

Usage of Social Media, Age, Introversion and Narcissism: A Correlational Study

***Asbah Zia and Anila Amber Malik, PhD**

Department of psychology, University of Karachi, Karachi

The present research focused on the relationship between usage of social media and its association with age and psychological issues (limited to introversion & narcissism). Participants who are social media users ($N=120$) were selected through purposive convenient sampling method. Self-report measurement of Introversion (McCroskey, 1984), Narcissistic Personality Inventory-16 (Ames, Daniel, Rose, Paul, & Anderson, 2006) and demographic were used for data collection. The results showed a significant negative relationship between age and social media usage and moderate positive relationship between introversion and narcissism with usage of social media. Moreover introversion and narcissism were found to be significant predictors for the usage of social media. Present study has important implications for eradicating excessive use of social media.

Keywords: Social media, Social Networking Sites (SNS), introversion, narcissism, age

Social media or social networking has been described as “*a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content*”(Kaplan & Haenlein, 2010, p.61). The word social media is not unknown to anyone these days; everyone is involved on Social Networking Sites for different purposes. There are 2.5 billion world-wide users

* Correspondence concerning this article should be addressed to Asbah Zia, Department of Psychology, University of Karachi, Karachi, Pakistan. Email: asbahzia@gmail.com

of different social media sites (Ellison, Steinfield & Lampe, 2007; Ryan & Xenos, 2011), who are very much attracted towards people from all around the world through powerful communication (Sharif, Mahmazi, Navimipour, & Aghdam, 2013) and there are many motives behind using these sites especially *Facebook* e.g., playing games, getting entertained, passing time, connecting with people, joining different pages for getting information etc. Nowadays *Facebook* can be considered as a world-wide popular SNS which is appealing billions of social media users with time. According to a research every seventh person on earth is active on *Facebook* (Smith, Sgall & Cowly, 2012). Another study says that users of *Facebook* mostly remain active and in interaction with each other. 63% *Facebook* users come online at least once a day and 40% come online many times in a day (Smith, 2011). Almost 92% of American adults own a cell phone and 67% of those own a smartphone. Ninety percent owners of cell phones especially smartphone owners never turn off their phone and always carry cell phones with them. In 2005, 7% of American adults were using social networking site as compared to 2015 when 65% of American adults were using such sites (Perrin, 2015). Availability of technology within home plays a vital role to keep family members closer with each other. Phone, computer networks and electronic mailing provide opportunities for paid working while staying at home. At one end the internet can gather family members in shared activities within their houses and on the other hand it can quickly transfer them to another solitary world where technology requires individual attention (Daly, 1996).

It is very common to see everywhere that teenage and young adults are more involved in using social media as compared to older people. According to Pew Research Center young adults were the earliest users of social media sites and are becoming more addicted to these sites as compared to seniors who are becoming users of social media in the recent years (Perrin, 2018). In a survey conducted in March 2018 it was revealed that 51% users of social media are from the age group of 18 to 24 and they think that it is nearly impossible to give up social media whereas only one third of adults above the age of 50 feel the same. Almost, 78% of young adults use *Snapchat* and 71 % visit it multiple times a day, in

America 71% of users aged between 18-24 use *Instagram* and 45% use *Twitter*. Nearly three quarters of adults in the US use *YouTube* whereas 94% of young adults, aged between 18 to 24 years use it regularly (Smith & Anderson, 2018). Similarly according to previous study of Perrin (2015) revealed in his study that with time the usage of social media is increasing in the adult population but young adults have always been more addicted to use these sites as in 2015, 90% of young adults aged between 18 to 29 used Social Networking Sites more as compared to 77% of adults aged between 30-49 years who used these sites (Duggan et al., 2015). Additionally, there are 22% adolescents who visit their most-liked Social Networking Sites more than 10 times a day, and more than half of them visit these sites multiple times a day. These sites are used for various purposes such as chatting, group chatting and through this many people can communicate with each other on one platform (James, 2009). With increasing requirements of advanced education, students cannot complete their studies without internet as they have to prepare assignments and presentations with the help of the internet. This platform helps them to exchange notes and different documents in one click and remaining logged in on their devices helps them to enter this virtual world easily which is obviously more attractive than education at the age of adolescence or young adulthood. A study confirms that checking Facebook has become a regular behavior for most of the students since they usually remain online on internet because of developed need of social media usage for their studies (Shilden, 2008).

As with any other thing, excessive usage of Social Networking Sites can also be detrimental. The dependency on these apps can induce many disastrous effects on physical as well as psychological health of people (Porter, Mitchell, Grace, Shinosky, & Gordon, 2012). According to an anti-*Facebook* blog more than 350 million people using Facebook were diagnosed with Facebook Addiction Disorder (FAD). This terminology is used by American psychologists and is getting attention since people started using Social Networking Sites excessively while having many different addictive symptoms such as mental preoccupation, neglecting personal life, modifying mood experiences, escapism,

tolerance, and showing many other addictive behaviors continuously (Kushner & Griffith, 2011).

Social Networking Sites provide a platform for people to develop understanding, love, and acceptance thus providing introverts with an opportunity to form relations with others behind screens. Introverts are much more reserved and reflective as compared to extraverts who are more outgoing and social, having many friends in real life. Introverts usually are deep thinkers and stay away from large social situations and social media allows introverted people to make positive relations by allowing them to participate in social activities which are missing in their real lives (Liu & Larose, 2009). Through these online activities and participation introverts gratify their desires of socializing, communicating and manage reciprocal social relationships. This process is known as *social compensation hypothesis*, and it reveals that introverts and socially anxious individuals who have difficulty in developing friendships, are more likely to use the internet because they substitute online contacts for an undesirable offline social network (Zywica & Danowski, 2008). Some other studies also reveal that people with the characteristics of introversion use social networking sites as an alternative or replacement for face-to-face interaction in interpersonal relationships (McKenna & Bargh, 2000). This means that people who are communication-avoidant or people who face difficulties in face-to-face communication prefer online communication and convey their messages better as compared to face-to-face interaction (Tosun & Lajunen, 2010).

An online survey consisting of 184 internet users revealed that individuals who spend more time on social networking sites are less involved in their real life communities (Nyland, Marvez & Beck, 2007). According to a study by Liu and Larose (2009) introverted people find social activities relatively easier and use them as a medium for expressing themselves and develop positive relationships. Facebook provides an alternate way of face-to-face interactions to the introverts, which is a promising and painless platform where they compensate the lack of offline connection or interaction in real lives and through these online activities an individual with introversion traits can develop extraverted

characteristics online. Introverted people don't often engage in self disclosure, they keep their things private and sometimes don't want to show their real self to the world thus the internet provides them with an opportunity to construct and reconstruct identities of themselves in countless ways which is not possible for them in their actual or real world. Similarly a research indicates that the online world is a place where people can limit and control the social interaction and number of friends and this quality of the online world attracts introverts. Platforms like Facebook provide a comfort zone and opportunities for introverted people to shortlist their friends and maintain contact with desirable people in a way that they find apt (Baxter, 2009).

Usually users of social media are motivated by two factors: need for belongingness and need for self-presentation. The first need for belongingness focuses on cultural and demographic factors while other need for presenting oneself is influenced by different traits of personality such as self-esteem, self-worth, shyness, neuroticism and narcissism (Nadkarni & Hofmann, 2012). Narcissism here is referred as subclinical narcissism which can be described as a personality trait and which prevails with different degrees in society (Rhod walt & M rf, 1995; Watson, Grisham, Trotter, & Biderman, 1984). Subclinical narcissism has a lesser intensity as compared to clinical narcissism in its attitudes, beliefs, and behaviors. Narcissists demand special treatment from others because they believe they are unique, special and superior as compared to others. They have an elevated self-concept and self-esteem (American Psychiatric Association, 2013). Various studies show that narcissism and SNS are associated with each other (Jayson, 2009; O'Dell, 2010). People having characteristics of narcissism are fame seeking, they tend to boast about themselves and are more likely to enjoy seeing themselves on social media, they cannot resist from sharing their personal and general experiences on these sites as they believe that this is a way of getting attention from others (Carp nt r, 2012). Having greater number of friends is always appealing to narcissists as they measure their popularity by these numbers. Some researchers have also indicated a strong relationship between greater numbers of

friends on social networking sites with narcissism (Buffardi & Campbell, 2008; Carpenter, 2012; Ong et al., 2011). A research suggested that narcissists prefer social media especially Facebook to a degree that they are obsessed with it, as they have much control over showing themselves in a desirable way on these platforms. It was studied that users of Facebook display higher levels of narcissism as compared to non-users of Facebook (Skues, Williams, & Wise, 2012). Other studies affirmed the findings that people with high levels of narcissism and lower levels of self-esteem spend most of their time on social media and usually post self-promotional content (All way, Runac, Qur hi & K mp, 2014; Mehdizadeh, 2010).

Narcissists always strive to seek praise and affirmation from others and they cannot reciprocate that as their personality lacks empathetic understanding. They cannot build long-term and deep relationships as they usually use and exploit others (American Psychiatric Association, 2013; Mill n & Davis, 1996). For protecting their fragile and inflated egos these individual become active social media users and mostly get involved in different activities showing exhibitionism, attention-seeking and self-promoting behaviors. For prior mentioned reasons of gaining attention both *Facebook* and *Twitter* serve as convenient and desirable platforms (Buss & Chiodo, 1991). Another study explained that through these social networking sites narcissists avail an opportunity to remain focused only on their profile's content; they update statuses, write comments or post pictures that represent themselves only and not others thus sustaining their self-loving and self-interested characteristics (Aboujaoude, 2012).

As it has been discussed already that there is an association between usage of social media with introversion and narcissism now the question arises if narcissism and introversion are the true predictors of social media usage? Many researchers report that people having few offline contacts compensate for their introversion, low self-esteem, and low life-satisfaction through using social networking sites i.e. *Facebook* for being popular online, thus confirming the principle of *the poor get richer* (the social compensation hypothesis; Barker, 2009; Ellison, Steinfield

& Lampe, 2007; Mehdizadeh, 2010). There are some other researchers who have concluded that individuals with characteristics of narcissism are more active in communities via social media and also post self-promoting content on social media. Studies also suggest that differences in individual characteristics like narcissism predict different online activities on social media (Andreassen, Pallesen & Griffiths, 2017; Malik & Khan, 2015).

Above mentioned literature clearly highlights how the increasing usage of social networking sites has transformed the users. It has influenced their way of thinking, interacting, sharing opinions, making friends and most importantly their habits and characteristics. Usage of social networking sites can be described here as how much time an individual spends on these networking sites daily. Nowadays we see that everyone is involved in using social media irrespective of their age, children and other demographic factors. Adolescents, adults and old aged people are all attracted towards this virtual world. Hence, the present study is an attempt to find out that at what age people get more involved on social networking sites. Many studies provide evidence about the relationship of social media usage with introversion and narcissism in different countries but there is not much research available on this topic in Pakistan. The present study investigates these relationships in Pakistan on different age groups. It is an attempt to fill the gap of researches on Pakistani community on the relationship of social media usage with age and psychological issues (limited to Introversion & Narcissism). Based on the above literature review following hypotheses were formulated:

There will be a negative relationship between social media usage and age.

There will be a positive relationship between social media usage and Introversion

There will be a positive relationship between social media usage and Narcissism.

Introversion and narcissism will predict social media usage.

Method

Research Design

The present study uses the quantitative correlation survey research design. Participants were asked to fill two survey questionnaires including the Self-report Measure of Introversion (McCroskey, 1984) and the Narcissistic Personality Inventory-16 (Ames et al., 2006) with the demographic information sheet.

Participants

To explore the relationship between social media usage with age and increasing rate of introversion and narcissism in the Pakistani community a total of 120 (Male $n=60$ & Female $n=60$) participants were included who were users of social media or social networking sites. The age range of the participants was between 19 to 57 years and they were approached through purposive sampling technique.

Table 1

Frequency and percentage of demographic variables of participants (N=120)

| Demographic Variables | <i>f (%)</i> | <i>M</i> | <i>(SD)</i> |
|----------------------------------|--------------|----------|-------------|
| Social Media Usage in Hours/ Day | | 02.69 | (1.59) |
| Age | | 32.78 | (8.27) |
| Gender | | | |
| Male | 60 (50.0) | | |
| Female | 60 (50.0) | | |
| Education | | | |
| Intermediate | 06 (05.0) | | |
| Graduation | 52 (43.0) | | |
| Masters | 52 (43.0) | | |
| M.Phil | 09 (07.4) | | |
| PhD | 01 (00.8) | | |
| Introversion | | | |
| Low level | 56 (46.60) | | |
| Moderate level | 54 (45.00) | | |
| High level | 10 (08.30) | | |
| Narcissism | | | |
| Low level | 80 (66.60) | | |
| Moderate level | 23 (19.16) | | |
| High level | 17 (14.16) | | |

Table 1 shows frequencies, percentages, mean and standard deviation of the participants of the study.

Measures

Demographic information sheet. The form consisted of questions related to age, gender, academic level and hours spent on social media per day by participants.

Self-report measurement of introversion. The scale is utilized for measurement of Introversion and Communication Apprehension. The scale has 18 items and participants respond to each item on a 5-point Likert type scale. The test has a correlation of 0.30 with Report of Communication Apprehension (PRCA-24) and an alpha above 0.80. Participants who score above 48 are considered as highly introverted, and those scoring below 24 are considered less introverted or extroverted (McCroskey, 1984).

Narcissistic Personality Inventory (NPI-16). This inventory is the brief version of Raskin and Terry's (1988) 40-item measure. It comprises of 16 paired items, where respondents need to choose one in each pair; items are scored 1 or 0 according to the responses on narcissistic traits. NPI-16 is considered to be a significant short scale of narcissism and has good predictive validity.

Procedure

The first step for the research consisted of obtaining an official approval from the authors of the scales. Post obtaining the permission a Google form was developed for data collection. It comprised of the demographic information sheet, self-report measurement of introversion and narcissistic personality inventory-16. The form was shared with various people through Gmail, WhatsApp and Facebook and it also included the researcher's contact information to address participant concerns and queries. Consent was obtained from all participants and they were informed about the nature of the study and about their rights of withdrawing

from the study at any time. Participants were also assured that their data would remain confidential and anonymous. Post collection of data the results were analyzed through the Statistical Package for Social Sciences.

Results

Statistical Package for Social Sciences (SPSS) version 22 was used to analyze the data. Cronbach's alpha was used to analyze the internal reliabilities of the scales used in the study, Pearson Product-Moment Correlation and Linear Regression Analysis were used to test the hypotheses of the study. The results of the analysis are mentioned in the following tables.

Table 2

Mean, Standard Deviation, Internal Reliabilities of Scales of the Current Study (N=120)

| Scales | No. of items | α | <i>M</i> | <i>SD</i> |
|---------------------------------------------|--------------|----------|----------|-----------|
| Self-report measurement of introversion | 18 | 0.66 | 25.70 | 11.328 |
| Narcissistic Personality Inventory (NPI-16) | 16 | 0.73 | 5.41 | 3.441 |
| Hours of social media usage | | | 1.61 | .71 |

Table 2 illustrates that internal consistency of Self Report Measurement of Introversion is 0.66 whereas the internal consistency of NPI-16 is 0.73.

Table 3

Pearson Product-Moment Correlations of Usage of Social Media with Age, Introversion and Narcissism (N=120).

| | Age | Introversion | Narcissism |
|-----------------------|---------|--------------|------------|
| Usage of Social Media | -0.43** | 0.51** | 0.64** |

Note. ** $p < 0.01$

Table 3 illustrates the correlation coefficient of age, introversion and narcissism with social media usage. Results indicate that age has a significantly negative correlation with social media usage whereas, Introversion and Narcissism have a significantly positive correlation with usage of social media.

Table 4

Linear Regression Analysis Showing the Predicting Role of Introversion and Narcissism in Developing Usage of Social Media (N=120)

| Predictors | B | β | t | F | R ² | R ² Change | p | 95% CI | |
|--------------|------|---------|-------|--------|----------------|-----------------------|-----|--------|------|
| | | | | | | | | LL | UL |
| Introversion | .07 | .514 | 6.509 | 42.364 | .264 | .258 | .01 | .049 | .093 |
| Narcissism | .296 | .641 | 9.064 | 82.150 | .410 | .40 | .01 | .232 | .361 |

Table 4 illustrates that both introversion and narcissism are significantly predicting usage of social media.

Discussion

Before evaluating the results the Cronbach alpha reliability of the measures was checked as it is one of the most useful and flexible tool that can be used to investigate the internal consistency of the tests (Field, 2013). The findings entail that both, the self-report measurement of introversion ($r = 0.66$) and narcissistic personality inventory ($r = 0.66$) are internally consistent (see table 2).

The first hypothesis of the study assumes that there is an inverse relationship between age and usage of social media. The results shows a significant negative moderate relationship between age and usage of social media. Result demonstrated that usage of social media decreases with age whereas individuals between 18 to 25 years use social media more frequently as compared to adults and older individuals. An in-depth analysis of results show that individuals between 26-38 years use social media sites between 2-5 hours daily. The findings of the present study are also supported by a recent study which concludes that a large population of internet users are young adults (77%) between the ages of 18-29 (Perrin & Anderson, 2019). Another study concluded that young age users of internet, who have a desire for fame without having any appealing skill and talent, use these sites more because of their wish to become famous (Maltby, 2010). Another reason for using these sites frequently may be a compensation for the lack of social support, as in a study, young age internet users explained conflicting relationship with their parents and because of not

having support at home. They got more involved in the online world to get the social support that they lack in their personal lives (Mesch & Talmud, 2007).

The second hypothesis assumed that there is a positive relationship between introversion and usage of social media. The result show a moderately significant positive relationship between introversion and usage of social media (see table 3). These finding indicate that people who are lonely in their lives and introverted in nature, tend to use social networking sites more. According to other researches introverted individuals give preferences to computer-mediated communication and extroverted individuals prefer face to face communication (Amiel & Sargent, 2004; Anolli, Villani & Ravi, 2005; Bargh, McKenna & Fitzsimmons, 2002) Introverted individuals feel uncomfortable in social gatherings and have few friends in real lives and therefore the virtual world of internet provide them with a better opportunity to engage in these activities. According to a study extroverted individuals get help from social media for expanding their existing social circles and introverted individuals get help from social media to create and develop circles which they cannot build in real life (Orchard & Fullwood, 2010). Social Networking Sites provides introverts with a platform to present their ideas and believes in a non-threatening way, as they feel uncomfortable in expressing themselves in the company of others. According to Barclay (2010) *Facebook* is described as the “*ultimate communication platform for people who are more introverted because they can be connected with their own world online and be by themselves at the same time.*”(p. 195).

The third hypothesis of the study assumed that a positive relationship exists between narcissism and usage of social media. The findings indicates that a moderately significant positive correlation exists between the variables. The results show that sub-clinical narcissism is present among heavy users of social networking sites and this finding is also supported by previous studies showing a positive relationship between narcissistic traits and social media usage (Wang, Jackson, Zhang, & Su, 2012). Another study shows that narcissism is positively related with updating posts regarding and individual’s diet, exercise and

accomplishments (Marshall, Lefringhausen, & Ferenczi, 2015). social networking sites are much appealing to narcissists as they easily show their authoritative nature by updating statuses, posting selfies and becoming the admin of different groups and pages. A study elaborates that narcissists desire activities where they can show themselves to others and achieve admiration and attention to satisfy themselves as they have traits of arrogance, manipulative behavior, self-centered grandiosity and other similar features. Social networking sites provide them with an opportunity to get admiration and attention from people through likes and comments (Alarcón & Sarabia, 2012).

Further analysis was performed to find out the predicting role of introversion and narcissism in developing usage of social media. For this purpose linear regression analyses were applied and results conclude 26.4% variance from introversion and 41.0% variance from narcissism in social media usage was observed (see table 4). It can be concluded individuals who have some characteristics of introversion and narcissism will have increased usage of social media. Prior literature supports the current findings of the study. As one study entailed introversion as a significant predictor of heavy internet usage (Kalmus, Realo & Siibak, 2011, Landers & Lounsbury, 2006). Another study showed that adolescents with the characteristics of introversion, less agreeableness and conscientiousness are addicted users of social networking sites such as *Facebook* and *Twitter* (Krcaburun, 2016; Marino et al., 2016). The results show that narcissism is stronger predictor of social media usage as compared to introversion, it shows 41.0% variance. The findings are in line with previous study which found a significant predicting role of narcissistic traits in developing usage of social media (Rosen, Whaling, Rab, Carrier, & Cheever, 2013). Narcissists usually prefer taking rather than giving and mostly, they engage in activities where they can boost their self-esteem through acknowledgement by the public and through association with people who are well known and generally admired (Twenge, Konrath, Foster, Campbell, & Bushman, 2008; Wallace & Baumeister, 2002) and social networking sites are the best place to satisfy their needs.

Conclusion

This present study aimed to investigate the relationship between usage of social media with age, introversion and narcissism. Results indicate that trends of using social media are much common in young adults or adolescents as compared to individuals above the age of 40. Using social media without any limitation is affecting their physical and psychological health negatively. Lastly, personality traits of introversion and narcissism play a vital role in the excessive usage of social media.

Implications

The findings of the current study can be used in developing customized intervention plans to reduce social media addiction. Parents and educationists should take initiatives to give awareness to their children and students about the pros and cons of using social media. Seminars and workshops should be arranged to give awareness regarding the development of psychological problems through social media to reduce the excessive addiction.

Limitations and Future Suggestions

The current study comprised of a small sample size and the participants were from varying age groups. The ratio of all the age groups was not equal. This study is also limited in investigating other psychological issues that develop through usage of social media. It is recommended for future researchers to take a larger sample with equal ratio of all age groups to enhance the generalizability of findings. A comparison between gender and other demographics should also be taken into account for future studies. Other psychological issues increasing by the excessive usage of social media should also be taken into consideration in future studies.

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