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Relationship between the Big Five Personality Traits and Time Spent Using Social Media among University Students in Pakistan

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Abstract

This study investigates the relationship between Big Five personality traits and the time spent on social media. A survey was conducted among 910 university students living in the primary urban centers of Pakistan. Results show that neuroticism, extraversion, and conscientiousness have a strong positive relationship with social media use, whereas openness to experience and agreeableness depicted no significant relationship with the use of social media. Further, there was no significant difference between the social media consumption by male and female students.

Keywords: social media use; big five personality traits; extraversion; openness to experience; neuroticism; conscientiousness; agreeableness

Introduction

The social media is now a part of the modern world. They have impacted on interpersonal dynamics, daily routines and even the way we communicate. Social media is based on decentralization, transparency and personalization. Also, they encourage collaboration and the sharing of information and knowledge (Makkonen et al., 2019). Social media platforms are interactive web-based forums and applications that facilitate the creation of user generated content, as well as its discussion, modification, and sharing. All of them fall under the Web 2.0 ideology and technology framework. These platforms are a shared information ecosystem where people can interact, communicate and cooperate. It is easy to update your social media profile with updates about your life. It is often the most popular online platform (Gil de Zunga et al., 2017). Uploading a picture or tweeting updates to hundreds and thousands of followers is a great alternative to personal conversations.

This study investigates how personality traits are related to social media usage among university students in Pakistan. This study is crucial because personality traits tend to remain relatively constant from middle childhood to middle age (Hampson & Goldberg, 2006), while social media usage, although regulated, has grown to be an essential part of modern communication (Ozimek & Forster, 2021). These platforms allow users to share more than just personal stories. Users can now share news articles and receive updates straight from the news source. They can also gain education on different topics. A lack of research has

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been seen on the relationship between personality and social media due to their newness. Prior studies focused on the effects of social media use on body image and satisfaction with life. This study fills in this gap by examining the relationship between personality traits and social media usage habits among university students. Researchers have mainly explored in the past how social media influences an individual's perception of themselves, and whether it can even encourage a preference for being alone (Hill & Zheng, 2018). In previous studies, researchers have explored the negative impact of social media on self-esteem. (McLean, 2015; Midgley, 2020). Social media platforms can also encourage social comparisons, which can negatively affect satisfaction with one's body and increase the fear of judgment (Zeeni et al., 2018). The relationship between personality and social media use has not been studied. This study aims to fill this gap by using descriptive research and replicating past studies in order to examine the relationship between social media use and the Big Five Personality Characteristics. This study is intended to give valuable insights into this field, due to the lack of research conducted on these variables.

Five Big Personality Traits on Social Media

D.W. Fiske conceived of the Big Five Personality Characteristics in 1949. Numerous researchers have since expanded on the Big Five personality characteristics. This is the most reliable way to assess personality. Researchers can quantify personalities by using traits classified as the Big Five: agreeableness, neuroticism, extraversion and conscientiousness. This framework can be used to predict academic success, professional performance and other outcomes. In a study which examined the relationship between students' personality traits and their motivation to learn at college, openness, conscientiousness, and sociability were key factors (Komarraju et al., 2009). The Big Five personality test is a reliable and valid tool in psychological research.

Openness to Experience

The willingness of an individual to be open and innovative is reflected in their level of openness (Lim, 2000; McCrae & Costa, 1999). Openness is the trait of a person who is willing to embrace new experiences and adapt to different situations. Researchers found in a study of 503 college students that those who were more open to social media used it more than those who had lower levels. (Ozguven & Mucan, 2013). Recent research has revealed that those who are most active on social networks tend to prioritise solitary pursuits above social interactions. It indicates that social media users prefer solitude. If they prefer solitary pursuits, it could indicate that they are less open to new experiences. According to previous studies, people who are open to experiencing new things use social media more frequently (Correa et al., 2010; Duniga et al., 2017; Özgüven & Mucan, 2013). Those Open-minded people are more likely than others to use social media for learning about other people, to coordinate offline activities and to report on their wall (Ross et al., 2018). The traits of curiosity, unconventionality, and willingness to immerse oneself in new situations can explain openness to experiences and social media usage. Openness is often associated with these traits. The hypothesis is that,

H1: Openness to experience is positively associated with social media usage.

Conscientiousness

Conscientiousness refers to an individual's ability to self-regulate, control, and regulate their behavior in order to achieve their goals (Lim, 2000; McCrae & Costa, 1999). Individuals with high conscientiousness are well-organized and have a purpose in their actions. Previous studies have shown that conscientiousness is a predictor of social media usage (Ozguven & Mucan, 2013; Peterka-Bonetta et al., 2021).

Researchers have also found that those who are more conscientious tend to be more willing to make new friends and expand their social network (Lee et al., 2010). This study found that people who are meticulous have better relationships with other people, particularly in professional settings.

The findings also show that those with higher levels conscientiousness regret less than others the fact they posted self-referential material on Facebook (Kircaburun et al., 2019). This shows a correlation between online behavior and conscientiousness. It reflects the meticulous nature of conscientious individuals, which is evidently reflected in their online presence. Conscientiousness has been the subject of conflicting research in the past. Some studies have found a positive correlation between social media usage and conscientiousness. (De Zuniga, et al., 2011, Ozguven, &Mucan, 2013). This indicates that people who are conscientious use social media to network and for work-related purposes (De Zuniga, et al., 2011, Ozguven & Mucan, 2013). Some studies have shown that people who are conscientious may avoid social media, as it can cause procrastination and distract them from important tasks. (Quintelier &Theocharis, 2013; Ryan & Xenos ,2011). People with high conscientiousness also tend to be more cautious and avoid posting comments or photos on social media.

Using the Big Five Model, (Costa & McCrae, 1992), individuals can use social media to improve their career prospects. It could be achieved through planning and networking. Social media can be used to entertain and relax those with a lack of self-discipline and goal orientation. It is hypothesized that,

H2: The use of social media is positively related to conscientiousness.

Extraversion

Extraversion is the tendency for an individual to seek out social interaction (Lim, 2020; McCrae & Costa, 1999). Extraverts are outgoing and enjoy being in the spotlight. Numerous studies have found a positive correlation between social media use and extraversion (Bowden-Green, 2020; Correa et al., 2010).

Hawi and Samaha (2018) specifically examined the relationship between internet addiction and extraversion. The researchers found that those with low extraversion levels were more likely than others to be addicted to and overuse the internet. In a second study Steers et al., (2016) examined the relationship between extraversion and the need for approval. Researchers found that participants with higher levels of extraversion and a need for approval also reported higher anxiety. Researchers have found that introverts who are high functioning prefer to spend time alone, without electronic devices (Thomas et. al., 2020). The

researchers also found that introverts who had high levels of functioning spend less time on social media than their counterparts. This indicates that psychological development can better predict social media usage patterns. Two models, one opposing and the other distinct, have been proposed to understand the relationship between social media usage and extraversion (Kraut et al., 2002). The "social compensation" model suggests that introverts prefer online communication over face-to-face interactions (Hamburger et al., 2000; Amichai Hamburger, 2002; Goby, 2006). Second, the "rich get richer model" suggests that extraverts are more likely to use social media because they can expand their offline social network (Correa et al., 2010; De Zuniga et al., 2017; Ross et al., 2009; Ryan & Xenos, 2011). Recent studies tend towards supporting the latter model. There is a positive correlation found between the use of social media and extraversion. Recent changes to social media seem to have shifted the balance in favor of introverts. (Correa et al., 2010; Tan & Yang, 2014; Ross & Kazemi, 2021). As Costa & McCrae's Big Five model (1992) outlines, social media platforms increasingly incorporate activities that are suited to extroverted individuals. This is especially true for those who seek excitement and positive feelings. It is hypothesized that,

H3: The use of social media is positively related to extraversion.

Agreeableness

The degree of agreeableness reflects the way people behave in relationships (Lim 2019, McCrae & Costa, 1999). High levels of agreeableness are a sign of trustworthiness and empathy, as opposed to stubbornness or hostility. They are generally affable and easy to get along. The social media posts of adolescents reflect their desire to be accepted (Meeus et al., 2019). This study showed that the dependency of adolescents on social acceptance was related to positive reinforcement from peers. This is often manifested as "likes" in social media. This dependency on social approval is linked to a decrease in self-esteem among this age group. Peer approval is a major factor in agreeableness. In order to be accepted by their peers and receive validation, teenagers strive to project a positive image. Researchers have also found that fear of judgement has been a contributing factor to eating disorders. (Zeeni et al., 2018). Fear of what others think can cause anxiety when using social networks. Researchers discovered that people with eating disorders who use social media often had a correlation. This shows that people care more about the perceptions of others. They are more concerned about being accepted and liked by others than they are with embracing themselves. A second study revealed that Twitter users with higher levels of dissatisfaction expressed in their posts tended to use negative language. (Yang & Srinivasan, 2016). This scenario shows how individuals who have difficulty interacting face-to-face extend their difficulties onto social media. Research has shown conflicting results in the past regarding agreeableness. According to certain studies, social media usage and agreeableness have a positive correlation (De Zuniga et al., 2017; Seidman, 2013). People with high levels of agreeableness are more likely to use Facebook and other social media platforms to fulfill their need to belong. They also facilitate peer acceptance and develop relationships (Seidman, 2013). Since agreeableness is linked to conflict avoidance (Barnes et al., 2013). Due to the high visibility of social media, individuals with high levels may also avoid using it to avoid negative discussions. The previous findings are not conclusive and lack empirical support. The Big Five model does not offer much insight into the relationship between agreeableness and social media. Social media can be used by individuals with high

levels agreeableness to spread friendly messages. People with lower levels may be more aggressive. The hypothesis is that,

H4: The use of social media is positively related to agreeableness.

Neuroticism

The level of neuroticism is a reflection of one's emotional resilience, and the tendency to see events as potentially dangerous. (Lim, 2000; McCrae & Costa, 1999). Neurotic people are irritable and anxious. Lower levels of neuroticism are associated with greater self-confidence and calmness. In a previous study of Allen and Celestino (2018), neuroticism's impact on mental health was highlighted. Similar studies have shown people using social media to showcase a carefully edited lifestyle (Veldhuis et. al., 2010). People share only certain things, motivated by the desire to influence their friends' perceptions and the public at large. Some studies investigate how feedback from social networks can affect body surveillance (Butkowski et al., 2019). According to research, women who engage in selfie feedback report greater body dissatisfaction as well as a desire for thinness. Accordingly, girls who show a greater interest in receiving feedback are more likely to have disordered eating behaviors (Butkowski et al., 2018). Separate research revealed that girls more likely to manipulate their image are those who share selfies frequently (McLean et al., 2015). A person's personality has a significant impact on how they use social media. According to studies on preadolescents, less social media use is linked to better mental health. This can be attributed by a reduction in social competition (Fardouly et al., 2018). Social media is a powerful tool for information sharing, but it can also cause problems when users compare themselves to others. Research has shown that there is a strong link between social media usage and symptoms of major depression disorder (Robinson et. al., 2019). These findings are confirmed by ongoing studies, which also highlight the negative effects of excessive social media use. One study found that social media use and depression symptoms are related. Twitter users were more likely to experience depression symptoms than Facebook and Instagram users (Jeri-Yabar et al., 2018). Twitter users are more likely to experience depressive symptoms than other social media users. People with high neuroticism are more likely to use social media (Correa et al., 2010; De Zuniga et al., 2017). Highly neurotic people use social media to feel more connected and reduce negative emotions (Gill, 2009; Seidman, 2013). According to the Big Five Neuroticism model people with high levels of neuroticism experience more negative emotions. This includes anxiety. Hypothesized,

H5: The use of social media is positively related to neuroticism.

Method

Survey

The survey method was employed to meet the objective of this study. To assess personality traits, the study utilized the Big Five personality scale developed by Goldberg (1999). This scale comprises five subscales: Extraversion, Agreeableness, Openness to Experience, Conscientiousness, and Neuroticism, each

containing 10 items. Participants rated each statement on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The sub-scales exhibited internal consistency, with Cronbach's alpha values of .72, .75, .80, .85, and .81, respectively. To measure social media usage, “How much time you spend on social media daily?” was asked, for which the respondents were asked to choose from less than 1 hour, 1-2 hours, 3-4 hours, 5-6 hours and more than 6 hours.

Sample

A survey questionnaire was administered to 1000 university students, resulting in 940 completed responses. Incomplete or inaccurately filled-out questionnaires were excluded from the analysis. Following rigorous data cleaning procedures, 910 questionnaires were deemed suitable for final analysis, resulting in a response rate of 91.0%. The survey was conducted with explicit consent and assurances that no harm would be inflicted upon the institution's integrity.

Results

The findings indicated that 80% of the participants were avid users of social media, dedicating a minimum of 3 hours daily to engaging with various social media platforms. Table 1 shows the frequencies of the time spent on a daily basis.

Table 1: *Time spent on social media on a daily basis*

Time Spent on Social Media	Frequencies	Percentages
Less than 1 hour	33	3.6 %
1-2 hours	144	15.8 %
3-4 hours	300	33 %
5-6 hours	225	24.7%
More than 6 hours	208	22.9 %

Independent samples t-test was used to test the differences of social media usage among male and female respondents as shown in Table 2. No significant differences were found among both the genders.

Table 2: *Differences in social media usage by male and female respondents*

Variables	Male(n= 373)		Female (n= 537)		t	p	95% CI		Cohen’s D
	SD	M	M	SD			L	L	
Social Media Usage	2.81	1.395	2.88	1.362	0.736	0.02	0.1	.25	.93
							1		

Pearson correlation was employed to test the relationship between the Big five personality traits and social media use. Table 3 shows Conscientiousness, Extraversion and Neuroticism had a strong positive relationship with social media usage whereas Agreeableness and openness to experience depicted no significant relationship with the social media usage.

Table 3: *Correlation Analysis of Conscientiousness, Openness to Experience, Extraversion, Agreeableness, Neuroticism and Social Media Usage*

Big Five Personality Traits	Social Media Usage
Conscientiousness	.62**
Openness to Experience	.002
Extraversion	.89**
Agreeableness	.001
Neuroticism	.93**

Correlation: ** $p < .01$ The above results show that H2, H3 and H5 are accepted depicting a positive relationship of conscientiousness, extraversion and neuroticism with social media usage. H1 and H4 are rejected as there is no significant relationship of openness to experience and agreeableness with social media use.

Discussion

Researchers have found that personality traits are associated with social media use. In previous studies, those with higher levels of openness used more social media than those with lower levels (Ozguven & Mucan, 2013). Social media usage is also higher among those with higher conscientiousness. Researchers found that people with lower levels extraversion were more likely to be addicted to their phone or internet (Hawi & Samaha, 2017). Further research shows that teens use "likes", as a way to gauge their popularity, and they carefully curate their social media posts to highlight the best moments (Meeus et al., 2019; Veldhuis et al., 2020).

The study found that there were significant correlations between personality and social media use. Some students may be spending more time at their off-campus accommodations or dorms, which gives them more opportunities to check social networks. Some students use social media privately rather than during social events. In reference to previous research we had expected to see a positive correlation between the use of social media and the openness to experience (Hypothesis 1). The results of the study are consistent with previous research, and they support Hypothesis 1 (Correa et al., 2010; De Zuniga et al., 2017; Ozguven & Mucan, 2013; Ross et al., 2009; Carpenter et al., 2011). Diverse reports have been published regarding the relationship between conscientiousness and social media. Our study confirms the fact that social media is primarily used to entertain, and not for work or academic pursuits (Quintelier & Theocharis; 2013; Rayan & Xenos 2011; Seidman, 2013). Social media is less popular among people who are conscientious, because they believe it interferes with more meaningful activities. Our study shows that people who are more conscientious use social media. This shift could indicate that social media has changed from being used for

casual activities to one of serious information seeking, professional networking, and collaboration (De Zuniga et al., 2017). Extraversion was positively correlated with social media usage, supporting Hypothesis 3. Extraversion is linked to a variety of social networks, and a more sociable personality compared to individuals with low levels of extraversion (Costa & Mc Crae, 1992; Chamorro-Premuzic, 2012; John & Srivastava, 1999; Gottfredson et al., 1993). Social media platforms between 2009 and 2020 have clearly strengthened social networks. This is more in line with the "richer get richer model" than the "social-compensation model." In the future, web designers will have the chance to create social media platforms which appeal to introverted users while aligning with the social compensation models. Hypothesis 4 was rejected, regarding agreeableness, as we found that there was no correlation between social media usage and agreeableness. It is possible that people who are high in agreeableness may have conflicting wants to belong and avoid conflicts. It may be manifested as divergent patterns of social media use (Seidman, 2013; Barnes et al., 2017). The hypothesis 5 was accepted for neuroticism because of the correlation between social media usage and neuroticism as measured by scale. That is consistent with previous researches that has shown a positive correlation between neuroticism and social media use (Correa et al., 2010; De Zuniga et al., 2017; Seidman, 2013; Gill et al., 2009). As for gender differences in social media use patterns, there were no significant differences among the social media usage of female and male students.

Conclusions

Our findings confirm that there is a strong correlation between extraversion and social media usage. Neuroticism and conscientiousness also showed a positive correlation. Social media use does not correlate with openness to experience and agreeableness. This study has several implications. One is the need to continue exploring and monitoring the relationship between the Big Five Model and social media, as this relationship appears to vary across cultures. This study has a number of implications, including the need for continued exploration and monitoring of the relationship between social media and Big Five model. Since this relationship seems to differ across cultures (De Zuniga et al., 2017). Our findings differ from those of an earlier study that examined the intersections of social media usage with the Big Five Model in 20 countries. Pakistan was excluded but there were still apparent contradictions. It is difficult to engage reserved individuals when social media platforms are used by extraverts who can quickly grasp new areas of usage and leverage them (Costa & McCrae, 1992; Chamorro-Premuzic, 2012). To ensure that we do not miss out on the potential users of technological advancements, it might be necessary to reassess certain individuals' use of social media. To reduce digital divides and ensure social media is available to all users, the society needs to improve its understanding of social media users. Researchers, web designers and psychologists need to work together in order to promote digital inclusion.

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