Selfies and personality: Who posts self-portrait photographs?

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A B S T R A C T

Online social networking (OSN) sites play many roles ranging from communication to entertainment. The current paper presents an analysis of the recently emerged OSN phenomenon of the selfie (self-portrait photographs of oneself). In two studies involving a total of 1296 men and women, we tested the prediction that selfie-sharing on various OSN sites (including Facebook) is positively related to social exhibitionism, extraversion, and self-esteem. Participants reported sharing anywhere between 0 to 650 selfies per month on various OSN sites, and were found to post, on average, 2.9 selfies of themselves, 1.4 selfies with a romantic partner, and 2.2 group selfies to Facebook each month. Women posted more selfies of each type than did men. Regardless of sex, our results indicate that social exhibitionism and extraversion generally predicted the frequency of online selfie-posting in men and women, however we found no strong evidence for a relationship between self-esteem and selfie-posting behavior among women, and only weak evidence among men. The results of this work highlight key individual differences among OSN users that can account for some of the variation in online photo sharing behavior, and provide novel insight into the psychological factors driving this rapidly popularizing phenomenon.

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1. Introduction

The recent trend of promoting oneself through the use of online social networking (OSN) sites may have contributed to the emergence of a new and apparently self-presenting and self-promoting phenomenon: posting "selfies" to various OSN sites, such as Facebook. A selfie has recently been defined as, "a self-portrait photograph of oneself (or of oneself and other people), taken with a camera or a camera phone held at arm's length or pointed at a mirror, which is usually shared through social media" (Sorokowski et al., 2015). Although the word describing this phenomenon is relatively new, in 2013 it had already become Oxford Dictionary's word of the year. Despite its growing popularity, observed both in the increased usage of the word selfie (over 17,000% increase in usage from 2012 to 2013; Oxford Dictionary) and in the increased reference to selfies in various types of mass media (including songs and television series), the present study is one of only a small number of studies to investigate the phenomenon of the selfie.

Studies to date (Fox & Rooney, 2015; Sorokowski et al., 2015; Weiser, 2015) have shown that selfie-posting behaviors are positively related to narcissism, especially in the case of men. However, data regarding other personality traits are scarce. The present research sought to better understand this new social phenomenon by exploring other characteristics of people differing in their selfie-posting activity. In their recent review of studies investigating the social functions of Facebook – currently the most popular social networking site – Nadkarni and Hofmann (2012) suggested that social media usage satisfies two basic social needs: the need to belong and the need for self-presentation. The present paper tested the hypothesis that selfie-sharing is related to self-presenting behaviors.

Past studies have analyzed a wide range of behaviors related to online self-presentation, including choice of Facebook profile picture (Back et al., 2010) and other online photo-sharing behaviors (Gosling, Augustine, Vazire, Holtzman, & Gaddis, 2011; Ong et al., 2011; Stefanone, Lackaff, & Rosen, 2011). Although many psychological characteristics appear to predict online photo-sharing activity, these studies suggest that extraversion, self-esteem, and exhibitionism are most consistently related to photo-sharing activity. Of the Big Five personality traits (McCrae & Costa, 2003), Gosling and collaborators (Gosling et al., 2011) found that an individual's level of extraversion best predicted both the frequency of adding photos of themselves and other people to their Facebook profile, and the frequency of replacing their profile picture. In addition, more extraverted OSN users appear to be more engaged in social media use than are less extraverted users (Correa, Hinsley, & de Zúñiga, 2010). This is perhaps unsurprising, as extraverted people are generally highly sociable (McCrae & Costa, 2003).

Nadkarni and Hofmann (2012) suggested that, in addition to a high level of extraversion, self-esteem may also predict the apparent need for self-presentation on OSN sites (Nadkarni & Hofmann, 2012). However, current evidence to support this prediction is mixed. Mehdizadeh (2010) found that individuals low in self-esteem engaged in more self-promoting behaviors on Facebook than did individuals with higher self-esteem, and women characterized by low self-esteem posted more self-promoting photos online than did women with higher self-esteem. Subramanian and colleagues (2014) further found that high self-esteem predicted more other- than self-referent Facebook posts. However, Krämer and Winter (2008) did not find any differences between the self-presentation behaviors of low and high self-esteem users. Social exhibitionism may also be associated with photo posting for self-presentation on OSN sites. Exhibitionism, as defined by Murray (1938), is related to vanity and a willingness to attract attention. Carpenter (2012) found that "Grandiose Exhibitionism" (a factor of narcissism) was related to self-absorption, whereas a need to be the center of others' attention (Ackerman et al., 2011) appears to be an important determinant of self-promotion on Facebook (via status updates, photos, and attaining large numbers of friends).

The present study was designed to further explore the phenomenon of selfies and to assess the psychological characteristics of people differing in selfie-posting activity. Specifically, we measured the number of selfies shared via various online social media sites to test whether extraversion, self-esteem, and social exhibitionism predicted individual differences in selfie-posting behavior. To do this, we conducted two separate studies. The first study involved self-report questionnaires, and the second study was an online Facebook study. The traditional paper-and-pencil questionnaires used in Study 1 enabled us to reach a large, diverse group of participants, whereas the Facebook analysis used in Study 2 increased the reliability and validity of our findings, as actual and self-reported measures of OSN use might differ (Junco, 2013). We chose Facebook to conduct Study 2 for several reasons. First, Facebook is considered the prototypical OSN site (Wilson, Gosling, & Graham, 2012). It is also the largest OSN site; more than one billion people from all over the world (and 12.2 million people in Poland) have a Facebook profile. Additionally, one of the most prominent and popular features of Facebook is the ability for its users to post photos and share them with friends, acquaintances, or even strangers. According to Facebook statistics, more than 200,000 photos are uploaded to this website every minute, making it the world's most popular online photographic service. Based on previous research discussed above and the nature of the personality characteristics included in our study, we predicted that in both Studies 1 and 2, extraversion, self-esteem, and social exhibitionism would be positively associated with selfie-posting.

2. Method

2.1. Participants

Study 1 included a total of 748 participants (355 women and 393 men) aged 17 to 47 years ($M = 21.64$; $SD = 3.41$). Participants were recruited from various university campuses in Poland. Study 2 included a total of 548 Facebook users (330 women and 218 men) aged 14 to 47 years ($M = 23.72$; $SD = 4.39$), none of whom took part in Study 1. These participants were recruited through personal contacts by the authors and their students. All participants provided informed consent prior to their inclusion in the study.

2.2. Measures

In both studies, each participant completed the following three personality questionnaires:

1. The Self-esteem (SES) Rosenberg scale (Rosenberg, 1989), Polish adaptation (Laguna, Lachowicz-Tabaczek, & Dzwonkowska, 2007). The SES scale consists of 10 declarative statements scored 1 (I definitely agree) to 4 (I definitely disagree) and it measures general, explicit and global levels of self-esteem, i.e. a person's opinion about his or her value, understood as a relatively stable characteristic (Baumeister, Campbell, Krueger, & Vohs, 2003). The internal consistency (Cronbach's alpha) of the Polish adaptation of this scale was .80 and .83 in Studies 1 and 2, respectively.

2. The Extraversion scale of the NEO-Five Factor Inventory (Costa & McCrae, 1992), Polish adaptation (Zawadzki, Strelau, Szczepaniak, & Sliwinska, 1998). The internal consistency (Cronbach's alpha) of the Polish NEO-FFI extraversion scale was .76 and .77 in Studies 1 and 2, respectively.

3. The Murray Social Exhibitionism Index designed to measure a person's willingness to be noticed, seen, and heard by other people (Siek, 1993) (adapted from (Murray, 1938)). The scale consists of 10 items scored 1 (I definitely agree) to 4 (I definitely disagree) with a possible score range of 10–40. The scale contains statements such as, "I prefer being noticed than staying in the shade", "I enjoy it when other people observe me when I do something well", and, "I like being the centre of attention during social meetings". The test–retest reliability of the Polish version of this method is $r_{tt} = .58$. The internal consistency (Cronbach's alpha) was .85 and .84 in Studies 1 and 2, respectively.

We examined three categories of selfies: own selfies; selfies with a romantic partner; and group selfies (i.e. taken with one or more individuals, excluding the romantic partner). In Study 1, the participants reported the self-assessed number of photos posted during the previous month on all types of OSN sites (including Facebook, Twitter, Instagram, and Whatsapp). In Study 2, we measured the actual, total number of photos posted by each participant on Facebook. We controlled for the age and sex of the participant in all analyses.

2.3. Procedure

In Study 1, each participant completed three questionnaires designed to assess their personality (listed above) and a survey designed to assess their selfie-sharing activity during the previous month. Participants were asked to count the number of each type of selfie (own, partner and group) and the total number of photos, excluding selfies, posted by them on social media. Questionnaires were completed by the participants at home and handed back in an envelope on a scheduled day.

In Study 2, undergraduate research assistants volunteered to take part in the project as recruiters. These students recruited participants from among their Facebook friends to take part in a study regarding personality and Facebook usage. The students messaged their Facebook friends individually with the use of Facebook chat; the recruitment message contained a general request to take part in the study, a short explanation of the study purpose, and an individually assigned link enabling the participants to complete the questionnaire. These invited individuals were informed that their responses would be entirely anonymous. When a participant agreed to participate in the study and completed the questionnaire, his/her responses appeared in a database under an individually assigned code. The code was anonymous, as it was not directly linked to the individual participant's name or identity. Research assistants then counted all photos available to Facebook friends posted to each participant's Facebook page, categorizing them as own selfies, selfies with a romantic partner, and group selfies. In order to avoid privacy setting violations, the photos were counted by one student experimenter only (every student experimenter counted only the pictures of their Facebook friends). Approximately 30% of all approached participants took part in the Facebook study.