INSTAGRAM SELFIE BEHAVIOR AS A FUNCTION OF PERSONALITY CHARACTERISTICS: A STUDY OF TURKISH EMERGING ADULTS DURING THE COVID-19 PANDEMIC

Ryan Macey Wise[1]

Aylin Kalkan[2]

ABSTRACT

The purpose of the current study was to investigate the relationship between personality characteristics and selfie behavior on Instagram among a sample of emerging adults in Turkey during the Covid-19 pandemic. Research has been mixed on how personality influences selfie taking and posting and demonstrates limited consideration of cultural variables, two problems we attempt to partly remedy in this study. Personality was measured using the Turkish version of the Big Five Inventory (B5KT-50-TR) and a series of questions was asked concerning frequency of selfie taking and sharing, the use of filtering and photo editing software, and the attention participants gave to monitoring followers' 'likes' of their selfies. Results indicated that extraversion and openness to experience predicted the frequency of selfie sharing and monitoring of likes, while neuroticism predicted the use of filtering software. Results are contextualized within Turkish culture and related to the ongoing Covid-19 pandemic and its effects for young adults, including increased levels of loneliness.
Keywords: Selfie, Instagram, Personality, Emerging Adults, Covid-19

INTRODUCTION

Social media are Internet-based channels enabling users to reach both narrow and broad audiences simultaneously and asynchronously and share content they have created or content created by others, and to engage in interactions with followers (Carr & Hayers, 2015). Social media platforms are divided according to their purposes and

[1] PhD, Department of Psychology, Istanbul Bilgi University, ryan.wise@bilgi.edu.tr

[2] Department of Psychology, Istanbul Bilgi University, kalkanaylinn@gmail.com

services, with some showing a greater focus on sharing photos of oneself, or 'selfies,' (e.g., Instagram, Facebook, and Tiktok) and others are focused more on the sharing of ideas and thoughts (e.g., Reddit, Tumblr, and Twitter). As of 2019, 52 million people were active users of social media in Turkey, although this number most likely increased during the Covid-19 pandemic as people were often isolated at home. Turkish users of social media spend an average of 2 hours 46 minutes on social media platforms, with the most popular being Instagram, Facebook, and Twitter (Kemp, 2019).

As social media use has increased, greater research attention has focused on understanding the predictors of social media use and behavioral and psychological outcomes of such use. One focus has been on personality characteristics of social media users. Liu and Campbell (2017) found that personality dispositions, as measured by the Big Five, were associated with social media use, with extraversion and openness having a strong relationship with sharing activity, a relationship replicated with other studies (e.g., Choi, Sung, Lee & Choi, 2017). Kim and Chock (2017) found a relationship between low levels of agreeableness and conscientiousness with high Instagram addiction. Grandiose narcissism was associated with taking and posting more selfies, but vulnerable narcissists were less likely interested in selfie posting, they engaged more in observing other users' posts (Mccain, et al., 2016). McCain and Campbell (2018) suggested that grandiose narcissism was interconnected with time spent on social media, frequency of posting status updates, posting pictures on social media, and with the number of followers and friends in social media.

Relatedly, body image perceptions and problems have been associated as both a predictor and outcome of social media use (Roosen, 2014; Mills, Roosen, & Vella-Zarb, 2011). Female participants have demonstrated more body image anxiety when exposed to unrealistic portrayals of female body images shared on social media (Betz & Ramsey, 2017). Similarly, young adults demonstrate increased body image concerns, greater body dissatisfaction, and more psychological distress when exposed to idealized body images on both traditional and social media platforms (Holland & Tiggemann, 2016).

Eating disorders have also been associated with social media use. Eating disorders are characterized by disordered thinking about food and the engagement in problematic eating patterns (Wang et al., 2017). While one of the causes of eating disorders

is body dissatisfaction, this relationship is often mediated by social media use (Bozan, 2009; de Vries et al., 2015; Uchôa et al.,2019). In a provocative study, Tiggemann and Zaccardo (2015) reported that individuals who were exposed to 'fitspiration' photos (photos glamorizing slender and athletic bodies) demonstrated greater body dissatisfaction than similar individuals who were exposed to travel images.

The Current Study

The current article focused on adding to and extending previous research that has examined personality-related characteristics and how they relate to social media use through an examination of personality and social media use among Turkish emerging adults during the Covid pandemic. Based on a consideration of the extant literature examining personality correlates of social media use, it was predicted that personality traits, as measured by the Big Five, would demonstrate significant relationships with the outcome measures of Instagram use. More specifically, we predicted that extraversion and openness to experience would predict frequency of sharing selfies, and that neuroticism would predict the use of filters and the monitoring of 'likes.'

MATERIAL AND METHOD

1.1. Participants

The sample included 184 volunteer undergraduate students (147 females, 36 males) with an average age of $M= 23.26$ ($SD= 4.46$). All participants completed an informed consent indicating their participation was voluntary and all data collected was anonymous. Ethical approval was secured from the relevant university ethics committee prior to beginning the study.

1.2. Measures

A series of questions was asked concerning participants' socio-demographic information and their selfie posting behaviors, including the frequency of posting selfies, use of filters, and tracking of "likes" and views. The concept of 'selfie' was operationalized based on previous research (source, date) as being a photo of oneself, typically from a cell phone, or of oneself with others ('groupie'), and shared on a social media platform. The study was limited to an investigation of selfie behavior on Instagram, which is the most popular social media platform in Turkey for young adults

(source, date). Photos that were taken by another person and shared were not considered as constituting a selfie.

1.2.1. The Big Five

Personality traits were measured using the Turkish version of the Big Five Inventory (Tatar, 2007) and measured five dimensions of personality: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (Horzum, Ayas, & Padir, 2017). In the original administration of the Turkish version, Tatar (2017) reported reliability coefficients between 0.65 and 0.79 for each of the five subscales. The 50 questions that were given to participants with 5-point Likert- type responses ranged from not suitable at all (1) to very suitable (5).

FINDINGS AND DISCUSSION

Table 1 summarizes the descriptive statistics for participants' selfie sharing behaviors and use of editing applications on Instagram. Table 2 summarizes the descriptive statistics for the BFI.

Table 1 *Descriptive*

	N	Minimum	Maximum	*Mean*	*SD*
Frequency of Selfies	183	1.00	6.00	4.4699	1.15212
Editing Applications	183	1.00	6.00	4.0437	1.75043
Selfie Instagram Likes	183	1.00	6.00	3.7049	1.57951

Table 2. *Descriptive Statistics of BFI*

	Minimum	Maximum	Mean	SD
Extroversion	10.00	50.00	33.75	7.31077
Agreeableness	22.00	46.00	37.7760	4.02998
Consciousness	21.00	46.00	34.7869	4.48360
Neuroticism	21.00	37.00	29.9454	3.15484
Openness	28.00	45.00	36.7432	2.72648

Simultaneous entry multiple regression analyses were conducted to examine relationships between selfie behavior and personality. In the first analysis, BFI scores were entered as the predictor variable and frequency of taking selfies entered as the criterion variable. The results of the analysis indicated that the model was significant $(F(5, 178) = 3.002, p < .05, R^2 = .078)$, with extraversion and openness to experience significantly contributing to the model. Based on the unstandardized beta coefficients, selfie frequency was related with lower levels of extraversion, while higher levels of openness to experience was related with more frequent selfie posting. See Table 3.

Table 3. Frequency of taking selfies as a function of BFI

Model	B	Std. Error	Beta	t	Sig.
Agreeableness	-.019	.023	-.078	-.840	.402
Consciousness	-.008	.019	-.035	-.416	.678
Neuroticism	.017	.028	.052	.631	.529
Extraversion	-.039	.014	-.257	-2.886	.004*
Openness	.073	.031	.227	2.376	.019*

*significant at p = .05.

A simultaneous entry regression analysis indicated that personality predicted the use of selfie editing applications, $(F(5, 178) = 1,53\ p < .05, R^2 = .04, R^2 = .02)$, with

neuroticism and extraversion significantly contributing to the model, indicating that participants with higher levels of neuroticism were more likely to use editing applications and filters, and participants higher in extraversion were less likely. See Table 4.

Table 4. Selfie editing as a function of BFI.

Model	B	Std. Error	Beta	t	Sig.
Agreeableness	.003	.036	.009	.096	.923
Conscientiousness	.012	.030	.035	.412	.681
Neuroticism	.094	.043	.184	2.185	.030*
Extraversion	-.048	.021	-.207	-2.282	.024*
Openness	-.011	.048	-.022	-.225	.822

*significant at p = .05

The final research question examined the relationship between the personality measures and attention participants gave to monitoring the 'likes' on their selfies. The regression model for the Big Five was significant, (F(5, 178) = 2.13, p < .05, R^2 = .057, R^2 = .03), with extraversion being the only contributing predictor and exhibiting a negative relationship with the monitoring of selfie 'likes.' See Table 5.

Table 5. Selfie 'likes' monitoring as a function of BFI.

	B	Std. Error	Beta	t	Sig.
Agreeableness	.010	.032	.029	.311	.756
Consciousness	.034	.027	.108	1.280	.202
Neuroticism	.025	.039	.055	.661	.509
Extraversion	-.039	.019	-.186	-2.064	.040*
Openness	.065	.043	.147	1.523	.129

*significant at p = .05

This study looked at three aspects of selfie behavior: the frequency of taking and sharing selfies, the use of filters and other photo editing applications, and the attention participants gave to the number of likes they received after posting a selfie. The contribution of the current study is to add to the developing literature on how young adults use a major social media platform, Instagram, and how various personality characteristics help predict type of social media engagement. The major findings were that the taking and sharing of selfies on Instagram for emerging adults during the Covid-19 pandemic was mainly predicted by the extraversion, neuroticism, and openness to experience components of personality, although for different components of selfie behavior. This study provides insight into understanding young adult use of social media and both how personality factors predict engagement with social media.

The first research question explored the frequency of selfie photo sharing and reported that extraversion exhibited a negative relationship with selfie taking, while openness to experience demonstrated a positive relationship. The second research question examined selfie filtering, and found that neuroticism predicted greater use of filtering applications and the use of filters native to the Instagram platform. Participants scoring higher on neuroticism used more filters before posting their selfie. The third and last research question looked at the monitoring and attention given to the number of 'likes' a selfie received, and the only significant predictor was extraversion, with participants higher in extraversion demonstrating less attention paid to selfie 'likes.'

The research findings reported herein are similar to previous research that has found a relationship between extraversion and openness to experience as being significant predictors of selfie posting (Sorokowska et al., 2016; Patil, Chaudhari, Kadiani, Chaudhury & Saldanha, 2019). Notably, the relationship between extraversion and the frequency of taking selfies demonstrated a negative relationship, meaning those participants higher in extraversion posted fewer selfies than those lower in extraversion.

One possible explanation for this finding derives from research conducted by Amichai-Hamburger and Vinitzky (2010) regarding Facebook use. The authors found that while extroverts had more friends on Facebook, they shared less information, with the explanation being that introverted individuals share more to help

compensate for an inability to do so offline. This explanation is supported in our study through the finding that participants higher in extraversion were less likely to monitor their 'likes,' suggesting higher self-esteem and less need for attention.

It is important to note, however, that sharing on Facebook and Instagram differ in significant ways. In the former, it is possible to share news, articles, status updates, and selfies, while on the latter, sharing is limited to photos, and thus, it would be expected that introverts would share more selfies on Instagram possibly explained as a role-reversal from their offline life, where sharing may be more difficult. Research seems to suggest this motivation. Shokri et al (2014) reported a positive relationship between self-esteem and extraversion, and considering that Egar and Amichai-Hamburger (2017) found a significant relationship between self-approval motivations and monitoring likes, it can be suggested that individuals higher in extraversion would have less need to engage in more frequent selfie sharing and attending to the response they receive from followers.

The other major finding was that neuroticism predicted greater use of filters before posting selfies. This relationship receives mixed support in the literature. Chaudhari, et al (2019) reported that neuroticism was inversely related with filtering selfies, with the explanation that neurotic individuals would be more sensitive to exposing themselves online and receiving negative feedback, and thus would be more likely to engage in texting and direct messaging rather than sharing selfies. A finding supported by research showing that neuroticism and Instagram use is associated with a greater motivation to disengage from the environment (Pasztor, 2021). Further, self-esteem has been positive related to Internet addiction in Turkey (Błachnio, et al, 2016), suggesting that it would be expected that individuals high in neuroticism and low in self-esteem would potentially engage in more filtering of selfies as a way to boost self esteem and and communicate to others a more positive image.

One explanation for our results regarding neuroticism and the use of filtering derives from research in Turkey suggesting a positive relationship between loneliness and neuroticism and a negative relationship between extraversion and loneliness (Atak, 2009). Loneliness takes on further consideration when taking into account the Covid-19 pandemic. In the beginning of the pandemic, when the data for this study were collected, the Turkish government instituted strict lockdown measures preventing

individuals from leaving their houses for any reason. Not only in Turkey, but globally, loneliness during the Covid-19 pandemic has been associated with lower levels of well-being across a number of mental and physical health outcomes, and has been seen as leading to an increase in loneliness, especially for adolescents and young adults (Weissbourd, et al., 2020). While data is not available, it is suggested that loneliness for individuals higher in neuroticism would be exacerbated under such conditions.

The results herein shared and the corresponding literature suggests the need to contextualize young adult social media behavior while taking three considerations into account. First, current environmental and social conditions may lead to different findings and findings gathered may not generalize to other conditions. The ongoing Covid-19 pandemic has affected young adults in ways unique to the historical moment, and findings during such a unique moment in global history may not be applicable to other time periods. Second, ego construction and personality expression in relation to cultural differences are important, as research suggests that these factors may help to explain conflicting research results. For example, Sumer (2016) reported that 'quiet ego' was differentially associated with personality variables between individualist cultures (United States) and collectivistic cultures (Turkey), and as such, research findings on personality correlates may not have meaning when applied to cultures differing on major social and economical dimensions. And third, when analyzing social media use, it is critical to identify the platform under consideration and to contextualize results therein, rather than generalizing across platforms. Although Instagram, Facebook, and Twitter, for example, are all forms of social media expression, the interaction and engagement in each is unique, and the use of each platform differs by generational age.

Study Limitations

There were several limitations in this study. One of the limitations was that data for this study was collected online, which has both benefits (e.g., cost effectiveness and accessibility) and disadvantages (sampling bias and non-respondent characteristics) (Nayak & Narayan, 2019). However, under the conditions of the Covid-19 pandemic, online data collection was the only viable alternative, especially considering the lockdown measures in place. A second limitation involved sex distribution, as a greater

percentage of respondents were female than male. While a limitation, research does suggest that women are more likely to share selfies on social media than men, and that adolescent and young adults do so more than older adults (Dhir, et al, 2016). The final limitation was the self-report nature of data collection and the limitations in participant accuracy in reflecting on their social media use.

CONCLUSION

As mentioned above, future research on adolescent and young adult use of social media should pay attention to not only the socio-historical context within which use occurs, but also attend to the platforms in which engagement occurs. Twitch is a very popular social media platform, but engagement on Twitch is very different from engagement with more traditional forms of social media, including Facebook, Instagram, and Snapchat. Social media has many benefits for young adults, while also posing a risk for those individuals susceptible to Internet addiction or problematic engagement. One possible advantage of the current study and similar research is that results obtained can be integrated into clinical psychotherapy treatment to assist therapists to understand why and how a client may be engaging not only in problematic online behaviors, but also to provide context to more general behaviors. As social media use continues to climb and as new platforms emerge, researchers should continue to help elucidate those factors predicting online behaviors, attitudes, and emotional well-being.

REFERENCES

Brovkin, D. (2017). How to create a photo sharing app like Instagram: the basics. Retrieved May 2, 2020, from https://www.freecodecamp.org/news/how-to-create-a-photo-sharing-app-like-instagram-the-basics-8dfdeb5e17f5/

Buffardi, L. E., & Campbell, W. K. (2008). Narcissism and social networking web sites. *Personality and Social Psychology Bulletin*, *34*(10), 1303–1314. doi: 10.1177/0146167208320061

Carbon, C.-C. (2017). Universal principles of depicting oneself across the centuries: From Renaissance Self-Portraits to Selfie-Photographs. *Frontiers in Psychology*, *8*. doi: 10.3389/fpsyg.2017.00245

Chaudhari, B. L., Patil, J. K., Kadiani, A., Chaudhury, S., & Saldanha, D. (2019). Correlation of motivations for selfie-posting behavior with personality traits. *Industrial psychiatry journal*, *28*(1), 123–129. https://doi.org/10.4103/ipj.ipj_30_19

Choi, T. R., Sung, Y., Lee, J.-A., & Choi, S. M. (2017). Get behind my selfies: The Big Five traits and social networking behaviors through selfies. *Personality and Individual Differences*, *109*, 98–101. doi: 10.1016/j.paid.2016.12.057

Czarna, A. Z., & Nevicka, B. (2019). Narcissism and leadership. *Encyclopedia of Personality and Individual Differences*, 1–9. doi: 10.1007/978-3-319-28099-8_2334-1

Ferwerda, B., & Tkalcic, M. (2018). Predicting users personality from Instagram Pictures. *Proceedings of the 26th Conference on User Modeling, Adaptation and Personalization - UMAP 18*. doi: 10.1145/3209219.3209248

Fox, J., & Rooney, M. C. (2015). The Dark triad and trait self-objectification as predictors of men's use and self-presentation behaviors on social networking sites. *Personality and Individual Differences*, *76*, 161–165. doi: 10.1016/j.paid.2014.12.017

Horzum, M. B., Ayas, T., & Padir, M. A. (2017). Beş Faktör Kişilik Ölçeğinin Türk Kültürüne Uyarlanmasi. *Sakarya University Journal of Education*, 398–408. doi: 10.19126/suje.298430

Jin, S. V., & Ryu, E. (2018). "The paradox of Narcissus and Echo in the Instagram pond" in light of the selfie culture from freudian evolutionary psychology: Self-Loving and Confident but Lonely. *Journal of Broadcasting & Electronic Media*, *62*(4), 554–577. doi: 10.1080/08838151.2018.1474881

Jonason, P. K., & Webster, G. D. (2010). The dirty dozen: A concise measure of the dark triad. *Psychological Assessment*, *22*(2), 420–432. doi: 10.1037/a001926

Jones, D. N., & Paulhus, D. L. (2013). Introducing the Short Dark Triad (SD3). *Assessment*, *21*(1), 28–41. doi: 10.1177/1073191113514105

Kazdin, A. E. (2000). *Encyclopedia of psychology*. Washington, D.C.: American Psychological Association.

Kayis, A., Yilmaz, M., Satıcı, S., & Çapan, B. (2018). Dirty dozen scale: a study of adaptation to turkish university students. *Anatolian Journal of Psychiatry*, 1. doi: 10.5455/apd.288773

Kim, J. W., & Chock, T. M. (2017). Personality traits and psychological motivations predicting selfie posting behaviors on social networking sites. *Telematics and Informatics*, *34*(5), 560–571. doi: 10.1016/j.tele.2016.11.006

Kubarych, T. S., Deary, I. J., & Austin, E. J. (2004). The narcissistic personality inventory: Factor structure in a non-clinical sample. Personality and Individual Differences, 36, 857–872. doi:10.1016/S0191-8869(03)00158-2

Liu, D., & Campbell, W. K. (2017). The Big Five personality traits, Big Two metatraits and social media: A meta-analysis. *Journal of Research in Personality*, *70*, 229–240. doi: 10.1016/j.jrp.2017.08.004

Lup, K., Trub, L., & Rosenthal, L. (2015). Instagram #Instasad?: Exploring associations among Instagram use, depressive Symptoms, negative social comparison, and strangers followed. *Cyberpsychology, Behavior, and Social Networking*, *18*(5), 247–252. doi: 10.1089/cyber.2014.0560

Manjoo, F. M. (2017). Why Instagram is becoming Facebook's next Facebook. Retrieved May 2, 2020, from https://www.nytimes.com/2017/04/26/technology/why-instagram-is-becoming-facebooks-next-facebook.html

Mccain, J. L., Borg, Z. G., Rothenberg, A. H., Churillo, K. M., Weiler, P., & Campbell, W. K. (2016). Personality and selfies: Narcissism and the Dark Triad. *Computers in Human Behavior*, *64*, 126–133. doi: 10.1016/j.chb.2016.06.050

Mccain, J. L., & Campbell, W. K. (2018). Narcissism and social media use: A meta-analytic review. *Psychology of Popular Media Culture*, *7*(3), 308–327. doi: 10.1037/ppm0000137

Mhlanga, O. (2019). Identification of personality traits affecting entrepreneurial performance in the hospitality subsector: A five-factor personality model. *Acta Commercii*, *19*(2). doi: 10.4102/ac.v19i2.651

Moon, J. H., Lee, E., Lee, J.-A., Choi, T. R., & Sung, Y. (2016). The role of narcissism in self-promotion on Instagram. *Personality and Individual Differences*, *101*, 22–25. doi: 10.1016/j.paid.2016.05.042

Nilan, Vivienne. (2003). ''The greeks: A portrait of elf and others' by Paul Cartledge, in Greek." [*Kathimerini English Edition*]. Retrieved from http://www.ekathimerini.com/11369/article/ekathimerini/life/the-greeks-a-portrait-of-self-and-others-by-paul-cartledge-in-greek

Patil, J., Chaudhari, B., Kadiani, A., Chaudhury, S., & Saldanha, D. (2019). Correlation of motivations for selfie-posting behavior with personality traits. *Industrial Psychiatry Journal*, *28*(1), 123. doi: 10.4103/ipj.ipj_30_19

Rauthmann, J. F., & Will, T. (2011). Proposing a multidimensional Machiavellianism conceptualization. *Social Behavior and Personality: an International Journal*, *39*(3), 391–403. doi: 10.2224/sbp.2011.39.3.391

Rogoza, R., & Cieciuch, J. (2018). Dark Triad traits and their structure: An empirical approach. *Current Psychology*. doi: 10.1007/s12144-018-9834-6

Sanecka, E. (2017). The dark side of social media: Associations between the Dark Triad of personality, self-disclosure online and selfie-related behaviours. *Journal of Education Culture and Society*, *8*(2), 71–88. doi: 10.15503/jecs20172.71.88

Schlamp, H. J. (2009). Glanz und Niedergang einer Geld-Dynastie. Retrieved May 4, 2020, from https://www.spiegel.de/spiegel/spiegelgeschichte/d-66214337.html

'Selfie' named by Oxford Dictionaries as word of 2013. (2013, November 19). *BBC News* .Retrieved from https://www.bbc.com/news/uk-24992393

Selfie. (n.d.). In *OxfordLearnersDictionaries.com*, Retrieved from https://www.oxfordlearnersdictionaries.com/definition/english/selfie?q=selfie

Sorokowska, A., Oleszkiewicz, A., Frackowiak, T., Pisanski, K., Chmiel, A., & Sorokowski, P. (2016). Selfies and personality: Who posts self-portrait photographs? *Personality and Individual Differences*, *90*, 119–123. doi: 10.1016/j.paid.2015.10.037

Southern, M. (2020). Instagram sees greatest gains from recent social media spikes. Retrieved from https://www.searchenginejournal.com/instagram-growth-in-2020/364490/#close

Sung, Y., Lee, J., Kim, E., & Choi, S. M. (2016). Why we post selfies: Understanding motivations for posting pictures of oneself. *Personality and Individual Differences, 97*, 260-265. doi:10.1016/j.paid.2016.03.032

Tatar, A. (2017). Translation of Big-Five Personality questionnaire into turkish and comparing it with five factor personality Inventory short form. *Anatolian Journal of Psychiatry*, 1. doi: 10.5455/apd.220580

We are Social. (2020). Retrieved May 4, 2020, from https://wearesocial.com/digital-202

Williams, D. L., Crittenden, V. L., Keo, T., & Mccarty, P. (2012). The use of social media: an exploratory study of usage among digital natives. *Journal of Public Affairs*, *12*(2), 127–136. doi: 10.1002/pa.1414