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Sexual Fantasies and Sexual Behaviors in the Perspective of Grandiose, Vulnerable, and Malignant Narcissism: A Community Study

Antonella Somma ^{1,2}, Leda Mastinu ¹, Andrea Fossati ^{1,2*}

Abstract

Background: Although at a theoretical level, narcissism has been always connected with sexuality, empirical research on the associations between different manifestations of narcissism and sexuality is still sparse. Starting from these premises, the present study aimed at assessing the associations between different manifestations of narcissism (i.e., grandiose narcissism, vulnerable narcissism, and malignant narcissism), and sexual fantasies and behaviors in a sample of adult community-dwelling adults.

Methods: Participants ($N = 583$; 63% female; mean age = 30.88 years, $SD = 11.23$) were administered the Five Factor Narcissism Inventory Super Short Form (FFNI-SSF) to assess grandiose and vulnerable narcissism, the Personality Inventory for DSM-5 Short Form malignant narcissism index (MNARC) to evaluate malignant narcissism, and the Sexual Fantasies and Behaviors Inventory (SFBI) to measure sexual fantasies and behaviors. Relative importance weight (RIW) analysis was used to evaluate the multivariate associations between narcissistic phenomena and different sexual fantasies and behaviors.

Results: Our RIW results supported the hypothesis that narcissistic dimensions are likely to show significant, albeit small-to-moderate or moderate associations with self-reports of non-normophilic, aggression-laden (e.g., sadism, masochism, and intrusion) sexual fantasies and behaviors. Interestingly, in our study different manifestations of narcissism showed differential relationships with selected sexual fantasies and behaviors, at least as they were operationalized in the SFBI self-reports.

Conclusions: Our findings may improve extant knowledge on sexual fantasies and sexual behaviors and their associations with grandiose, vulnerable, and malignant narcissism, paving the way for additional research on the role of antagonistic personality dimensions as possible roots for non-normophilic sexual fantasies and behaviors across different contexts.

¹ Faculty of Psychology, Vita-Salute San Raffaele University, Milan, Italy

² Clinical Psychology and Psychotherapy Unit, IRCCS San Raffaele Turro Hospital, Milan, Italy

E-mail corresponding author: fossati.andrea@hsr.it



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1. Introduction

Although different conceptualization of narcissism exists (e.g., Cain et al., 2008; Kaufman et al., 2020; Miller et al., 2021; Wright et al., 2013), two broad dimensions of narcissistic dysfunction emerged in the literature with varying degrees of emphasis (e.g., Miller et al., 2017; Pincus & Lukowitsky, 2010), namely, narcissistic grandiosity and narcissistic vulnerability. The grandiose expression of narcissism generally involves arrogance, entitlement, higher self-esteem, aggression, risk taking, antagonistic interpersonal approach, self-serving beliefs, grandiose fantasies, and self-enhancement strategies (Miller et al., 2021; Pincus et al., 2009). Rather, narcissistic vulnerability underlies egocentrism, low and variable contingent self-esteem, distrust of other people, susceptibility to self-and emotional dysregulation (e.g., shame, anger, envy), and social isolation (e.g., Miller et al., 2021; Pincus et al., 2009).

Narcissistic features are associated with a wide range of problematic outcomes, including significant functional impairments (e.g., Miller et al. 2007; Stinson et al., 2008), and several related areas of maladjustment, including interpersonal problems, relational dysfunction, aggression and sexual aggression (e.g., Ogrodniczuk et al., 2009; Pincus et al., 2009; Zobel et al., 2021). To describe the most severely variant of narcissism, where aggression becomes a distinctive feature and a central aspect of the grandiose self, Kernberg (1984, 2007) relied on the term malignant narcissism. Despite its relatively long history, malignant narcissism remains a relatively understudied line of empirical research (e.g., Faucher et al., 2022), mostly for the scarce availability of tools to adequately assess this construct (e.g., Cain et al., 2024; Faucher et al., 2022; Lenzenweger et al., 2018).

Although at a theoretical level, narcissism has been always connected with sexuality (e.g., Ellis, 1898; Freud, 1914), and the interconnection between different expression of narcissistic features and sexuality has represented a central aspect of numerous theories of narcissism and sexual behavior (e.g., Baumeister et al., 2002; Foster et al., 2006; Hurlbert & Apt, 1991; Karpman, 1957), empirical research on the associations between different manifestations of narcissism and sexuality is still sparse (e.g., Widman & McNulty, 2011).

Interestingly, previous research showed that higher levels of grandiose narcissism were associated with lower commitment to partner prior to engaging in sexual intercourse (Foster et al., 2006; Kastner & Sellbom, 2012; Jonason et al., 2009), sexual infidelity (e.g., Atkins et al., 2005; Buss & Shackelford, 1997), transmission and acquisition of sexually transmitted diseases (e.g., Bjekić et al., 2002; Erbeling et al., 2004), and sexual aggression (e.g., Kosson et al., 1997; Uhlich et al., 2024; Widman & McNulty, 2010). However, up to now, no previous studies directly examined the associations between different variants of narcissism and manifestations of sexual behaviors. For instance, Watts, Nagel, Latzman, and Lilienfeld (2019) found that

Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) dimensions predicted paraphilic interests, with NPI Entitlement/Exploitativeness scale showing a significant and moderate association with sexual sadism. Other studies found no associations between grandiose narcissistic features and paraphilic interests in the contexts of studies on *Dark Triad* dimensions (e.g., de Roos et al., 2025; Lassche et al., 2024).

Fantasizing seems to characterize different manifestation of narcissism, with indulging in excessive daydreaming being a substitute for active problem solving (e.g., Wink, 1991), and a common and critical form of intrapersonal self-regulation (Finch & Hooley, 2023; Morf & Rhodewalt, 2001). Raskin and colleagues (1991) found that higher levels of narcissistic grandiosity were associated with achievement, heroic, hostile, self-revelation, future-oriented, and sexual daydreams, and that these daydreaming styles represent a coherent general fantasy style that is substantially related to narcissism. Interestingly, NPI vanity subscale was related uniquely to sexual daydreams (Raskin et al., 1991). Although Raskin and colleagues (1991) did not directly assess narcissistic vulnerability or malignant narcissism, they observed that people with higher levels of narcissistic features who showed higher levels of daily stress tended to experience power and revenge fantasies in which they see themselves in a powerful position able to impose punishment on those who have wronged them.

Despite the prominence of fantasy to avoid realities that are contrary to an inflated self-image, and the outbreaks of insecurity that disrupt their sense of grandiosity or specialness that characterize narcissism, the role of sex fantasies across different narcissistic manifestations received poor empirical attention. Indeed, the large majority of studies that considered sex fantasies in the context of narcissism relied on *Dark Triad* assessment instruments, thus, considering narcissistic grandiosity features exclusively (e.g., Baughman et al., 2014). The term *Dark Triad* was coined by Paulhus and Williams (2002) to indicate three interrelated, socially aversive personality constructs, namely narcissism, psychopathy, and Machiavellianism that appear to share some commonalities, including ethical, moral, and socially deviant behavior. When narcissism is considered in the context of the *Dark Triad*, usually only grandiose features are taken into account, including entitlement, superiority, exhibitionism, exploitativeness, arrogance, etc., whereas vulnerable narcissism is usually neglected (e.g., Glenn & Sellbom, 2015), or considered as part of the so-called “*Vulnerable Dark Triad*” (Miller et al., 2010).

Sexual fantasies, defined as constellations of mental imagery that is erotic or sexually arousing to the individual (e.g., Leitenberg & Henning, 1995), play a central role in shaping sexual behavior (Lehmiller & Gormezano, 2023), and, as sexual behaviors, may focus on different themes (e.g., Lehmiller, 2020). Available research suggests that paraphilic behaviors are not pathological and may represent a broadening of an individuals’ sexual repertoire (Brown et al., 2020). Sexual fantasies and sexual behaviors may differ based on the sexual interest content, the

desire to engage in a behavior (e.g., rape fantasies without the desire to ever act them out), and the possibility of engaging in the behavior (e.g., lack of opportunity). As Freud (1916-1917) nicely pointed out, only a minority of inner sexual fantasies become conscious thoughts and actual sexual behavior. Moreover, Freud's (1914) seminal writings stressed a close connection between sexual drives and narcissistic phenomena for the first time. Building on these considerations, Kernberg (1991), proposed that non-normophilic sexual fantasies and behaviors are closely linked to aggressive drives, while reconsidering narcissistic phenomena as personality pathologies infiltrated by aggression. However, to the best of our knowledge, up to now, no previous studies examined the differential association between sexual fantasies and narcissistic grandiosity, vulnerability and malignant expression of narcissism.

1. The present study

Against this background, the present study aimed at assessing the associations between different manifestations of narcissism (i.e., grandiose narcissism, vulnerable narcissism, and malignant narcissism) and sexual fantasies and behaviors in a sample of adult community-dwelling adults. Although different measures of narcissism are currently available (e.g., Pincus et al., 2009; Miller et al., 2017), we relied on the Five Factor Narcissism Inventory Super Short Form (FFNI-SSF; Packer West et al., 2021) to assess grandiose and vulnerable narcissism because its scales are meant to manifest divergent relations to external criteria (e.g., Glover et al., 2012). Rather, in order to assess malignant narcissism, we relied on Faucher et al. (2022) scoring procedure for the assessment of malignant narcissism using the Personality Inventory for *DSM-5* Short Form (PID-5-SF; Krueger et al., 2012; Maples et al., 2015). Specifically, the malignant narcissism index (MNARC index; Faucher et al., 2022) was developed relying on a prototype matching approach based on ratings from 15 clinicians specialized in the treatment of personality pathology and is obtained computing a weighted sum of the scores of 11 PID-5 traits, reflecting the relative importance of each PID-5 dysfunctional personality trait (Faucher et al. 2022; Somma et al., 2024).

Moreover, in the present study, we relied on the Sexual Fantasies and Behaviors Inventory (SFBI; Brown et al., 2022), which was developed to simultaneously assess both normophilic and non-normophilic (paraphilic) sexual fantasies and behaviors. For both sex fantasies (i.e., Sexual Fantasies Inventory) and behaviors (i.e., Sexual Behaviors Inventory), different themes were considered in order to assess normophilic (e.g., having penetrative sex), rough sex (e.g., hair pulling, biting), interest of intrusion (e.g., exposing genitals to unsuspecting persons), assuming power (e.g., making others referring to you as a superior), and relinquishing power (e.g., receiving corporal punishment) sex fantasies and behaviors (Brown et al., 2022).

Because Morf and Rhodewalt (2001) found an association between grandiose narcissism and sexual daydreams, we expected to observe positive associations between narcissistic grandiosity and a diverse range of sex fantasies. Additionally, given the compensatory role of fantasies in narcissism, although no previous study directly examined this issue, we hypothesized that also vulnerable narcissism and malignant narcissism would show significant associations with sex fantasies, considering domination/sadism and assumption of power sex fantasies as prominent for the latter (e.g., Faucher et al., 2022).

Finally, based on available evidence on the associations between narcissism and paraphilic interests (e.g., Watts et al., 2019), despite no previous empirical study directly examined this topic, we hypothesized that sex behaviors involving the assumption of power (e.g., domination, sadism, or humiliation and degrading of others), and behaviors of intrusion (e.g., watching others engage in sexual behaviors without them being aware of the presence) would be associated with grandiose malignant narcissism.

2. Methods

2.1 Participants

Participants were community-dwelling adults who responded to advertisements requesting potential volunteers for psychological studies that were placed at the campus of two large universities and on the web. Participants were 583 Italian community-dwelling adults; participants' mean age was 30.88 years, $SD = 11.23$ years. Sociodemographic characteristics are summarized in Table 1.

Table 1.

Sociodemographic characteristics of the Community-Dwelling Adult Sample (N = 583)

Gender	<i>n</i>	%
Female	367	63.0
Male	203	34.8
Non-binary	12	2.0
Not disclosed	1	0.2
Marital status		
Unmarried	394	67.6
Married	161	27.6
Divorced	24	4.1
Widowed	1	0.2
Not disclosed	3	0.5
Highest Educational level		
Junior high school degree	23	4.0
High school degree	227	38.9
University degree	330	56.6
Not disclosed	3	0.5

Employment		
Active community workers	327	56.1
Students	221	37.9
Unemployed	12	2.1
Retired	18	3.1
Not disclosed	5	0.8

2.2 Procedures

All participants were treated in accordance with the Ethical Principles of Psychologists and Code of Conduct. All participants were at least 18 years old at the time the study was carried out. To be included in the sample, participants had to confirm that they were at least 18 years and agree to online written informed consent in which the study was extensively described. Participants completed the study online using Jisc online survey. In this study, all measures were administered to participants in their Italian translations. Institutional review board (IRB) approval was obtained for all aspects of this study; participants volunteered to take part in the study receiving no economic incentive or academic credit for their participation.

2.3 Measures

Sexual Fantasies Inventory (SFI; Brown et al., 2022). The SFI is a 28-item self-report measure designed to assess participant's level of sexual arousal when thinking or imagining each of the sexual activity described in the items. Items are measured on a 7-point Likert scale ranging from $-3 = \textit{very repulsive}$ to $3 = \textit{very arousing}$, with 0 indicating indifference. The SFI items could be averaged to obtain scores assessing the following dimensions, which demonstrated adequate reliability in Brown et al. scale development: Normophilic ($\omega = .69$ in Brown et al. [2022] original scale development), Rough sex ($\omega = .82$), Submission/masochism ($\omega = .90$), Domination/sadism ($\omega = .92$), Degradation/humiliation ($\omega = .87$), and Intrusion ($\omega = .74$) (Brown et al., 2022). Different (normophilic and non-normophilic) sexual fantasies were represented by items of varying intensity. The SFI showed adequate reliability and factor structure, as well as nomological network validity with respect to *Dark Triad* traits, sociosexuality variables and depression and anxiety. The psychometric properties of the Italian translation of the SFI have been previously assessed (Somma et al., 2025); the SFI showed adequate internal consistency for all subscales (Normophilic: $\omega = .85$; Rough Sex: $\omega = .92$; Submission/masochism: $\omega = .93$; Domination/sadism: $\omega = .92$; Degradation/Humiliation: $\omega = .96$; Intrusion: $\omega = .92$).

Sexual Behavior Inventory (SBI; Brown et al., 2022). The SBI is a self-report measure designed to assess the frequency with which participants had engaged in each sexual behavior. The 28 items of the SBI are measured on a 6-point Likert scale, ranging from $-1 = \textit{never, don't}$

want to try, to 4 = *once a week or more on average*. The SBI items could be averaged to obtain scores assessing the following dimensions, which demonstrated good internal consistency both in Brown et al. (2022) original scale development study and in its Italian translation (Somma et al., 2025): Normophilia ($\omega = .85$ in Brown et al., 2022; $\omega = .89$ in Somma et al., 2025) Rough sex ($\omega = .85$; $\omega = .94$, respectively), Assuming power ($\omega = .91$; $\omega = .95$, respectively), Relinquishing power ($\omega = .92$; $\omega = .97$, respectively), and Intrusive behaviors ($\omega = .76$; $\omega = .95$, respectively) (Brown et al., 2022).

Personality Inventory for *DSM-5-Short Form* (PID-5; Krueger et al., 2012; Maples et al., 2015) Malignant Narcissism Index (MNARC; Faucher et al., 2022). The PID-5-SF is a 100-item questionnaire with a 4-point response scale, which was explicitly designed to measure the *DSM-5* AMPD dysfunctional personality traits. The adequacy of the psychometric properties of the PID-5-SF has been extensively supported (e.g., Maples et al., 2015), also among Italian participants (e.g., Somma et al., 2019). For the purposes of the present study, the MNARC index was computed and considered (Faucher et al., 2022). The psychometric properties of the Italian translation of the MNARC have been previously assessed (Somma et al., 2024), showing adequate reliability in an Italian community-dwelling sample (Mosier's [1943] α coefficient = .95, mean PID-5 weighed scale correlation = .30).

Five Factor Narcissism Inventory-Super Short Form (FFNI-SSF; Packer West et al., 2021). The FFNI-SSF is a 15-item abbreviated form of the FFNI-Short Form (Sherman et al., 2015 self-report measure of vulnerable narcissism, and grandiose narcissism. Respondents indicate the extent to which they agree with each item ranging on a scale of 1 (*Disagree strongly*) to 5 (*Agree strongly*). Previous data documented that FFNI-SSF scores showed strong associations with other narcissism measures and external criteria related to narcissism, and all of these relations were virtually identical for the SSF compared to the FFNI-SF (e.g., Packer West et al., 2021). Also, Packer West et al. (2021) demonstrated the adequacy of the reliability of the FFNI-SSF Vulnerable (median Cronbach's $\alpha = 0.63$) and Grandiose Narcissism (median Cronbach's $\alpha = 0.74$). A detailed presentation of the psychometric properties of the Italian translation of the FFNI-SSF is provided in the Supplementary Material (see, below, Results). In order to assess the convergent-discriminant validity of the FFNI-SSF scales, participants were also administered the Italian translation of the Brief Pathological Narcissism Inventory (B-PNI; Schoenleber et al., 2015; Italian translation: Somma et al., 2020).

2.4 Data analysis

Bivariate relationships between continuous variables were tested using Pearson r coefficient. McDonald's omega (McDonald, 1999) coefficient was relied on to assess the reliability of the

SFBI scale and FFNI-SF scales; Mosier's (1943) weighted composite index was relied upon to assess MNARC index reliability.

We relied on relative importance weights (Johnson & LeBreton, 2004) to assess the multivariate relationships between sexual interests (i.e., fantasies and behaviors) and dysfunctional personality domains and traits, respectively. Relative importance weights analysis is based on the decomposition of the total variance predicted in a regression model (i.e., the R^2 value) into metrics (also called weights; Tonidandel et al., 2009) that reflect the proportional contribution of the various predictor variables; i.e., the contribution that a variable makes to the prediction of a criterion variable by itself and in combination with other predictor variables (Johnson & LeBreton, 2004). Being squared standardized regression coefficients of transformed (orthogonal) independent variables, relative importance weights have the property that the individual weights sum to the overall model R^2 . Thus, the relative weights can also be expressed in terms of the percentage of predictable variance associated with each predictor. In the present study, bias corrected accelerated 95% bootstrap confidence intervals are used to assess the significance of relative importance weights (Tonidandel et al., 2009). In the present study, 10,000 bootstrap replications were used to compute each 95% confidence interval.

Relative importance weight analyses were carried out using RWA Web computer program (Tonidandel & LeBreton, 2015); we relied on 'psych' (Revelle, 2025) R (R Core Team, 2025) package to compute omega coefficient values. All other statistics were computed using SPSS 29.

3. Results

3.1 Preliminary Results: Psychometric Properties of the FFNI-SSF

The FFNI-SSF item polychoric correlation matrix, quasi-inferential parallel analysis results, Procrustes-rotated standardized principal component (PC) loadings and congruence coefficient values with the binary target matrix based on the a priori model for assignment of the FFNI-SSF items to the first-order corresponding scales (i.e., Extraversion, Antagonism, and Neuroticism scales), and convergent-discriminant r values for the relationships between the FFNI-SSF GN and VN scales with B-PNI NG and NV scales are reported in Table S1, Table S2, Table S3, and Table S4 in the Supplementary Materials, respectively. As it can be observed in Table S2 and in Table S3, our dimensionality analysis (i.e., quasi-inferential parallel analysis) and PCA results safely recovered the three-dimensional first-order structure of the FFNI-SSF item polychromic correlation matrix, based on the a priori model of item-to-scale attribution. When the FFNI-SSF first-order dimensions were combined to obtain the GN and VN second-order scale, our data showed that both FFNI-SSF GN and VN scale were almost orthogonal,

while showing r coefficient values for their association (i.e., convergent validity) with the corresponding BPNI NG and NV scale scores that were suggestive of large effect size by conventional standards (Cohen, 1988).

3.2 Main Findings: Relationships between Narcissism and Sex Interests

The descriptive statistics and McDonald's (1999) omega coefficient/Mosier's (1943) reliability coefficient for weighted composite values of the FFNI-SSF GN and VN scales, PID-5-SF MNARC index, and SFBI scales, and the bivariate inter-relationships (i.e., Pearson r coefficient values) between the FFNI-SSF GN and VN scales and PID-5-SF MNARC index, and SFBI scales among community-dwelling adults are summarized in Table 2. The nominal significance level (i.e., $p < .05$) for Pearson r coefficient values was corrected according to the Bonferroni procedure and set at $p < .0015$; Pearson r coefficients $> |.13|$ were significant at $p < .0015$. In our sample, the FFNI-SSF GN scale scores showed no significant association with the FFNI-SSF VN scale scores, $r = .07$, $p > .05$; rather, the PID-5-SF MNARC scores correlated significantly with both FFNI-SSF GN, $r = .67$, $p < .001$, and VN, $r = .28$, $p < .001$, scale scores. As it can be observed in Table 2, based on McDonald's omega coefficient (and on Mosier's coefficient for the MNARC index), all scales resulted adequately reliable. Considering Pearson r coefficient values, all SFI and SBI scale scores except for Normophilic fantasies (SFI Normophilic scale score) and behaviors (SBI Normophilic scale score) scores were positively and Bonferroni-significantly correlated to the MNARC index score. FFNI-SSF Grandiose Narcissism resulted as positively and Bonferroni-significantly associated with all SFI and SBI subscale scores.

Among our community-dwelling adult participants, the SFI scale scores were positively and non-trivially inter-related, median r value = $.37$, $SD = .13$, min. r value = $.19$ (Rough Sex and Intrusion scales), max. r value = $.68$ (Degradation/Humiliation and Domination/Sadism scales), all $ps < .001$; similarly, the Sexual Behavior Inventory scale scores were non-negligibly and positively inter-correlated, median r value = $.31$, $SD = .17$, min. r value = $.16$ (Normophilic and Intrusive scales), max. r value = $.63$ (Assuming Power and Relinquishing Power scales), all $ps < .001$.

With the exception for the association between Sexual Fantasy Inventory Normophilic scale score and Sexual Behavior Inventory Assuming Power scale score, $r = .07$, $p > .05$, all Sexual Fantasy Inventory scale scores were significantly and positively correlated with the Sexual Behavior Inventory scale scores, median r value = $.30$, $SD = .17$, min. r value = $.10$ (SFI Intrusion and SBI Normophilic scales), max r value = $.71$ (SFI Rough Sex and SBI Rough Sex scales), all $ps < .025$. In particular, SFI and SBI Normophilic scale scores were non-trivially inter-

related, $r = .34, p < .001$; Pearson r values of .71, .65, .61, and .53, all $ps < .001$, were observed for the associations between SFI Rough Sex and SBI Rough Sex scales, SFI Degradation/Humiliation and SBI Assuming Power scales, SFI Submission and SBI Relinquishing Power scales, and SFI Intrusion and SBI Intrusive scales, respectively.

Table 2.

Five Factor Narcissism Inventory-Super Short Form Grandiose Narcissism and Vulnerable Narcissism Scale and Personality Inventory for DSM-5-Short Form Malignant Narcissism Index, and Sexual Fantasy and Behavior Inventory Scales: Bivariate Inter-Relationships (i.e., Pearson r Coefficient Values), Descriptive Statistics, McDonald's Omega Coefficient / Mosier's Reliability Coefficient for Weighted Composite Values in Community-Dwelling Adult Participants (N = 583)

Sexual Fantasy and Behavior Scales	Grandiose Narcissism	Vulnerable Narcissism	Malignant Narcissism Index	<i>M</i>	<i>SD</i>	ω
Sexual Fantasy Scales						
Normophilic	.17	.00	.10	5.91	0.84	.85
Rough Sex	.28	.06	.24	4.41	1.54	.92
Degradation/Humiliation	.31	-.04	.35	2.01	1.28	.96
Domination	.39	.04	.36	3.07	1.43	.92
Submission/Masochism	.22	.11	.24	2.77	1.60	.93
Intrusion	.16	.00	.22	2.17	1.30	.92
Sexual Behavior Inventory						
Normophilic	.16	-.08	.11	4.08	1.10	.89
Rough Sex	.28	.04	.26	2.96	1.48	.94
Assuming Power	.25	.01	.41	1.30	0.61	.95
Relinquishing Power	.16	.11	.32	1.43	0.70	.97
Intrusive	.15	-.03	.31	1.24	0.56	.95
<i>M</i>	29.49	11.54	22.79			
<i>SD</i>	7.39	3.41	12.92			
ω	.85	.80	.98§			

Note. The nominal significance level (i.e., $p < .05$) for Pearson r coefficient values was corrected according to the Bonferroni procedure and set at $p < .0015$; Pearson r coefficients $> |.13|$ were significant at $p < .0015$. Bold highlights Bonferroni-significant Pearson r coefficient values.

§ Mosier's alpha coefficient for weighted composite.

The relative importance weight analysis results of FFNI-SSF GN and VN scale scores and PID-5-SF MNARC index scores as predictors of the SFI and SBI scales, respectively, are reported in Table 3. The raw weight coefficient significance level was tested by computing bootstrap 95% confidence intervals based on 10,000 bootstrap replications: For significant raw weight coefficients, plus and minus signs listed between brackets next each coefficient value indicate

the positive and negative direction of the relationships between predictors and dependent variables, respectively, based on the corresponding bivariate r coefficient value. Based on relative importance weight analyses results, FFNI-SSF subscale scores and PID-5 MNARC score resulted as statistically significant predictors for each SFI and SBI scale score variance. For instance, FFNI-SSF subscales and MNARC were found to explain the highest amount of SBI scale score variance in the case of the Assuming Power SBI score ($R^2 = .18, p < .001$). Considering predictors' contributions singularly, the majority of the explained variance was predicted by the MNARC Index score (78.67%), with a significant raw relative weight of .140 and a positively-directed association with the dependent variable; FFNI-SSF Grandiose Narcissism scale score also resulted significant in explaining a portion of the Assuming Power SBI score variance, with a raw relative weight of .032 corresponding to the 17.95% of the overall variance explained by the model. As it can be observed in the table, all SFI and SBI non-normophilic scales were positively and significantly associated with FFNI-SSF Grandiose Narcissism and MNARC Index scores as predictors (except for SBI Relinquishing Power's score variance, significantly associated only to the MNARC Index score), while normophilic SFI and SBI scale score variance was only associated with FFNI-SSF Grandiose Narcissism score. FFNI-SSF Vulnerable Narcissism never resulted as a significant predictor of the explained score variance of SFI or SBI scales.

Table 3.

Five Factor Narcissism Inventory-Super Short Form Grandiose Narcissism and Vulnerable Narcissism Scale Scores, and Personality Inventory for DSM-5-Short Form Malignant Narcissism Index Score as Predictors of Sexual Fantasy Inventory (Top) and Sexual Behavior Inventory (Bottom) Scale Scores: Relative Importance Weight Analysis Results in Community-Dwelling Adult Participants (N = 583).

Predictors	Sexual Fantasy Inventory Scales (Dependent Variables)											
	Normophilic		Rough Sex		Degradation		Domination		Submission		Intrusion	
	<i>w</i>	%	<i>w</i>	%	<i>w</i>	%	<i>w</i>	%	<i>w</i>	%	<i>w</i>	%
FFNI-SSF GN	.022 (+)	81.32	.053 (+)	61.73	.051 (+)	35.09	.096 (+)	55.87	.029 (+)	42.17	.013 (+)	24.73
FFNI-SSF VN	.000	0.43	.002	2.38	.009	6.19	.002	0.86	0.008	11.77	.002	3.97
PID-5-SF MNARC	.005	18.24	.031 (+)	35.89	.086 (+)	58.72	.074 (+)	43.28	.032 (+)	46.06	.036 (+)	71.3
R ²	.03**		.09***		.15***		.17***		.07***		.05***	
f ²	.03		.10		.18		.20		.08		.05	

Predictors	Sexual Behavior Inventory Scales (Dependent Variables)									
	Normophilia		Rough Sex		Assuming Power		Relinquishing Power		Intrusive	
	<i>w</i>	%	<i>w</i>	%	<i>w</i>	%	<i>w</i>	%	<i>w</i>	%
FFNI-SSF GN	.020 (+)	55.13	.047 (+)	53.7	.032 (+)	17.95	.015	14.45	.016 (+)	13.37
FFNI-SSF VN	.008	23.41	.001	1.14	.006	3.38	.006	5.46	.008	6.83
PID-5-SF MNARC	.008	21.46	.039 (+)	45.16	.140 (+)	78.67	.083 (+)	80.09	.092 (+)	79.8
R ²	.04***		.09***		.18***		.10***		.12***	
f ²	.04		.10		.22		.11		.14	

Note. FFNI-SSF GN: Five Factor Narcissism Inventory-Super Short Form Grandiose Narcissism scale; FFNI-SSF VN: Five Factor Narcissism Inventory-Super Short Form Vulnerable Narcissism scale; PID5-SF MNARC: Personality Inventory for *DSM-5*-Short Form Malignant Narcissism Index; *w*: raw relative importance weights; %: raw weights rescaled as percentages of R² value. The coefficient significance level was tested by computing bootstrap 95% confidence intervals based on 10,000 bootstrap replications: bold highlights significant *w* coefficients. For significant *w* coefficients, plus and minus signs listed between brackets next each *w* coefficient value indicate the positive and negative direction of the relationships between predictors and dependent variables, respectively, based on the corresponding bivariate *r* value.

** *p* < .01; *** *p* < .001.

4. Discussion

Confirming and extending previous reports on the interface between narcissism and human sexuality (Foster et al., 2006; Widman & McNulty, 2011), our findings supported the usefulness of relying on multidimensional conceptualizations of narcissism to understand the relationships between narcissistic phenomena and human sexuality. As a whole, our results supported the hypothesis that narcissistic dimensions are likely to show significant, albeit small-to-moderate or moderate associations with self-reports of non-normophilic, aggression-laden (e.g., sadism, masochism, and intrusion) sexual fantasies and behaviors. Interestingly, notwithstanding the inter-relationships among sexual fantasies and behaviors, as well as their substantial inter-correlations, in our study different manifestations of narcissism showed differential relationships with selected sexual fantasies and behaviors, at least as they were operationalized in the SFBI self-reports.

Consistent with previous reports (e.g., Noorishad et al., 2019), our findings based on the SFBI self-reports seemed to support the multi-faceted nature of human sexuality, at least among community-dwelling adults. Indeed, bivariate correlation analysis results of the SFBI self-report scale scores supported the hypothesis that adult sexual life is likely to involve a variety of both normophilic (i.e., fantasies or behaviors involving genital stimulation and preparatory fondling with phenotypically typical, consenting adults; Brown et al., 2022) and non-normophilic sexual fantasies, and actual sexual behaviors, in the context of adaptive and (hopefully) consensual sexual relationships (e.g., Noorishad et al., 2019). Confirming previous studies (e.g., Ahlers et al., 2011; Cantor & McPhail, 2016; Noorishad et al., 2019), our results suggested substantial continuities between sexual fantasies and sexual behaviors, at least when the SFBI self-reports were relied upon. In our sample of community-dwelling adult participants, these associations were particularly relevant for non-normophilic sexual fantasies and the corresponding non-normophilic sexual behaviors, although they were far from suggesting exact correspondence between sexual fantasies and sexual behaviors. Indeed, sexual fantasies represent mental representations of sexual intercourses that are elaborated by an individual, whereas sexual behaviors require negotiating a dyadic interaction with a (hopefully) consenting partner, who has in turn an inner world of sexual fantasies and expectations. This finding supported the usefulness of providing separate assessment measures for sexual fantasies and sexual behaviors (Brown et al., 2022).

In our study, we relied on the FFNI-SSF to assess both GN and VN; although further evidence is badly needed before accepting our preliminary psychometric considerations, we replicated the dimensionality of the FFNI-SSF items as well as their first-order factor structure (Packer West et al., 2021), while documenting the adequate reliability and convergent-discriminant validity of the FFNI-SSF GN and VN second-order scale scores. Consistent with the theoretical model of narcissistic personality dimensions underlying the FFNI-SSF development (Packer West et al., 2021), our results suggested that the FFNI-SSF second-order scales provide almost orthogonal representations of grandiose and vulnerable manifestation of narcissism. Based on Faucher et al. (2022) seminal findings, in the present study we relied upon the MNARC index to assess malignant narcissism in community-dwelling adults; although we relied on the 100-item version of the PID-5 (i.e., the PID-5-SF) rather than on the 220-item version of scale as in Faucher et al. (2022) study, Mosier's (1943) weighted composite reliability coefficient values suggested that our MNARC scores were adequately reliable. Interestingly, the results of our bivariate correlation analyses of the FFNI-SSF GN and VN scores were highly consistent with previous conceptualization of malignant narcissism (e.g., Fromm, 1964; Kernberg, 1984, 2007) as involving grandiose narcissism features (e.g., exaggerated sense of self-importance, considering self as superior to others, arrogant behavior, etc.), as well as vulnerable narcissism characteristics (e.g., entitlement rage and anger outbursts, suspiciousness, shame, etc.).

Confirming and extending extant knowledge on the relationships between narcissism and human sexuality (Foster et al., 2006; Widman & McNulty, 2011), our bivariate correlation analysis results suggested that vulnerable features of narcissism are not significantly involved in the frequency of normophilic and non-normophilic sexual fantasies and behaviors; rather, grandiose and malignant narcissistic features, at least as they were operationalized in the FFNI-SSF GN and PID-5-SF MNARC self-reports, respectively, showed positive and significant bivariate associations with self-reports of all non-normophilic sexual fantasies and behaviors that were included in the SFBI, with r coefficient values that could be considered small-to-moderate or moderate by conventional standards (Cohen, 1988). Although the effect size for the association was small (Cohen, 1988), in our study only grandiose narcissistic dimension was significantly associated with self-reported normophilic sexual fantasies and behaviors in bivariate correlation analyses.

In our community-dwelling adult sample, relative importance weight analysis results documented a weak, albeit a significant multivariate association of self-reports of narcissism dimensions with self-reports of normophilic sexual fantasies and behaviors, which was almost completely explained by the significant effect of GN on the frequency of normophilic sexual

fantasies and sexual behaviors, respectively. Although the effect size was at best small by conventional standards (Cohen, 1988), the significant association between narcissistic grandiosity and normophilic sexual life is consistent with descriptions of “womanizing” – i.e., recurring to multiple shallow sexual relationships to as a way to support representations of grandiosity and superiority, while denying needs for dependency in intimate relationships (e.g., Widman & McNulty, 2010) – as well as with the construct of sexual narcissism, i.e., the activation of cognitive component of narcissism in sexual situations (Davidson & Jaccard, 1979).

Considering non-normophilic aspects of human sexual life, our relative importance weight analysis results suggested that both sexual fantasies and sexual behaviors involving physically intense/imposing acts like hair pulling, biting and scratching (i.e., rough sex; Brown et al., 2022) were modestly, albeit significantly associated with both grandiose and malignant narcissistic features. Although other explanations may be equally possible, this finding seemed to suggest that the reliance on physically imposing behaviors during real or fantasized sexual intercourses may increase the sense of superiority and control over the partner in GN subjects, as well as in subjects characterized by malignant narcissistic features. Confirming and extending previous considerations on ego-syntonic sadism as relevant feature of malignant narcissism (Cain et al., 2024; Kernberg, 1984, 2007), our relative importance weight analysis results suggested that malignant features, at least as they were operationalized in the PID-5-SF MNARC index, represented the most relevant narcissistic dimension in predicting self-reports of sexual behaviors concerning power dynamics (dominance vs. submission, as they were operationalized in the SBI Assuming Power and Relinquishing Power scales; Brown et al., 2022) and interests in boundary violations (i.e., the SBI Intrusion scale scores; Brown et al., 2022) although the corresponding effect size were moderate or small-to-moderate by conventional standards (Cohen, 1988). In particular, the MNARC index score represented the only significant predictor of relinquishing power (i.e., submission; Brown et al., 2022) sexual behaviors in our relative importance weight analyses. In our sample, self-reports of narcissistic grandiosity played a secondary, albeit significant role in predicting the frequency of assuming power (i.e., domination, Brown et al., 2022) and intrusive sexual behaviors.

Interestingly, in our sample self-reports of narcissistic grandiosity, at least as they were operationalized in the FFNI-SSF GN scale scores, were significantly associated with self-reports of power dynamics (i.e., degradation, domination, and submission; Brown et al., 2022) and intrusion sexual fantasies, being the most relevant predictor of the SFI Domination scale scores. Interestingly, our relative importance weight analysis results suggested that self-reports of

narcissistic vulnerability, at least as they were operationalized in the FFNI-SSF VN scale scores, were not significantly associated with self-reports of normophilic and non-normophilic sexual fantasies and behaviors. This finding was not unexpected; narcissistic vulnerability is characterized by intense negative emotions, e.g., depression and shame, social withdrawal, anger, and suicidal/homicidal thoughts, which may reduce the subject's interests in getting involved in real or fantasized sexual activities (e.g., Pincus & Lukowitsky, 2010).

In summary, we think that our data may represent a contribution to increase our knowledge on the relationships between dysfunctional narcissism dimensions and human sexuality. Although we relied on community-dwelling participants, our findings suggested the importance of considering sexual fantasies, as well as actual sexual behaviors in the assessment and treatment of subjects with dysfunctional narcissism, particularly when grandiose and malignant narcissistic features are at issue. Finally, we think that our results suggest a possible asymmetry in the relationship between dysfunctional narcissism in its grandiose and malignant manifestations, and non-normophilic sexual fantasies and behaviors. Subjects fully displaying malignant narcissistic features are likely to be deeply involved in power dynamics and/or intrusive sexual practices, domination/submission, degradation or even intrusion.

5. Strengths and Limitations

Although our study represented the first attempt at empirically assessing the associations between different manifestations of narcissistic features and sexual fantasies and behaviors, of course, limitations should be taken into account regarding our results. Firstly, we relied on a convenience sample, although moderately large, so further studies should be carried out on forensic and clinical samples to expand and accept present results. Notwithstanding these limitations, we think that our data may have some potential clinical usefulness in stressing the relevance of addressing the interplay between narcissism and sexual interests (comprised of fantasies and behaviors) in applied contexts. Also, participants only answered one self-report measure for each considered construct. Since different instruments based on different methods might convey different findings, more studies about these topics are needed (e.g., administering semi-structured interviews). For instance, future studies could rely on assessments of impairment in self and interpersonal functioning (e.g., Borroni et al., 2024; Naumova, & Naumov, 2022), alternative theoretical approaches (e.g., Malafanti et al., 2024), or even considering additional dysfunctional features (e.g., Sesar et al., 2023). Additionally, our study's sample size characteristics and issues related to participants' privacy would not allow for the assessment of gender and orientation roles in shaping associations between sex interests and

dysfunctional personality traits. Such aspects should be examined in future studies. Finally, as Brown et al. (2022) suggested, we relied on SFBI scales' average scores; however, structural equation modeling studies could further present evidence on the associations between dysfunctional personality traits and sexual fantasies and behaviors.

6. Conclusions

Even keeping these limitations in mind, we think that our findings may improve extant knowledge on sexual fantasies and sexual behaviors and their associations with GN, VN, and malignant narcissism. In turn, our findings may pave the way for additional research on the role of antagonistic personality dimensions as possible roots for non-normophilic sexual fantasies and behaviors across different contexts.

Ethical approval

The Institutional Review Board was obtained. Ethical Committee Approval: #NeuroPers-2016 (June 09, 2016).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

Data are available upon request, by sending an email to the corresponding author. Data cannot be made publicly available, because this was not explicitly approved by the participants at the moment of assessment.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any potential conflict of interest.

Authors' Contribution

AS: Conceptualization; Formal analysis; Writing - Original Draft; LM: Data Curation; Writing - Original Draft; AF: Conceptualization; Formal analysis; Writing - Original Draft; Supervision.

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Appendix A

Table S1.

Five Factor Narcissism Super Short Form: Item Polychoric Correlation Matrix (N = 583)

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Item 15
Item 1	--														
Item 2	-.04	--													
Item 3	.20	.17	--												
Item 4	.22	.11	.26	--											
Item 5	.23	-.26	.20	.16	--										
Item 6	.32	.04	.32	.39	.20	--									
Item 7	.15	.13	.15	.48	.15	.32	--								
Item 8	.29	-.03	.23	.38	.27	.42	.53	--							
Item 9	.23	.03	.20	.37	.19	.41	.51	.79	--						
Item 10	.21	.02	.30	.30	.21	.28	.21	.37	.38	--					
Item 11	.33	-.10	.15	.26	.35	.30	.30	.45	.42	.41	--				
Item 12	.10	-.56	.01	-.10	.30	.00	-.22	.02	-.06	.02	.07	--			
Item 13	-.03	.06	-.10	.25	.09	.23	.27	.23	.24	.07	.16	-.12	--		
Item 14	.35	.05	.45	.54	.20	.43	.33	.44	.42	.46	.35	-.01	.16	--	
Item 15	.07	-.64	-.07	-.16	.34	.02	-.17	.07	-.01	.01	.12	.71	-.07	-.02	--

Table S2.*Five Factor Narcissism Super Short Form: Item Polychoric Correlation Matrix: Quasi-Inferential Parallel Analysis Results (N = 583)*

Eigenvalue Number	Real Data Eigenvalues	Random Data Based on 1,000 Random Permutation of Real Data	
		<i>M</i>	95 th Percentile
1.	4.42*	1.32	1.38
2.	2.60*	1.25	1.30
3.	1.34*	1.19	1.23
4.	0.91	1.15	1.19
5.	0.84	1.11	1.14
6.	0.81	1.07	1.10
7.	0.74	1.03	1.06
8.	0.69	0.99	1.02
9.	0.53	0.96	0.98
10.	0.48	0.92	0.95
11.	0.42	0.88	0.91
12.	0.42	0.85	0.88
13.	0.35	0.81	0.84
14.	0.26	0.77	0.80
15.	0.20	0.71	0.76

Note. *: Component to be retained

Table S3.

Five Factor Narcissism Super Short Form: Item-Level Principal Component Analysis: Procrustes-Rotated Component Loadings and Congruence Coefficients for the Similarity of the Empirical Principal Component Matrix and Binary Target Matrix Based on the A Priori Model of Item-to-Scale Assignment in Community Dwelling Adults (N = 583)

FFNI-SSF Items	<i>M</i>	<i>SD</i>	λ	λ	λ	b^2
Item 1	2.90	1.15	.61	-.10	.12	.35
Item 2	2.64	1.30	.01	-.04	-.82	.68
Item 3	1.74	0.84	.78	-.37	-.15	.63
Item 4	2.31	1.25	.47	.33	-.20	.47
Item 5	2.62	1.18	.42	.10	.49	.41
Item 6	2.24	1.18	.54	.24	-.01	.43
Item 7	3.10	1.27	.21	.64	-.21	.58
Item 8	3.21	1.34	.45	.59	.10	.69
Item 9	3.32	1.34	.39	.61	.00	.66
Item 10	2.52	1.32	.63	.05	.02	.41
Item 11	3.13	1.24	.47	.33	.21	.44
Item 12	2.81	1.27	.18	-.18	.84	.72
Item 13	3.42	1.11	-.21	.73	-.07	.50
Item 14	1.86	1.06	.75	.08	-.07	.62
Item 15	3.21	1.46	.11	-.05	.89	.79
Eigenvalue			Antagonism	Agentic Ext.	Neuroticism	
% of Variance			4.42	2.60	1.34	
PC Label			29.5	17.3	8.9	
CC Values			.90	.88	.91	

Note. FFNI-SSF: Five Factor Narcissism Inventory-Super Short Form; PC: Principal component; λ : Principal component loading; b^2 : Item communality; Ext.: Extraversion; CC: Congruence coefficient. CC values in the .85-.94 range imply fair similarity, whereas CC values of .95 or greater indicate matching components.

Table S4.

Five Factor Narcissism Super Short Form: Grandiose Narcissism and Vulnerable Narcissism Scales: Convergent-Discriminant Pearson r Coefficient Values (McDonald's Omega Coefficient Values Are Listed on the Main Diagonal) with the Brief Pathological Narcissism Inventory Narcissistic Grandiosity and Narcissistic Vulnerability Scales in Community Dwelling Adults ($N = 583$)

	1	2	3	4	<i>M</i>	<i>SD</i>
1. Five Factor Narcissism Super Short Form: Grandiose Narcissism Scale	.85				29.49	7.39
2. Five Factor Narcissism Super Short Form: Vulnerable Narcissism Scale	.07	.80			11.54	3.41
3. Brief Pathological Narcissism Inventory Narcissistic Grandiosity Scale	.59***	.35***	.88		3.77	0.74
4. Brief Pathological Narcissism Inventory Narcissistic Vulnerability Scale	.28***	.66***	.60***	.93	3.05	0.88

Note. Bold highlights the Five Factor Narcissism Super Short Form Grandiose Narcissism scale and Vulnerable Narcissism scale convergent validity r values.