

ORIGINAL RESEARCH

## Deviance or Normalcy? The Relationship Among Paraphilic Thoughts and Behaviors, Hypersexuality, and Psychopathology in a Sample of University Students



Giovanni Castellini, PhD,<sup>1</sup> Alessandra H. Rellini, PhD,<sup>2</sup> Cristina Appignanesi, MD,<sup>1</sup> Irene Pinucci, MD,<sup>1</sup> Matteo Fattorini, BA,<sup>1</sup> Elisa Grano, BA,<sup>1</sup> Alessandra D. Fisher, PhD,<sup>3</sup> Emanuele Cassioli, MD,<sup>1</sup> Lorenzo Lelli, MD,<sup>1</sup> Mario Maggi, MD,<sup>3</sup> and Valdo Ricca, MD<sup>1</sup>

### ABSTRACT

**Introduction:** The actual definitions of paraphilic thoughts or behaviors and hypersexuality are still a matter of debate in the scientific community, and few studies have evaluated their psychopathological correlates in non-clinical samples of both men and women.

**Aim:** This study aimed at shedding light on the gender differences in terms of frequency of paraphilic fantasies and behaviors, and the relationship among paraphilias, hypersexuality, and general psychopathology.

**Methods:** A sample of 775 university students (243 men, 532 women) was recruited from 6 Italian universities using questionnaires posted in social networks. Paraphilic behaviors, fantasies, and masturbation during these fantasies were evaluated, as well as hypersexuality, psychopathological correlates, self-perceived gender identity, and a history of adverse childhood conditions.

**Main Outcome Measures:** Participants were assessed on the presence of paraphilic fantasies, behaviors, and masturbation related to paraphilic thoughts, and evaluated by means of the Symptom Checklist 90-Revised, the Hypersexual Disorder Screening Inventory, the International Index of Erectile Function, the Female Sexual Function Index, the Gender Identity/Gender Dysphoria Questionnaire, and the Childhood Experience of Care and Abuse Questionnaire.

**Results:** In the present survey, 50.6% of the men and 41.5% of the women reported at least 1 behavior considered paraphilic. A gender difference in the prevalence of the main paraphilic interests and behaviors was observed, with men reporting a higher prevalence of voyeurism, exhibitionism, sadism, and frotteurism, and a higher prevalence of fetishism and masochism in women. Both general psychopathology and sexual dysfunctions were associated with hypersexuality, rather than with the content of sexual fantasies. Finally, an association between childhood adversities and hypersexuality was found in women but not in men.

**Clinical Implications:** Understanding the psychopathological correlates of paraphilic fantasies/behaviors and hypersexuality may allow clinicians to develop specific psychological and pharmacological interventions.

**Strengths & Limitations:** This is one of the few studies assessing paraphilic phenomenology and psychopathological correlates of hypersexuality in a non-clinical sample of both men and women.

**Conclusion:** The results seem to demonstrate that paraphilic thoughts and behaviors are not really a deviation from normalcy, rather they are quite widespread in the young population, and the distinction between healthy and pathological sexual interests may be better replaced by an all-encompassing approach considering ego-dystonic sexuality, hypersexuality, and their psychopathological correlates. **Castellini G, Rellini AH, Appignanesi C, et al. Deviance or Normalcy? The Relationship Among Paraphilic Thoughts and Behaviors, Hypersexuality, and Psychopathology in a Sample of University Students. J Sex Med 2018;15:1322–1335.**

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**Key Words:** Childhood Abuse; Hypersexuality; Paraphilia; Psychopathology

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<sup>1</sup>Psychiatry Unit, Department of Neuroscience, Psychology, Drug Research, and Child Health, University of Florence, Florence, Italy;

<sup>2</sup>Department of Psychology, University of Vermont, Burlington, VT, USA;

<sup>3</sup>Sexual Medicine and Andrology Unit, Department of Experimental, Clinical, and Biomedical Sciences, University of Florence, Florence, Italy

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## INTRODUCTION

In the last version of the *Diagnostic and Statistical Manual of Mental Disorders Fifth Edition* (DSM-5), paraphilia is defined as any “intense and persistent interest other than sexual interest in genital stimulation or preparatory fondling with phenotypically normal, physically mature, consenting human partners.”<sup>1</sup> By definition, paraphilia is not considered a disorder, rather it is related to sexual thoughts or behaviors that are considered as deviated from normalcy. According to the DSM-5, in order to establish a diagnosis of a paraphilic disorder, these deviated thoughts and behaviors must cause distress or impairment to the individual or harm to others. In other words, in order to establish the presence of a disorder, as for all other diagnoses included in the DSM-5, the paraphilic sexual behaviors must be subjectively perceived as ego-dystonic by the subjects, and the distress caused by them should last for a stable period of time (6 months). In psychiatry, ego-dystonic adjective is referred to aspects of one’s behavior or attitudes viewed as inconsistent with one’s fundamental beliefs and personality (contrasted with ego-syntonic). Indeed, the actual definition of “paraphilia” is still a matter of debate in the scientific literature. In the same way, the reason for perceiving a behavior as ego-dystonic can be varied, and many times related to religious beliefs, cultural issues, as well as psychopathological features.

The main reason for the uncertainty around the clinical and operative definition of paraphilias is the lack of conclusive empirical data on this topic. Indeed, the majority of the information regarding paraphilias is derived from clinical samples, with a substantial heterogeneity both within and between studies.<sup>2</sup> Despite the evidence of the association between paraphilia and lower satisfaction with sexual life,<sup>3</sup> there is a paucity of studies on the relationships between these particular conditions and subjective satisfaction in sexual intercourse. Furthermore, although a gender effect on paraphilic fantasies can be postulated, the available information on women is scarce.<sup>2,4</sup>

While the most common approach to defining paraphilia has been to consider its statistical normalcy, this approach is proving more and more problematic. Recent studies using non-clinical samples challenged the concept that paraphilia is a matter of deviation from statistical “normalcy.” As illustrated in a study conducted in a population of men, 62.4% of the participants had sexual interest that fell into at least 1 paraphilic category.<sup>5</sup> Paraphilic fantasies (58.6%) were more frequent than behaviors (44.4%), and the most common were voyeuristic (38.7%) and fetishistic (35.7%) fantasies. In a younger population of college students, voyeurism was present in the majority (52%) of the sample of men.<sup>4</sup>

With the aim of improving the conceptualization of paraphilia, researchers should take into consideration the psychopathological mechanisms underlying these behaviors, and how those may overspill into other aspects of the mental health through the expression of other symptoms or syndromes

(eg, anxiety, mood disorders). Furthermore, it is important to consider the impact of paraphilic behaviors on the quality of sexual relationships, as a potential factor of “ego-dystonicity” for one’s own sexuality.

Indeed, it has been reported that the relationship between sexual activity and general psychopathology was not mediated by the content of the non-mainstream fantasies per se, rather by the subjective feeling of ego-dystonic sexual preferences.<sup>6</sup> If this conceptualization is embraced, paraphilias are better considered as an expression of more general psychopathological processes, and this can be categorized as including sexual addiction, sexual compulsivity, or hypersexuality.<sup>7</sup> Despite the well-demonstrated relationship between paraphilias and hypersexuality, a clear distinction between these 2 categories should be provided and demonstrated according to empirical data. Kafka<sup>8</sup> defined hypersexuality as a syndrome characterized by recurrent and intense sexual fantasies, sexual urges, or sexual behaviors associated with time consumed, dysphoric mood states, stressful life events, repetitive but unsuccessful efforts to control it, and disregarding the risk for physical or emotional harm to self or others. In 2012, a DSM-5 Field Trial was designed to assess the reliability and validity of the criteria for hypersexual disorder in a sample of patients seeking treatment for hypersexual behavior, a general psychiatric condition, or a substance-related disorder.<sup>9</sup> Overall, hypersexuality has been associated with several problematic behaviors, including cybersex, pornography use, aberrant sexual behavior with consenting adults, telephone sex, and strip club visitation.<sup>10</sup> Distress caused by hypersexuality is usually the product of legal consequences, and social withdrawal resulting from the out-of-control sexual behavior that takes over other aspects of human life, such as family, work, and friends.<sup>7</sup> These intrinsic aspects of hypersexuality then can lead to mood or anxiety disorders. On the other side, it is possible that some persons attempt to manage mood and anxiety symptoms with compulsive sexual behaviors, which in turn are perceived as ego-dystonic. Moreover, according to a categorical approach,<sup>11</sup> Axis I co-morbid diagnoses, in particular, mood and anxiety disorders, are quite frequently observed in men with paraphilia, providing initial evidence that a more comprehensive approach that looks at paraphilic fantasies as part of a multi-symptom diagnosis may be appropriate.<sup>6,12–15</sup>

Finally, several etiological theories have been proposed for hypersexuality,<sup>16,17</sup> even though few studies have specifically examined the complex interplay of proposed predictors.<sup>18</sup> As a further support and clarification of the mechanisms underlying the relationship between hypersexuality and general psychopathology, studies should focus on the role of early adverse life events, considering their well-known importance in the development of mental problems.<sup>19</sup> For example, it has been suggested that early developmental experiences, such as childhood sexual abuse or family neglect, have etiological importance in the development of hypersexuality.<sup>18,20</sup> Indeed, childhood sexual abuse has been associated with impulsive sexual

behaviors,<sup>21,22</sup> and childhood emotional abuse has been reported to be increased in sexually addicted persons.<sup>23</sup> Regarding the possible mechanisms, it has been suggested that insecure attachment styles consequent to maltreatment might mediate the development of dysregulated sexual behaviors.<sup>24</sup> Furthermore, Bancroft et al<sup>25</sup> proposed emotional dysregulation as an underlying mechanism linking hypersexuality, psychopathology, and early adverse life events.

In general, a more fine-tuned characterization of the psychopathological processes associated with ego-dystonic sexuality and non-mainstream fantasies is necessary for a better comprehension of the sexual behaviors that cause distress, and to build up efficacious interventions. In particular, a specific relationship between hypersexuality and novelty seeking has been postulated, since paraphilic interests also tend to co-occur with a high sex drive or hypersexuality.<sup>26,27</sup> Specifically, it has been postulated that the degree of distress associated with paraphilic behaviors is not due to the abnormality of the fantasies per se, but rather to the subjective perception of lack of control and to the impact on sexual function and satisfaction within a committed relationship.<sup>28</sup>

With this regard, this study is aimed at shedding light on the differences in paraphilic thoughts and behaviors between men and women recruited from among college students, and also at illustrating the possible psychopathological correlates. On the basis of the above considerations, the present study evaluated gender differences in paraphilic phenomenology, comparing the prevalence and psychopathological correlates of different paraphilic fantasies and behaviors in a sample of men and women college students. Furthermore, it investigated the complex relationships between paraphilic behaviors and hypersexuality (defined according to the criteria described by American Psychiatric Association DSM-5 Workgroup on Sexual and Gender Identity Disorders)<sup>9</sup> general psychopathological features, self-perceived gender identity, as well as sexual distress and sexual dysfunctions. Finally, it examined the role of adverse childhood conditions as potential etiological correlates of hypersexuality. In order to collect information on a large sample, representative of the population of college students a self-reported survey on a social network was performed. Therefore, the present study was focused on paraphilic thoughts and behaviors, but the adopted methodology did not allow establishing a diagnosis of paraphilic disorder.

## METHODS

### Participants

A total of 775 students (243 men of mean  $\pm$  SD age 22.7  $\pm$  2.6 years and 532 women of mean  $\pm$  SD age 22.6  $\pm$  3.3 years) were recruited from 6 Italian universities (Naples, Bologna, Florence, Turin, Milan, and Rome) using questionnaires posted in social network groups for students (ie, Facebook). Facebook is the most widely used social network in the world, with an

average of 1.45 billion daily active users on March 2018 (<https://newsroom.fb.com/company-info/>). Using social networks to reach participants presents strengths and limitations: social media methods have more data quality issues but are faster and less expensive than many other survey methodologies. Recruiting via Facebook is indeed an inexpensive way to contact a large number of individuals in a short period of time. It has also been suggested to be a useful resource for stigmatized groups, thanks to the confidentiality and anonymity that it can afford. Facebook can be used to acquire a representative sample, nonetheless selection biases may imbalance the characteristics of the sample.

The inclusion criteria were as follows: age higher than 18 years old, registered in a degree program, fluent in Italian, and presence of a sexual activity in the last month. These universities were selected because they are the largest in the country and include a variety of majors allowing for a greater variety in the sample. The universities were included in the study only if they offered all of the following majors: psychology, medical school, government, literature and philosophy, mathematics, engineering, law, economics, foreign languages, pharmacy, and agriculture. The composition of the sample according to the different Italian towns was Milan 21.5%, Turin 20.9%, Florence 22.7%, Naples 6.2%, Bologna 7.5%, Rome 21.2%.

The survey was posted in roughly 60 social network groups, composed of 300 students each on average. The advertisements described the study as an online survey investigating sexual experiences and psychopathology. All students declared that they were above the age of 18 years and consented for the data to be used in the study. Google Survey was used to collect the data from the online questionnaire. Google Surveys provides a web interface with which to design surveys. Sociodemographic data were collected by specific questions, followed by the specific questionnaires reported in the Methods section. Before filling out the questionnaire the participants were asked to state the city and the bachelor's degree they attended, and they were informed that the compilation time lasted approximately 30 minutes. Students did not receive any compensation, and all the data were collected anonymously. This study was approved by the local ethical committee.

## Measures

### General Psychopathology

The Symptom Checklist (SCL)-90-Revised<sup>29,30</sup> was used to investigate the different psychopathological dimensions. The items assess, on a 5-point scale, how much a certain problem has distressed the individual over the last week. It fits the purpose of investigating psychopathological dimensions in healthy individuals as well as in people with medical or psychiatric conditions. The 9 subscales of the SCL-90-Revised are as follows: somatization; obsessive-compulsive; interpersonal sensitivity; depression; anxiety; hostility; phobic anxiety; paranoid ideation; and psychoticism. There are 7 additional items that explore

appetite and sleep. The general indexes are as follows: global severity index, positive symptom total, and positive symptom distress index. Scores vary between 0 and 4 and a score above 1 indicates the presence of a psychiatric tendency. For the sake of this study the SCL-total score was used for the main analyses. The Italian version of the questionnaire reported adequate internal consistency and psychometric properties.<sup>31</sup>

### Paraphilic Content of Sexual Fantasies and Paraphilic Behaviors

A specific questionnaire was adopted to evaluate the paraphilic content of sexual fantasies, frequency of such fantasies for each paraphilia, as well as masturbation related to these sexual thoughts and the paraphilic behaviors. Items were derived from the DSM-5 paraphilia definitions. Questions were asked in the following manner: "Have you ever...?" Response options included "yes" or "no." In the event of an affirmative answer, in order to evaluate the distress due to the self-perception of these fantasies and behaviors as ego-dystonic, the next question was: "Does this fantasy/masturbation-related thought/behavior cause distress or impairment to you?" Examples of questions asked were: "Have you ever had fantasies about exposing your genitals to a stranger and becoming sexually aroused by this?" concerning exhibitionism. And then: "Have you ever thought about exposing your genitals to a stranger during masturbation?" And finally: "Have you ever exposed your genitals to a stranger and become sexually aroused by this?" If "yes," the following item was: "Have you ever been distressed by that?" This approach was pursued for each paraphilia listed in DSM-5. Pedophilic fantasies and behaviors were addressed with questions about sexual interests, masturbation fantasies, and sexual partners among children under the age of 13 years. The mentioned questionnaire was already used in a previous publication, and thus validated in its Italian version.<sup>32</sup> Only individuals answering positively to behavioral questions were considered positive for paraphilic behaviors. The questionnaire was used to create a category (yes or no) for paraphilic behaviors and anyone answering positively to at least 1 behavioral question was included in the paraphilic category, which did not mean that a person had a paraphilia or a paraphilic disorder, rather it indicated that the subject had ever acted out a paraphilic behavior.

### Hypersexuality

Participants were asked to complete the Hypersexual Disorder Screening Inventory (HDSI), a questionnaire developed by the American Psychiatric Association DSM-5 Workgroup on Sexual and Gender Identity Disorders.<sup>9</sup> HDSI has shown evidence of reliability and validity in assessing recurrent and intense sexual fantasies, urges, and behaviors that have caused distress or impairment in the prior 6 months. Questions include 7 items divided into 2 sections: section A exploring recurrent and intense sexual fantasies, urges, and behaviors; and section B investigating distress and impairment as a result of these fantasies, urges, and behaviors. The items' sum can be used as a dimensional measure

of overall severity. Scores vary between 0 and 4 for each item, and a higher score indicates the presence of stronger hypersexuality. This questionnaire can also be used, other than a dimensional measure, as a diagnostic criteria measure. In order to obtain an Italian version of HDSI, a process of translation, back-translation, and semantic concordance evaluation has been performed independently by 2 bilingual translators, who were experienced psychiatrists and English native speakers. The Italian translation showed an adequate internal consistency for the present sample (Cronbach alpha = 0.83), and test-retest reliability.

### Male Sexual Functioning

The 15-item version of the International Index of Erectile Function (IIEF)-5 is a self-rating questionnaire designed to assess sexual function and distress.<sup>33</sup> This questionnaire has been validated in more than 50 clinical trials and provides a clinical assessment investigating 5 domains of sexual function: erectile function, orgasmic function, sexual desire, sexual satisfaction, and overall satisfaction. The individual scores were used for each category of the IIEF to provide a more in-depth explanation of the different aspects of sexual function in the present sample. Scores vary between 0 and 5 for each item and the maximum score is different for each domain (between 10 and 30). A lower score is related to a more severe dysfunction. The Italian version of the questionnaire reported adequate internal consistency and psychometric properties.<sup>34</sup>

### Female Sexual Functioning

The Female Sexual Function Index (FSFI) is a self-rating questionnaire measuring sexual functioning in women.<sup>35</sup> It was developed to provide an instrument to assess 6 domains of sexual function (desire, sexual arousal, orgasm, vaginal dryness, pain, and sexual satisfaction) in clinical trials. In the present study the individual scores for the subcategories of the FSFI were used for analyses. Score range varies for each item from 0 to 5 or from 1 to 5) as does the minimum range (0 or 0.8 or 1.2), while maximum range is 6 for each item. The sum of the items of each domain is multiplied by a domain factor. A higher score is related to better sexual functioning. Similarly, to the male version, it utilized the individual scores for each of the sexual dysfunction categories. According to the instructions for FSFI, this questionnaire was collected only for those persons with a sexually active sexual relationship within the last 4 weeks. The Italian version of the questionnaire reported adequate internal consistency and psychometric properties.<sup>36</sup>

### Gender Identity/Gender Dysphoria

The Gender Identity/Gender Dysphoria Questionnaire (GIDYQ-AA) evaluates the degree to which an individual struggles with his/her gender identity.<sup>37</sup> It is a 27-item self-rating questionnaire used to measure gender dysphoria. Scores vary between 1 and 5 for each item, and the mean of the scores is calculated. Lower scores are associated with higher

levels of gender dysphoria. the Italian version of the questionnaire reported adequate internal consistency and psychometric properties.<sup>38</sup>

### Adverse Childhood Experiences

The Childhood Experience of Care and Abuse (CECA) Questionnaire (CECA.Q) is a self-report questionnaire of adverse childhood experiences.<sup>39</sup> This report deals with parental care (neglect and antipathy), and physical and sexual abuse that took place in the period prior to age 17 years. Parental care is measured by 16 items presented in terms of a Likert scale. The items assess parents' antipathy (8 items) and neglect (8 items). The items are rated on a 5-point scale ranging from 1 (totally disagree) to 5 (totally agree). Questions about physical abuse are introduced as "physical punishment by a parental figure or other household member" and a general question asks: "When you were a child or teenager were you ever hit repeatedly with an implement, or punched, kicked, or burnt by someone in the household?" (yes or no). If "yes" then further questions explore the characteristics of the physical punishment. Concerning sexual abuse, the items aim to assess "unwanted sexual experiences before age 17 years." 3 separate screening questions were used: "When you were a child or teenager did you have any unwanted sexual experiences?" (yes, no, or unsure); "Did anyone force you or persuade you to have sexual intercourse against your wishes before age 17 years?" (yes, no, or unsure); and "Can you think of any upsetting sexual experiences before age 17 years with a related adult or someone in authority, eg, teacher?" (yes, no, or unsure). Both "yes" and "unsure" were considered as positive responses for completing the supplementary items to characterize the aforementioned sexual experiences. CECA.Q showed satisfactory reliability and validity as a self-reported retrospective assessment for adverse childhood experiences. The Italian version was derived from the original validated Italian CECA interview<sup>40</sup> and the validation work for the English version of the questionnaire,<sup>39</sup> following the International Test Commission latest guidelines.<sup>41</sup>

### Statistical Analyses

Continuous variables were reported as mean  $\pm$  SD, whereas categorical variables were reported as percentage. We used  $\chi^2$  to compare men and women, in terms of paraphilic fantasies and behavior rates. Independent sample *t* test and  $\chi^2$  for continuous and categorical variables were adopted to compare clinical variables between each paraphilia group and the group of persons without any paraphilia. The association between hypersexuality and clinical variables was tested by means of age-adjusted linear regression analyses. Stepwise linear regression analyses were also used to evaluate the specific association between HDSI scores and psychopathological dimensions. The aforementioned models were built for either men or women, adopting the HDSI score as a dependent variable and entering age and SCL-90 subscale scores as covariates. Finally, different multivariate models (linear regression analyses) were performed assessing the association of psychopathology (SCL-90 global score, as dependent variable) with both hypersexuality (HDSI) and each different paraphilic behavior (entered together into the models).

## RESULTS

### General Characteristics of the Sample

Within the sample, 36.8% reported a relationship with a partner lasting less than 6 months (women: 35.7% vs men: 39.0%), 53.0% reported a stable relationship lasting more than 6 months without cohabitation (women: 53.7% vs men: 51.5%), while 10.3% reported a stable relationship lasting more than 6 months with cohabitation (women: 10.6% vs men: 9.5%). Very few women reported at least 1 child (2.2%) while fatherhood was virtually absent in the sample. A sexual affair with a partner other than the one of the stable relationship was reported by 5.8% of the sample (women: 5.5% vs men: 6.4%). No significant difference was detected between men and women regarding these variables, and no association was detected between the mentioned sociodemographic information and the presence of a paraphilic behavior or a hypersexuality.

**Table 1.** Prevalence of paraphilic experiences (at least 1 lifetime fantasy, masturbation-correlated thought, and behavior)

	Sexual fantasies			Thoughts while masturbating			Behaviors		
	Men n = 243	Women n = 542	$\chi^2$	Men n = 243	Women n = 542	$\chi^2$	Men n = 243	Women n = 542	$\chi^2$
Voyeurism	157 (64.6%)	211 (38.9%)	44.2*	118 (48.6%)	133 (24.6%)	43.8*	65 (28%)	66 (12.4%)	28.3*
Exhibitionism	52 (21.4%)	57 (10.5%)	16.4*	43 (17.7%)	49 (9%)	12.1*	22 (9.5%)	20 (3.8%)	10.3*
Fetishism	92 (37.9%)	186 (34.4%)	0.87	61 (25.1%)	119 (22%)	0.91	58 (24.3%)	40 (26.3%)	0.36
Transvestitism	33 (13.6%)	86 (15.8%)	0.63	11 (4.5%)	33 (6.2%)	0.87	11 (4.5%)	33 (6.2%)	0.87
Masochism	49 (20.2%)	128 (23.7%)	1.18	43 (17.7%)	133 (24.6%)	4.5 <sup>†</sup>	26 (10.7%)	73 (14.3%)	1.8
Sadism	56 (23%)	42 (7.7%)	35.8*	51 (21%)	38 (7%)	32.6*	23 (9.5%)	25 (4.9%)	5.9*
Frotteurism	48 (19.8%)	46 (8.5%)	20.1*	43 (17.7%)	41 (7.5%)	18*	25 (10.3%)	19 (3.6%)	14*
Pedophilia	11 (4.5%)	8 (1.5%)	6.3 <sup>†</sup>	9 (3.7%)	4 (0.8%)	8.8*	1 (0.4%)	2 (0.4%)	0.05

Values are numbers (percentages);  $\chi^2$  for comparisons between groups of men and women group.

\**P* < .01.

<sup>†</sup>*P* < .05.

## Prevalence of Paraphilic Interests and Paraphilic Behaviors

Considering the whole sample, this investigation revealed two-thirds of the sample (68.2%) acknowledged a paraphilic fantasy at some point in their lives and approximately half of the sample (52.3%) reported masturbation driven by paraphilic thoughts. Furthermore, 43.6% of the stakeholders engaged in a paraphilic behavior at least once in their lifetime. Considering the potential bias in assessing voyeurism due to the online survey, analyses were also performed excluding this paraphilic behavior. Accordingly, 38.5% of the stakeholders engaged in a paraphilic behavior at least once in their lifetime, excluding voyeurism. Participants who declared impairment or distress because of their sexual paraphilic attitude were only a small percentage (3.6%).

Table 1 reports the prevalence of paraphilic behaviors and fantasies in men and women. Among men, voyeurism represented the most common paraphilic content concerning fantasies, masturbation, and behaviors (64.6%, 48.6%, and 28%, respectively) followed by fetishism (37.9%, 25.1%, and 24.3%, respectively). Sadism was the third most represented fantasy and arousing masturbation thought (23% and 21%, respectively), while sadistic behaviors were far less common (9.5%). Exhibitionism, masochism, and frotteurism in men had a similar prevalence: about 20%, 17%, and 10% concerning fantasies, masturbation thoughts, and behaviors, respectively. The paraphilic scenario for the lowest prevalence was pedophilia, with 4.5% of the men reporting pedophilic fantasies, 3.7% reporting pedophilic thoughts during masturbation, and 0.4% reporting pedophilic behaviors. 62 persons (25.5%) reported more than 1 paraphilic behavior.

Considering women, it was observed that voyeurism was the most frequent paraphilic fantasy and masturbation scenario (38.9% and 24.6%, respectively), but women appeared to act more frequently regarding other paraphilias, such as fetishism (26.3%) and masochism (14.3%). It was confirmed that pedophilia is the least frequent paraphilia also among women stakeholders (1.5%, 0.8%, and 0.4% analyzing fantasies, masturbation thoughts, and behaviors, respectively). 99 Persons (18.6%) reported more than 1 paraphilic behavior.

As expected, the evaluation of differences in mean ratings revealed that men reported higher paraphilic tendencies as compared to women. The unique paraphilic scenario most frequent in women was masochistic thoughts during masturbation (24.6% vs 17.7%). A higher prevalence of voyeurism, exhibitionism, sadism, and frotteurism was observed in men (fantasies, masturbation-related thoughts, and behaviors). Gender differences were detected also in pedophilic fantasies and arousing masturbation thoughts, with men reporting a higher frequency (3.7% vs 0.8%). No significant difference between men and women was observed for pedophilic behaviors.

## Psychopathological Correlates of Paraphilic Behaviors

Considering men (Table 2), all the groups of people reporting paraphilic behaviors showed higher SCL-90 total scores, as compared with the group without any paraphilic behavior. All the paraphilic groups with the exception of the transvestism group reported higher hypersexuality (HDSI), as compared with subjects without any paraphilic behavior.

Furthermore, all the groups, with the exception of the exhibitionistic one, reported higher gender dysphoria (GIDYQ-AA) as compared to persons without paraphilias. As far as sexual functioning is concerned (IEEF), frotteuristic ( $t = 2.12, P < .05$ ), transvestic ( $t = 2.12, P < .05$ ), and masochistic ( $t = 2.42, P < .05$ ) groups reported a lower erectile function, while voyeuristic ( $t = 2.46, P < .05$ ), transvestic ( $t = 2.46, P < .05$ ), masochistic ( $t = 2.53, P < .05$ ), and sadistic ( $t = 2.77, P < .01$ ) groups showed a lower orgasmic function, as compared to subjects without paraphilias. On the contrary, exhibitionistic ( $t = 2.09, P < .05$ ), fetishistic ( $t = 2.13, P < .05$ ), and frotteuristic ( $t = 2.12, P < .05$ ) groups reported a greater sexual drive. Considering early life events, no paraphilia was associated with parents' neglect, whereas a more prevalent history of childhood sexual abuse was associated with frotteurism ( $\chi^2 = 10.30$ ) and sadism ( $\chi^2 = 8.72$ ).

Considering women (Table 3), all the groups of people with paraphilic behaviors, with the exception of the frotteuristic group, showed higher SCL-90 total scores, as compared to the group without any paraphilic behavior. All the paraphilic groups reported higher hypersexuality (HDSI), gender dysphoria (GIDYQ-AA), and all the paraphilias with the exception of sadism and transvestism, which showed higher sexual desire (FSFI scores) as compared to people without any paraphilias. No relevant impairment in sexual functioning was detected among women with paraphilias.

The association with hypersexuality was also considered taking into account those subjects reporting distress related with their specific paraphilic behavior: again, all groups of persons with distress related to their paraphilic behavior reported higher HDSI scores as compared to the other subjects (all  $P < .001$  for both men and women), with the exception of transvestitism in men, which was not significantly different.

Considering early life events, only sadism was associated with higher reported father neglect ( $t = 3.63, P < .01$ ). A more prevalent history of childhood sexual abuse was associated with voyeurism, fetishism, masochism, and sadism, and with a higher number of co-occurring paraphilias (age-adjusted  $\beta = 0.138, P = .002$ ).

## Psychopathological Correlates of Hypersexuality

Men reported significantly higher HDSI scores as compared to women ( $7.41 \pm 5.67$  vs  $4.75 \pm 4.79$ ;  $t = 6.72, P < .001$ ).

**Table 2.** Clinical characteristics of men (n = 243) with and without paraphilic behaviors

	No paraphilic behavior (n = 120)	Voyeuristic behavior (n = 65)	Exhibitionistic behavior (n = 22)	Frotteuristic behavior (n = 25)	Fetishistic behavior (n = 58)	Transvestic behavior (n = 11)	Masochist behavior (n = 26)	Sadist behavior (n = 23)
SCL-90-R total score	0.38 ± 0.39	0.70 ± 0.60*	0.82 ± 0.50*	0.76 ± 0.56*	0.64 ± 0.53*	0.86 ± 0.69 <sup>†</sup>	0.87 ± 0.80*	0.76 ± 0.59*
HDSI	4.97 ± 4.33	10.40 ± 6.02*	11.68 ± 6.13*	12.36 ± 5.54*	9.88 ± 5.68*	8.45 ± 5.66	9.85 ± 7.06*	11.22 ± 5.72*
IIEF erectile function	21.53 ± 11.13	19.03 ± 11.96	21.68 ± 11.19	17.12 ± 12.47 <sup>†</sup>	20.43 ± 11.67	18.91 ± 12.09 <sup>†</sup>	15.61 ± 12.08 <sup>†</sup>	22.52 ± 10.95
IIEF intercourse satisfaction	6.60 ± 4.50	5.58 ± 4.69	7.09 ± 3.93	5.28 ± 4.55	6.10 ± 4.27	6.55 ± 4.41	4.18 ± 5.08	5.43 ± 5.04
IIEF orgasmic function	7.52 ± 3.75	6.29 ± 4.29 <sup>†</sup>	7.55 ± 3.28	6.48 ± 4.04	7.40 ± 3.40	6.82 ± 3.73 <sup>†</sup>	5.42 ± 4.22 <sup>†</sup>	5.09 ± 4.41 <sup>†</sup>
IIEF sexual desire	7.91 ± 2.12	8.52 ± 2.00	8.91 ± 1.38*	8.36 ± 1.55	8.33 ± 1.50 <sup>†</sup>	7.36 ± 1.80	8.04 ± 1.89	8.57 ± 1.40 <sup>†</sup>
IIEF overall satisfaction	6.19 ± 3.06	5.18 ± 3.16 <sup>†</sup>	6.50 ± 3.16	5.04 ± 3.32	6.24 ± 3.04	5.45 ± 2.73	5.42 ± 3.18	5.60 ± 3.57
GIDYQ-AA	4.63 ± 0.23	4.49 ± 0.25*	4.45 ± 0.40	4.32 ± 0.64 <sup>†</sup>	4.48 ± 0.33*	3.96 ± 0.82 <sup>†</sup>	4.32 ± 0.61 <sup>†</sup>	4.36 ± 0.63
CECA.Q sexual abuse	20 (10.6%)	6 (9.2%)	3 (13.6%)	5 (20.0%) <sup>†</sup>	5 (8.6%)	2 (18.2%)	5 (19.2%)	6 (26.1%)*
CECA.Q physical abuse	39 (20.7%)	23 (33.8%)*	7 (30.4%)	14 (56.0%)*	11 (18.6%)	2 (18.2%)	6 (23.1%)	10 (43.5%)*
CECA.Q father neglect	19.09 ± 6.50	18.86 ± 6.27	19.48 ± 6.11	19.71 ± 6.27	17.44 ± 5.86	16.73 ± 6.10	19.16 ± 6.56	21.86 ± 7.05
CECA.Q mother neglect	14.61 ± 5.97	14.09 ± 4.46	14.55 ± 5.33	14.04 ± 4.13	12.88 ± 4.27 <sup>†</sup>	12.82 ± 2.13 <sup>†</sup>	12.92 ± 2.54 <sup>†</sup>	16.00 ± 5.42

Values are number (percentage) for categorical variables or mean ± SD for continuous variables. Each paraphilia group was compared with persons without any paraphilia;  $\chi^2$  for comparisons for categorical variables or independent sample t test for continuous variables.

CECA.Q = Childhood Experience of Care and Abuse Questionnaire; GIDYQ-AA = Gender Identity/Gender Dysphoria Questionnaire; HDSI = Hypersexual Disorder Screening Inventory; IIEF = International Index of Erectile Function; SCL-90-R = Symptom Checklist 90-Revised.

\* $P < .01$ .

<sup>†</sup> $P < .05$ .

**Table 3.** Clinical characteristics of women (n = 542) with and without paraphilic behaviors

	No paraphilic behavior (n = 317)	Voyeuristic behavior (n = 66)	Exhibitionistic behavior (n = 20)	Frotteuristic behavior (n = 19)	Fetishistic behavior (n = 140)	Transvestic behavior (n = 33)	Masochist behavior (n = 73)	Sadist behavior (n = 25)
SCL-90-R total score	0.63 ± 0.55	1.05 ± 0.78*	1.04 ± 0.82 <sup>†</sup>	1.04 ± 0.95	0.84 ± 0.62*	1.09 ± 0.79*	0.92 ± 0.68*	1.20 ± 0.79*
HDSI	3.41 ± 3.88	8.77 ± 6.19*	11.35 ± 7.36*	9.32 ± 6.37*	6.79 ± 5.46*	9.30 ± 6.51*	8.53 ± 6.54*	8.96 ± 5.98*
FSFI desire	4.41 ± 1.11	4.77 ± 0.95*	5.22 ± 0.62*	4.99 ± 0.80*	4.64 ± 0.92 <sup>†</sup>	4.42 ± 1.22	4.71 ± 0.94 <sup>†</sup>	4.32 ± 1.33
FSFI arousal	3.98 ± 2.05	4.17 ± 1.75	4.50 ± 1.73	4.20 ± 1.80	4.31 ± 1.73	4.08 ± 1.67	4.34 ± 1.72	3.66 ± 1.65
FSFI lubrication	4.27 ± 2.10	4.50 ± 1.82	4.66 ± 1.74	4.53 ± 2.08	4.58 ± 1.74	4.40 ± 1.62	4.67 ± 1.78	4.04 ± 1.64
FSFI orgasm	3.62 ± 2.07	3.91 ± 1.85	3.78 ± 1.82	3.68 ± 1.99	4.01 ± 1.79 <sup>†</sup>	3.81 ± 1.72	3.92 ± 1.76	3.71 ± 1.80
FSFI satisfaction	4.23 ± 1.74	4.24 ± 2.03	4.50 ± 1.30	4.29 ± 1.45	4.24 ± 1.63	4.18 ± 1.68	4.26 ± 1.60	3.42 ± 1.80 <sup>†</sup>
FSFI pain	4.12 ± 2.24	4.24 ± 2.03	4.42 ± 1.91	4.42 ± 2.16	4.41 ± 2.05	3.90 ± 2.13	4.55 ± 1.98	3.84 ± 2.02
GIDYQ-AA	4.57 ± 0.21	4.35 ± 0.42*	4.26 ± 0.57 <sup>†</sup>	4.17 ± 0.50*	4.43 ± 0.34*	4.31 ± 0.52*	4.41 ± 0.36*	4.22 ± 0.51*
CECA.Q sexual abuse	82 (19.5%)	20 (30.3%)*	6 (30.0%)	4 (21.1%)	36 (25.7%)*	8 (24.2%)	20 (27.4%) <sup>†</sup>	9 (36.0%)*
CECA.Q physical abuse	82 (19.5%)	19 (28.8%) <sup>†</sup>	3 (15.0%)	4 (21.1%)	30 (21.4%)	10 (30.3%)	19 (25.0%)	9 (34.6%) <sup>†</sup>
CECA.Q father neglect	19.28 ± 7.75	21.17 ± 7.93	19.05 ± 9.35	21.74 ± 8.24	20.64 ± 7.73	21.13 ± 7.21	20.87 ± 7.38	25.16 ± 8.21*
CECA.Q mother neglect	14.22 ± 6.14	14.94 ± 5.89	14.80 ± 6.01	14.42 ± 6.30	14.51 ± 5.45	15.21 ± 6.07	14.70 ± 6.04	15.84 ± 5.44

Values are number (percentage) for categorical variables or mean ± SD for continuous variables;  $\chi^2$  for categorical variables or independent sample t test for continuous variables.

CECA.Q = Childhood Experience of Care and Abuse Questionnaire; FSFI = Female Sexual Function Index; GIDYQ-AA = Gender Identity/Gender Dysphoria Questionnaire; HDSI = Hypersexual Disorder Screening Inventory; SCL-90-R = Symptom Checklist 90-Revised.

\* $P < .01$ .

<sup>†</sup> $P < .05$ .



**Table 4.** Multivariate model for association of psychopathology with paraphilic behaviors and hypersexuality

Dependent variable for each model: SCL-90-Revised total score

Variables entered into each model	Men n = 243			Women n = 532		
	R <sup>2</sup>	β	P	R <sup>2</sup>	β	P
	0.24			0.15		
Age		-0.124	.060		-0.087	.068
Voyeurism		0.133	.074		0.112	.032
Hypersexuality		0.401	<.001		0.311	<.001
	0.218			0.112		
Age		-0.023	.758		-0.093	.074
Exhibitionism		0.222	.011		0.048	.405
Hypersexuality		0.318	<.001		0.304	<.001
	0.174			0.132		
Age		-0.046	.507		-0.106	.017
Fetishism		0.122	.114		0.052	.268
Hypersexuality		0.348	<.001		0.325	<.001
	0.182			0.135		
Age		-0.028	.730		-0.097	.055
Transvestitism		0.245	.004		0.114	.037
Hypersexuality		0.301	<.001		0.288	<.001
	0.306			0.128		
Age		-0.074	.306		-0.091	.059
Masochism		0.221	.005		0.066	.209
Hypersexuality		0.435	<.001		0.315	<.001
	0.187			0.123		
Age		0.002	.982		-0.101	.049
Sadism		0.164	.062		0.175	.001
Hypersexuality		0.332	<.001		0.234	<.001
	0.206			0.126		
Age		0.060	.430		-0.092	.079
Frotteurism		0.133	.136		0.067	.223
Hypersexuality		0.369	<.001		0.311	<.001

Linear regression analyses assessing the association of psychopathology (SCL-90 global score, as dependent variable) with both hypersexuality (Hypersexual Disorder Screening Inventory) and each different paraphilic behavior (entered together into the models). Results were age adjusted. SCL-90-R = Symptom Checklist 90-Revised.

Within the group of men, HDSI was directly correlated to SCL-90 total score ( $\beta = 0.41, P < .001$ ), and all the SCL-90 subscales (all  $P < .001$ ). According to age-adjusted stepwise linear regression analyses, only the somatization subscale retained its significant association with HDSI. Furthermore, HDSI was inversely associated with GIDYQ-AA (meaning higher gender dysphoria,  $\beta = -0.22, P < .001$ ), IIEF general satisfaction ( $\beta = -0.15, P = .014$ ), and IIEF erectile function ( $\beta = -0.12, P = .04$ ), and it was directly associated with IIEF sexual desire ( $\beta = 0.18, P = .005$ ).

Within women, the HDSI group was directly correlated to SCL-90 total score ( $\beta = 0.36, P < .001$ ) and SCL-90 subscales (all  $P < .001$ ). According to age-adjusted stepwise linear regression analyses, only the obsessive-compulsive subscale retained its significant association with HDSI. Furthermore, HDSI was inversely correlated to GIDYQ-AA (meaning higher

gender dysphoria,  $\beta = -0.31, P < .001$ ), and it was directly associated with FSFI sexual desire ( $\beta = 0.17, P < .001$ ).

Table 4 reports the association of psychopathology (SCL-90 global score) with both hypersexuality (HDSI) and each different paraphilic behavior. In both men and women, the association between SCL-90 and HDSI retained its significance, even after adjusting for all different paraphilic behaviors. In men, exhibitionism, transvestitism, and masochism retained their significant association with SCL-90, when adjusting for hypersexuality, while in women, voyeurism, transvestitism, and sadism retained their significant association.

Finally, a significant gender effect was detected for the association between early life events and hypersexuality. Indeed, a specific association between reported father neglect (CECA.Q) and HDSI was found in women (age-adjusted  $\beta = 0.148, P = .001$ ) but not in men, and a history of sexual abuse was

significantly associated with higher HDSI scores in women (age-adjusted  $\beta = 0.144$ ,  $P = .001$ ) but not in men.

## DISCUSSION

This is one of the few studies that has assessed paraphilic phenomenology and its psychopathological correlates in a non-clinical sample of both men and women. In agreement with previous reports, the results of the present study challenge the current definition of paraphilic fantasies and behaviors, which is grounded on a concept of sexual interest that deviates from statistical normalcy. Indeed, in this study 50.6% of men and 41.5% of women reported a behavior considered paraphilic. It is well known that in sexual medicine the concept of normalcy varies widely between cultures and even within 1 culture over time. Accordingly, the distinction between healthy and pathological sexual interests cannot be merely established on the basis of the content of sexual fantasies per se, rather on the way a person subjectively experiences his/her sexual interest. In line with this approach, the present study attempted to unpack the concept of paraphilic interest by considering it as part of a more complex network of behaviors and fantasies, commonly considered deviations, along with the important self-perception of an excessive involvement in sexuality (hypersexuality).

The main results of the present study are as follows:

- 1) Paraphilic fantasies and behaviors were generally more frequent than expected in a population of men and women students, thus challenging the definition of a behavior deviating from normalcy;
- 2) Both general psychopathology and sexual dysfunctions appear to be associated with hypersexuality, rather than to paraphilic behaviors;
- 3) An association between early adverse life conditions and paraphilic behaviors or hypersexuality has been demonstrated in women but not in men.

### Prevalence of Paraphilic Behaviors and Gender Differences

Considering the high prevalence of paraphilic behaviors, the results of the present study challenged the definition referred to as unusual or atypical sexual interest. In fact, this investigation found that 68.2% of the sample reported a paraphilic fantasy at some point in their lives and approximately half of the sample (52.3%) reported masturbation driven by paraphilic thoughts. These data are consistent with recent studies conducted in college students<sup>4</sup> and in the general population.<sup>2,5</sup> Furthermore, the high prevalence of paraphilic behaviors (43.9%) is far from deserving of the label “unusual.” A high rate (38.5%) was observed even when excluding voyeurism. It is of note that in the present investigation only 3.6% of case participants met criterion B of the DSM-5 criteria for a paraphilic disorder (distress or impairment). This result confirms previous observations<sup>5</sup> already reporting a substantial discrepancy between the prevalence of

persons with an arousal pattern associated with paraphilias (62.4%) and the rate of persons who declare distress related to them (1.7%).

Considering the specific paraphilias, the most frequently reported in terms of desire and experienced by both genders was voyeurism, followed by fetishism as previously reported in men,<sup>2,4,5</sup> and women.<sup>4</sup> It is important to note that voyeurism is one of the paraphilias most difficult to diagnose by survey. This is because sexual arousal from seeing naked people cannot be considered voyeurism, which involves a preference for observing non-consenting people. The fact that many people reported masturbating while engaging in voyeuristic fantasies could be explained by people thinking masturbating while viewing pornography on the Internet is voyeuristic. In line with population studies,<sup>42,43</sup> a gender difference was observed in the prevalence of the main paraphilic interests and behaviors, with men reporting a higher sex drive associated with paraphilias as compared to women, and a higher prevalence of voyeurism, exhibitionism, sadism, and frotteurism (fantasies, masturbation-related thoughts, and behaviors). However, while almost all the paraphilias were more prevalent among men, it was found that women acted more frequently in regard to fetishism (26.3%) and masochism (14.3%) fantasies, compared to men. The fantasy of having forced sex has already been described as quite frequent among young women.<sup>44–46</sup> Even more, Joyal and Carpentier<sup>2</sup> found that among women the sexual fantasy of being dominated, spanked or whipped, being tied up, and being forced to have sex was one of the most frequent paraphilia among women. Often this type of fantasy has been explained as a way for women to rid themselves of guilt or negative associations for wanting sex.<sup>47</sup> It has been reported that a higher frequency of sexual fantasies among women resulted in being associated with better sexual satisfaction.<sup>44</sup>

Most importantly, gender differences were detected not just in the prevalence rate of paraphilic behaviors, but also considering the degree of self-reported hypersexuality, which was significantly higher in men than women. Neurobiological and evolutionary theories have been proposed to explain why women are less vulnerable to hypersexuality than men<sup>7,48</sup> without reaching definitive conclusions. Indeed, men have more frequent sexual fantasies,<sup>49</sup> greater frequency of masturbation,<sup>50</sup> and more frequent permissive tendency toward casual sex,<sup>51</sup> while women are generally considered to show more inclinations toward reproduction, child-rearing, and stability in sexual relationships.<sup>52–54</sup>

### Psychopathological Correlates of Paraphilic Behaviors and Hypersexuality

Considering the relationship between paraphilic behaviors and psychopathology, it was found that every paraphilic behavior (except for frotteurism in women) showed a significant correlation with higher psychopathology, confirming previous observations.<sup>4,5,11</sup> Given the cross-sectional design of the study, it is

not possible to establish whether this observation could be explained by causal effects between paraphilic interests and psychiatric symptoms. However, multivariate models showed that the relationship between paraphilic behaviors and psychopathology might be better explained by the degree of hypersexuality, as almost all the associations between paraphilias and SCL-90 scores lost their significance after adjusting for HDSI scores.

In agreement with previous observations,<sup>27</sup> the present study confirmed a relationship between paraphilic behaviors and hypersexuality, as participants reporting at least 1 paraphilic behavior reported higher sex drive, and higher HDSI scores, in both genders. Every paraphilic behavior (except for transvestitism in men) also showed a significant correlation with a higher score in hypersexuality, thus confirming previous findings.<sup>55</sup> Furthermore, the association between paraphilic behaviors and hypersexuality might be also explained because people with paraphilic interests may be more likely to self-label themselves as “hypersexual” because of the self-perceived unconventionality of their interests. In other terms, their unconventional sexual interest might be subjectively perceived as excessive and pathological.

The present results confirmed the frequent co-occurrence of paraphilic behaviors and hypersexuality, as these conditions share many clinical conditions.<sup>55–61</sup> For example, in both conditions at a clinical level, patients report sexually arousing fantasies, urges, and behaviors that are time-consuming or associated with sexual preoccupation,<sup>13,26,59</sup> and they can occur more intensively during periods of “stress.”<sup>13</sup> However, although these 2 conditions can be comorbidly associated and a paraphilic interest can be expressed in association with specific hypersexual behaviors, it has been suggested that they be considered as distinct categories in the DSM.<sup>27</sup> Hypersexuality has been conceptualized as a pathophysiological mechanism that can include both paraphilic and non-paraphilic behaviors, including affairs, commercial sex, pornography, cybersex, sexual harassment, and sexual offending.<sup>27</sup>

In particular, the results of the present study confirmed that the association between sexual activity and psychopathology is not primarily due to the content of sexual fantasies (paraphilic fantasies), rather it is associated with the subjective perception of a “hyper”/excessive sexual involvement. Considering the specific psychopathological features, multivariate analyses showed that somatization in men and obsessive-compulsive symptoms in women were the only variables that retained an independent association with HDSI scores, confirming previous observations of a relationship between hypersexuality and neurotic disorder.<sup>13,62,63</sup> Considering the proposed etiological pathways for hypersexuality, the paradoxical mood-sexuality relationship can be seen as a way to achieve emotional stability or a progression toward tolerance of emotional distress.<sup>59,64</sup> In the perspective of addiction, involvement in sexual behaviors may serve distinct psychological needs, such as being a coping strategy to reduce stress or regulate negative psychological states.<sup>65,66</sup> At the same

time, the findings of the specific link to obsessive-compulsive symptoms in women are in line with the “sexual compulsivity” position. According to this perspective, individuals with compulsive sexuality may be sexually driven by the need to neutralize the unremitting and intrusive sexual thoughts and urges.<sup>67</sup>

As far as the potential adverse consequences of paraphilias and hypersexuality are concerned, most studies described them in terms of legal problems, increased risk of sexually transmitted diseases, unwanted pregnancies, severe pair-bond impairment, excessive financial expenses, work or educational role impairment, and other associated morbidities.<sup>27</sup> However, only a few authors have considered the sexual impairment due to these behaviors.<sup>68</sup> In the present study, no relevant association was detected between sexual functioning and paraphilic behaviors, thus confirming that non-normophilic sexual interests do not represent a cause of sexual impairment. However, hypersexuality was associated with sexual dysfunction in both men and women. This result is in line with previous observations reporting that excessive involvement in unconventional sexual activity may cause a person to withdraw from sexual encounters with a partner that becomes “ordinary” and thus less sexually arousing.<sup>27</sup>

Finally, considering the complex relationships among childhood adverse life events, hypersexuality, and psychopathology, a gender-specific relationship was found between hypersexuality and childhood adversities. Accordingly, women with a history of neglect and/or sexual abuse reported higher hypersexuality than other women. Although a history of sexual abuse is more commonly associated with adult sexual dysfunction, in a subgroup of affected adult women sexual abuse may be associated with hypersexual behaviors,<sup>3,69</sup> as well as with other impulsive behaviors such as binge eating.<sup>70</sup> With this regard, it can be hypothesized that the pathoplastic effect of childhood abuse in terms of impulsive behaviors during adulthood would be mediated by gender-specific variables (eg, body image disturbance, relational issues) not considered in the present survey.

The results of the present study should be considered in the light of some limitations. First of all, the cross-sectional design of the study did not allow for causal inferences among psychopathology, paraphilias, hypersexuality, and sexual dysfunctions to be made. Findings only support the correlational nature among the aforementioned variables. Second, data were obtained from a limited sample of university students, and therefore they cannot be generalized to the whole population. Third, only 1 social network (Facebook) was used, in order to have homogeneous sources of data, thus excluding other social networks (ie, Twitter). All the variables were obtained by means of self-reported instruments that could overestimate or underestimate the prevalence of hypersexual or paraphilic sexual behaviors. Indeed, considering the sensitive nature of the data collected, it is feasible that sexual interests were not reported in a proper way, or at least not fully understood, as for the already reported issue associated with voyeurism. However, it is

important to note that online surveys have the strength of anonymity, and they can elicit greater self-disclosure and increase attitude to answer to questions related to sexual behaviors. Finally, given the adopted online methodology for the present survey, it was not possible to establish diagnoses for paraphilic disorders, other psychiatric disorders (eg, mood, anxiety disorders), or sexual dysfunctions.

## CONCLUSION

Overall, the results of the present study seem to challenge the current definition of paraphilic behaviors. To distinguish between healthy and pathological sexual interests is important as well as difficult, and the key explanation could be subjectivity and the way people experience a sexual fantasy or behavior, rather than the content of such fantasy per se. The data of prevalence among the non-clinical population suggest that paraphilia-related interests or acts cannot be defined as anomalous from a normative perspective if they are not accompanied by problem awareness, are not accompanied by sexual and psychological distress, or do not involve non-consenting partners. History and sociocultural changes tell us that focusing on “normality” in medicine could be limiting, while focusing on suffering, distress, or impairment related to thoughts or behaviors could be the more stable and forward-thinking interpretation despite demographic and cultural changes.

Finally, the present results are in line with previous observations, confirming that hypersexuality should be considered across a dimensional continuum as a serious and common clinical condition that can be associated with specific psychopathological correlates, sexual dysfunction, and a gender-specific association with childhood adversities. Hypersexuality may be a first signal of a more profound uneasiness related to different psychopathological mechanisms (ie, addiction, mood disorders, emotional dysregulation, obsessive thinking) thus deserving greater attention and knowledge.

**Corresponding Author:** Giovanni Castellini, PhD, Psychiatric Unit, Department of Neuroscience, Psychology, Drug Research, and Child Health, University of Florence, Largo Brambilla 3, 50134 Florence, Italy. Tel: +39 055-7947487; Fax: +39 055-7947531; E-mail: [giovanni.castellini@unifi.it](mailto:giovanni.castellini@unifi.it)

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## STATEMENT OF AUTHORSHIP

### Category 1

#### (a) Conception and Design

Giovanni Castellini; Alessandra H. Rellini; Cristina Appignanesi; Irene Pinucci; Valdo Ricca

#### (b) Acquisition of Data

Matteo Fattorini; Elisa Grano

### (c) Analysis and Interpretation of Data

Giovanni Castellini; Alessandra H. Rellini; Alessandra D. Fisher; Valdo Ricca

### Category 2

#### (a) Drafting the Article

Giovanni Castellini; Cristina Appignanesi; Irene Pinucci; Emanuele Cassioli; Lorenzo Lelli

#### (b) Revising It for Intellectual Content

Alessandra D. Fisher; Mario Maggi

### Category 3

#### (a) Final Approval of the Completed Article

Giovanni Castellini; Alessandra H. Rellini; Valdo Ricca

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