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# The Prevalence of Paraphilic Interests in the Czech Population: Preference, Arousal, the Use of Pornography, Fantasy, and Behavior

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## ABSTRACT

The number of population-based studies focused on the prevalence of paraphilic sexual interests in men is very low and for women, the subject remains largely unexplored. The two main aims of this study are to investigate the prevalence of paraphilias and to explore sex differences in an online representative sample of Czech men and women using various dimensions of sexual experience. We collected data about sexual motivations and behavior from a representative online sample of 10,044 Czechs (5,023 men and 5,021 women). In a standardized online interview, participants answered questions about selected dimensions of sexual experience within specific paraphilic patterns: sexual preferences, sexual arousal, sexual fantasies in the past 6 months, pornography use in the past 6 months, and experience with paraphilic behaviors. Our results show that 31.3% of men ( $n = 1,571$ ) and 13.6% of women ( $n = 683$ ) admitted to at least one paraphilic preference. Moreover, 15.5% of men and 5% of women reported more than one paraphilic preference. Except for beating/torture and humiliation/submission, in terms of real experience with such behaviors almost all paraphilias were more common among men than among women. Our results indicate that the high prevalence of some paraphilic patterns might render their pathologization problematic.

## Introduction

### Prevalence of Paraphilic Interests across Populations

According to the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5, American Psychiatric Association [APA], 2013), a paraphilic interest can be defined as sexual interest in an anomalous target or activity. If this interest is present for 6 months or more, and equal or superior to “normophilic” interest for the achievement of sexual pleasure, it is considered to be a paraphilia. If it causes significant distress or disrupts sexual functioning, it is classified as a paraphilic disorder. Paraphilia, as represented by recurrent, intense, sexually arousing fantasies, sexual urges, or behaviors, tends to involve i) nonhuman objects (for instance, in fetishism or zoophilia), ii) suffering or humiliation of oneself or one’s partner (for instance, in sadism or masochism), or iii) minors (for example, pedophilia). In this respect, it should be noted that ICD 11, which will come into effect in 2022, removes sadomasochism, fetishism, and transvestism from its list of paraphilic disorders. This decision was based on suggestions of the ICD 11 working group (Krueger et al., 2017; Reed et al., 2016). In comparison to DSM-5, ICD 11 uses absence of consent (regardless of the age of victim) as the core feature of paraphilic disorders, which implies that some instances of rape can be classified as manifestations of a paraphilic disorder. Consensual or solitary behaviors can be viewed as paraphilic disorders only if they cause substantial

distress or pose a direct risk of injury or death to the individual concerned.

Current knowledge of distribution of paraphilic interests and paraphilias in the general population is biased because the majority of evidence is based on small samples of psychiatric patients, criminal individuals, or case studies (Behrendt, Buhl, & Seidl, 2002; Dunsieith et al., 2004; Federoff, Fishell, & Federoff, 1999; Kafka, 2012; Marsh et al., 2010). In sex offenders, for example, paraphilias were found in 25–74% of cases (Dunsieith et al., 2004; Hanson & Morton-Bourgon, 2004; Raymond, Coleman, Ohlerking, Christenson, & Miner, 1999) and that figure includes only individuals who were actually diagnosed with a paraphilic disorder. It is most likely, however, that in general nonclinical populations the prevalence of paraphilias is significantly lower (Långström & Seto, 2006; Marsh et al., 2010; Seto, 2008).

As noted above, awareness of paraphilias in the general population is limited. Nevertheless, recent calls for expansion of our knowledge of this subject, which come both from scholars (Briken & Krueger, 2018; Joyal, 2018) and from public institutions engaged in the management of sexual violence and/or its prevention (e.g., Rape, Abuse, and Incest National Network [RAINN], National Sexual Assault Online Hotline [NSAOH; [www.rainn.org](http://www.rainn.org)]), may soon result in more focus on these issues.

Current knowledge of paraphilic interests in nonclinical samples is based on just a few studies of varying quality.

The main limitations of our knowledge of the subject are due to three main factors: First of all, there is a lack of population-based representative studies. Secondly, there is little interest in dimensions of paraphilic experience other than just behavior (such as paraphilic desires, fantasies, or self-reported paraphilic preferences). Thirdly, there is a near-absence of studies addressing paraphilic interests in women, so that the prevalence of paraphilic interests in women is largely unknown. And finally, there is a lack of representative studies investigating paraphilic interests in both sexes.

Studies across the world agree on identifying voyeurism and fetishism as the most frequent paraphilic patterns, followed by pedophilia, exhibitionism, frotteurism, and transvestism, as manifested by daydreaming, fantasy, porn use, or actual behavior (Abdullahi, Jafojo, & Udofia, 2015; Ahlers et al., 2011; Långström & Seto, 2006; Långström & Zucker, 2005; Oliveira Júnior & Abdo, 2010). In the realm of actual behavior in men, 7–18% admit to voyeurism, 2–25% to fetishism, 2–4% to exhibitionism, 2.5% to frotteurism, and up to 3% admit to transvestism (Abdullahi et al., 2015; Ahlers et al., 2011; Långström & Seto, 2006; Långström & Zucker, 2005; Oliveira Júnior & Abdo, 2010). It should be noted that percentages for voyeurism and fetishism vary greatly, thus raising the possibility of cultural influences which influence subjects' willingness to admit to such behaviors.

Unsurprisingly, in the realm of daydreams or masturbation fantasies, numbers are much higher. This could be explained by socially imposed restrictions on behaviors, but one should also take into account that the link between fantasy and behavior need not be quite straightforward, as noted for instance by Joyal, Cossette, and Lapierre (2015). For example, a large German survey of 1,915 men aged 40–79 years (Ahlers et al., 2011) had shown rather high percentages for voyeuristic (34.9%), fetishistic (30.0%), and sadistic (21.8%) sexual daydreams. Less common were fantasies of the exhibitionistic (3.5%) or transvestic, eventually fetishistic kind (4.9%), while other types of fantasies (such as sex with babies, sex with elderly persons, and zoophilic sex) were all reported jointly in the low prevalence category (6.3%). The most common masturbation fantasies included fetishism (26.4%), voyeurism (24.5%) and sadism (19.9%), while masturbation fantasies involving pedophilia (6.0%), transvestic fetishism (5.7%) and exhibitionism (3.3%) were less prevalent.

Interestingly, Joyal and Carpentier (2017), in their recent study based on an online Canadian sample of 475 men and 565 women, reported considerably higher percentages of voyeurism, exhibitionism, and frotteurism than other comparable studies. In their study, over 50% of men and 21.2% of women admitted to engaging in voyeuristic behavior at least once in their lifetime, while 32.6% of men and 29.4% of women reported exhibitionistic behavior, and 32.4% of men and 20.5% of women reported at least one occasion at which they engaged in frotteuristic behavior (Joyal & Carpentier, 2017). These results markedly differ from other reports, but this study was large and its representativeness was confirmed by parallel data collection via telephone.

Pedophilia, the most socially exposed unusual sexual pattern, seems to be also one of the rarest ones. In relatively recent studies, only up to 3.8% of men admitted to pedophilic interests

(Dombert et al., 2016; Mohnke et al., 2014; Santtila et al., 2010) and less than 3% of women admitted to fantasies about prepubescent and pubescent children (Fromuth & Conn, 1997); 0.2% of men and 0.8% of women indicated actual engagement in pedophilic behavior (Abdullahi et al., 2015). Some likelihood of having sex with a child if there was no punishment was indicated by 6% of men and 2% of women, while 9% of men and 3% of women indicated that under such circumstances, they might view child pornography (Wurtele, Simons, & Moreno, 2014). It should be noted, though, that in comparison to other studies these results are based on a rather small sample.

Interestingly, Bondage-Discipline-Sado-Masochism-related activities (BDSM) seem to deviate from this pattern of behaviors which are characterized by a close link between the prevalence of fantasy and behavior. It has been observed that BDSM is very common on the level of fantasy but markedly less common on the level of actual behavior. National surveys showed that the prevalence of experience with BDSM in men and women combined was 10% in the USA and 1.7% in Australia (reviewed in Van Der Walt, 2014). Sexual fantasies involving BDSM, however, seem very common, reaching around 60% (Powls & Davies, 2012). This is in line with at least three other studies, which showed that paraphilic fantasies and especially fantasies focused on BDSM are indeed common in the general population (Holvoet et al., 2017; Joyal et al., 2015; Zurbriggen & Yost, 2004).

The abovementioned studies all seem to indicate that the prevalence of non-normophilic sexual patterns across multiple dimensions is higher in men than in women. In some particular instances, one can observe a curious reversal of the ratio (such as frotteurism and pedophilia in a Nigerian study involving undergraduate students by Abdullahi et al., 2015), but generally speaking, this is the rule. The only notable and well-confirmed exception to this rule is sexual masochism, which seems to be more widespread in women both on the level of behavior and on the level of fantasy. Some evidence even suggests that masochistic scenarios may be the most common paraphilic subject of sexual fantasies in women (Breslow, Evans, & Langley, 1985; Levitt, Moser, & Jamison, 1994). It is also well known that women often report sexual fantasies about sexual submissiveness or even about being forced into sexual behavior (Critelli & Bivona, 2008).

Reasons which underlie these sex differences are unclear, since existing information is based mostly on clinical experience (and the number of paraphilic women in specialized care for committing a sex-related offense is minimal), and the subject is not sufficiently explored (Dawson, Bannerman, & Lalumière, 2016). Theoretical explanations tend to focus on various factors which influence sexual behaviors, such as men's higher susceptibility to developmental disturbances which may contribute to the development of pathologies (Cantor, 2012), their generally higher sex drive (Dawson et al., 2016), higher mating efforts (Baumeister, Catanese, & Vohs, 2001), but also higher impulsivity and higher proclivity to sensation-seeking and risk-taking behaviors (Marshall, 2007).

## The Aims of the Present Study

Large differences between the prevalence of paraphilic interests reported by various studies as well as differences in the

variables used as indicators of paraphilic interests raise concerns about the validity of results obtained by nonsystematic surveys. Researchers across the field strongly agree that there is an urgent need for epidemiological data which would assess various dimensions of sexual experience (self-reported preference, presence of thoughts and fantasies, arousal potential of paraphilic topics, and actual presence of paraphilic behavior) and that there are not enough studies of large representative samples outside clinical or correctional settings (Joyal & Carpentier, 2017; Laws & O'Donohue, 2008). Moreover, cultural and sex differences in the prevalence of paraphilic interests should also be investigated to determine the role of biological sex and social and cultural influences on the phenomenon. A better understanding of the distribution of paraphilic interests in populations may also help individuals who need specialized treatment or preventive support.

The main aims of the present study thus were: Firstly, to describe the prevalence of paraphilic sexual interests (and paraphilias) in a representative online sample of Czech men and women using questions which target various dimensions of sexual experience. This study adds to previous studies by exploring a wide range of dimensions of sexual experience, not only behavior or arousal. Secondly, we wanted to assess, based on the above, sex differences in the prevalence of paraphilic sexual interests and paraphilias. Based on previous literature, we hypothesized that with the exception of the behavioral dimension of paraphilic patterns related to BDSM (specifically beating/torture, humiliation/submission), the percentage of persons reporting paraphilias across all dimensions of sexual experience should be significantly higher in men. And finally, we wanted to explore associations between the various dimensions of sexual experience.

## Method

### Sample and Procedure

Participants were recruited from a national pool of Czech respondents via STEM/MARK sociodemographic agency ([www.stemmark.cz](http://www.stemmark.cz)) in December 2016. This agency recruits from the European national panel (<https://www.nationalpanel.eu/>). The panel is compliant with the ethical codex of ICCP/ESOMAR (<https://www.esomar.org/>). Stratified random sampling was applied (the quotas were Czech nationality, the region of the Czech Republic, number of inhabitants in place of residence, sex, age, and education). Quotas were determined based on the last census of the Czech Statistical Agency in 2011 (Český statistický úřad, 2013). Data were collected using a standardized online interview in the form of an online questionnaire. An online method (instead of telephone or face to face interviewing) was selected due to the intimate character of our questions. From a national register of 50,000 men and women, a total of 12,000 men and 13,500 women were randomly selected within the particular quotas. These persons were then contacted by e-mail and invited to participate in an online survey. If they agreed to participation (men = 7,109, i.e., 59%; women = 6,903, i.e., 51%), they were asked to log in and complete our online questionnaire. Data of 2,086 men and 1,882 women were not included either because they did not complete the

questionnaire or due to saturation of particular quotas. The final online representative sample consisted of 5,023 men (age range: 18–88 years,  $M$  age = 45.47;  $SD$  = 15.47); 53% of men completed elementary education, almost 31% had higher education, and 16.2% attended university; 95% identified as heterosexual, 1.9% as bisexual, and 3.1% as homosexual. We also collected data from 5,021 women (age range: 18–88 years;  $M$  age = 46.13;  $SD$  = 15.32); 48.3% of women completed elementary education, 37% had higher education, and 14.7% of women attended university; 97.5% identified as heterosexual, 2% as bisexual, and 0.5% as homosexual. This research was approved by the Ethics Committee of National Institute of Mental Health (n. 119/19).

### Instruments and Methods

Before providing information in the online data survey, each participant provided informed consent. Completion of the questionnaire took on average 18 min. The questionnaire was available only in Czech.

The first part of the questionnaire focused on basic socio-demographic data such as sex, age, sexual orientation, level of education, and place of residence. Sexual orientation was assessed on a 7-point Kinsey scale (ranging from 0 = “exclusively heterosexual” to 6 = “exclusively homosexual”; Kinsey, Pomeroy, Martin, & Gebhard, 1998). The second part of the questionnaire focused on the prevalence of 13 paraphilic sexual interests, namely voyeurism, frotteurism/toucherism, fetishism, fetishistic transvestitism, exhibitionism, humiliation/submission, beating/torture, autogynephilia/autoandrophilia<sup>1</sup>, immobilization, pedophilia, zoophilia, and biastophilia (in the Czech sexological tradition known as “pathological sexual aggression”). The paraphilic interests section included seven sexual preference disorders listed in the ICD 10. We also included several additional items on frotteurism/toucherism, hebephilia, zoophilia, autogynephilia/autoandrophilia, immobilization, and biastophilia (see Table 1; World Health Organization, 1993). Descriptions of sexual interests presented to survey participants were based on definitions used in the diagnostic manual (e.g., Toucherism/frotteurisms: Secret touching or rubbing against intimate parts of an unknown person to obtain sexual arousal) and the assessed dimensions of sexual experience were congruent with diagnostic criteria. Using 5-point and 9-point scales, we assessed the following dimensions of sexual experience:

- (1) PREFERENCE: Do you have such a preference?  
1 (Not at all) 2 3 4 5 (Definitely yes)
- (2) AROUSAL: How sexually arousing would you find it?  
1 (It is unpleasant to think about it) 2 3 4 5 (Highly arousing)
- (3) PORN USE: How often did you watch/read erotic materials with this kind of content in the past 6 months? (videos, stories, etc.)

<sup>1</sup>The diagnosis of autogynephilia is traditionally reserved for men; to ask for an analogous sexual experience in women (autoandrophilia), we used a different wording: “You are sexually aroused by the thought of being a man.”

**Table 1.** Names and definitions of paraphilic patterns in the questionnaire used and corresponding diagnoses according to the ICD 10 (World Health Organization, 1993).

Name	Description of paraphilic pattern presented to participants	Corresponding diagnosis in ICD-10
Fetishism	Preference for fetish (reliance on an inanimate object as a stimulus of sexual arousal and sexual gratification, e.g. latex, leather, rubber, shoes, underwear ...).	Fetishism (F65.0)
Transvestitism	The wearing of clothes of the opposite sex to obtain sexual arousal.	Fetishistic transvestitism (F65.1)
Exhibitionism	Exposing one's genitalia to unknown men/women (in non-intimate situations) to obtain sexual arousal.	Exhibitionism (F65.2)
Voyeurism	Secret watching of intimate activities of other people (e.g. undressing, sexual activities) to obtain sexual arousal.	Voyeurism (F65.3)
Pedophilia	Intimate contact with prepubertal children.	Pedophilia (F65.4)
Hebephilia	Intimate contact with pubertal children.	NOS (F65.8)
Humiliation/ Submission	Preference for sadomasochistic sexual activity which involves physical or psychological humiliation or submission (either as recipient or as provider).	Sadomasochism (F65.5)
Beating/Torture	Preference for sadomasochistic sexual activity which involves pain by beating or other forms of torture (either as recipient or as provider).	Sadomasochism (F65.5)
Zoophilia	Sexual activities with animals.	NOS (F65.8)
Frotteurism/ Toucherism	Secret touching or rubbing against intimate parts of an unknown person to obtain sexual arousal.	NOS (F65.8)
Autogynephilia/ Autoandrophilia	Imagining being of the opposite sex to obtain sexual arousal.	NOS (F65.8)
Blastophilia	Non-consensual preying on unknown men/women and sexually assaulting them to obtain sexual arousal.	NOS (F65.8)
Immobilization	Non-consensual immobilization of unknown men/women (with or without use of violence) to obtain sexual arousal.	NOS (F65.8)

*Not even once 1–2 times 3–6 times 7–25 times  
More frequently*

- (4) FANTASY: How often did you have fantasies corresponding to this preference in the past 6 months?  
*Never Very rarely Once a month Once a week Every day*
- (5) BEHAVIOR: How many times in your life did you engage in such activities?  
*Never 1 2 3 4 5 6 times 7–9 times 10–19 times 20 and more*

Note that for illegal behaviors that may be included in blastophilia, immobilization, hebephilia, and pedophilia, this question was replaced by formulation: “Would you engage in such activity if it were legal in our society?”

*1 (Certainly not) 2 3 4 5 (Definitely yes)*

Finally, participants indicated if they ever had visited a sexologist or other health-care specialist in connection with their sexual preference (Yes/No).

### Paraphilic Interest Versus Paraphilia

In each dimension (Preference, Arousal, Fantasy, Porn Use, Behavior), we identified the extent to which the unusual sexual preference or experience is present. Responses were divided into three categories: never occurs (answer “1”), paraphilic interest (the middle of each scale), and the presence of paraphilia (the last two points of each scale). This procedure was based on an approach previously employed by Joyal and Carpentier (2017), who argued that the uppermost part of the scale can be viewed as representing the range where intense and persistent paraphilic interest, i.e., paraphilia, manifests itself.

### Statistical Analyses

All analyses were carried out in SPSS 21.0 (IBM Corp.). Prevalence rates were first obtained for the whole sample, then treated separately for men and women. Percentages for

paraphilias and paraphilic interests are presented separately. Percentages of individuals with paraphilia who in the past visited a health-care professional are presented in a separate table. Sex differences in paraphilic interests/paraphilias were computed using chi-squares (Bonferroni corrected). The strength of links between all dimensions of sexual experience for each paraphilia was expressed using Kendall's correlation coefficients suitable for ordinal categorized variables, and internal consistency between the dimensions was assessed by Cronbach's  $\alpha$ . Following Dawson et al. (2016), we treated only correlations with at least a medium effect size ( $r_{\tau} = .30$  or more) as significant.

## Results

### Prevalence of Paraphilia and Paraphilic Interests

Results showed that 31.3% of men ( $n = 1,571$ ) and 13.6% of women ( $n = 683$ ) admitted to at least one paraphilia (from our list of paraphilias) in the dimension of Preference. Moreover, 15.5% of men and 5% of women reported the presence of more than one paraphilia in the same dimension. Regarding the rating of the Arousal potential of the various paraphilias, 40.2% of men and 18.7% of women were highly excited by some paraphilic topics. A total of 21.1% of men and 5.1% of women reported the use of pornography with paraphilic content at least seven times in the past 6 months and 20.4% of men and 6.5% of women had paraphilic fantasies at least once a week over the past 6 months. Almost one quarter (23.3%) of men and 10.1% of women had engaged in a paraphilic behavior at least 10 times over their lifetime. For a detailed distribution of prevalence of different paraphilias in all dimensions, see Table 2.

The three most prevalent paraphilias in the Preference dimension were voyeurism (16.6% of men, and 6.4% of women), frotteurism/toucherism (12.7%, and 3.9%, respectively) and fetishism (10.1%, and 2.4%, respectively; see Table 3). In the dimension of Arousal, results were similar: voyeurism (23.3% of men, and 9.9% of women), frotteurism/toucherism (16.9%, and

**Table 2.** Cumulative prevalence (%) of paraphilias assessed for all dimensions of sexual experience (preference, arousal, porn use, fantasies, and behavior) in a representative online Czech sample of men (5,023) and women (5,021).

Number of admitted paraphilias	Preference		Arousal		Porn use		Fantasies		Behavior	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
0	68.7	86.4	59.8	81.3	78.9	94.9	79.6	93.5	76.7	89.9
1	15.8	8.6	18.6	10.7	11.1	2.5	11.6	3.9	15.3	7.3
2	8.0	2.8	10.1	4.3	4.1	1.3	4.3	1.8	5.1	1.9
3	3.5	1.4	5.7	2.2	2.6	.7	2.5	.5	2.1	.7
4	1.9	.5	2.9	.9	1.4	.2	.8	.2	.6	.1
5	.9	.2	1.1	.3	.7	.1	.5	.1	.1	<.1
6	.5	.1	.8	.2	.4	.1	.4	<.1	.1	<.1
7	.2	<.1	.4	<.1	.3	.1	.2	NC	<.1	NC
8	.2	NC	.3	.0	.2	NC	.1	.0	<.1	NC
9	.1	NC	.2	NC	.1	.0	<.1	NC	NC	NC
10	.1	NC	.1	NC	.1	<.1	.1	NC	NC	NC
11	NC	NC	<.1	<.1	<.1	<.1	<.1	NC	NC	NC
12	NC	NC	<.1	NC	<.1	NC	NC	NC	NC	NC
13	NC	NC	<.1	NC	.1	NC	<.1	NC	NC	NC

Only the last two points of each scale were considered as the presence of paraphilia; NC = no cases.

**Table 3.** The prevalence (%) of paraphilias, paraphilic interests, and no paraphilic interests in the dimension of preference and sex differences in the prevalence of paraphilias in the Czech population (5,023 men and 5,021 women; paraphilic patterns are presented in an alphabetical order).

Paraphilic pattern	No paraphilic interest (1 Certainly not)			Paraphilic interest (2–3)			Paraphilia (4–5 definitely yes)			Sex difference in prevalence of the paraphilia			
	Overall	Men	Women	Overall	Men	Women	Overall	Men	Women	$\chi^2$	<i>P</i>	ES	CI (95%)
Autogynephilia/Autoandrophilia	92.4	90.4	94.3	6.4	7.9	4.9	1.2	1.7	0.8	19.47	<.001	.05	0.03–0.06
Beating/Torture	91.7	91.1	92.2	6.4	6.8	6.1	1.9	2.1	1.7	2.28	.145	.02	0.00–0.04
Bastophilia	94.7	92.2	97.2	4.3	6.1	2.4	1.0	1.7	0.4	42.73	<.001	.07	0.05–0.08
Exhibitionism	86.9	82.8	91.1	10.8	14.3	7.4	2.3	3.0	1.5	31.04	<.001	.06	0.04–0.08
Fetishism	75.5	64.0	87.0	<b>18.2</b>	<b>25.9</b>	10.6	6.3	10.1	2.4	343.43	<.001	.20	0.19–0.22
Frotteurism/Toucherism	68.4	56.3	80.5	<b>23.3</b>	<b>31.1</b>	15.3	8.3	12.7	3.9	372.33	<.001	.22	0.20–0.24
Hebephilia	90.9	83.2	98.6	7.5	13.7	1.3	1.6	3.1	0.1	NA	NA	NA	NA
Humiliation/Submission	88.1	86.4	89.7	9.0	10.0	8.0	2.9	3.5	2.3	15.44	<.001	.04	0.02–0.06
Immobilization	85.0	80.4	89.6	11.4	14.6	8.2	3.6	5.1	2.2	72.79	<.001	.09	0.07–0.11
Pedophilia	98.7	97.7	99.6	1.0	1.7	0.4	0.3	0.6	0	NA	NA	NA	NA
Transvestitism	95.6	93.5	97.7	3.7	5.4	2.0	0.7	1.1	0.3	26.73	<.001	.05	0.03–0.07
Voyeurism	54.3	40.8	67.7	<b>34.2</b>	<b>42.5</b>	<b>25.9</b>	11.5	<b>16.6</b>	6.4	466.57	<.001	.27	0.25–0.29
Zoophilia	97.1	96.0	98.1	2.4	3.2	1.7	0.5	0.8	0.2	19.31	<.001	.04	0.03–0.06

ES = effect size (Cramer's V); CI = confidence intervals; NA = not applicable, less than 5 instances. Bold font indicates rates higher than statistical criteria for unusual (15.9%) occurrence.

**Table 4.** The prevalence (%) of paraphilias, paraphilic interests, and no paraphilic interest in the dimension of arousal and sex differences in the prevalence of paraphilias in the Czech population (5,023 men and 5,021 women; paraphilic patterns are presented in alphabetical order).

Paraphilic pattern	No paraphilic interest (1 "it is unpleasant to think about it")			Paraphilic interest (2–3)			Paraphilia (4–5 "highly arousing")			Sex difference in prevalence of the paraphilia			
	Overall	Men	Women	Overall	Men	Women	Overall	Men	Women	$\chi^2$	<i>p</i>	ES	CI (95%)
Autogynephilia/Autoandrophilia	76.3	73.3	79.3	<b>22.1</b>	<b>24.4</b>	<b>19.8</b>	1.6	2.2	0.9	32.62	<.001	.07	0.05–0.09
Beating/Torture	87.0	86.0	88.1	10.2	11.1	9.3	2.8	3.0	2.6	1.44	.249	.01	0.00–0.03
Bastophilia	88.7	84.4	93.0	9.8	13.4	6.3	1.4	2.2	0.6	52.39	<.001	.08	0.06–0.09
Exhibitionism	74.9	68.6	81.2	<b>21.8</b>	<b>27.2</b>	<b>16.5</b>	3.3	4.3	2.3	47.58	<.001	.08	0.06–0.10
Fetishism	51.7	41.0	62.4	<b>38.5</b>	<b>43.5</b>	<b>33.4</b>	9.8	15.4	4.2	506.80	<.001	.29	0.27–0.31
Frotteurism/Toucherism	50.2	34.8	65.7	<b>38.7</b>	<b>48.3</b>	<b>29.1</b>	11.0	<b>16.9</b>	5.1	661.76	<.001	.33	0.31–0.35
Hebephilia	85.3	74.1	96.6	12.4	<b>21.5</b>	3.3	2.3	4.4	0.1	263.11	<.001	.17	0.16–0.18
Humiliation/Submission	82.1	79.6	84.5	13.8	15.7	11.9	4.1	4.7	3.5	11.72	.001	.04	0.02–0.06
Immobilization	75.3	69.1	81.6	<b>20.0</b>	<b>24.4</b>	15.6	4.7	6.5	2.9	96.78	<.001	.11	0.09–0.13
Pedophilia	97.0	94.9	99.0	2.6	4.2	0.9	0.5	0.9	0.1	NA	NA	NA	NA
Transvestitism	73.3	72.5	74.2	<b>25.6</b>	<b>25.9</b>	<b>25.4</b>	1.0	1.6	0.5	34.03	<.001	.07	0.05–0.09
Voyeurism	39.2	26.8	51.7	<b>44.2</b>	<b>50.0</b>	<b>38.5</b>	<b>16.6</b>	<b>23.3</b>	9.9	617.92	<.001	.33	0.31–0.36
Zoophilia	93.8	91.9	95.7	5.6	7.1	4.0	0.7	1.0	0.3	18.80	<.001	.05	0.03–0.06

ES = effect size (Cramer's V); CI = confidence intervals; NA = not applicable, counts were less than 5. Bold font indicates rates higher than statistical criteria for unusual occurrence (15.9%).

5.1%, respectively), and fetishism (15.4%, and 4.2%, respectively; see Table 4). The four types of paraphilic pornographic content most frequently watched by respondents in the past 6 months were fetishism (11.5% of men, and 1.7% of women), voyeurism (7.7%, and 1.6%, respectively), immobilization (4.5%, and 1.2%, respectively), and humiliation/submission (4.1%, and 1.7%,

respectively; see Table 5). The highest prevalence for paraphilias in the dimension of Fantasy were fetishism (10.5% of men, and 2.0% of women) and voyeurism (7.1%, and 1.7%, respectively), followed by toucherism/frotteurism, where, however, it held only in the overall sample (3.7%) and in men (5.8%) and women were not represented. The third most common

**Table 5.** The prevalence (%) of paraphilias, paraphilic interests, and no paraphilic interests in the dimension of porn use over the past 6 months and sex differences in the prevalence of paraphilias in the Czech population (5,023 men and 5,021 women; paraphilic patterns are presented in alphabetical order).

Paraphilic patterns	No paraphilic interest ("not at all")			Paraphilic interest (1 to 6 times)			Paraphilia (7 to 25 times or more)			Sex difference in prevalence of the paraphilia			
	Overall	Men	Women	Overall	Men	Women	Overall	Men	Women	$\chi^2$	<i>p</i>	ES	CI (95%)
Autogynephilia/ Autoandrophilia	95.9	94.5	97.4	3.4	4.4	2.5	0.6	1.1	0.2	34.18	<.001	.05	0.07–0.04
Beating/Torture	88.7	87.4	90.1	9.0	9.5	8.5	2.3	3.1	1.4	37.67	<.001	.06	0.05–0.08
Bistophilia	91.5	88.6	94.4	7.3	9.6	5.1	1.2	1.8	0.5	42.15	<.001	.07	0.05–0.08
Exhibitionism	89.2	87.5	90.8	9.3	10.3	8.3	1.5	2.2	0.9	29.91	<.001	.06	0.04–0.08
Fetishism	74.6	62.5	86.6	<b>18.9</b>	<b>26.0</b>	11.7	6.6	11.5	1.7	500.85	<.001	.25	0.23–0.26
Frotteurism/Toucherism	84.4	78.8	90.0	12.9	<b>16.8</b>	9.1	2.7	4.4	0.9	136.07	<.001	.13	0.11–0.14
Hebephilia	94.4	90.3	98.3	4.7	7.9	1.6	0.9	1.7	0.1	73.31	<.001	.09	0.07–0.10
Humiliation/Submission	85.9	83.2	88.5	11.2	12.7	9.8	2.9	4.1	1.7	57.54	<.001	.08	0.06–0.10
Immobilization	84.9	79.7	90.1	12.2	15.8	8.7	2.9	4.5	1.2	115.97	<.001	.12	0.10–0.13
Pedophilia	97.6	96.9	98.4	2.0	2.5	1.4	0.4	0.6	0.1	16.34	<.001	.04	0.02–0.06
Transvestitism	94.9	92.9	96.9	4.2	5.5	2.8	0.9	1.6	0.3	51.60	<.001	.07	0.06–0.09
Voyeurism	73.4	63.0	83.7	<b>22.0</b>	<b>29.2</b>	14.7	4.7	7.7	1.6	286.41	<.001	.19	0.17–0.21
Zoophilia	95.3	92.8	97.8	4.2	6.4	2.1	0.5	0.1	0.2	23.94	<.001	.05	0.03–0.07

ES = effect size (Cramer's V); CI = confidence intervals. Bold font indicates rates higher than statistical criteria for unusual occurrence (15.9%).

paraphilic fantasy content among women was humiliation/submission (1.6%; see Table 6). And finally, we found that 9.9% of men and 3.0% of women had repeated (more than 10 times over their lifetime) experience with fetishistic behavior, 8.9% of men and 2.9% of women had experience with toucheristic/frotteuristic behavior, and 8.3% of men and 2.2% of women had experience with voyeuristic behavior (see Table 7).

For detailed results of the distribution of paraphilic interests as well as of individuals in the general population who had no paraphilic interests, see Tables 3–7. The percentages of individuals affected with paraphilia, who confided in a health-care professional, were generally very low for all paraphilic patterns – ranging from 0% in pedophilia and hebephilia (women) to 14.7% in exhibitionism (men). Detailed percentages of individuals who confided in a health-care professional in connection with their sexual preferences can be found in Table 8.

### Sex Differences

We tested the differences between men ( $n = 5,023$ ) and women ( $n = 5,021$ ) in the prevalence of paraphilias, i.e., for all paraphilic patterns and dimensions of sexual experience. Results showed significant sex differences in the prevalence of paraphilias in

almost all dimensions and paraphilic patterns. As expected, men, in general, reported higher prevalences. In beating/torture (dimension of Preference, Arousal, and Behavior) and humiliation/submission (dimension of Behavior), we found no differences between the sexes. The effect sizes were, however, mostly negligible or weak, with only a few of a moderate size (Cohen, 1988; for detailed results, see Tables 3–7).

### Correlations between the Dimensions of Sexual Experience

According to strict criteria, we applied ( $r_t > .30$  indicating medium and larger effect size; Cohen, 1988), almost all dimensions (namely Preference, Arousal, Porn Use, Fantasy, and Behavior) were in men significantly positively correlated for all paraphilic patterns, the only exceptions being Porn Use and the Behavior dimension in zoophilia ( $r_t = .286$ ; a low effect size). For detailed results, see Tables S1–S7 in supplementary materials. All Cronbach's  $\alpha$  in men were above .82, indicating a high internal consistency across all tested dimensions.

In women, the dimensions were all significantly positively correlated in bistophilia, exhibitionism, fetishism, frotteurism/toucherism, immobilization, beating/torture, humiliation/

**Table 6.** The prevalence (%) of paraphilias, paraphilic interests, and no paraphilic interest in the dimension of fantasies over the past 6 months and sex differences in the prevalence of paraphilias in the Czech population (5,023 men and 5,021 women; paraphilic patterns are presented in alphabetical order).

Paraphilic patterns	No paraphilic interest (never)			Paraphilic interest (very rarely – once a month)			Paraphilia (once a week – every day)			Sex difference in prevalence of the paraphilia			
	Overall	Men	Women	Overall	Men	Women	Overall	Men	Women	$\chi^2$	<i>p</i>	ES	CI (95%)
Autogynephilia/ Autoandrophilia	93.2	91.1	95.2	6.2	7.8	4.5	0.7	1.1	0.3	25.13	<.001	.05	0.03–0.07
Beating/Torture	91.4	90.8	92.0	7.0	7.2	6.7	1.6	1.9	1.3	6.60	.011	.03	0.06–0.05
Bistophilia	94.5	92.0	96.9	4.9	6.9	2.9	0.7	1.1	0.2	28.74	<.001	.06	0.04–0.07
Exhibitionism	87.8	84.0	91.6	10.8	13.8	7.7	1.4	2.2	0.7	46.75	<.001	.07	0.06–0.09
Fetishism	73.0	60.9	85.1	<b>20.8</b>	<b>28.7</b>	12.9	6.2	10.5	2.0	416.44	<.001	.23	0.21–0.25
Frotteurism/Toucherism	72.6	62.2	83.0	<b>23.7</b>	<b>32.0</b>	15.5	3.7	5.8	1.5	185.80	<.001	.16	0.14–0.17
Hebephilia	92.2	85.3	99.9	7.1	13.3	0.9	0.7	1.4	0	NA	NA	NA	NA
Humiliation/Submission	87.6	86.0	89.3	10.1	11.0	9.1	2.3	2.9	1.6	20.90	<.001	.05	0.03–0.07
Immobilization	85.9	81.5	90.3	12.3	15.7	8.9	1.8	2.8	0.8	67.42	<.001	.09	0.07–0.11
Pedophilia	98.5	97.4	99.6	1.3	2.2	0.4	0.2	0.4	0	NA	NA	NA	NA
Transvestitism	95.6	93.8	97.3	3.8	5.0	2.5	0.6	1.1	0.1	40.62	<.001	.07	0.05–0.08
Voyeurism	63.3	52.0	74.5	<b>32.4</b>	<b>40.9</b>	<b>23.8</b>	4.4	7.1	1.7	265.37	<.001	.20	0.18–0.22
Zoophilia	97.4	96.6	98.2	2.3	2.9	1.7	0.3	0.6	0.1	16.35	<.001	.04	0.02–0.06

ES = effect size (Cramer's V); CI = confidence intervals; NA = not applicable, less than 5 instances. Bold font indicates rates higher than statistical criteria for unusual occurrence (15.9%).

**Table 7.** The lifetime prevalence (%) of paraphilias, paraphilic interests, and no paraphilic interests in the dimension of behavior and sex differences in the prevalence of paraphilia in the Czech population (5,023 men and 5,021 women; paraphilic patterns are presented in an alphabetical order).

Paraphilic patterns	No paraphilic interest (never/certainly not*)			Paraphilic interest (1 to 9 times/2 – 3*)			Paraphilia (10 to 19 times or 20 and more times/4 – 5 “definitely yes”*)			Sex difference in prevalence of the paraphilia			
	Overall	Men	Women	Overall	Men	Women	Overall	Men	Women	$\chi^2$	<i>p</i>	ES	CI (95%)
Autogynephilia/ Autoandrophilia	95.7	93.9	97.6	3.7	5.2	2.2	0.6	1.0	0.2	24.49	<.001	.05	0.03–0.07
Beating/Torture	93.1	93.6	92.6	5.2	4.9	5.5	1.7	1.6	1.9	2.24	.134	.02	0.01–0.04
Bistophilia*	94.0	91.0	97.1	4.8	6.8	2.7	1.2	2.2	0.3	80.80	<.001	.09	0.08–0.11
Exhibitionism	91.7	89.8	93.6	6.9	8.2	5.6	1.4	2.0	0.9	23.37	<.001	.05	0.03–0.07
Fetishism	79.3	71.8	86.7	14.2	<b>18.2</b>	10.2	6.5	9.9	3.0	235.99	<.001	.17	0.14–0.19
Frotteurism/Toucherism	73.1	63.2	83.1	<b>21.0</b>	<b>27.9</b>	14.0	5.9	8.9	2.9	227.68	<.001	.17	0.15–0.19
Hebephilia*	90.6	82.3	98.9	7.2	13.3	1.1	2.2	4.4	0	251.99	<.001	.16	0.15–0.18
Humiliation/Submission	91.5	91.6	91.4	6.4	6.2	6.5	2.1	2.2	2.1	.03	.856	.02	0.00–0.02
Immobilization*	83.1	77.9	88.2	13.5	<b>17.1</b>	9.8	3.5	5.0	1.9	85.17	<.001	.10	0.08–0.12
Pedophilia*	97.9	96.2	99.7	1.5	2.8	0.3	0.6	1.0	0.1	42.62	<.001	.07	0.05–0.08
Transvestitism	92.8	89.2	96.4	6.2	9.4	3.0	1.0	1.5	0.5	24.65	<.001	.05	0.04–0.07
Voyeurism	68.3	56.5	80.1	<b>26.4</b>	<b>35.2</b>	<b>17.7</b>	5.3	8.3	2.2	281.92	<.001	.20	0.18–0.22
Zoophilia	98.4	98.1	98.7	1.5	1.7	1.2	0.1	0.2	0.1	4.62	.032	.02	0.00–0.04

\* = Indicates wish for engaging in such activity if it was legal.

ES = effect size (Cramer's V); CI = confidence intervals.

Bold font indicates rates higher than statistical criteria for unusual occurrence (15.9%).

**Table 8.** The prevalence (%) of respondents with paraphilia in the dimension of preference who confided in a health-care professional (e.g., sexologist).

Paraphilic pattern	Paraphilia (4–5 certainly yes)		
	Overall	Men	Women
Total Prevalence (presence of at least one paraphilia)	8.5	8.8	7.8
Autogynephilia/ Autoandrophilia	9.6	8.1	12.8
Beating/Torture	13.0	13.2	12.8
Bistophilia	9.2	10.8	0.0
Exhibitionism	11.5	14.7	5.3
Fetishism	10.8	10.6	11.5
Frotteurism/Toucherism	9.0	9.1	8.6
Hebephilia	11.3	11.5	0.0
Humiliation/Submission	10.9	11.8	9.6
Immobilization	10.8	13.0	5.6
Pedophilia	3.2	3.3	0.0
Transvestitism	11.9	13.0	7.7
Voyeurism	9.1	9.6	7.8
Zoophilia	12.5	12.8	11.1

submission, and voyeurism. Non-correlations between some dimensions were observed in autoandrophilia, hebephilia, pedophilia, transvestitism, and zoophilia (see Tables S1–S7 in supplementary materials). Cronbach's alphas were all higher than .70, with the exceptions of transvestitism ( $\alpha = .64$ ) and pedophilia ( $\alpha = .60$ ).

## Discussion

Following the main aims of this study, we collected data on the prevalence of paraphilic sexual interests and paraphilia in five dimensions of sexual experience using a large and representative online sample of Czech men and women ( $N = 10,044$ ). We found a relatively high general prevalence of paraphilias in the population: 31.3% of men and 13.6% of women admitted preference for at least one paraphilia. The most prevalent paraphilic patterns across all dimensions (in both men and women) were voyeurism, frotteurism/toucherism, and fetishism. Their prevalence exceeded statistical criteria for rare (less than 2.3%) or unusual (less than 15.9%) population phenomena. Paraphilias and paraphilic interests

including paraphilic objects (i.e., not phenotypically normal, physically mature, consenting human partners, as noted in the definition of paraphilia in DSM-5; APA, 2013) were uncommon, especially in women where their prevalence was close to zero. We also found that very few of the individuals who indicated a strong preference for some paraphilic pattern sought the help of health-care professionals.

In all dimensions, we confirmed a higher prevalence of paraphilias in men than in women, the only exception being paraphilic patterns related to BDSM practices such as beating/torture and humiliation/submission, which were in some dimensions more common in women. With the exception of differences in the most prevalent paraphilic patterns (voyeurism, frotteurism/toucherism, and fetishism), which reached moderate effect sizes, the effect sizes were either statistically negligible or low. Associations between the dimensions of sexual experience (Preference, Arousal, Fantasy, Porn Use, and Behavior) were all significant and of moderate or large effect sizes, with high internal consistency across dimensions in all paraphilias. This suggests that assessments of paraphilia and paraphilic interests should indeed treat all dimensions of sexual experience as relevant.

Our findings are in line with a recent study by Joyal and Carpentier (2017), especially with respect to the behavioral dimension of paraphilia (“I often behave in line with a paraphilic pattern”), the desire to engage in a paraphilic behavior (“I absolutely wish to experience ...”), and regarding the dimension of Preference. Similar to Joyal and Carpentier (2017), the prevalence rates we found are higher than those found in older, mostly non-representative surveys undertaken in the 1990s or earlier (e.g., Janus & Janus, 1993). These surveys were conducted prior to the social change which led to a higher acceptance of unusual sexual preferences and prior to the cultural spread (via, e.g., popular literature) of unusual practices such as BDSM. This cultural shift took place mainly in recent decades (Peter & Valkenburg, 2006). We found a relatively high general prevalence of any paraphilia and especially in the case of voyeurism, fetishism, and toucherism/frotteurism (across all dimensions), the rates exceed statistical norms for being rare



or unusual. Earlier studies (e.g., Ahlers et al., 2011; Dawson et al., 2016; Joyal & Carpentier, 2017) have also demonstrated high prevalence of voyeurism, fetishism, frotteurism/toucherism, and sadism/masochism, which suggests that a priori labeling of these patterns as atypical or pathological may be at least problematic. However, high numbers of these patterns could also be false positives due to discrepancies in definitions of paraphilic patterns. For example, not all studies (including ours) clearly specify the potential victim as being unaware of the behavior in definition, which is key to acknowledge a pattern as paraphilic and is present in the ICD-10 definition (e.g., “carried out without the observed people being aware”). Another important factor is intentionality of voyeuristic or toucheristic/frotteuristic acts, which is rarely included in questionnaires and thus, behaviors which happened by chance are not always excluded from the behavioral dimension.

Based on these results, we would like to argue that one ought to make a strict distinction not only between paraphilic interests and paraphilias but also between paraphilias as variants of sexuality and paraphilic disorders that should be treated (and acknowledged by the DSM – 5). Moreover, in the light of a recent modification in the ICD 11, which removed sadomasochism, fetishism, and transvestism from its list of paraphilias, thus diverging significantly from the DSM-5, it seems even more important to use as precise a language as possible when speaking about these subjects.

High prevalence does not, however, imply that the affected individuals do not find life with their preference in current society problematic. Studies on individuals with paraphilic interests (such as pedophilia) show increased rates of personality disturbances, mood disorders, and intimacy deficits (Gerwinn et al., 2018; Raymond et al., 1999), which can be related to their sexual preference. It might also be a result of the stigmatization stress that these individuals face in contemporary societies (e.g., Jahnke, 2018).

It should be noted, though, that due to methodological differences, comparisons of the prevalence of paraphilic patterns reported by different studies can be problematic. Different authors use different questions (for instance, asking about “experience with a behavior” is different from asking about “desire for a behavior”, with the latter likely to yield higher prevalence), different scales, and different criteria, so that some authors, for example, report any arousal higher than zero (Dawson et al., 2016), whereas others, such as ourselves and Joyal and Carpentier (2017), report only strong arousal. Meta-analytic comparison of existing studies based on unified criteria and transformed scales may be needed to gain a more accurate view of similarities and differences between surveys, let alone entire nations and cultures.

In line with our hypothesis and with previous research (e.g., Ahlers et al., 2011; Dawson et al., 2016; Joyal & Carpentier, 2017; Makanjuola, Adegunloye, & Adelekan, 2008; Oliveira Júnior & Abdo, 2010), we found that paraphilias are more common among men than among women in all dimensions of sexual experience. Compared to 13.6% of women, almost one-third of men admitted to the presence of at least one paraphilia in the dimension of Preference. In the dimension of Arousal, the differences were even greater: 40.2% of men compared to 18.7% of women. In the remaining dimensions of Porn Use,

Fantasy, and Behavior, the prevalence was over 20% in men and 5% in women. Regarding the type of paraphilia, we found support for the prediction that sex differences would be present in all paraphilic patterns except for activities related to BDSM practices. This result is partly congruent with previous research (Joyal & Carpentier, 2017) in the sense that one could expect a comparable prevalence of complementary activities. This was mostly seen in the Behavior dimension (prevalence in men: beating and torture 1.6%, humiliation/submission 2.2%; prevalence in women: beating and torture 1.9%, humiliation/submission 2.1%).

Our study also shows that paraphilias and paraphilic interests involving unusual targets (e.g., pedophilia, zoophilia, hebephilia) are less common than paraphilic patterns involving unusual activities. In women, the prevalence of interest in paraphilic objects was close to zero. This is in line with evolutionary logic which highlights the importance of appropriate mate choice for reproductive success and inclusive fitness of both sexes. The choice of a partner with suitable reproduction-relevant characteristics, i.e., phenotypically normal, physically mature, consenting human partners as noted in the definition of paraphilia in DSM-5 (APA, 2013), is subject to intense selection and leaves less space for errors and mutations. This holds particularly for women, in whom the cost of reproduction and offspring nurture is higher than in men (Trivers, 1972). When it comes to extreme options, such as paraphilic objects or unusual partners, one can thus expect women to be more selective in their mate choice than men are.

Moreover, Dawson et al. (2016) suggested that sex differences in the prevalence of paraphilias could be linked to the level of sex drive which is on average higher among men than among women (Baumeister et al., 2001; Lippa, 2006). Higher sex drive motivates interest in paraphilic activities. Furthermore, this assumption is in line with studies which showed that high sex drive is linked to diverse sexual activities and could also lower the baseline of sexual aversion and disgust (Baumeister et al., 2001; de Jong, van Overveld, & Borg, 2013).

In regard to the possibility of socio-sexual explanations of sex differences e.g., women being more sexually restricted by society than men (Bhugra, Popelyuk, & McMullen, 2010), it must be noted that studies from across the world examining societies with various levels of restrictiveness (from very liberal to very conservative), all show higher prevalence of paraphilic interests and paraphilia in men. Interestingly, Långström and Seto (2006) found that the immigrant status of a respondent was not a significant correlate of paraphilic behavior and based on their findings, these authors claimed that “paraphilia-like behavior is not specific to sociocultural subgroups” (p. 433).

The abovementioned theoretical explanations could also account for sex differences and ought to be further explored in detail. Doing so, however, was beyond the scope of the present study. Nevertheless, it should be noted that with the exception of sex differences in the most prevalent paraphilic patterns (voyeurism, frotteurism/toucherism, and fetishism), which were of moderate effect size, differences between the prevalence of studied patterns were of negligible or low effect size.

The surprisingly low percentage of people with paraphilias who confided in health-care professionals found in our study

could be the cause of some concern for public safety and health policies because it indicates that most people with paraphilias tend to remain undetected until they violate the law. This finding may be specific to the Czech society (we have no comparison data from other countries) and it may be due to either a low need of external management of paraphilias on the part of affected individuals, due to the lack of an effective system of help and prevention on the part of the society, and at least in some cases, also due to a denial of one's own sexual problems. Of importance may also be the extreme stigmatization of paraphiles (e.g., Jahnke, Schmidt, Geradt, & Hoyer, 2015), which lowers the likelihood of contacting a health-care professional. In line with this explanation, individuals who admitted to pedophilia reported by far the lowest level of help seeking (the percentage in our sample was even lower than in Dombert et al., 2016, where 12.3% of pedophiles reported they think about seeking professional help). This is associated with the fact that pedophilic interest is heavily stigmatized (for an overview, see Jahnke, 2018). Further exploration of this subject is clearly needed.

The high internal consistency found across dimensions of sexual experience in most paraphilic patterns indicates that the results of various studies could perhaps be compared by proxy, that is, by using a different dimension highly correlated with the one in question. Based on our findings, the use of composite or factor scores is justified and could be recommended for future research. Nevertheless, in some paraphilias, we also found some interesting differences between their dimensions. For instance, zoophilia was the only paraphilia that displayed low levels of internal consistency across the tested dimensions for both men and women. It may thus seem that zoophilia-like behaviors may not be a manifestation of real zoophilic preference but rather of a different paraphilia (for instance, BDSM practices can involve sex with animals but the purpose is to humiliate a partner). In women, low levels of internal consistency were found also in other paraphilias, namely those involving human paraphilic subjects (hebephilia and pedophilia) and in activities involving crossdressing (autoandrophilia and transvestitism). Mostly, however, we found a notable discrepancy between behavioral aspects (Behavior, Porn Use) and other ratings of preference, which indicates that fantasies, preferences, and actual behavior do not necessarily match. This could be due to women being more fearful of the criminalization of sexually inappropriate behavior or also possibly due to fears of being victimized and a wish to remain in control of one's behavior.

In general, our results suggest that behavior might be constrained by external factors, such as lack of opportunity (e.g., paraphilic patterns related to BDSM require a willing partner) or law (e.g., pedophilia, biastophilia, zoophilia).

### Limitations

The following limitations of our study should be considered. First of all, as discussed above, the prevalence rate is a direct result of the methodology used and may account for many differences among studies. Moreover, the number of paraphilic patterns described in the literature (Aggrawal, 2008) is large but the format of a national survey made it impossible to include them all. Another methodological concern has to

do with the representativeness of our internet-based sample and generalization of results based on this sample to the population as a whole. The mode of contact is an important aspect of research that deals with subjects as intimate as sexual behavior and sexual preferences. On the one hand, an online setting provides an increased feeling of anonymity, so that individuals may well be more willing to reveal their preferences. Moreover, the online format enables access even to persons who live in remote areas or unique communities. On the other hand, this format also makes it more difficult to control the characteristics of people involved in a study. Generalizability of our results is furthermore limited by the fact that individuals without internet access are highly unlikely to get involved (Wright, 2006). Nevertheless, a previous study which compared two modes of contact (representative surveys conducted online and by phone) found no differences in the prevalence rates of paraphilic interests between the two modes of data collection (Joyal & Carpentier, 2017). We, therefore, believe that our internet-based data do provide a valid and important insight into the distribution of paraphilic preferences in the current Czech population.

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