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Narcissism and self-esteem: Different motivations for selfie posting behaviors

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Abstract: Over the past few years, social networking site usage has increased rapidly, in particular as concerns photo-sharing and self-portrait photographs (so-called selfies). In the academic literature, some studies have recently analyzed the psychological antecedents of selfie posting behavior to better understand its underlying mechanism. Generally, scholars consider the use of selfies as a means of online self-presentation. In the present research, the effects of two personality traits known to impact self-presentation (i.e. narcissism and self-esteem) are investigated, considering the mediation effects of four selfie posting motives: attention-seeking, communication, archiving, and entertainment. Results on 237 participants show that selfie posting motives, narcissism and self-esteem are differently linked to frequencies depending on the type of selfie posted online (whether own, group, or partner). Moreover, the path analysis model shows that, even if positively correlated between them, self-esteem and narcissism have different motives underlying the use of selfies. In particular, narcissistic people engage in selfie posting behaviors because of a search for the attention of others and the urge to escape from boredom. Contrariwise, these are the two motives for which people with high self-esteem do not get involved in selfie-posting behaviors.

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PUBLIC INTEREST STATEMENT

In 2013, “selfie” was designated word of the year and it considered as a symptom of “social media-driven narcissism.” The number of selfies shared online in 2014 was around 880 billion and each day smartphone users posted about 93 million number of photos. Given the pervasiveness of selfie posting behaviors, an interesting issue is to identify the underlying psychological motivations. The study aimed to survey different predictions of narcissism and self-esteem on selfie posting behaviors through the mediation of the different selfie motivations (attention-seeking, communication, archiving, and entertainment). Results on 237 participants show that both motives, narcissism and self-esteem connect differently to posting frequencies of own, group, or partner selfies. High self-esteem people do not engage in selfie posting behaviors because they do not search for the others’ attention nor do they feel the urge to entertainment. Instead, these are the main motives for which narcissistic people get involved.



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1. Introduction

Common social networking sites usage (SNSs, e.g. Facebook, Instagram and Twitter) has increased rapidly over the past few years (see Biolcati & Cani, 2015; Biolcati, Cani, & Badio, 2013; Kaplan & Haenlein, 2010). Its relative novelty is linked to the occurrence of new psychological (e.g. the change of some communication codes) and collective phenomena (e.g. the spread of new forms of online behaviors), some of which have yet to be carefully explored (Błachnio, Przepiórka, & Rudnicka, 2013; Sorokowski et al., 2015). In particular, photo sharing has become a significant part of the online social experience. Over half of social network users post self-portrait photographs of themselves (alone or with other people) and share them online through social media (Smith, 2013; Sorokowski et al., 2015; Weiser, 2015). This is in part due to the increasing use of smartphones. In 2013, “selfie” was designated word of the year. It refers to “a photograph that one has taken of oneself, usually with a smartphone or webcam and shared via social media” (Oxford Dictionaries, 2015). The number of selfies shared online in 2014 was around 880 billion (Zigterman, 2013) and each day smartphone users posted about 93 million number of photos (Brandt, 2014).

Selfie-posting has earned a great deal of attention from newspapers and the academic world since 2011 (e.g. Sung, Lee, Kim, & Choi, 2016). Previous studies (Dhir, Pallesen, Torsheim, & Andreassen, 2016; Sorokowski et al., 2016) have suggested that females are more active in taking and posting own, partner and group selfies as compared to male social networking users. This is consistent with the wider research into computer-mediated communication, specifically into online self-presentation, which has shown that women are more prone to use photos for self-impression management than men (Muscanell & Guadagno, 2012).

Given the pervasiveness of selfie posting behaviors, in particular among young women (Manovich, 2014), an interesting issue is to identify the psychological motivations behind selfie-posting behavior in order to better understand its underlying mechanism. Generally, scholars agree that selfie posting symbolizes a relatively new but dominant means of online self-presentation (Qiu, Lu, Yang, Qu, & Zhu, 2015; Sung et al., 2016). The selfie distinguishes itself from other forms of self-promotion on social media. Users may indeed extend the self in a more complete way, showing in the portrait both physical characteristics and personality traits (Lee & Sung, 2016). Specifically, selfies seem naturally to contain the highest number of elements of ostentation and self-propagation (Weiser, 2015). Selfies have been defined as a symptom of “social media-driven narcissism” (Pearlman, 2013), meaning that the posting of self-portrait photographs represents a self-promoting activity.

Given the theoretical rationale on selfie-posting as a self-promoting online activity, the present study investigates the effects of two personality traits known to impact self-presentation, namely, narcissism and self-esteem. Narcissism is commonly defined as a pervasive pattern of grandiosity, need for admiration, and a hyperbolic sense of self-importance (Mehdizadeh, 2010; Oltmanns, Emery, & Taylor, 2006). Specifically, narcissists are characterized by a significantly inflated, positive but unrealistic self-image, a lack of interest in weaving close relationships, and an engagement in self-regulatory behaviors to confirm the positive evaluation of one’s own self (Foster & Campbell, 2007; Ong et al., 2011). Most of the theoretical models in personality psychology agree that narcissists use interpersonal relationships in part to affirm the positive illusions of their own physical desirability (Vazire, Naumann, & Rentfrow, 2008).

The association between narcissism and selfie posting behaviors has already been analyzed (Fox & Rooney, 2015; Leung, 2013; Sorokowska et al., 2016; Sorokowski et al., 2015). Given the narcissists’ need to gain others’ attention and admiration for preserving their own fragile self-image, posting selfies may reasonably function as a psychological way by means of which individuals attempt to

achieve these self-regulatory purposes (Sorokowski et al., 2015; Weiser, 2015). Scholars have indeed found that narcissism predicts higher levels of self-promoting content in several social networking activities (see Buffardi & Campbell, 2008).

Self-esteem is defined as an individual's overall self-evaluation of one's own worth (Rosenberg, 1965; Weiten, 2004). According to Judge and Bono (2001), it represents a specific dispositional trait, a *positive self-concept* that refers to people's representations of their distinctive, or general feelings of self-confidence. One's own level of self-esteem reveals personal representations of how individuals typically feel about their value, importance, or abilities across time and context (Rosenberg, 1986). Indeed, self-esteem represents the evaluation which individuals make and usually maintain with respect to themselves (Amirazodi & Amirazodi, 2011).

As many studies (e.g. Campbell, 2001) have pointed out, narcissism and self-esteem have commonalities. Scholars have explained the strong correlation between the two constructs by the fact that both narcissists and high self-esteem individuals share a high self-opinion (Campbell, Rudich, & Sedikides, 2002). Nevertheless, the two personality traits do not overlap. A critical difference concerns the interpersonal implications of these traits. Narcissism is rather harmful to interpersonal relationships, whereas self-esteem may be helpful. Furthermore, in clinical psychology it is widely accepted that narcissism is deep-seated in fragile self-esteem (Mehdizadeh, 2010). In contrast to narcissism, which is recognized as a risk factor for some forms of addiction (e.g. compulsive shopping, pathological gambling), high self-esteem is strongly associated with psychological health (Biolcati, 2017; Biolcati, Passini, & Griffith, 2015).

Previous research investigating relationships between social media activities and self-esteem has produced mixed results. Nadkarni and Hofmann (2012) have shown that self-esteem may predict the actual need for self-promotion on social networking sites. Mehdizadeh (2010) has instead found that individuals low in self-esteem engaged in more self-promoting behaviors on Facebook (including self-promoting photos) as compared with individuals with higher self-esteem (see Sorokowski et al., 2015). Conversely, other studies (e.g. Krämer & Winter, 2008) have pointed out that low and high self-esteem users did not differ on self-presentation behaviors. In addition, some studies have suggested that selfie-posting behavior encompasses a range of use and motivations: for example, taking and sharing selfies for "narcissist motives" (Halpern, Valenzuela, & Katz, 2016) might be very different from posting selfies to feel authentic (Warfield, 2014). Indeed, selfie-posting might not be a unidimensional phenomenon and a number of motivations to take and share selfies may exist simultaneously (Etgar & Amichai-Hamburger, 2017). In this sense, these several motivations underlying selfie-posting behavior may relate differently to personality characteristics. Therefore, in line with some literature (e.g. Biolcati, Passini, & Mancini, 2016; Wang, Jackson, Wang, & Gaskin, 2015; Weiser, 2015), psychological motives could be considered more important determinants of behaviors than personality traits because they are a more proximal source of behavior than individual characteristics.

In the present research, psychological motives are considered in order to investigate the hypothetically different predictions of narcissism and self-esteem on selfie-posting behaviors. Sung et al. (2016) have principally identified four motives for posting selfies on SNSs: attention-seeking, communication, archiving, and entertainment. The attention-seeking motive represents the drive for individuals to seek self-concept confirmation and affirmation through the positive evaluation of others (Bazarova & Choi, 2014). The communication motive represents the drive for individuals seeking to build and maintain relationships within their social networks. The archiving motive indicates that individuals take selfies and post them on SNSs to document special events. Finally, the entertainment motive suggests that individuals take and post selfies to pass the time and to escape boredom. Sung et al. (2016) have shown that the four motives were all significantly associated with selfie-posting frequencies. However, while research has examined the significant motivations behind

online photo-sharing (e.g. Etgar & Amichai-Hamburger, 2017), to our knowledge no study has yet investigated the motivations as mediators of the relationships between personality features (i.e. narcissism and self-esteem) and selfie-posting behaviors.

2. Hypotheses

The main aim of this study is to extend previous works on predictors of selfie-posting behaviors by investigating the relationship between selfie-posting, narcissism, self-esteem and motivations for selfie posting behaviors. In particular, the aim is to examine hypothetical different predictions of narcissism and self-esteem on selfie-posting behaviors through the mediation of distinct selfie motivations.

Our first hypothesis concerns the differences between men and women in regard to selfie posting behaviors. Specifically, in line with the literature previously described, we predicted that women would score higher on selfie-posting frequencies than men.

Our second hypothesis concerns the mediation effects of motivations for selfie-posting behaviors on the relationship between personality traits and selfie posting. Specifically, we hypothesized that narcissism and self-esteem were differently mediated by the four motives identified by the literature. As attention-seeking and entertainment are two motivations more related to personal needs while communication and archiving have a more social and relational purpose, we hypothesized that narcissism would be positively mediated by entertainment and attention-seeking and negatively by communication and archiving. Contrariwise, self-esteem should be positively mediated by communication and archiving, and negatively by entertainment and attention-seeking.

3. Methods

3.1. Participants

A convenience sample of participants was contacted online, using an Internet questionnaire implemented by Google Forms, a survey-generating tool (<https://www.google.com/forms/about/>). The questionnaire was publicly accessible and an invitation with the link to the questionnaire was disseminated to the potential participants by means of three systems: mailing lists, a newsgroup of university undergraduate students, and a social networking site, namely Facebook. Respondents were advised that their participation was voluntary and that their responses would remain anonymous and confidential. No fee was offered. The questionnaire was drafted in Italian. In order to check and prevent a person re-entering the survey site, the subject's IP address was monitored. The data were collected in 2017. The research was conducted in agreement with the ethical norms laid down by the Italian National Psychological Association.

A total of 237 Italian citizens (20.7% men and 79.3% women) responded by accessing the website and filling out the questionnaire. Participant ages ranged from 18 to 40 years ($M = 23.97$, $SD = 3.73$). As regards their level of education, 3.8% declared they had finished middle school, 45.1% declared they had completed a high school diploma, 31.6% had a university degree, 18.1% a master's degree, and finally 1.3 a PhD qualification.

3.2. Measures

3.2.1. Selfie-posting behaviors

Selfie-posting frequency was measured using one item, "How often would you say that you take and post selfies on SNSs?" Response options consisted of *very infrequently*, *once a month*, *once every other week*, *once a week*, *2-4 times a week*, *5-6 times a week*, *once a day*, and *several times a day*. Participants also specified the frequency by which over the past 30 days they had posted on social networks (from 1 = *never* to 6 = *always*): own selfies; group selfies; selfies with the partner. Moreover, they indicated the importance given to the number of likes to their selfies posted online (from 1 = *no importance* to 7 = *a lot of importance*).

3.2.2. Selfie-posting motives

Motivations were assessed using the 38-item scale developed by Sung et al. (2016). Response options ranging between 1 (*strongly disagree*) and 7 (*strongly agree*). As in the original study, four dimensions were computed: attention-seeking (6 items, e.g. “To attract attention,” $\alpha = .92$), communication (5 items, e.g. “To keep in touch with friends,” $\alpha = .75$), archiving (5 items, e.g. “To record a specific moment,” $\alpha = .85$), and entertainment (3 items, e.g. “To pass the time,” $\alpha = .69$).

3.2.3. Narcissism

Participants completed the 16-item version of the Narcissistic Personality Inventory (NPI, Ames, Rose, & Anderson, 2006). The NPI is composed by 16 forced-choice dyads. Participants chose either the non-narcissistic (recoded as 0, e.g. “I prefer to blend in with the crowd”) or the narcissistic response (recoded as 1, e.g. “I like to be the center of attention”). The 16 items were summed together ($\alpha = .71$). The sum score ranged from 0 to 16, where higher scores indicate higher levels of narcissism.

3.2.4. Self-esteem

The Rosenberg (1965) Self-Esteem (RSE) scale is a 10-item instrument in which participants respond to each item on a 4-point Likert-scale (from 1 = *strongly disagree* to 4 = *strongly agree*). Example items include: “On the whole, I am satisfied with myself” and “All in all, I am inclined to feel that I am a failure” (reversed item). A RSE index was computed as the mean of all the items ($\alpha = .77$), so that higher totals reflect higher self-esteem.

3.3. Data analysis

First, in order to explore the relationships between the variables investigated, bivariate correlations were computed. In particular, Spearman’s correlations were used between single scale items (i.e. the four items measuring selfie-posting behaviors and importance attached to “likes”), while Pearson’s correlations were used in the other cases. Second, differences between men and women were computed using χ^2 test, in case of the general selfie-posting frequency, and ANOVA in case of all the other variables.

Third, a path analysis model was computed to test Hypothesis 2, i.e. the mediation of motivations for posting selfies on the relationship between narcissism and self-esteem with selfie-posting frequencies. The model was estimated via maximum likelihood (ML) estimation using the Mplus 8 software program (Muthen & Muthen, 2012). For the evaluation of the model fit, we relied on the following indexes: the comparative fit index (CFI), the Tucker-Lewis index (TLI), the standardized root-mean-square residual (SRMR), and the root-mean-square error of approximation (RMSEA). Consistent with the recommendation of Hu and Bentler (1999), goodness-of-fit criteria were used in order to quantify acceptable (CFI > 0.90, TLI > 0.90, SRMR < 0.10, RMSEA < 0.08) and excellent fit (CFI > 0.95, TLI > 0.95, SRMR < 0.08, RMSEA < 0.06). Finally, the indirect effects and their standard errors in the model were also estimated with Mplus, which uses the so-called delta method (Mackinnon, Lockwood, Hoffman, West, & Sheets, 2002). Given that the survey software automatically obligated participants to respond to all the items, no data were missing.

4. Results

As concerns the selfie-posting frequency, half of the participants ($n = 109$, 46%) engaged in selfie-posting behaviors very infrequently, while 73 people (30.8%) once a month or once every other week, 27 (11.4%) once a week, and 28 (11.6%) 2–4 times a week or more frequently. No difference for sex was found on general selfie-posting behaviors [$\chi^2(7, N = 237) = 7.81, p = ns$]. As can be seen in Table 1 (left part), descriptive statistics showed that participants declared not to frequently post own, group or partner selfies, while they attach importance to the “likes” they received around the midpoint of the scale. Motivations for posting selfies showed that selfies were posted principally for archiving, even if also the other three motivations had scores around the midpoint of the scale. As concern sex differences (see Table 1, low part), the ANOVA showed that women had a higher frequency of group selfies compared to men, while no differences were found on the other frequencies

Table 1 Means, standard deviations, correlation coefficients and ANOVA differences for sex among all the variables.

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. Selfie frequency (1, 8)	2.32	1.65	-										
2. Own selfie (1, 6)	1.78	1.10	.70***	-									
3. Group selfie (1, 6)	2.11	1.22	.54***	.43***	-								
4. Partner selfie (1, 6)	1.41	.84	.17**	.16**	.20**	-							
5. Likes (1, 7)	3.55	1.70	.21***	.34***	.16*	-.04	-						
6. Attention (1, 4)	1.90	.84	.13*	.24***	.08	-.06	.58***	-					
7. Communication (1, 4)	1.76	.59	.33***	.30***	.32***	.06	.44***	.40***	-				
8. Archiving (1, 4)	2.45	.78	.28***	.23***	.24***	-.06	.31***	.37***	.55***	-			
9. Entertainment (1, 4)	1.97	.76	.31***	.32***	.24***	.08	.41***	.68***	.42***	.44***	-		
10. NPI (0, 16)	3.23	2.65	.11	.17**	.10	.13	.14*	.17**	.11	.03	.14*	-	
11. RSE (1, 4)	2.99	.43	.06	-.08	.05	.20**	-.25***	-.25***	.05	.03	-.15*	.25***	-
M men	-	-	-	1.67	1.82	1.39	3.35	1.96	1.74	2.38	1.93	4.67	3.07
M women	-	-	-	1.81	2.19	1.41	3.61	1.88	1.77	2.47	1.99	2.85	2.97
F	-	-	-	.64	3.69*	.40	.90	.34	.82	.62	.19	19.90***	2.31

Notes: NPI = Narcissistic personality inventory and RSE = Rosenberg self-esteem. Correlations of single items (Column 1 to 5) were computed with Spearman's coefficient, while all the others with Pearson's one.

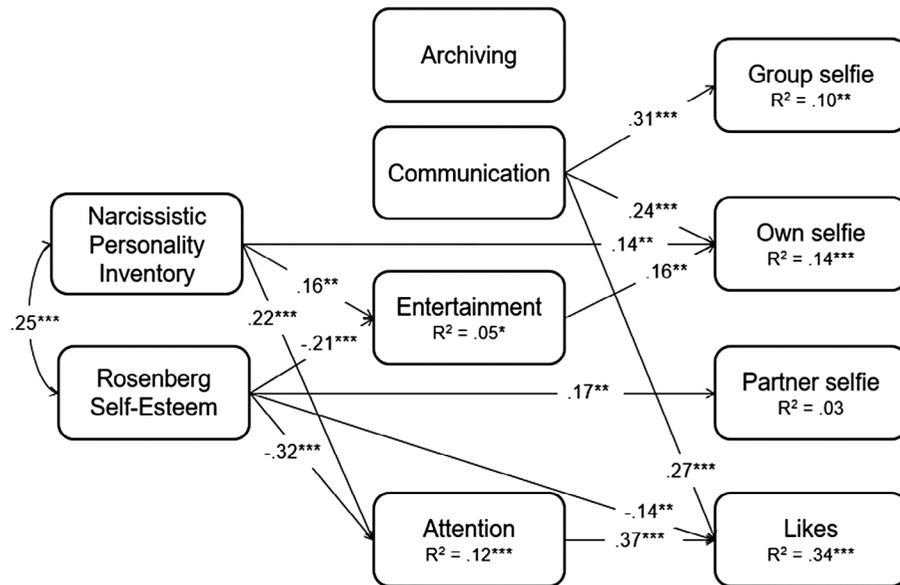
* $p < .05$.

** $p < .01$.

*** $p < .001$.

Figure 1. Path analysis of the effects of NPI and RSE on selfie-posting behaviors mediated by selfie-posting motives.

Notes: Reported coefficients are standardized.
 Commun. = Communication.



and on motivations for posting selfies. As concerns personality variables, men had higher scores on NPI as compared to women.

Bivariate correlations (see Table 1, right part) showed that selfie frequency was strongly positively correlated with own, group selfie, while more moderately correlated with partner selfie. All selfie posting frequencies except partner selfies were positively correlated with likes (especially own selfie had a strong coefficient), and with motivations concerning communication, archiving, and entertainment, while not correlated with attention (except for own selfie). Partner selfie was not correlated with any of these variables. NPI and RSE (moderately positively correlated between them) were differently correlated with the other variables: NPI was moderately positively correlated with own selfie, likes, attention-seeking and entertainment, while RSE was moderately positively correlated with partner selfie, and negatively with likes, attention seeking, and entertainment.

As concerns the path analysis model, we started from a model which included all paths from NPI and RSE to the four selfie posting motives, and all paths from motives to the items identifying selfie-posting behaviors. Then, non-statistically significant paths ($p > .05$) were trimmed from the model (Kline, 2004): i.e. the paths from NPI and RSE to archiving ($\beta = .02$ and $\beta = .02$, respectively) and to communication ($\beta = .10$ and $\beta = .02$, respectively), the paths from archiving to all the dependent variables ($\beta = .01$ on own, $\beta = .07$ on group, $\beta = -.12$ on partner, $\beta = .05$ on likes), as well as the one from communication to partner selfie ($\beta = .14$), the one from entertainment to group ($\beta = .17$) and partner ($\beta = .16$) selfie and to likes ($\beta = .01$), and finally the one from attention to group ($\beta = -.10$), own ($\beta = -.07$), and partner ($\beta = .11$) selfie. Moreover, the modification indexes suggested to set free the paths from NPI to own selfie and the ones from RSE to partner selfie and likes. The fit indexes of the resulting model display a good fit with $\chi^2(22) = 28.07$, $p = .17$, CFI = .99, TLI = .98, RMSEA = .03, SRMR = .04. Final path coefficients (see Figure 1) showed that NPI and RSE both predicted entertainment and attention-seeking but in an opposite direction: NPI was a positive while RSE a negative predictor. Moreover, NPI had a direct positive effect on own selfies and RSE a direct positive effect on

partner selfie and a negative effect on likes. Motivations for posting selfies were positively predictors of selfie-posting. In particular, communication predicted group and own selfie and likes, entertainment predicted own selfie, and attention predicted likes. Archiving did not significantly predict any variable.

As concerns the mediation effects, the indirect effects from NPI and RSE on own selfie through the mediating effects of entertainment were significant ($B = .03, t = 1.91, p < .05$ and $B = -.03, t = -2.17, p < .05$, respectively). The indirect effects from NPI and RSE on likes through the mediating effects of attention were significant ($B = .08, t = 3.37, p < .001$ and $B = -.12, t = -4.39, p < .001$, respectively).

5. Discussion

The main aim of the present research is to investigate the different predictions of narcissism and self-esteem on selfie-posting behaviors through the mediation of the selfie posting motives. Given the hypothetical effects of these two personality traits in self-presentation strategies, the current study explores these differences in a rather new form of self-promotion, i.e. selfies.

First of all, we have hypothesized that women would score higher on selfie-posting frequencies than men. The results partially confirm this hypothesis. Indeed, according with the previous literature on selfies (e.g. Dhir et al., 2016), our results show that females are more active in taking group selfies, while no gender differences on own and partner selfies emerge. It is worth noting that most recent research has indeed shown that both males and females frequently post selfies (Katz & Crocker, 2015) and that gender differences might appear just in the way self-presentation is made through them (Dhir et al., 2016). Our result is therefore consistent with previous research into online self-presentation, in which women tend to post and present themselves more as a part of a social group (Manago, Graham, Greenfield, & Salimkhan, 2008). Indeed, scholars have shown that men tend to portray themselves on SNSs according to stereotypical standards of masculinity (e.g. power) and women instead portray themselves as “affiliative.” That is, through online activities, women try to communicate and extend their social network and to seek social satisfaction (Dhir et al., 2016; Joiner et al., 2012). The lack of differences in overall selfie posting frequencies could also be explained by the fact that the men in our sample have higher scores on narcissism as compared to women. In this sense, it is reasonable that individuals with high levels of narcissism use selfies as a usual means to manage impressions (Sung et al., 2016).

Second, the relations of narcissism and self-esteem with the overall selfie-posting frequency are not significant. In accordance with Barry, Doucette, Loflin, Rivera-Hudson, and Herrington (2017), we found a general lack of association between narcissism and self-esteem with overall postings of selfies, suggesting that personality traits are significantly related just to specific categories of selfies. Narcissism indeed correlates with own selfie posting, while self-esteem with partner selfie. In this sense, by being people who seek attention and exhibitionism, narcissists attach great importance to posting own selfies, faced with an audience of admirers, and less importance to posting in general or sharing group or partner selfies (Vazire et al., 2008). This is confirmed by the significant positive correlation between NPI and the importance attached to the likes received. As suggested by Sorokowski et al. (2015), narcissism may be positively related to posting and improving one’s self-image, but may not necessarily be related to posting portraits of oneself as a member of a group or of a romantic couple. Thus, our study extends previous results concerning the positive relationship between narcissism and self-promoting behaviors in social networking websites (e.g. DeWall, Buffardi, & Bonser, 2011; Weiser, 2015) by showing that narcissism does not correlate with all forms of selfies, but just with one’s own. Instead, self-esteem only positively correlates with partner selfies. This result suggests a certain dose of happiness and satisfaction in affective relationships that lead people to share their couple images on social media (Orth & Robins, 2014). Moreover, findings may be in line with the theory model of self-esteem (Murray, Holmes, & Griffin, 1996) suggesting that individuals with high self-esteem have a positive evaluations of their romantic partners that may, in turn, result in better gratification in the relationship.

Third, as could be expected, our study found that the four motives investigated are correlated to frequency of selfie posting, suggesting that the higher are selfie motivations, the greater is the frequency of selfie sharing. However, it is worth noting that communication, archiving and entertainment motives are correlated with all frequencies (except for partner selfie which is an infrequent selfie posting behavior, at least in our research). Instead, attention motive is linked only to own selfie posting. These results suggest that each motive might be differently linked to frequencies depending on the type of selfie. A recent study by Yang and Li (2014) has found that individuals post portraits of themselves or of themselves with others on social media for a communication purpose, which is the desire to get responses from other users. Moreover, frequencies of own or group selfies are driven also by an individual's desire to capture and document a specific life event or a particular place (i.e. archiving) and as a way of escaping from boredom or as a source of entertainment. As concerns the correlation of attention-seeking with just own selfies, this result might be explained by the specificity of this motivation: among the various means of self-presentation offered by social networking websites, selfies accentuate one's key characteristics by exhibiting improved and desired self-image with the intention of seeking admirers (Bazarova & Choi, 2014). In this sense, own selfies are one of the main means of self-promotion and image management offered by social media, as they make possible sharing a desired view of oneself. These distinct patterns of correlation suggest that the specific type of selfie should be considered when the relationships between psychological traits and selfie posting behaviors are investigated.

Fourth, the path analysis model shows more in depth how the personality traits predict selfie posting behavior, considering the mediation of the four selfie motives. It is worth noting that, in disagreement with the hypothesis but as suggested by the correlation patterns, archiving and communication were not connected with narcissism and self-esteem. Thus, the two motives that are less related to any type of discomfort and that may, in a certain sense, be considered as healthy motivations—as they express a social motivation to share with others their own life—are neither connected to self-evaluation nor to the desire to appear. Instead, entertainment (i.e. the escape from boredom) and attention-seeking appear to mediate the link between the two personality traits considered and selfie-posting behavior. The relevant result is that, even if positively correlated between them, the model suggests two different (and almost contrary) modalities in the use of selfies of people high in self-esteem or narcissism. People with high self-esteem do not engage in selfie-posting behaviors with the aim of searching for the attention of others or escaping from boredom. Instead, these are the main motives by which narcissist people get involved, as concerns own selfies and importance attached to the likes received. In this sense, as suggested by Halpern et al. (2016), taking selfies for narcissist reasoning might be perceived as the opposite of taking selfies to feel authentic, which is more frequently a feature of individuals with high self-esteem (see Warfield, 2014).

This research has some limitations which ought to be borne in mind for future research. First, the gender imbalance limits the generalizability of the findings and precludes our capacity to deepen the role of gender on selfie posting behaviors. Even though gender difference was taken into account, in the future the same study should be replicated in a more balanced sample. Second, this study is based on self-reported data. Other studies (e.g. Amichai-Hamburger & Vinitzky, 2010) have shown that the relationships between personality traits and selfie-posting behaviors may be different when measured by more objective criteria. Third, further variables should be considered. As Weiser (2015) has pointed out, selfie-posting may be indeed associated with other factors not assessed in this research, such as other personality traits (e.g., extraversion). Moreover, it may be interesting to consider the two forms of self-esteem identified by Kernis, Lakey, and Heppner (2008): i.e. secure and fragile self-esteem. Indeed, individuals with secure high self-esteem should have well-anchored feelings of self-worth that are generally related to a healthy psychological functioning. Instead, individuals with fragile high self-esteem should tend to defend their positive, yet vulnerable, feelings of self-worth and are characterized by maladaptive processes, such as anger and hostility. As those authors have pointed out, only this second form of self-esteem is related to narcissism.

Notwithstanding these limitations, the present study extends previous selfie literature showing that personality and trait-related motives are dominant planners of selfie posting behaviors on social media. According to Weiser (2015), selfie posting is not an unmotivated, empty activity. Instead, it is a form of self-presentation and interaction that carries both underlying psychological and social meanings. The results of the present research contribute in this sense to offering valuable understandings of selfie-posting profiles specifically and social media users in general.

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