects and the data collection process continued this way. Data of individuals indicating low facebook usage were screened out using the facebook intensity scale (FBI). According to the purpose of the study, only those data indicating high-average facebook usage and low score on GHQ-12 were retained for further data analysis.

**Results**

From tables 1 and 2, it can be seen that facebook users were significantly higher in extraversion, openness, self-esteem and lower

**Table 1. Means and SDs of personality (5 domains); attachment style (4 domains); social interaction anxiety; and self-esteem of male and female FB users and non-users**

Variables	Facebook usage				Facebook non-usage				
	Male		Female		Male		Female		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Personality	1. Neuroticism	10.93	3.33	20.67	3.82	12.43	4.55	22.33	8.41
	2. Extraversion	36.97	4.47	27.30	3.12	32.83	5.29	24.27	3.46
	3. Openness	34.50	2.81	26.87	2.90	27.87	3.09	20.80	3.60
	4. Agreeableness	26.93	2.90	33.83	2.26	26	2.98	33.17	2.09
	5. Conscientiousness	32.83	2.15	34.77	3.30	35.33	3.13	39.77	2.88
Attachment style	1. Secure	4.1733	0.3095	4.1267	0.3503	3.82	0.5467	3.6467	0.4718
	2. Fearful	2.8167	0.6915	2.9467	0.5452	3.9	0.3322	3.9917	0.3314
	3. Preoccupied	3.5917	0.4618	4.0583	0.4628	3.5833	0.3957	3.7833	0.5862
	4. Dismissing	3.94	0.2686	3	0.7483	4.2667	0.3336	2.9933	0.4563
<b>Social interaction anxiety</b>	6.40	3.12	11.27	5.02	9.07	3.43	17.37	6.15	
<b>Self-esteem</b>	24.70	2.87	21.33	4.72	21.80	3.32	17.70	4.23	

**Table 2. Results of 2\*2 factorial analysis of variance for significance of main effect of FB usage (A) and gender (B) and their interaction (AB) effect on personality (5 domains), attachment style (4 domains), social interaction anxiety and self-esteem.**

		F-ratio		
		Source		
		A	B	AB
Personality	1.Neuroticism	2.567	98.676**	0.007
	2.Extraversion	22.129**	143.235**	0.521
	3.Openness	124.484**	166.779**	0.248
	4.Agreeableness	2.869	221.783*	0.08
	5.Conscientiousness	50.163**	36.148**	5.574*
Attachment style	1.Secure	28.153**	1.962	0.65
	2.Fearful	136.498**	1.481	0.044
	3.Preoccupied	2.596	14.372**	2.3
	4.Dismissing	3.228	154.435**	3.503
<b>Social interaction anxiety</b>		27.27**	61.513**	4.183*
<b>Self-esteem</b>		21.564**	28.166**	0.272

\*p&lt;0.05; \*\*p&lt;0.01

in conscientiousness and social interaction anxiety than non-users. Facebook users were significantly higher in secure attachment style while non-users were significantly higher in fearful attachment style. Female facebook non-users were more conscientious than their male counterparts. Males were significantly higher in extraversion, openness, self-esteem and lower in neuroticism, agreeableness, conscientiousness and social interaction anxiety than females. Females were significantly higher in preoccupied attachment style while males were significantly higher in dismissing attachment style. Female facebook non-users had higher social interaction anxiety than their male counterparts.

### Discussion

From the present study, it emerged that facebook users are more extravert and open, while non-users are more conscientious than users. This is in accord with earlier findings. Extraversion was positively related to facebook use (Seidman, 2013; Wilson et al., 2010; Wright, Jenkins-Guarnieri & Hudiburgh, 2012). Since extraverts are social, active, and excitement seeking, they perhaps use facebook to satisfy their need for a high level of stimulation and a large social network. Facebook provides them an additional means to communicate with friends and contacts made off-line and also enables them to engage in an array of activities, such as posting comments, status updates, uploading photos, chatting etc. Ross et al. (2009) found individuals high on the trait of openness willingly consider alternative methods of communication (as facebook). Open individuals perhaps use facebook to seek out novel experiences and to satisfy their need for variety and intellectual curiosity. Facebook provides them with the medium where they can elaborate and develop their fantasies by sharing novel and original ideas and the huge pool of poetry, music and art shared by its members on facebook supposedly satisfies the open individuals' deep quest for art and beauty. Wilson et al. (2010) and Ryan et al. (2011) found facebook users were low in conscientiousness. Individuals with low conscientiousness are hedonistic, lackadaisical in working toward their goals and have poor self-control. Such individuals will be more inclined to use facebook perhaps to satisfy their need for

pleasure and for procrastinating and avoiding their work. On the other hand, Individuals high in conscientiousness are dutiful and responsible in their tasks. As a result, they prefer to stick to their main goals and avoid facebook which may serve as a procrastination or distraction tool (Wehrli, 2008). Besides this, unwillingness of conscientious individuals to join facebook may be due to a host of other reasons. Facebook posts are often used to reach out to people when in trouble, low or depressed. A Conscientious individual being sensible and prudent may be genuinely concerned about the person's well-being. However, facebook is a virtual medium, where interaction is guided by "likes/dislikes", "positive/negative comments", "emoticons" etc. As a result, over the facebook, it may not be possible for the conscientious person to truly help a person in the way that he/she needs to be helped. Therefore, their decreased motivation to use facebook may be because they consider facebook will not drive enough efficiency. Moreover, as facebook is mainly for pleasure and entertainment, they perhaps consider its use as sinful owing to their puritanical attitudes and values or because they are able to structure their lives tightly and have an internal locus of control, they avert facebook successfully, irrespective of temptations or pressure from others to join.

Facebook users were securely attached, while non-users had fearful attachment style. Secure individuals are typically socially competent (Schulman, Elicker, & Sroufe, 1994), report greater companionship (Saferstein, Neimeyer, & Hagans, 2005) intimacy (Bartholomew & Horowitz, 1991) and emotional closeness (Zimmerman, 2004). Thus, facebook as a means for maintaining and extending social ties will be more appealing to them. Individuals with fearful attachment style, on the other hand refrain from relational intimacy because they worry about being hurt or rejected. They are prone to negative expectations such as they may fear of being "unfriended", or "blocked" by facebook friends, worry about having their "friend requests" rejected, expect criticism or adverse comments etc. As a result, they will feel more intimidated and less motivated to use facebook.

Facebook users had lower social interaction anxiety than non-users. This is in accord with

the findings of Sheldon (2008, 2012). People with high social interaction anxiety have fewer experiences of pleasant and satisfactory real-life encounters, high rejection sensitivity and the fear of being evaluated or criticized. Facebook, though different from real-life communication, is fundamentally a social phenomenon and thus asks for a good degree of active socialization for developing and maintaining relationships. Facebook is not an anonymous medium. It requires users to create profile and display personal information. The public nature of a person's profile means that user's social lives are particularly open to scrutiny from others (Boyd & Ellison, 2007). As facebook non-users are aware of the concept and uses of facebook, they perhaps consider online communication to be equally unpleasant and demanding. This explains their reluctance to join facebook. On the other hand, individuals not socially anxious usually have strong social network and social skills and thus will be more motivated to use facebook because according to the rich-get-richer hypothesis (Kraut et al., 2002) such individuals benefit the most from online socialization.

Facebook users had higher self-esteem than non-users. In most of the earlier studies (Kalpidou et al., 2011; Mehdizadeh, 2010) low self-esteem was related to higher facebook use. The present finding, thus contradicts the earlier findings. This may be because one of the main attractions of facebook is the ability to highlight one's successes and rewards. People with low self-esteem have poor self-image, consider their lives as boring and miserable compared to others. They magnify and focus more on their weaknesses and expect negative evaluations. Consequently, they feel limited, not having much interesting to share about themselves that can fetch appreciation. Their urge to use facebook is therefore expectedly low. People with high self-esteem, on the other hand, hold a positive self-image, perceive themselves as well liked and popular and are more open to feedback (Guidon, 2009). As a result they do not shun away from facebook, rather use it as a platform for enhancing their self-esteem.

Males were found to be extravert and open. Females were more emotionally unstable (higher

neuroticism), agreeable and conscientious than males. Males possessed dismissing attachment style, while females had preoccupied attachment style. Males had higher self-esteem and lower social interaction anxiety than females. The gender differences observed in the present study may be attributed to differential patterns of socialization and child rearing for boys and girls in our culture. Our socialization process emphasizes submissiveness, dependence, conformity and low achievement orientation for females, while it teaches male children to be aggressive, assertive, independent and achievement oriented (V. V. P. Rao, 1982; V. N. Rao, 1982). In cross-cultural research women consistently report higher neuroticism and agreeableness and men often report higher assertiveness (a facet of extraversion) and openness to ideas as assessed by the NEO-PI-R (Costa & McCrae, 2001). This supports our finding.

Girls are forced to live under several constraints and limitations of social and cultural norms. Girls never get nearly as much freedom as boys of the same age. Girls' interactions with outsiders are closely watched and restricted. This kind of gender socialization, beginning in early childhood gets reflected in their self-images as they grow up: males consider themselves as superior, while females learn to value male traits as more superior and consequently, begin to value themselves less. They lack confidence in themselves, their cognitive and social skills. Therefore, most studies found females have higher social interaction anxiety (Somers, Goldner, Waraich, & Hsu, 2006) and lower self-esteem compared to males.

Males obtain higher mean ratings of dismissing attachment, whereas females obtain higher mean ratings of preoccupied attachment (Bartholomew & Horowitz, 1991; Scharfe & Bartholomew, 1994). Girls perhaps experience more inconsistent and unpredictable treatment of caregivers than boys. As girls are taught to be submissive, they tend to assume that the discrepancies in the caregiver's responses are due to their own fault. Thus, as they grow up they anxiously seek validation from others and believe that they could attain safety, or security, only if they could get others to respond properly

towards them (Brennan, Clark, & Shaver, 1998). Male children on the other hand, are taught to view themselves as independent and self-sufficient. Thus, so as to maintain a sense of self-worth they defensively deny the value of, or need for close relationships (Klohnen & John, 1998).

### Conclusion

From the present study it may be concluded that personality, attachment style, social interaction anxiety and self-esteem are all associated with facebook use and non-use. As a result of which some people will be more inclined to use facebook while some others may not use it at all, despite of familiarity with the site and having all opportunities available for use. This study shows support for the rich-get-richer hypothesis. Facebook is therefore not a substitute channel of communication for those who are less socially active, such as those with low self-esteem, high interaction anxiety, and fearful attachment style; rather it enriches the lives of those whose lives are already socially rich such as extraverts or those with secure attachment style, high self-esteem and low interaction anxiety. The sample size of the study was not large enough (N=120). However, in partial defense it may be added that though facebook users were readily available, it was immensely difficult to find facebook non-users, who would also meet all the criteria of the study. Thus, the sample size, though attempted was not possible to expand further.

From the findings, it appears that facebook non-users will be more susceptible to feel lonely, isolated and depressed. Facebook use has been found to have significant positive effect on social and psychological well-being (Ellison et al., 2007; Valenzuela, Park, & Kee, 2009). The present findings, thus can offer serious therapeutic interventions. Therapists can recommend an optimal level of facebook usage to non-users. This will serve two purposes: (i) They will develop confidence in their social skills and realize that their apprehensions regarding facebook are unrealistic exaggerations of their mind, and (ii) They can benefit from the ready-made support network provided by the facebook pool.

Recently, there have been reports of employers screening candidates on the basis

of their facebook profiles. Thus, the present findings can have significant implications for job recruiters. Employers can decide between users and non-users according to the type of the job. Developers of facebook can incorporate suitable changes to their site based on the findings of the present study, to increase their appeal to non-members and broaden their user base. Gender differences observed in the present study is supposed to create more awareness and can bring about a positive social change.

### References

- Amichai-Hamburger, Y., & Vinitzky, G. (2010). Social network use and personality. *Computers in Human Behavior*, *26*, 1289-1295.
- Bartholomew, k., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, *61*, 226-244.
- Blascovich, J., & Tomaka, J. (1991). Measures of self-esteem. In J. P. Robinson, P. R. Shaver, L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 115-160). San Diego, CA: Academic Press.
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history and scholarship. *Journal of Computer-Mediated Communication*, *13*, 210-230.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of attachment style: An integrative interview. In J. A. Simpson & W.S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 25-45). New York, NY: Guilford Press.
- Correa, T., Hinsley, A. W., & de Zúñiga, H. G. (2010). Who interacts on the Web? The intersection of users' personality and social media use. *Computers in Human Behavior*, *26*, 247-253.
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO personality inventory (NEO-PI-R) and the NEO Five-Factor inventory (NEO-FFI): Professional manual*. Odessa, FL: Psychological Assessment Resources Inc.
- Costa, P.T. Jr., Terracciano, A., & McCrae, R.R. (2001). Gender Differences in Personality Traits across Cultures: Robust and Surprising Findings. *Journal of Personality and Social Psychology*, *81*, 322-331.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social

- capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, 12, 1143–1168.
- Fernandez, K.C., Levinson, C.A., & Rodebaugh, T.L. (2012). Profiling: Predicting Social Anxiety from Facebook Profiles. *Journal of Social Psychological and Personality Science*, 3, 706–713.
- Goldberg, D., & Williams, P. (1988). *A user's guide to the General Health Questionnaire*. Slough: NFER- Nelson.
- Griffin, D. W., & Bartholomew, K. (1994). The Metaphysics of Measurement: The Case of Adult Attachment. In K. Bartholomew & D. P. Perlman (Eds.), *Advances in Personal Relationships: Vol. 5. Attachment Processes in Adult Relationships* (pp. 17-52). London: Jessica Kingsley.
- Guindon, M.H. (2009). *Self-Esteem across the Lifespan: Issues and Interventions*. London: Routledge Chapman & Hall.
- India Facebook Statistics. (2013). Retrieved February 22, 2013 from <<http://www.socialbakers.com/facebook-statistics/india>>.
- Kalpidou, M., Costin, D., & Morris, J. (2011). The Relationship between Facebook and the Well-Being of Undergraduate College Students. *Cyberpsychology, Behavior, and Social Networking*, 14, 183-189.
- Klohnen, E., & John, O. P. (1998). Working models of attachment: A theory-based prototype approach. In J.A. Simpson & S. William (Eds.), *Attachment theory and close relationships* (pp. 143-165). New York, NY: Guilford Press.
- Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet paradox revisited. *Journal of Social Issues*, 58, 49-74.
- Lee, S. J. (2009). Online Communication and Adolescent Social Ties: Who benefits more from Internet use? *Journal of computer Mediated Communication*, 14, 509-531.
- Lipsman. (2011). The network effect: Facebook, LinkedIn, Twitter, and Tumblr reach new heights in May. Retrieved from <[http://blog.comscore.com/2011/06/facebook\\_linkedin\\_twitter\\_tumblr.html](http://blog.comscore.com/2011/06/facebook_linkedin_twitter_tumblr.html)>.
- Mattick, R. P., & Clarke, J. C. (1998). Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. *Behaviour Research and Therapy*, 36, 455–470.
- Mehdizadeh, S. (2010). Self-Presentation 2.0: Narcissism and Self-Esteem on facebook. *Cyber Psychology, Behavior, and Social Networking*, 13, 357–364.
- Orr, E. S., Sisic, M., Ross, C., Simmering, M. G., Arseneault, J. M., & Orr, R. R. (2009). The influence of shyness on the use of Facebook in an undergraduate sample. *Cyber Psychology & Behavior*, 12, 337-340.
- Press Trust of India. (2013, March 12). Social media users in urban India to reach 66 mn by June 2013. *The Indian Express*. Retrieved from <<http://www.indianexpress.com/news/social-media-users-in-urban-india-to-reach-66-mn-by-june-2013/1086999/>>.
- Rao, G., & Madan, A. (2013). A Study Exploring the Link between Attachment Styles and Social Networking Habits of Adolescents in Urban Bangalore. *International Journal of Scientific and Research Publications*, 3(1), 1-12.
- Rao, V. V. P., & Rao, V. N. (1988). Sex role attitudes of college students in India. In R. Ghadially (Ed.), *Women in Indian Society: A Reader* (pp. 109-124). New Delhi: Sage Publications.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Ross, C., Orr, E. S., Sisic, M., Arseneault, J. M., Simmering, M. G., & Orr, R. R. (2009). Personality and motivations associated with Facebook use. *Computers in Human Behavior*, 25, 578–586.
- Ryan, T., & Xenos, S. (2011). Who uses Facebook? An investigation into the relationship between the Big Five, shyness, narcissism, loneliness, and Facebook usage. *Computers in Human Behavior*, 27, 1658-1664.
- Saferstein, J. A., Neimeyer, G. J., & Hagans, C. L. (2005). Attachment as a predictor of friendship qualities in college youth. *Social Behaviour and Personality*, 33, 767–776.
- Scharfe, E., & Bartholomew, K. (1994). Reliability and stability of adult attachment patterns. *Personal Relationships*, 1, 23-43.
- Schulman, S., Elicker, J., & Sroufe, L. A. (1994). Stages of friendship growth in preadolescence as related to attachment history. *Journal of Social and Personal Relationships*, 11, 341–361.
- Seidman, G. (2013). Self-presentation and belonging on Facebook: How personality influences social media use and motivations. *Personality and Individual Differences*, 54, 402-407.
- Sheldon, P. (2008). The relationship between

- unwillingness-to-communicate and students' Facebook use. *Journal of Media Psychology*, 20, 67-75.
- Sheldon, P. (2012). Profiling the non-users: Examination of life-position indicators, sensation seeking, shyness, and loneliness among users and non-users of social network sites. *Computers in Human Behavior*, 28, 1960–1965.
- Skues, J.L., Williams, B., & Wise, L. (2012). The Effect of Personality traits, Self-esteem, Loneliness, and Narcissism on Facebook Use among University Students. *Computers in Human Behavior*, 28, 2414-2419.
- Somers, J. M., Goldner, E.M., & Waraich, P. Hsu. L. (2006). Prevalence and Incidence Studies of Anxiety Disorders: A Systematic Review of the Literature. *Can J Psychiatry*, 51, 100–113.
- Tazghini, S., & Siedlecki, K.L. (2013). A mixed method approach to examining Facebook use and its relationship to self-esteem. *Computers in Human Behavior*, 29, 827-832.
- Valenzuela, S., Park, N., & Kee, K. F. (2009). Is there social capital in a social network site?: Facebook use and college students' life satisfaction, trust, and participation. *Journal of Computer-Mediated Communication*, 14, 875-901.
- Wehrli, S. (2008). Personality on social network sites: An application of the five factor model. Eth zurich sociology working papers, ETH Zurich. Predictors, 0.37- 33.54.
- 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.
- Wright, S.L., Jenkins-Guarnieri, M.A., & Hudiburgh, L.M. (2012). The relationships among attachment style, personality traits, interpersonal competency, and Facebook use. *Journal of Applied Developmental Psychology*, 33, 294-301.
- Zimmerman, P. (2004). Attachment representations and characteristics of friendship relations during adolescence. *Journal of Experimental Child Psychology*, 88, 83–101.

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