Grandiose and vulnerable narcissists: who is at higher risk for social networking addiction?

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Abstract

Scholars have recently taken an interest in the connection between narcissism and Internet use, especially among users who frequent social networking sites. Conversely, the association between narcissism and problematic use of social networking sites (i.e. unregulated use that leads to negative outcomes) has been scarcely investigated. The present study addresses this gap by comparing the mean levels of problematic use of SNS among grandiose narcissists, vulnerable narcissists, and non-narcissists. A sample of 535 students completed the 16-item Narcissistic Personality Inventory (NPI), the Hypersensitive Narcissism Scale (HSNS), and the Generalized Problematic Internet Use Scale-2 (GPIUS2).

Vulnerable narcissists reported 1) significant higher levels on all GPIUS2 subscales and total scores compared to non-narcissists, and 2) a stronger preference for online social interactions and higher overall levels of problematic use of SNS compared to grandiose narcissists. Conversely, no significant differences were found between grandiose narcissists and non narcissists. The present study suggests that vulnerable narcissism may contribute more to problematic use of SNS than grandiose narcissism.

Key-words: Vulnerable narcissism; Grandiose narcissism; Internet addiction; Social Networking Addiction; Generalized Problematic Internet Use

Introduction

In recent years, the study of narcissism has expanded enormously, and multiple studies[1-4] have documented the existence of two particular subtypes of narcissism: *grandiose and vulnerable*. The grandiose type, also referred to as "overt" narcissism, is characterized by the search for

admiration, high self-esteem, direct expression of exhibitionism, and arrogance.[5-6] It also reflects traits related to dominance, grandiosity, and aggression. Conversely, vulnerable narcissism, or "covert" and "hypersensitive" narcissism, is characterized by a defensive and insecure sense of grandiosity that is associated with low self-esteem, shame-proneness, shyness, and hypersensitivity to the evaluation of others.[7] Whereas arrogance and displays of dominance are peculiar to grandiose narcissism, both the forms are characterized by a sense of entitlement, grandiose fantasies,[8] and a tendency to promote an image of perfection while pursuing the admiration of others.[9] For this reason, previous research has often hypothesized that social networking sites (SNS) represent an ideal environment for achieving narcissistic goals because they provide greater control over self-presentation and an opportunity to reach a wider audience. In keeping with these hypotheses, some research has highlighted a positive association between grandiose narcissism and how often users update their statuses,[10] upload attractive photos, promote their own content,[11] and make efforts to attract admiring friends to their own Facebook profile. [12] Similar research has shown that grandiose narcissists tend to update their status more frequently for self- presentation purposes than non-narcissists. [12-16]

The few studies that have considered the distinction between grandiose and vulnerable narcissism found that both the forms turn out to be more interested in using online social platforms for self-presentation purposes than non-narcissists. This was revealed by the user's tendency to

include more albums with personal photos on their Facebook pages.[14] Other studies, meanwhile, have shown that vulnerable narcissism (but not grandiose narcissism) was positively and significantly associated with the user's attempts to secure privacy on SNS. [17]

Building on these previous studies, it has been recently supposed that high levels of narcissistic traits can lead to the excessive use of SNS – i.e. a deficient self-regulation – and produce a host of negative outcomes. In line with studies showing that narcissism is positively related to self-promotion through online platforms, it has been speculated that individuals with elevated narcissistic traits might report a compulsive use of social media because SNS provide them with an ideal tool in which to reinforce an idealized self and gain admiration. Whereas previous studies failed to find a predictive role for narcissism in unspecified forms of Internet addiction, [18] a positive correlation between grandiose narcissism and addictive use of social media has recently been reported.[19-20]

Surprisingly, all of the studies mentioned above have focused on grandiose narcissism. No studies to date have investigated the association between vulnerable narcissism and problematic use of SNS, nor have they compared grandiose and vulnerable narcissists in the context of problematic SNS use. On the one hand, grandiose and vulnerable narcissists do not differ regarding their search for admiration, and SNS have already been proven to offer users a good environment in which to attain narcissistic goals. On the other hand, computer-mediated-interactions and face-to-face interactions differ in a way that might be particularly appealing to vulnerable narcissists.[21-22] Online interactions

allow greater control over self-presentation and impression formation, which may create a sense of security that is otherwise lacking among vulnerable narcissists. Indeed, communicating and self-presenting online were found to be associated with decreased risk of negative evaluation,[23] and previous research has shown that vulnerable narcissists are at least as sensitive to negative feedback as high grandiose narcissists. Moreover, vulnerable narcissists report a greater tendency to avoid direct feedback and they are more sensitive to interpersonal setbacks compared to grandiose narcissists. [24] In keeping with these results, it has been recently reported that vulnerable narcissists feel safer and more comfortable in online interactions than in face-to-face situations.[25] These preliminary results suggest that empirical research on problematic SNS use should expand the focus of the attention by also considering the vulnerable form of narcissism.

The present study represents a first step to fill this research gap by investigating differences in the problematic use of SNS among grandiose and vulnerable narcissists. Our first hypothesis states that higher levels of problematic use will be found among vulnerable and grandiose narcissists than non narcissists (*H1*). Our second hypothesis, meanwhile, states that higher levels of problematic use can be expected among vulnerable narcissists than grandiose narcissists (*H2*).

Materials and Methods

Participants

A sample of 540 students studying at the University of Florence were approached by four female assistants. Data collection consisted of written questionnaires, and general information about the purposes of the study were announced to the participants beforehand. All but five students agreed to join the study (N = 535; 50.9% F; mean age: 22.73 $\pm$ 2.77 years). The participation was voluntary and anonymous, and confidentiality was guaranteed. No formative credits or remunerative rewards were given. Study procedures were designed in accordance with the European research ethical guidelines. The study protocol was approved by the Director of the Department of Psychology.

Measures

Grandiose Narcissism was assessed through the Italian adaptation[26] of the brief abbreviated version of the Narcissistic Personality Inventory. [27] The NPI-16 is a shorter, unidimensional measure of the NPI-40, which is designed to measure grandiose narcissism in the non-clinical population. It contains 16 pairs of items, each consisting of two conflicting proposals that the participants must express a preference for

according to their own beliefs and feelings (e.g. “I like to be the center of the attention” vs. “I prefer to blend in with the crowd”). This 16-item forced-choice format personality questionnaire has an α = .72 and notable face, internal, discriminant, and predictive validity. [27] In the current study, the Cronbach’s alpha was α =.73

The Italian adaptation[28] of the *Hypersensitive Narcissism Scale* [29] was used to assess *Vulnerable Narcissism*. The HSNS is a 10-item, one-dimensional measure of vulnerable narcissism involving statements regarding feelings of narcissistic hypersensitivity (e.g. “My feelings are easily hurt by ridicule or by the hurtful remarks of others”). The HSNS has demonstrated reliability and validity in numerous studies. [30-31] Participants indicated to what extent the items were characteristic of their feelings and behavior using a response scale that ranges from 1 (*very uncharacteristic or untrue*) to 5 (*very characteristic or true*). In the current study, the Cronbach’s alpha was α = .67

The Italian adaptation[32] of the *Generalized Problematic Internet Use Scale-2* [33] was used to assess the degree to which an individual experiences the types of cognitions, behaviors, and outcomes that arise because of the unique communicative context of the Internet. Participants were asked to explicitly focus on their use of SNS. The GPIUS2 is a 15-item scale that addresses four higher-order dimensions: (a) preference for online social interactions (POSI), which is defined as the belief that one is safer, more efficacious, and more confident with online

interpersonal interactions than with face-to-face interactions (e.g. “Online social interactions is more comfortable for me than face-to-face interactions); (b) Mood Regulation, which pertains to the motivation to use the web as a means of alleviating distressing feelings (e.g. “I have used the Internet to make myself feel better when I was down”); (c) Deficient self-regulation, which refers to the inability of users to control their online behavior (e.g. “I find it difficult to control my Internet use) and obsessive thinking about the online world (e.g. “I think obsessively about going online when I am offline”); (d) Negative outcomes, which describes the extent to which an individual experiences personal and social problems resulting from use of the Internet (e.g. “I have missed social engagements or activities because of my Internet use”). The Italian version of the GPIUS2 demonstrates solid construct and convergent validity. The Cronbach’s Alphas of the subscale in the present study ranged from $\alpha = .747$ to $\alpha = .805$.

Results

The mean total score and the standard deviation obtained by the total sample on the NPI and the HSNS were used to identify grandiose and vulnerable narcissists. The mean NPI score was 3.58 with a standard deviation of 2.925. The mean HSNS score was 25.47 with a standard

deviation of 5.955. Scores that fell above mean plus one of the standard deviation of the NPI *and* below the mean plus one of the standard deviation of the HSNS were classified as high grandiose narcissism. Scores that fell above the mean plus one of the standard deviation of the HSNS *and* below the mean plus one of the standard deviation of the NPI were classified as high vulnerable narcissism. 80 participants (14.66% of the total sample) were identified as reporting high grandiose narcissism, 67 (12.41% of the total sample) were identified as referring high vulnerable narcissism, and 388 (71.03% of the total sample) obtained scores that were below the mean plus one of the standard deviation of both the NPI and the HSNS. Table 1 shows the means and standard deviations achieved by the three subgroups on the NPI and the HSNS.

Of the 80 participants identified as grandiose narcissists, 55 were males (68.75%) and 25 were females (31.25%). Of the 67 participants identified as vulnerable narcissists, 24 were males (35.82%) and 43 were females (64.18%). A significant association between gender and narcissism was found: males had a higher probability of being classified as grandiose narcissists than females, whereas females had a higher probability of being classified as vulnerable narcissists than males ($\chi^2 = 17.744$, $p<.001$).

Since the association between gender and narcissism was significant, a two-way analysis of variance (ANOVA) was performed to investigate the main and interactive effects of narcissism and gender on GPIU. Descriptive statistics pertaining to the study variables for all 3 groups are reported in Table 2. Post-hoc paired contrasts were conducted for the pairwise comparison. Among the most readily used post hoc

tests available, the Games-Howell procedure was chosen because it was designed to cope with different sample sizes and offers the best performance when there are doubts that the population variances are equal. [34]

Significant differences were found on all the GPIUS2 dimensions between vulnerable narcissists and non narcissists (Table 3). Vulnerable narcissists also reported significantly higher scores on the preference for online social interaction subscale and on the GPIUS2 total score than grandiose narcissists. On the other hand, grandiose narcissists did not score significantly higher on the GPIUS2 dimensions and total score than non narcissists.

Discussion

The present study hypothesized that 1) high narcissistic traits might be associated with problematic use of SNS, and 2) vulnerable narcissists report higher levels of problematic use than grandiose narcissists. In contrast with recent findings,[20] we did not find grandiose narcissists to be a higher risk for problematic use of SNS than non-narcissists. On the other hand, significant differences were found between vulnerable narcissists and non-narcissists on all of the GPIUS2 subscales and total scores. Vulnerable narcissists showed a higher preference for

online social interactions and higher levels of overall problematic use than grandiose narcissists. Besides confirming recent evidence[25] regarding the positive association between vulnerable narcissism and the preference for online social interactions, the present study highlights for the first time that vulnerable narcissists (but not grandiose narcissists) were more likely to feel safer in an online environment. This suggests that SNS might be the preferred tool among vulnerable narcissists to gain approval and admiration, whereas they might be just one of many tools grandiose narcissists use to achieve narcissistic goals. Moreover, this greater sense of security users feel in online environments might also be responsible, at least in part, for the higher overall levels of problematic use that have been found among vulnerable narcissists. Indeed, previous studies[33, 35] support the notion that feeling more confident and efficacious in an online setting is a cognitive precursor of problematic use of SNS. Interestingly, although vulnerable narcissists score significantly higher on the GPIUS2 total score scale, no significant differences were found regarding Mood regulation, Deficient self-regulation, and Negative Outcomes. Grandiose narcissists occupy an intermediate position between the highest scores obtained by vulnerable narcissists and the lowest scores reached by non-narcissists in three key areas: the tendency to use SNS to regulate negative feelings, the inability to control one's own use of SNS, and the negative outcomes arising from the use of SNS. This suggests that the use of online platforms might be somewhat problematic among grandiose narcissists, yet less problematic among vulnerable narcissists.

An association between gender and narcissism was also found. Vulnerable narcissists are more likely to be women, whereas grandiose narcissism is more common among men. However, neither a main nor interactive effect of gender was found through the two-way ANOVA, with the exception of significant higher levels of negative outcomes among men (i.e. a main effect). Simultaneously, vulnerable narcissists, despite the higher proportion of females in this subgroup, reported higher scores in the Negative Outcomes subscale. As a result, it can be argued that men are at higher risk than women to develop negative outcomes associated with their use of SNS, irrespective of vulnerable narcissistic traits. Similarly, vulnerable narcissists, regardless of gender, tend to report greater negative impacts on their daily functioning than non-narcissists and grandiose narcissists.

Some limitations of the present study should be noted. The present study relies entirely on self-report data, and future research should use indirect measure of both narcissism (e.g. projective tests) and problematic use of SNS in an effort to overcome self-presentational biases and social desirability. Moreover, the present study used a cross-sectional design, thus preventing us from testing questions of directionality. Although narcissism is conceptualized as a stable trait, it is impossible to rule out the idea that problematic use of SNS reinforces the very issues that led to its use in the first place,[36] thereby helping to sustain those particular narcissistic needs and desired gratifications. Future research may want to include potential mediating variables – e.g. the perception of Internet advantages – that clarify the link between vulnerable narcissism

and problematic use of SNS. In addition, the Cronbach α values obtained for the NPI and the HSNS were low, although consistent with those previously reported in the literature.[28] Finally, participants were undergraduate students, which severely limits the generalizability of the present findings to a clinical population. Moreover, the method used to identify the three groups is partially forced since a cutoff point for the narcissism measures has not been established. Finally, future research should involve clinical subjects that have been diagnosed with Narcissistic Personality Disorder.

Author Disclosure Statement

No competing financial interests exist.

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TABLE 1 DESCRIPTIVE STATISTICS ON NPI AND HSNS SCORES

Measures	Grandiose narcissists (*n* = 80) *M* ± *SD*	Vulnerable narcissists (*n* = 67) *M* ± *SD*	Non narcissists (*n* = 388) *M* ± *SD*
HSNS	24.10 ± 4.91	34.48 ± 2.60	23.82 ± 4.79
NPI	8.63 ± 1.67	2.50 ± 1.81	2.54 ± 1.86

Note. HSNS = Hypersensitive Narcissism Scale; NPI = Narcissistic Personality Inventory

TABLE 2. DESCRIPTIVE STATISTICS ON GPIUS2 SUBSCALES AND TOTAL SCORE

Narcisism groups		POSI	MOOD REGULATION	DEFICIENT SELF-REGULATION	NEGATIVE OUTCOMES	GPIUS2 TOTAL SCORE
		M ± *SD*	*M* ± *SD*	*M* ± *SD*	*M* ± *SD*	*M* ± *SD*
NN	F (*N*=206)	1.68 ± 1.04	2.26 ± 1.3	1.90 ± 1.08	1.28 ± 0.63	2.13 ± 1.1
	M (*N*=182)	1.85 ± 1.01	2.32 ± 1.4	2.05 ± 1.07	1.59 ± 1.05	2.32 ± 1.19
	Tot (*N* = 388)	1.76 ± 1.03	2.29 ± 1.35	1.97 ± 1.08	1.43 ± 0.86	2.22 ± 1.14
NV	F (*N* =43)	2.33 ± 1.51	2.98 ± 1.9	2.23 ± 1.29	1.78 ± 1.52	2.58 ± 1.34
	M (*N*=24)	2.73 ± 1.65	3.31 ± 1.49	2.70 ± 1.36	2.12 ± 1.31	3.06 ± 1.4
	Tot (*n* = 67)	2.47 ± 1.56	3.1 ± 1.76	2.40 ± 1.32	1.90 ± 1.45	2.75 ± 1.37
NG	F (*N*=25)	1.74 ± 1.39	2.98 ± 2	2.23 ± 1.44	1.50 ± 1.08	2.43 ± 1.47
	M (*N* =55)	1.65 ± 1.06	2.37 ± 1.65	2.10 ± 1.21	1.62 ± 1.04	2.14 ± 1.02
	Tot (*n* = 80)	1.65 ± 1.06	2.56 ± 1.78	2.14 ± 1.29	1.58 ± 1.04	2.24 ± 1.18
Totale	F (*N*=274)	1.79 ± 1.18	2.44 ± 1.51	1.98 ± 1.16	1.38 ± 0.89	2.23 ± 1.18
	M (*N*=261)	1.88 ± 1.09	2.42 ± 1.49	2.12 ± 1.14	1.65 ± 1.08	2.35 ± 1.2
	Tot (*N*=535)	1.83 ± 1.14	2.43 ± 1.5	2.05 ± 1.15	1.51 ± 0.99	2.29 ± 1.19

Note. NN = Non narcissists; VN = Vulnerable Narcissists; GN = Grandiose narcissists;

POSI = Preference for online social interactions

TABLE 3. EFFECTS OF NARCISSISM AND GENDER ON GPIU SUBSCALES AND TOTAL SCORE:

TWO-WAY ANOVA AND GAMES-HOWELL POST-HOC

Variables	Narcisism groups (NN, NV, NG)	Gender	Interaction	Games-Howell post-hoc		
				High GN vs NN	High VN vs NN	High GN vs high VN
POSI	F = 13.45**; η^2=.05	F =1.18	F = 0.94	n.s.	<.01	<.01
MOOD REGULATION	F = 9.78**; η^2=.04	F = 0.17	F = 1.91	n.s.	<.01	n.s.
DEFICIENT SELF-REGULATION	F = 5.109*; η^2=.02	F = 1.34	F = 1.12	n.s.	<.05	n.s.
NEGATIVE OUTCOMES	F = 7.38*; η^2=.03	F = 4.64*; η^2=.009	F = 0.29	n.s.	<.05	n.s.
GPIUS2 TOTAL SCORE	F = 6.69*; η^2=.025	F = 7.779	F = 1.82	n.s.	<.05	<.05

Note. NN = Non narcissists; VN = Vulnerable Narcissists; GN = Grandiose Narcissists;
POSI = Preference for online social interactions. *p<.05;**p<.01