



## Short Communication

## The relationship among individual differences in individualism-collectivism, extraversion, and self-presentation


Ibrahim Arpacı<sup>a,\*</sup>, Mustafa Baloglu<sup>b</sup>, Şahin Kesici<sup>c</sup>
<sup>a</sup> Gaziosmanpaşa University, Department of Computer Education and Instructional Technology, Tokat, Turkey

<sup>b</sup> Hacettepe University, School of Education, Ankara, Turkey

<sup>c</sup> Necmettin Erbakan University, Ahmet Keleşoğlu Faculty of Education, Department of Educational Sciences, Konya, Turkey

## ARTICLE INFO

## Keywords:

Culture  
Individualism  
Collectivism  
Extraversion  
Self presentation

## ABSTRACT

Individualism versus collectivism as an aspect of culture and extraversion as an aspect of personality may help explain self-presentation attitudes, intentions, and behaviors on social networking sites. Thus, this study aims to investigate the individual differences and relationships among individualism versus collectivism, extraversion, and self-presentation attitudes, intentions, and behaviors. The Individualism-Collectivism Scale and the Big Five Personality Scale were used to collect the data from 311 college students (75.9% woman, mean age = 20.68). Results show that individualism has a significant positive correlation with extraversion, which has a significant correlation with selfie posting attitudes, intentions and behaviors. Even though the correlation between individualism and attitudes toward self-presentation was statistically significant, the magnitude of the association was small.

## 1. Introduction

Chiu, Leung, and Hong (2011) define culture as a network of procedural and declarative knowledge, which answers the fundamental questions in life. Culture is distributed in the society through media messages, language, practices, artifacts, values, and modeling of a behavior (Markus & Kitayama, 2001). On the other hand, personality is “the patterns of thoughts, emotions, and behaviors, together with the psychological mechanism -hidden or not- behind those patterns” (Funder, 1997, p. 1). Personality is shaped by genetic dispositions and environmental factors, the most important of which are cultural values. Markus and Kitayama (1998) explain that there is no personality without culture.

McCrae and Terracciano (2005) investigated the relationships between the Big Five personality traits and culture and found that individualistic countries (i.e. North Americans and Europeans) scored higher in extraversion than collectivistic countries (i.e. Africans and Asians). Hutchinson and Gul (1997) examined the impact of extraversion and individualism versus collectivism on students' group learning preferences and found that extraverts with a collectivistic orientation prefer more group learning environments than those with an individualistic orientation. Findings such as these suggest that culture has a significant impact on personality and behavior. Accordingly, this study aims to investigate individual differences in and the relationships

among individualism versus collectivism, extraversion and self-presentation attitudes, intentions, and behaviors on social networking sites (SNS).

## 2. Theoretical background and hypotheses

## 2.1. Individualism versus collectivism

Individualism is “the degree to which a person acts as an individual rather than as a member of a group” (Hofstede, 1994, p. 6). Individualists are more autonomous, independent, self-contained, success-oriented, and calculative (e.g., Chan & Cheung, 2016; Rinne, Steel, & Fairweather, 2013). They place greater value in privacy and personal opinions (Hofstede, 2001). On the other hand, collectivism is “the degree to which individuals are integrated into groups” (Hofstede, 1984, p. 83). Collectivists value interdependence and consider the interests of the group (Hofstede, 2001).

Hofstede's (2001) culture theory considers collectivism versus individualism as the opposite ends of a continuum. However, some researchers consider these two cultural orientations to be independent constructs (e.g., Hui, 1988). Collectivism and individualism may be regarded as two separate constructs and exist as tendencies within all societies and individuals. Spence (1985) found a positive relationship between individualism and the need for achievement. He suggests that

\* Corresponding author.

E-mail addresses: [ibrahim.arpaci@gop.edu.tr](mailto:ibrahim.arpaci@gop.edu.tr) (I. Arpacı), [baloglu@hotmail.com](mailto:baloglu@hotmail.com), [baloglu@hacettepe.edu.tr](mailto:baloglu@hacettepe.edu.tr) (M. Baloglu), [sahinkesici@konya.edu.tr](mailto:sahinkesici@konya.edu.tr) (Ş. Kesici).

individualists are motivated by personal goals. In contrast, collectivists emphasize cooperation, sharing, and prevalence of the group goals over their personal goals. Ogiwara and Uchida (2014) indicated that individualism has a negative relationship with the amount of close friends.

Previous studies identified relationships between selfie posting and narcissism (e.g., Halpern, Valenzuela, & Katz, 2016). However, Le (2005) found that an increase in individualism is significantly correlated with an increase in narcissism. Foster, Campbell, and Twenge (2003) found that people in individualistic cultures have a higher mean score on narcissism than those of more collectivistic cultures. Conversely, collectivism, with a strong emphasis on interdependence and harmony within the group, is negatively associated with narcissism (Smith, 1990). Therefore, we hypothesized that there would be a *significant* positive correlation between individualism and selfie posting attitudes, intentions, and behaviors (Hypothesis 1) and a *non-significant* correlation between collectivism and selfie posting attitudes, intentions, and behaviors (Hypothesis 2).

## 2.2. Extraversion

Literature has reported significant relationships between individualism and extraversion (e.g., Kotelnikova & Tackett, 2009). McCrae (2001) investigated the relationships between personality and national cultures and suggested that individualism and extraversion are significantly correlated. McCrae and Allik (2002) investigated the relationships between personality and national cultures of 35 nations and suggested that individualism and extraversion are significantly correlated. McCrae and Terracciano (2005) re-analyzed the relationships between personality and national cultures with an enlarged sample of 51 nations. Their results indicated a positive significant correlation between extraversion and individualism. Consistent with these results, extraversion is higher in the U.S. and Europe (McCrae, 2004). Based on the above-mentioned findings, we hypothesized that there would be a *significant* positive correlation between individualism and extraversion (Hypothesis 3).

Marshall, Lefringhausen, and Ferenczi (2015) and Seidman (2013) investigated the relationship between personality and social media use. They found that extraverts tend to be more talkative, gregarious, and cheerful and use social media more frequently. Recent studies also indicate a significant relationship between online behaviors and personality, suggesting that higher extraversion predicts more social network use (e.g., Eftekhar, Fullwood, & Morris, 2014; Sorokowska et al., 2016). Accordingly, we hypothesized that there would be a *significant* positive correlation between extraversion and selfie posting attitudes, intentions, and behaviors (Hypothesis 4).

## 3. Method

### 3.1. Participants

Through convenience sampling method, 311 students from a state university in Turkey were recruited and willingly participated in the study. An online survey was administered using an Internet-based surveying system in a counterbalanced order. Of the sample, 236 were women (75.9%) and 75 were men (24.1%). Participants' ages ranged from 18 years old to 37 years old ( $M = 20.68$ ;  $SD = 3.07$ ). In terms of college status, there were 157 freshmen (50.5%), 83 sophomores (26.7%), 38 juniors (12.2%), and 33 seniors (10.6%). Almost all participants (97.7%) reported to have taken selfies, whereas 76.2% reported posting selfies on SNS.

### 3.2. Measures

#### 3.2.1. The Individualism-Collectivism (INDCOL) Scale

Singelis et al. (1995) developed a scale that includes 37 five-point

Likert-type items (18 items for individualism and 19 items for collectivism) to measure the level of individualistic versus collectivistic tendencies. The items for individualism focus on uniqueness and competition. On the other hand, the items for collectivism focus on interdependence and sacrificing. Triandis and Gelfand (1998) provided strong evidence for the validity and reliability of the scale. Further, Wasti and Erdil (2007) adapted the scale into Turkish and provided the reliability and validity evidence of the adapted Turkish version.

#### 3.2.2. The adjective-based personality test (ABPT)

Forty items (seven-point Likert-type) were developed under five subscales (i.e., conscientiousness, agreeableness, openness to experience, extraversion, and neuroticism) by Bacanlı, İlhan, and Aslan (2009) to measure the Big Five personality traits. The reliability of the test was investigated by internal consistency coefficients, which ranged from 0.73 to 0.89 (Bacanli et al., 2009). Only the items measuring "extraversion" were used in the present study.

Selfie posting was measured by 13 five-point Likert-type items involving the dimensions of attitudes, intentions, and behaviors. The items were adapted from Ajzen's Theory of Reasoned Action (e.g., Ajzen, 1991; Ajzen & Fishbein, 2005; Fishbein & Ajzen, 1975). Cronbach's alpha coefficients of these scales were the indicators of reliability. Among the measures, minimum Cronbach's alpha was 0.89, which suggests a high level of internal consistency.

## 4. Results

### 4.1. Hypothesis testing results

The results show that individualism has a significant correlation with attitudes toward selfie posting, whereas it has a non-significant correlation with intentions and actual behaviors; therefore, Hypothesis 1 was rejected except for attitudes toward selfie posting. However, collectivism has no significant correlation with selfie posting attitudes, intentions, or behaviors; therefore, Hypothesis 2 was supported. Results also indicate that individualism has a significant correlation with extraversion; therefore, Hypothesis 3 was supported. Finally, extraversion has a significant correlation with attitudes toward selfie posting, intentions, and behaviors. Therefore, Hypothesis 4 was also supported. Table 1 shows the correlations, reliability, and descriptive statistics.

### 4.2. Gender differences

One-way multivariate analysis of variance investigated the role of gender differences in cultural orientations. Results show that there is no difference in cultural orientations between men and women [ $F_{(2, 308)} = 2.62$ ,  $p > 0.05$ , Wilk's  $\lambda = 0.98$ , partial  $\eta^2 = 0.02$ ]. Independent samples *t*-tests were used to investigate gender differences in extraversion, selfie posting attitudes, intentions, and behaviors. Results show that men and women do not differ in either extraversion ( $p = 0.29$ ) or selfie-posting attitudes, intentions, and behaviors ( $p = 0.71$ ).

## 5. Discussion and conclusion

The present study focused on gender differences and the relationships among culture, personality, and selfie posting on SNS. Findings suggest that selfie posting is a reflection of personality (i.e., extraversion) but not much of a cultural orientation. Thus, one of the main contributions of the present study is that even though culture (individualism and collectivism) and extraversion are related, culture does not have a strong relationship with selfie posting.

Results suggest that individualism has a statistically significant correlation only with attitudes toward selfie posting but the magnitude of such relation is quite small. Based on the findings, it can be concluded that increase in individualism is related to increase in

**Table 1**  
Correlations, descriptive statistics, and reliability of the measures.

	$\alpha$	Correlations					
		Individualism	Collectivism	Attitude	Intention	Behavior	Extraversion
Individualism	0.90	1.00					
Collectivism	0.90	– 0.60**	1.00				
Attitude	0.95	0.10*	0.02	1.00			
Intention	0.96	0.01	0.01	0.86**	1.00		
Behavior	0.93	0.01	0.02	0.82**	0.85**	1.00	
Extraversion	0.89	0.20**	0.16**	0.18**	0.14**	0.22**	1.00
Range of scores		1–5	1–5	1–5	1–5	1–5	1–7
Mean		3.76	3.77	2.90	2.83	2.80	4.87
SD		1.04	0.97	1.27	1.19	1.27	1.61

\*\*  $p < 0.01$ .

\*  $p < 0.05$ .

extraversion, which in turn is slightly related to more positive attitudes toward selfie posting. However, collectivism did not have any meaningful relationship with selfie posting attitudes, intentions, or behaviors.

Results also suggest a significant correlation with extraversion and selfie posting attitudes, intentions, and behaviors. Selfies shared on SNS are becoming prominent means of communication online. Non-verbal cues (e.g., postures, gestures, facial expressions) are being powerful means of online communication (Frosh, 2015). Extraverts communicate with others more effectively and intend to maintain this communication. Accordingly, selfie posting can serve a practically significant purpose in such a communication for extraverts. In addition, extraverts have common share with others and engage more in social activities. This suggests that extraverts who wish to share memories, feelings, and activities display more positive attitudes toward selfie posting, higher intention to post selfies, and do show more selfie posting behaviors. The current results along with the results of previous studies (e.g., Kim & Chock, 2016; Lee, Ahn, & Kim, 2014; Sorokowska et al., 2016; Sung, Lee, Kim, & Choi, 2016) support this interpretation. The implication of this finding is that extraverts would continue to post selfies so long as they keep satisfying their social engagement needs.

Giluk and Postlethwaite (2015) argued that individuals higher in extraversion enjoy being social, have an assertive nature, and are sensation-seekers (Seidman, 2013). When these characteristics come together, it is no surprise that extraverts have more positive attitudes, higher intentions, and selfie posting behaviors on SNS (Ryan & Xenos, 2011). Sorokowska et al. (2016) found that extraversion and social exhibitionism determined the frequency of online selfie posting among 1296 Polish college students. In a similar study, Qiu, Lu, Yang, Qu, and Zhu (2015) examined the association between the Big Five personality traits and selfie posting behavior on SNS. They identified that specific cues in selfies were related to neuroticism, agreeableness, openness, and conscientiousness. It can be concluded from these findings that the fundamental characteristics of extraverts increase the likelihood of selfie posting attitudes, intentions, and behaviors.

The present study was able to identify significant correlations between individualism-extraversion and collectivism-extraversion. Prior studies suggest significant relationships between individualism and extraversion (McCrae, 2001; McCrae & Allik, 2002; McCrae & Terracciano, 2005). For example, Kotelnikova and Tackett (2009) suggested that individuals' behaviors on social media reflect their personality characteristics.

### 5.1. Limitations and future directions

Both culture and personality are profoundly comprehensive constructs that are impossible to be studied under any single research. We suggest that future studies attempt to replicate the results of the current findings as well as focus on the additional aspects of culture and

personality in relation to selfie posting. Comparable studies should be conducted in different cultures with different age groups to increase the external validity of current findings.

### References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Processes*, 50, 179–211.
- Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.). *The handbook of attitudes*. Lawrence Erlbaum Associates.
- Bacanlı, H., İlhan, T., & Aslan, S. (2009). The development of a personality scale based on the five-factor theory: The adjective-based personality test (ABPT). *Türk Eğitim Bilimleri Dergisi*, 7(2), 261–279.
- Chan, A. W., & Cheung, H. Y. (2016). Extraversion, individualism and M & A activities. *International Business Review*, 25(1), 356–369.
- Chiu, C. Y., Leung, A. K. Y., & Hong, Y. Y. (2011). Cultural processes: An overview. In A. K.-Y. Leung, C.-Y. Chiu, & Y.-Y. Hong (Eds.). *Cultural processes: A social psychological perspective* (pp. 3–22). Cambridge University Press.
- Eftekhari, A., Fullwood, C., & Morris, N. (2014). Capturing personality from Facebook photos and photo-related activities: How much exposure do you need? *Computers in Human Behavior*, 37, 162–170.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Foster, J. D., Campbell, W. K., & Twenge, J. M. (2003). Individual differences in narcissism: Inflated self-views across the lifespan and around the world. *Journal of Research in Personality*, 37, 469–486.
- Frosh, P. (2015). Selfies | The gestural image: The selfie, photography theory, and kinesthetic sociability. *International Journal of Communication*, 9, 1607–1628.
- Funder, D. C. (1997). *The personality puzzle*. WW Norton Co.
- Giluk, T. L., & Postlethwaite, B. E. (2015). Big five personality and academic dishonesty: A meta-analytic review. *Personality and Individual Differences*, 72, 59–67.
- Halpern, D., Valenzuela, S., & Katz, J. E. (2016). “Selfie-ists” or “Narci-selfiers”? A cross-lagged panel analysis of selfie taking and narcissism. *Personality and Individual Differences*, 97, 98–101.
- Hofstede, G. H. (1984). *Culture's consequences: International differences in work-related values* (2nd ed). Newbury Park, CA: Sage.
- Hofstede, G. H. (1994). Management scientists are human. *Management Science*, 40(1), 4–13.
- Hofstede, G. H. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage.
- Hui, C. H. (1988). Measurement of individualism-collectivism. *Journal of Cross-Cultural Psychology*, 22, 17–36.
- Hutchinson, M., & Gul, F. A. (1997). The interactive effects of extroversion/introversion traits and collectivism/individualism cultural beliefs on student group learning preferences. *Journal of Accounting Education*, 15(1), 95–107.
- Kim, J. W., & Chock, T. M. (2016). Personality traits and psychological motivations predicting selfie posting behaviors on social networking sites. *Telematics and Informatics*, 2016. <http://dx.doi.org/10.1016/j.tele.2016.11.006>.
- Kotelnikova, Y., & Tackett, J. L. (2009). Personality and cultural correlates of childhood psychopathology. *University of Toronto Journal of Undergraduate Life Sciences*, 3(1), 26–29.
- Le, T. N. (2005). Narcissism and immature love as mediators of vertical individualism and ludic love style. *Journal of Social and Personal Relationships*, 22(4), 543–560.
- Lee, E., Ahn, J., & Kim, Y. J. (2014). Personality traits and self-presentation at Facebook. *Personality and Individual Differences*, 69, 162–167.
- Markus, H. R., & Kitayama, S. (1998). The cultural psychology of personality. *Journal of Cross-Cultural Psychology*, 29, 63–87.
- Markus, H. R., & Kitayama, S. (2001). The cultural construction of self and emotion: Implications for social behavior. In W. G. Parrott (Ed.). *Emotions in social psychology: Essential reading* (pp. 119–137). Psychology Press.
- Marshall, T. C., Lefringhausen, K., & Ferenczi, N. (2015). The Big Five, self-esteem, and

- narcissism as predictors of the topics people write about in Facebook status updates. *Personality and Individual Differences*, 85, 35–40.
- McCrae, R. R. (2001). Trait psychology and culture: Exploring intercultural comparisons. *Journal of Personality*, 69(6), 819–846.
- McCrae, R. R. (2004). Human nature and culture: A trait perspective. *Journal of Research in Personality*, 38, 3–14.
- McCrae, R. R., & Allik, I. U. (2002). In R. R. McCrae, & J. Allik (Eds.). *The five-factor model of personality across cultures* (pp. 105–125). New York: Kluwer Academic/Plenum Publishers.
- McCrae, R. R., & Terracciano, A. (2005). Personality profiles of cultures: Aggregate personality traits. *Journal of Personality and Social Psychology*, 89(3), 407–425.
- Ogihara, Y., & Uchida, Y. (2014). Does individualism bring happiness? Negative effects of individualism on interpersonal relationships and happiness. *Frontiers in Psychology*, 5, 1–8.
- Qiu, L., Lu, J., Yang, S., Qu, W., & Zhu, T. (2015). What does your selfie say about you? *Computers in Human Behavior*, 52, 443–449.
- Rinne, T., Steel, G. D., & Fairweather, J. (2013). The role of Hofstede's individualism in national-level creativity. *Creativity Research Journal*, 25(1), 129–136.
- 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.
- Seidman, G. (2013). Self-presentation and belonging on Facebook: How personality influences social media use and motivations. *Personality and Individual Differences*, 54(3), 402–407.
- Singelis, T. M., Triandis, H. C., Bhawuk, D. P., & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-Cultural Research*, 29(3), 240–275.
- Smith, B. M. (1990). The measurement of narcissism in Asian, Caucasian, and Hispanic American women. *Psychological Reports*, 67, 779–785.
- 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.
- Spence, J. T. (1985). Achievement American style: The rewards and costs of individualism. *American Psychologist*, 40(12), 1285–1295. <http://dx.doi.org/10.1037/0003-066X.40.12.1285>.
- Sung, Y., Lee, J. A., Kim, E., & Choi, S. M. (2016). Why we post selfies: Understanding motivations for posting pictures of oneself. *Personality and Individual Differences*, 97, 260–265.
- Triandis, H. C., & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology*, 74(1), 118.
- Wasti, A., & Erdil, E. S. (2007). Measurement of individualism and collectivism: Validation of the self-construal scale and INDCOL in Turkish. *Yönetim Araştırmaları Dergisi*, 7(1–2), 39–66.