

The Development of the Paraphilic Disorders Short Screen (PDSS) and Its Examination in Diverse Populations: A Large, Multi-Nation Study

Sexual Abuse

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Abstract

To date, there is no reliable and valid screening tool for paraphilic disorders (PDs) based on the diagnostic criteria of the International Classification of Diseases (ICD-11). The present study aimed to develop and cross-culturally examine the cross-cultural applicability of a new screening tool for PDs following the ICD-11 guidelines. Methods: Top-down item development was conducted with expert practitioners in the field. Data were collected in 26 languages across 42 countries ($N = 82,243$; 39.5% men; 57.0% women; 3.4% gender-diverse; $M_{\text{age}} = 32.39$ years, $SD = 12.52$). Cut-off scores were established per ICD-11 guidelines, and at-risk groups were compared with low-risk groups along theoretically relevant correlates (e.g., depression, anxiety). Outcomes: The Paraphilic Disorders Short Screen (PDSS) assesses seven paraphilias via 21 items.

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Results: Voyeurism was most common paraphilic interest (PI) (19.42% of the total sample; $n = 15,970$), which also had the highest number of participants meeting the ICD-11 diagnostic cut-off (3.24%; $n = 2,662$). PI and PD groups consistently demonstrated more severe depression and anxiety symptoms than others. Conclusion: The PDSS is a reliable and valid screening tool that follows the latest ICD-11 guidelines;

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therefore, it has the capacity to enhance clinical practice and research by identifying individuals at risk.

Keywords

atypical sexuality, cross-cultural, deviant sexuality, paraphilic disorder, paraphilic interest, scale development, screening tool

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Introduction

The 11th edition of the International Classification of Diseases (ICD-11) brought essential changes to the pre-existing diagnostic guidelines for Paraphilic Disorder (PD) (World Health Organization, 2022), aligning them with current evidence, practice, and human rights standards (Krueger et al., 2017), see summary at Table 1. The revised criteria¹ aimed to move away from outdated conceptualizations and pathologization of sexual behaviors that do not involve non-consenting partners (i.e., their age or status

Table 1. Description of Paraphilic Disorders in the 11th Edition of the International Classification of Diseases

ICD-11 code	Name	Definition
6D30	Exhibitionistic disorder	Sustained pattern of sexual arousal centered around exposing one's genitals to unsuspecting individuals in public places, without seeking closer contact or consent.
6D31	Voyeuristic disorder	Sustained pattern of sexual arousal by observing unsuspecting individuals who are naked, in the process of undressing, or engaging in sexual activities.
6D32	Pedophilic disorder	Sustained pattern of sexual arousal involving pre-pubertal children.
6D33	Coercive sexual sadism disorder	Sustained pattern of sexual arousal by inflicting physical or psychological suffering on non-consenting individuals.
6D34	Frotteuristic disorder	Sustained pattern of sexual arousal by non-consensual touching or rubbing against non-consenting individuals in public places.
6D35	Other paraphilic disorder involving non-consenting individuals	Sustained patterns of sexual arousal that involves others who are unwilling or unable to consent but that is not specifically described in any of the other disorders mentioned above, such as arousal patterns involving corpses or animals.
6D36	Atypical paraphilic disorder involving solitary behavior or consenting individuals	Sustained patterns of sexual arousal involving consenting adults or solitary behaviors, where the nature of the paraphilic behavior involves significant risk of injury or death either to the individual (e.g., asphyxiophilia or achieving sexual arousal by restriction of breathing) or to the individual's partner (e.g., consensual sadism that results in injuries requiring medical attention), or the individual is markedly distressed by the nature of the arousal pattern.

renders them unwilling or unable to consent) or pose a serious threat of harm. By eliminating the inclusion of behaviors based solely on societal norms (e.g., transvestism, fetishism), the updated criteria sought to prevent the stigmatization and discrimination of individuals based on their sexual preferences, and include only those disorders that have public health, healthcare system, or legal system relevance (Briken et al., 2019; Giami, 2015). This stands in contrast to the DSM-5 (American Psychiatric Association, 2013), which lists Sexual Masochism Disorder, Fetishistic Disorder, and Transvestic Disorder as formal mental disorder categories. Under the ICD-11, such behaviors would only be diagnosable if they cause significant distress to the individual or pose a substantial risk of injury or death, in which case they could fall under the category of *Other Paraphilic Disorder Involving Solitary Behavior or Consenting Individuals* (Krueger et al., 2017). This shift emphasizes that atypical sexual interests are not inherently pathological unless they result in harm or significant impairment. Furthermore, there is no exact duration requirement in the ICD-11, just the implications of an arousal pattern that is sustained, focused, and intense (Krueger et al., 2017).

Prevalence of Paraphilic Interests and Disorders

With the constant changes in diagnostic categories, definitions, varying measurement tools, and sampling methods (e.g., sexual offending sample), prevalence rates of people with PDs are difficult to determine. This is further complicated by the list of different dimensions of paraphilic interest (PI) that can be measured, ranging from general fantasies (i.e., daydreams), feeling sexually aroused by a specific thought, masturbation fantasies, pornography choice, or hypothetical scenarios (i.e., “*Would you engage in such activity if it were legal in our society?*”) to actual sociosexual behavior (Abdullahi et al., 2015; Ahlers et al., 2011; Bártová et al., 2021; Dawson et al., 2016; Joyal & Carpentier, 2017, 2022; Långström & Hanson, 2006; Oliveira Júnior & Abdo, 2010). Although sexual interest is generally predictive of related behaviors, research shows that only about half of individuals with a specific PI actually engage in the corresponding behavior (Joyal & Carpentier, 2022). As a result, there is often a substantial gap between measures of interest and measures of actual behavior, or between interest and a formal PD diagnosis. There have been only two nationally representative studies on PI and behaviors, presenting diverse results. In a Czech sample (Bártová et al., 2021), interests were ranging from 3.1% (pedophilia) to 60.8% (voyeurism), and in a Swedish sample (Långström & Seto, 2006), manifested behavior ranged from 3.1% (exhibitionism) to 7.8% (voyeurism). Other studies, conducted on non-representative samples reported varying prevalence rates. Abdullahi et al. reported a combined prevalence of 14.8% in Nigerian undergraduates with voyeurism (8.7%) being most frequent, followed by frotteurism (3.4%), sexual masochism (2.4%), fetishism (1.7%), sexual sadism (1.0%), exhibitionism (1.3%), and pedophilia (0.2%) (Abdullahi et al., 2015). A German study on general population (Ahlers et al., 2011) shows that 62.4% of men reported arousal in at least one realm of PI, most often voyeurism. Masturbation fantasies were reported most frequently for fetishism (26.4%), voyeurism (24.5%), sadism (19.9%), and the least frequently for pedophilia (6%), frotteurism (7.1%), and

surprisingly, exhibitionism (3.3%). Real-world engagement generally matched the prevalence of fantasies, with the highest engagement in fetishism (24.5%) and voyeurism (18%). From a Canadian student sample (Dawson et al., 2016), 52% of men and 26% of women reported arousal for voyeurism, while exhibitionism (6%; 6% respectively) and pedophilic interests (0.6%; 0% respectively) were rare. In a Canadian general population sample, Joyal and Carpentier (Joyal & Carpentier, 2022) found relatively high prevalence rates for voyeurism (46.3% desire, 34.5% experience), exhibitionism (30.6% desire, 30.1% experience), frotteurism (26.7% desire, 26.1% experience), and masochism (23.8% desire, 19.2% experience), with a notable concordance between reported sexual interest and real-world behavior. On a general population sample from Brazil (Oliveira Júnior & Abdo, 2010), lifetime experience rates were reported for voyeurism (13%), exhibitionism (9.3%), incestuous sexual intercourse (11.3%) and zoophilia (3.2%). Overall, these findings highlight not only the wide variation in prevalence rates across studies, but also the considerable differences in how PIs and behaviors are measured and the cultural and national contexts in which data are collected. Despite the methodological and cultural variability, however, voyeurism seems to be consistently reported as the most frequent PI.

Regarding demographic characteristics, there is a lack of comparative studies among diverse populations in the field. Men are more likely to report PIs and behaviors than women (Abdullahi et al., 2015; Ahlers et al., 2011; Bártová et al., 2021; Dawson et al., 2016; Joyal & Carpentier, 2017, 2022; Långström & Hanson, 2006; Oliveira Júnior & Abdo, 2010). Such gender-related differences may relate to gender-specific characteristics of sexual drive (Dawson et al., 2016; Levaque et al., 2022). However, the differences in prevalence rates may also derive from PIs and behaviors being overlooked in women. Mental health professionals show a gender bias in the diagnosis of PDs (Fuss et al., 2018), such that PIs and behaviors are less pathologized and stigmatized among women. This could relate to the perceived lower risk of sexual violence in women, but also carries the risk that PDs in women remain undetected and untreated. To prevent this, the use of brief screening tools in clinical practice could be useful.

Clinical and Forensic Significance

The clinical significance (e.g., functional impairment, interpersonal conflicts, personal distress) of PD is, in part, underscored by co-occurrences with other mental health issues, such as depression and anxiety (Dunsieth et al., 2004; Fox et al., 2022). One study's sample (Grant, 2005) consisted of 25 male participants diagnosed with exhibitionism, reported that 92% of participants met criteria for at least one Axis I disorder. Major depressive disorder was particularly common, affecting 36% currently and 40% over their lifetime, while anxiety disorders were reported by 16% at the time of the study and 36% across their lifetime. Other papers report similar or higher rates for both comorbidities (Jahnke et al., 2015; Kruger & Schiffer, 2011), however, these studies often focus on convicted or incarcerated samples, where legal status and the associated psychological burden may significantly influence the prevalence of these

conditions, potentially leading to an overestimation of their direct association with the disorder itself (Prins, 2014).

Given potential moral incongruence (Grubbs et al., 2019) (i.e., the misalignment between one's moral beliefs and their behaviors) arising from behaviors that may harm others, coupled with social stigma (Frost, 2011) and challenges associated with maintaining satisfactory sexual and romantic lives, it is important to explore paraphilias in relation to affective symptoms.

The relationship between PDs and sexual offending has prompted considerable attention in both clinical and forensic literature. Empirical evidence suggests that a substantial proportion of individuals convicted of sexual offenses meet criteria for at least one PD, with prevalence estimates ranging widely depending on sample type and methodology. Structured clinical interviews have found rates as high as 39–74% among incarcerated offenders (Dunsieth et al., 2004; Eher et al., 2010; Kok Kendirlioglu et al., 2024), 58% in a smaller clinical sample (McElroy et al., 1999). Even in outpatient forensic settings, roughly a quarter of sexual offenders are diagnosed with a PD, with pedophilia most commonly reported (Turner et al., 2018). However, not all individuals with PDs go on to commit offenses. Research and international guidelines emphasize that risk is moderated by multiple individual factors, including comorbid psychiatric conditions (Landgren et al., 2022; Thibaut et al., 2020), substance abuse, particularly alcohol (Kafka & Prentky, 1994), neurodevelopmental conditions such as ADHD (Kafka & Prentky, 1998; Korchia et al., 2022), probably connected to impulsivity. Moreover, having multiple PIs appears to elevate risk, possibly due to the cumulative effect of overlapping urges (Tozdan & Briken, 2021). Despite these risks, longitudinal treatment data show that individuals with PDs who receive specialized intervention do not necessarily reoffend at high rates. For example, in a 10-year follow-up of treated paraphilic individuals, the sexual recidivism rate was 16.5%, with only 4.7% involving contact offenses (Páv et al., 2025). Together, these findings underscore the importance of precise assessment and targeted intervention, and highlight that PDs are not synonymous with sexual offending but represent one of several contributing factors.

Overview of Previous Assessment Scales

Several psychometric scales have been developed to assess PIs and disorders, aligning with the evolving diagnostic frameworks that have emerged over time. The Multiphasic Sex Inventory (MSI-II) (Nichols & Molinder, 1984) is based on the DSM-IV (American Psychiatric Association, 2000), consisting of over 500 items designed to evaluate both paraphilic fantasies and behaviors. A brief checklist was also been developed (Wilpert, 2018) based on the Sexual Outlet Inventory (Kafka, 1991), assessing fantasies, urges and activities related to the DSM-IV-TR paraphilias. The Paraphilic Interest and Disorder Scale (PIDS) (Winters et al., 2022) a comprehensive instrument designed to measure fantasies, sexual urges and behaviors across the eight paraphilias delineated in the DSM-V. The Atypical Sexual Interests Scale (Rowlands et al., 2023) similarly asks participants to rate their level of arousal to several of the paraphilias listed in the DSM-V. These include frotteurism, voyeurism, exhibitionism, sexual sadism, and sexual

masochism. The scale also includes an additional category of devotism, which refers to the arousal to disability. Finally, the Sexual Fantasies and Behaviors Inventory (SFBI) (Brown et al., 2022) assesses the frequency of a wide range of sexual fantasies and behaviors, ranging from normophilic to paraphilic content. The items are organized into five empirically derived factors: Normophilic Behaviors (typical, consensual sexual activities such as vaginal intercourse and oral sex), Rough Sex (e.g., spanking and choking), Assuming Power (e.g., sexually humiliating a partner), Relinquishing Power (e.g., being sexually humiliated) and Intrusive Behaviors, which includes voyeuristic, exhibitionistic, and frotteuristic themes (e.g., watching others undress or engaging in sexual activity without their consent). Of these, Intrusive Behaviors most closely reflect what is traditionally understood as PIs in clinical diagnostics today.

While existing scales have provided valuable insights into the assessment of PIs, they are largely rooted in earlier diagnostic frameworks such as the DSM-IV, DSM-V, and ICD-10. Consequently, many continue to assess categories that are now considered outdated or pathologizing based on sexual morality or atypicality rather than clinical relevance. A review of current instruments reveals that the majority focus on sexual interest or arousal (e.g., fantasies, attraction) and real-life behavior, while none capture distress related to these fantasies or behaviors. Despite the centrality of distress and functional impairment in all major diagnostic frameworks, existing measurement tools continue to overlook these dimensions, leaving a critical gap in the assessment of clinically relevant PDs.

Aims of the Study

To date, few studies have examined the potential sexual-orientation-based differences of PI, and to the authors' knowledge, no studies have assessed PDs among gender-minority groups. Cross-cultural investigations on PI have been conducted in non-WEIRD (white, educated, industrialized, rich and democratic) countries like Brazil (Oliveira Júnior & Abdo, 2010) and Nigeria (Abdullahi et al., 2015), but more comprehensive cross-cultural research is needed, as cultural beliefs, norms, and expectations may play a role in the conceptualization and expression of PI (Bhugra et al., 2010; Zgourides, 2020).

An overarching aim of the International Sex Survey project (ISS; Bóthe, Koós, et al., 2021) was to study mechanisms underlying different sexual behaviors and to identify risk and protective factors and population at high risk for maladaptive sexual behaviors. In order to achieve that, in the first phase of the project, we aim to validate and provide theory-based screening tools that can reliably and validly assess different sexual behaviors. Therefore, the purpose of the present study was to develop a short and valid screening scale for paraphilic interests and disorders, aligned with the ICD-11 diagnostic guidelines (World Health Organization, 2018). It aimed to explore potential differences between gender, sexual orientation, and nationality-based subgroups of participants. Finally, associations with depression and anxiety symptoms were examined.

Materials and Methods

Procedure and Participants

The present study was part of the International Sex Survey project (Böthe, Koós, et al., 2021), a broad-scope cross-cultural, multi-language study (see details regarding recruitment: [\[PROJECT PREREGISTRATION LINK\]](#)). The survey battery was translated into 25 languages² from English, following well-established protocols for cross-cultural studies (Beaton et al., 2000). Adult samples from the general population were collected online anonymously in 42^{3,4} countries, with aims to validate scales: [\[VALIDATION PAPERS PREREGISTRATION LINK\]](#). Data collection took place between October 2021 and May 2022. The survey took approximately 25–45 minutes to complete. Collaborating countries were tasked to collect a community sample of adults with a minimum sample size of 2000 participants. This sample size was required to ensure sufficient power for statistical analyses that require relatively high number of participants (e.g. person-centered approaches). The principal investigator and the co-investigators of the project recommended collaborators contact popular news website(s) in their country, to advertise the survey. In exchange, they offered descriptive results to these advertisement partners after data collection was closed. These media publications are available on the project's website: internationalsexsurvey.org. Incentive was not offered by the principal investigator for participants, but they were informed that a 50 cents (USD) donation will be made by the research team for every completed survey (e.g., World Association for Sexual Health) with a maximum of a 1000 USD donation. Collaborators were allowed to provide incentive for participants, four out of 42 countries' representative research teams took the opportunity⁵. In Czech Republic online crowdsourcing survey platforms were used.

Ethical approvals were obtained from local Institutional Ethical Review Boards [\[SUPPORTING DOCUMENTS LINK\]](#), and the study was conducted in line with the Helsinki Declaration.

Those participants were excluded from the final sample, who did not agree to the informed consent ($n = 2,178$), were underage ($n = 441$), quitted before the demographic questions ($n = 80,592$), did not pass at least two out of three attention testing questions ($n = 5,735$), or gave inconsistent answers ($n = 394$). Throughout the survey, three attention testing questions were administered (i.e., “I am paying attention. Please indicate “completely agree” to this question.”), to which participants had to answer at least two right, taking human error into account. After data cleaning, 82,243 participants remained in the dataset ($M_{\text{age}} = 32.39$ years, $SD = 12.52$). Most participants identified as women (46,874), followed by men (32,245), while 2,315 identified as non-binary or gender fluid, 166 as indigenous or other cultural gender identities (e.g., two-spirit), and 302 indicated other gender identities. Around two-thirds of the sample identified as heterosexual (56,125), 4,607 as gay or lesbian, 7,688 as bisexual, 2,926 as queer or pansexual, 6,734 as homo- or heteroflexible, 1,064 as asexual, 1,951 as questioning their sexual orientation, and 807 selected “Other.” Detailed demographic

information is shown in [Table S1](#) and per country in [[SUPPORTING DOCUMENTS LINK](#)].

Measures

Participants answered sociodemographic questions (see [Table S1 in Supplemental Materials](#)) at the beginning of the survey (e.g., age, gender, sexual orientation⁶, highest level of education, place of residence, relationship status). The translation of the items is available and free to use at [[TRANSLATIONS LINK](#)].

The depression and anxiety subscales of the Brief Symptom Inventory (BSI-12) were also used ([Asner-Self et al., 2006](#)). Participants indicated the extent to which they were distressed during the past week across various domains using a five-point Likert scale, ranging from “*not at all*” to “*extremely*.” These factors have showed excellent fit to the data, factor loadings ranged from 0.702 to 0.891 ($p < .001$), with a strong positive correlation between them ($\Phi = 0.771, p < 0.001$). Internal consistency was high, with Cronbach’s alpha and McDonalds’s omega both at or above 0.90. These psychometric characteristics on the present dataset are reported and published by ([Quintana et al., 2024](#)).

The Paraphilic Disorder Short Screen (PDSS) was created to assess seven PIs and PDs following the ICD-11 diagnostic guidelines ([World Health Organization, 2018](#)). Item selection, scoring, and cut-offs reflect the wording of the definitions and symptoms in the classification system. According to the ICD-11, a PD can be diagnosed if the individual had acted on the arousal pattern, or has been markedly distressed by it. Three questions were created for each paraphilia (e.g., voyeurism): asking about the level of sexual arousal (“*I have had a sustained and intense sexual arousal from the thought or fantasy of ...*”), the level of distress or functional impairment (“*My sexual thoughts, fantasies, urges or behaviors of (...), have caused significant personal distress or problems in my life (e.g., relationships with others, my work, or other important aspects of my life)*”), and whether it manifested in actual behavior (“*I have acted on these thoughts and fantasies in the past six months.*”). These three items were presented for each paraphilia listed in the ICD-11. Functional impairment was included in line with the general approach of the ICD-11 revision, which defines disorders based on personal distress or functional limitations. Although not a formal criterion for paraphilia diagnosis, functional impairment was added based on the clinical experience of team members working with patients with PDs, reflecting its relevance in clinical practice.

The scale also includes definitions for and examples of each disorder ([Table 2](#)). Due to the length of the ISS survey battery, a screening question of initial interest was displayed for each paraphilia. Participants indicated their interest in the given paraphilia with yes or no questions (“*Have you ever been sexually interested in the following sexual activities?*”). If they expressed interest, they were shown the corresponding items, assessing sexual arousal, significant inter- or intrapersonal distress, and paraphilic behavior in the past six months. To summarize, each of the seven subscales of the PDSS consist of one screening question of sexual interest, and three questions regarding

Table 2. Descriptive Statistics of the Items of the Subscales of Paraphilic Disorder Short Screener (PDSS)

Items	Yes (%)	Range	M	SD	Skew. (SE)	Kurt. (SE)
Screening items for interest						
S1. Exhibitionism (exposing one's genitals to an unsuspecting individual in public places, usually without inviting or intending closer contact)	5.17	0-1	0.05	.22		
S2. Voyeurism (observing an unsuspecting individual who is naked, in the process of disrobing, or engaging in sexual activity)	19.4	0-1	0.19	.40		
S3. Pedophilia (sexual arousal involving pre-pubertal children)	1.24	0-1	0.01	.11		
S4. Coercive sexual behavior (the infliction of physical or psychological suffering on a non-consenting person)	3.78	0-1	0.04	.19		
S5. Frotteurism (touching or rubbing against a non-consenting person in crowded public places)	2.85	0-1	0.03	.17		
S6. Sexual arousal involving non-consenting individuals (e.g., animals or corpses)	1.22	0-1	0.01	.11		
S7. Sexual arousal involving risky sexual behaviors (e.g., severe choking, being beaten, or otherwise made to suffer with the risk of physical injury or death to you or your partner)	7.36	0-1	0.07	.26		
Exhibitionism						
1. I have had a sustained and intense sexual arousal from the thought or fantasy of exposing my genitals to an unsuspecting individual in public places.		1-4	1.06	.35	6.28 (0.01)	40.63 (0.02)
2. My sexual thoughts, fantasies, urges or behaviors of exposing my genitals to an unsuspecting individual in public places, have caused significant personal distress or problems in my life (e.g., relationships with others, my work, or other important areas of my life).		1-4	1.02	.17	12.78 (0.01)	180.09 (0.02)
3. I have acted on these thoughts and fantasies in the past six months.	0.93	0-1	0.01	.10		

(continued)

Table 2. (continued)

Items	Yes (%)	Range	M	SD	Skew. (SE)	Kurt. (SE)
Voyeurism						
1. I have had a sustained and intense sexual arousal from the thought or fantasy of observing an unsuspecting individual who is naked, in the process of disrobing, or engaging in sexual activity.		1–4	1.27	.72	2.61 (0.01)	5.54 (0.02)
2. My sexual thoughts, fantasies, urges or behaviors of observing an unsuspecting individual who is naked, in the process of disrobing, or engaging in sexual activity, have caused significant personal distress or problems in my life (e.g., relationships with others, my work, or other important aspects of my life).		1–4	1.04	.28	7.32 (0.01)	59.16 (0.02)
3. I have acted on these thoughts and fantasies in the past six months.	3.36	0–1	0.03	.18		
Pedophilia						
1. I have had a sustained and intense sexual arousal involving pre-pubertal children (e.g., viewing sexually explicit material involving children, touching children inappropriately).		1–4	1.02	.21	12.01 (0.01)	150.44 (0.02)
2. My sexual thoughts, fantasies, urges or behaviors involving pre-pubertal children have caused significant personal distress or problems in my life (e.g., relationships with others, My work, or other important aspects of my life).		1–4	1.01	.15	16.71 (0.01)	298.33 (0.02)
3. I have acted on these thoughts and fantasies in the past six months.	0.24	0–1	0.00	.05		
Coercive sexual sadism						
1. I have had a sustained and intense sexual arousal from the thought or fantasy of inflicting physical or psychological suffering to a non-consenting person.		1–4	1.05	.33	6.84 (0.01)	48.05 (0.02)
2. My sexual thoughts, fantasies, urges or behaviors of inflicting physical or psychological suffering to a non-consenting person have caused significant personal distress or problems in my life (e.g., relationships with others, my work, or other important aspects of my life).		1–4	1.01	.16	13.52 (0.01)	202.43 (0.02)
3. I have acted on these thoughts and fantasies in the past six months.	0.57	0–1	0.01	.08		

(continued)

Table 2. (continued)

Items	Yes (%)	Range	M	SD	Skew. (SE)	Kurt. (SE)
Frotteurism						
1. I have had a sustained and intense sexual arousal from the thought or fantasy of touching or rubbing against a nonconsenting person.		1-4	1.04	.30	7.85 (0.01)	63.66 (0.02)
2. My sexual thoughts. Urges or behaviors of touching or rubbing against a nonconsenting person have caused significant personal distress or problems in my life (e.g., relationships with others. My work. Or other important aspects of my life).		1-4	1.01	.15	14.65 (0.01)	235.24 (0.02)
3. I have acted on these thoughts and fantasies in the past six months.	0.58	0-1	0.01	.08		
Other paraphilia involving non-consenting individuals						
1. I have had a sustained and intense sexual arousal from the thought or fantasy of involving others who are unwilling or unable to consent (e.g., arousal patterns involving corpses or animals).		1-4	1.02	.20	12.38 (0.01)	160.41 (0.02)
2. My sexual thoughts, fantasies, urges or behaviors about others who are unwilling or unable to consent, have caused significant personal distress or problems in my life (e.g., relationships with others, my work, or other important aspects of my life).		1-4	1.01	.11	22.57 (0.01)	548.96 (0.02)
3. I have acted on these thoughts and fantasies in the past six months.	0.17	0-1	0.00	.04		
Atypical paraphilia involving solitary behaviour or consenting individuals						
1. I have had a sustained and intense sexual arousal from the thought or fantasy of atypical sexual activities that involve a significant risk of injury or death either to me or to my partner (e.g., severe choking).		1-4	1.13	.53	4.24 (0.01)	17.27 (0.02)
2. My sexual thoughts, fantasies, urges or behaviors about atypical sexual activities with consenting adults or solitary behaviors, have caused significant personal distress or problems in my life (e.g., relationships with others, my work, or other important aspects of my life).		1-4	1.02	.20	9.97 (0.01)	111.53 (0.02)
3. I have acted on these thoughts and fantasies in the past six months.	3.13	0-1	0.03	.17		

(continued)

Table 2. (continued)

Correlations between the subscales					
	Voyeurism	Pedophilia	Coercive ^a	Frotteurism	Non-consenting ^b
Exhibitionism	.31*	.13*	.15*	.24*	.11*
Voyeurism	-	.13*	.17*	.25*	.11*
Pedophilia		-	.19*	.17*	.26*
Coercive ^a			-	.23*	.19*
Frotteurism				-	.15*
Non-consenting ^b					-
Atypical ^c					-

Note. M = mean, SD = standard deviation, Skew. = skewness, SE = standard error, Kurt. = kurtosis, S1 – S7: screener items of paraphilic interest. α = Cronbach's alpha, ω = McDonald's omega.
^aCoercive Sexual Sadism.
^bOther Paraphilia Involving Non-Consenting Individuals.
^cAtypical Paraphilia Involving Solitary Behaviour or Consenting Individuals. Spearman's rank correlations were conducted between subscales. * $p < .001$.

sexual arousal, distress and functional impairment and manifest behavior. Those participants who did not express interest in a given paraphilia did not complete the corresponding scale, and thus were treated as naturally missing data. Their naturally missing data were recoded as if they disagreed with each question that was not displayed to them. The item structure is similar for all paraphilias, except for the atypical paraphilia involving solitary behavior or consenting adults, which is supplemented by an additional question about the activities of interest (e.g., being severely choked, or severely choking their partner). This list of behaviors was created by members of the research team who are working with patients with PDs as psychiatrists. The ICD-11-based guidelines for paraphilias includes answering (a) somewhat agree or totally agree to the sexual arousal item (coded as totally disagree = 1; somewhat disagree = 2; somewhat agree = 3; totally agree = 4); (b) somewhat agree or totally agree to the significant distress item; and, (c) yes to the behavior item (no = 0; yes = 1). Both symptoms (a) and either (b) or (c) have to be met to reach the scale's cut-off score, based on the ICD-11 diagnostic guidelines ([World Health Organization, 2022](#)).

Statistical Analysis

The authors take responsibility for the integrity of the data, the accuracy of the data analyses, and have made every effort to avoid inflating statistically significant results. For data cleaning and analyses, SPSS 28 (SPSS Inc., Chicago, IL, United States) was used. The statistical analyses aimed to assess the available psychometric properties of the screener scale, acknowledging that its structure does not allow for dimensionality testing. Therefore, the proportions of those who were interested and those who reached the ICD-11 cut-offs per country, gender, and sexual orientation were explored, and can be seen in the [Supplemental Material \(Table S2\)](#). To account for differences in sample sizes across countries, genders, and sexual orientation-based groups when reporting proportions, we applied an empirical Bayesian correction ([Robinson, 2017](#)) using the *ebbr* package in R. This method adjusts raw proportions by incorporating a prior based on the overall distribution, preventing extreme values in small groups from skewing results. Missing values were examined on the PDSS items, language, country of residence, gender, and sexual orientation variables. The result of Little's Missing Completely at Random Test (MCAR) ([Little, 1988](#)) indicated that values were not missing completely at random: $\chi^2 = 3651.702$, $df = 707$, $p < .001$. However, missingness was negligible (ranging from 0 to 1.2%⁷), therefore missing value imputation was not performed. Given the characteristics of the PDSS (e.g., lack of dimensionality, ordinal scaling), it was not possible to conduct all preregistered statistical analyses [[VALIDATION PAPERS PREREGISTRATION LINK](#)].

To ensure the internal consistency of the subscales of the PDSS, Cronbach's alphas and McDonald's Omegas were calculated for each subscale ([McDonald, 1999](#); [Ravinder & Saraswathi, 2020](#)). However, results should be interpreted cautiously, hence the characteristics of the PDSS scale are far from ideal for the alpha indices (e.g. low item number per subscale, ordinal scaling) ([Orçan, 2023](#); [Sijtsma, 2009](#)). Convergent validity was assessed by creating subgroups of participants based on their level

of interest and involvement in specific paraphilias, and comparing them along depression and anxiety symptoms (Asner-Self et al., 2006). Pairwise χ^2 tests with Bonferroni corrections were conducted on the proportions of participants who reached PD thresholds per country, gender, and sexual orientation.

Regarding the Atypical Paraphilic Behavior subscale, an additional item (“Which of the following acts are the interest of yours?”) listed seven options (Table 5) and included an open-ended answer option (“other, please specify”). To that item, 751 responses were recorded after data cleaning. To analyze these open-ended responses, we conducted a bottom-up Thematic Analysis (TA; Braun & Clarke, 2006) following prior procedures (Buczó et al., 2024; Bóthe, Tóth-Király, et al., 2021). The TA process involved several steps. First, two independent coders familiarized themselves with the full set of responses by reading through all answers without coding. Each coder then generated preliminary categories based on their initial impressions. The coders met to discuss and agree on a set of initial categories. During the detailed coding process, coders were allowed to create additional categories if a response did not fit the existing ones. Once coding was complete, the coders and the first author met to review the full coding scheme and make minor adjustments to the categories after considering the data as a whole. Conflicts in coding were resolved through discussion between the coders and, when necessary, with input from a third party (first author) to reach consensus. The scale is available in 26 languages [[TRANSLATIONS LINK](#)] and free to use for research and clinical purposes.

Results

Psychometric Properties

Descriptive statistics, reliability indices, and correlations between paraphilias were calculated on the total sample (Table 2). The correlation analysis revealed significant positive associations between all paraphilias. Exhibitionism and Voyeurism showed a moderate correlation ($r = .31, p < .05$), while other associations were generally weaker but still significant. Pedophilia correlated most strongly with Non-Consenting Paraphilia ($r = .26, p < .05$). The weakest correlations were observed between Pedophilia and Atypical subscales ($r = .07, p < .05$), as well as Voyeurism and Non-Consenting subscale ($r = .11, p < .05$). Inter-item correlations show moderate to high correlation within each subscale (Table 3).

The most frequently reported PI was Voyeurism (19.42% of the total sample; $n = 15,970$), and it was also the most common PD, based on the ICD-11 diagnostic guidelines (3.24%; $n = 2,662$), see Figure 1. The least frequently reported PIs were Paraphilia Involving Non-Consenting Individuals ($n = 1,003$; 1.22%) and Pedophilia ($n = 1,021$, 1.24%). These were also the least common PDs ($n = 188$ and 283 ; 0.23% and 0.35%, respectively). The rates of PIs and ICD-11-based PDs are reported across countries, genders and sexual orientation groups in in Supplemental Materials (Table S2). Regarding “Atypical Paraphilia Involving Solitary Behavior or Consenting Individuals” involving behaviors that may cause serious injury to themselves or partners, being severely choked was the most

Table 3. Inter-item Correlations Within the Subscales of the Paraphilic Disorder Short Screener (PDSS)

Exhibitionism		
	Item 2	Item 3
Item 1	0.49*	0.45*
Item 2	-	0.37*
Voyeurism		
Item 1	.42*	.44*
Item 2	-	.30*
Pedophilia		
Item 1	.65*	.46*
Item 2	-	.40*
Coercive sexual sadism		
Item 1	.54*	.41*
Item 2	-	.36*
Frotteurism		
Item 1	.57*	.48*
Item 2	-	.42*
Other paraphilia involving non-consenting individuals		
Item 1	.52*	.41*
Item 2	-	.35*
Atypical paraphilia involving solitary behaviour or consenting individuals		
Item 1	.47*	.67*
Item 2	-	.34*

Note. Spearman correlations are reported. * $p < .001$.

common interest ($n = 3,632$, percentage to the total sample = 4.5%). For the open-ended answer option, bondage, pain, and impact-related themes were the most common (see the complete list in [Table S4 in the Supplemental Materials](#)).

Reliability and Validity

The reliability of the PDSS subscales ranged from low to adequate depending on the indicator. Cronbach's alpha values were generally modest ($\alpha = .50-.67$), whereas McDonald's omega values were higher, indicating better internal consistency ($\omega = .71-.89$). Specifically, subscale reliability was as follows: Exhibitionism ($\alpha = .67$, $\omega = .73$), Voyeurism ($\alpha = .50$, $\omega = .71$), Pedophilia ($\alpha = .66$, $\omega = .82$), Coercive Sexual Sadism ($\alpha = .55$, $\omega = .72$), Frotteurism ($\alpha = .62$, $\omega = .77$), Other Paraphilias Involving Non-Consenting Individuals ($\alpha = .57$, $\omega = .74$), and Atypical Paraphilias Involving Solitary or Consenting Behaviors ($\alpha = .61$, $\omega = .89$).

The data was strongly skewed, nonparametric tests were conducted (i.e., Spearman correlation, Kruskal-Wallis test for group mean difference). The results of the Kruskal-

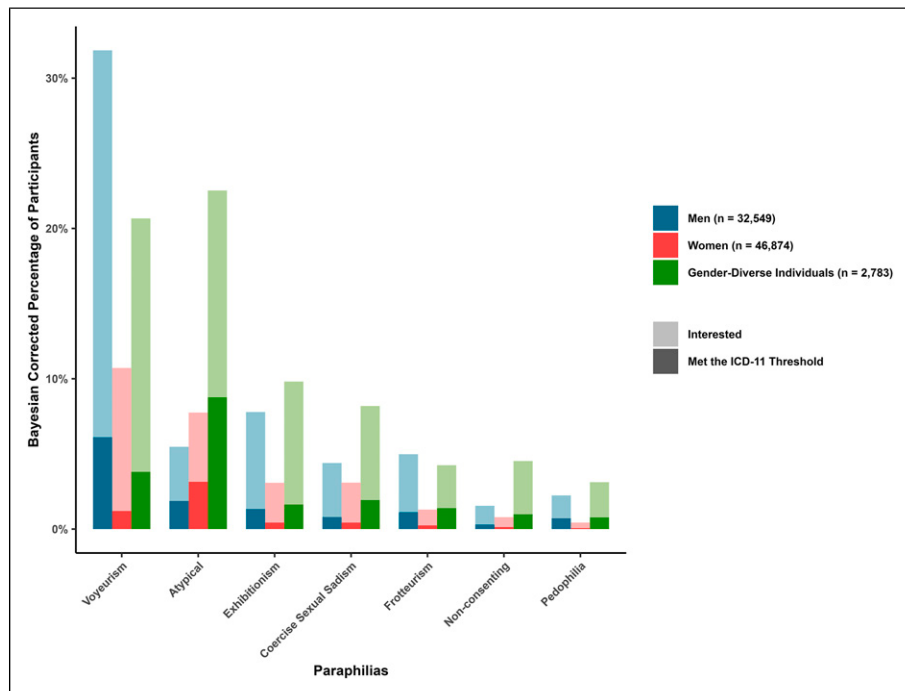


Figure 1. Percentage of Participants per Paraphilia.

Note. Visual representation of the Bayesian-corrected proportions for the number of participants in each gender group, per PD. Different colors represent different gender groups (blue = men, pink = women, green = gender diverse individuals), and different transparency levels indicate interest in the PD, or reaching diagnosis threshold, according to the ICD-11 (high transparency = interest, low transparency = diagnostic threshold)

Wallis tests indicate significant differences in depression symptoms across groups (not interested, interested but not meeting ICD-11 criteria, and meeting ICD-11 criteria) for all assessed paraphilic behaviors (all $p < .001$) (Table 4). Dunn's post-hoc tests reveal that individuals meeting the ICD-11 criteria for PD consistently reported higher depression levels compared to those who were only interested but did not meet diagnostic criteria and those who were not interested. The largest effect sizes were observed for Pedophilia ($d = 0.546$) and Coercive Sexual Sadism ($d = 0.596$), indicating a stronger association between these behaviors and depression severity. In contrast, Voyeurism had the smallest difference between those interested but not meeting the ICD-11 criteria and those meeting criteria ($d = 0.148$).

Similarly, significant differences were observed in anxiety levels across all paraphilias ($p < .001$). Individuals meeting the ICD-11 criteria showed higher anxiety symptoms than the other groups, with the largest effect sizes observed for Atypical Paraphilia Involving Solitary Behavior or Consenting Individuals ($d = 0.616$) and Coercive Sexual Sadism ($d = 0.484$). For Voyeurism, anxiety levels were lower in the

Table 4. Group Comparison of Participants' Level of Depression and Anxiety Between Those Who Are Not Interested, Who Are Interested, and Who Met the Threshold of the ICD-11, Based on the Paraphilic Disorder Short Screener (PDSS)

Variables	Group 1: Not interested	Group 2: Interested, but did not reach ICD-11 threshold	Group 3: Reached ICD- 11 threshold	Kruskal-Wallis test	
	M (SD)	M (SD)	M (SD)	Kruskal- Wallis H	Cohen's d
Exhibitionism					
BSI-12 depression	(n = 72,124) 6.712 (5.996) ^a	(n = 3,242) 7.943 (6.516) ^b	(n = 627) 8.541 (6.872) ^b	149.208*	0.088
BSI-12 anxiety	(n = 72,131) 6.612 (5.642) ^a	(n = 3,237) 7.242 (5.964) ^b	(n = 626) 8.029 (6.372) ^c	57.629*	0.054
Voyeurism					
BSI-12 depression	(n = 61,225) 6.713 (6.010) ^a	(n = 11,415) 6.875 (6.051) ^b	(n = 2,454) 7.785 (6.519) ^c	66.098*	0.058
BSI-12 anxiety	(n = 61,230) 6.692 (5.696) ^a	(n = 11,417) 6.339 (5.427) ^b	(n = 2,454) 7.323 (5.966) ^c	52.270*	0.052
Pedophilia					
BSI-12 depression	(n = 75,081) 6.749 (6.017) ^a	(n = 690) 8.914 (6.599) ^b	(n = 259) 10.039 (7.225) ^b	134.799*	0.084
BSI-12 anxiety	(n = 75,090) 6.644 (5.659) ^a	(n = 691) 6.639 (5.770) ^a	(n = 259) 8.340 (6.580) ^b	14.838*	0.026
Coercive sexual sadism					
BSI-12 depression	(n = 73,150) 6.695 (5.993) ^a	(n = 2,383) 8.676 (6.484) ^b	(n = 481) 10.274 (7.200) ^c	360.775*	0.138
BSI-12 anxiety	(n = 73,157) 6.603 (5.638) ^a	(n = 2,384) 7.572 (6.022) ^b	(n = 481) 9.333 (6.745) ^c	136.313*	0.084
Frotteurism					
BSI-12 depression	(n = 73,851) 6.695 (5.993) ^a	(n = 1,676) 8.083 (6.547) ^b	(n = 488) 10.274 (7.200) ^b	114.944*	0.077
BSI-12 anxiety	(n = 73,859) 6.603 (5.638) ^a	(n = 1,676) 6.928 (6.000) ^a	(n = 488) 9.333 (6.745) ^b	41.005*	0.045

(continued)

Table 4. (continued)

	Group 1: Not interested	Group 2: Interested, but did not reach ICD-11 threshold	Group 3: Reached ICD- 11 threshold	Kruskal-Wallis test	
Variables	M (SD)	M (SD)	M (SD)	Kruskal- Wallis H	Cohen's d
Other paraphilia involving non-consenting individuals					
BSI-12 depression	(n = 75,106) 6.753 (6.020) ^a	(n = 750) 8.811 (6.479) ^b	(n = 173) 9.659 (7.639) ^b	105.385*	0.074
BSI-12 anxiety	(n = 75,113) 6.637 (5.657) ^a	(n = 751) 7.503 (5.954) ^b	(n = 173) 8.855 (7.020) ^b	31.225*	0.045
Atypical paraphilia involving solitary behavior or consenting individuals					
BSI-12 depression	(n = 70,455) 6.667 (5.970) ^a	(n = 3,385) 9.965 (6.677) ^b	(n = 2,136) 10.573 (6.870) ^c	1,649.264*	0.298
BSI-12 anxiety	(n = 70,462) 6.550 (5.610) ^a	(n = 3,386) 9.051 (6.161) ^b	(n = 2,136) 10.023 (6.395) ^c	1,299.648*	0.264

Note. M = mean; SD = standard deviation; SE = standard error; H = Kruskal-Wallis H; * = Bonferroni-corrected p value < .001. Superscript letters indicate significant pairwise differences: groups sharing the same letter do not differ significantly, whereas groups with different letters do (Dunn's post-hoc test). Group 1 = participants not interested in the behavior (answered positively to the screening question); Group 2 = participants interested but did not reach the ICD-11 threshold; Group 3 = participants who reached the ICD-11 threshold. Thresholds were determined according to ICD-11 guidelines.

^a"somewhat" or "totally agree" on sexual arousal item.

^b"somewhat" or "totally agree" on significant distress item.

^c"yes" on behavior item. Both (a) and either (b) or (c) must be met to reach the cut-off ([World Health Organization, 2022](#)).

"interested but not meeting criteria" group compared to those who were not interested ($d = 0.062$), suggesting a different pattern compared to the other interests. Overall, these findings highlight a gradient in psychological distress, where individuals meeting the ICD-11 criteria for PDs exhibit significantly higher depression and anxiety levels than those who are interested in the behaviors without acting on them or not interested at all.

Across countries, gender groups, and sexual orientations, notable patterns emerged in the Bayesian-corrected prevalence estimates of PIs ([Table S2](#)). Across paraphilias, the rate of participants reporting interest or meeting the diagnostic indicators was higher among gender-diverse individuals than among men. Further, estimates among men exceeded the estimates among women. Voyeurism was an exception, where men reported an interest and met diagnostic indicators at the highest levels.

Regarding sexual orientation, the rates among gay or lesbian and queer individuals often exceeded other groups. Specifically, gay and bisexual participants exhibited

increased rates of Voyeurism, Exhibitionism, and Coercive Sadism. Queer and pan-sexual individuals reported the highest interest in Atypical Paraphilia. Asexual individuals, in contrast, consistently displayed the lowest scores across all categories.

At the country level, a considerable variation was observed. Certain countries, such as Brazil and South Korea, exhibited higher proportions of individuals reporting interest in paraphilic behaviors, while European countries like Germany, Austria, and Poland tended to report lower rates. Voyeurism, for instance, was more commonly reported in Latin America, whereas Atypical PIs appeared more common in South Korea and Taiwan. All group differences were significant regarding gender, and most group differences were significant regarding sexual orientations and countries, based on pairwise χ^2 comparisons [[ONLINE SUPPLEMENTAL MATERIALS LINK](#)].

Discussion

The development of accurate and up-to-date screening tools for PDs is important for promoting effective assessment and early intervention. With the recently released ICD-11 ([World Health Organization, 2022](#)), it is crucial to align screening measures with updated diagnostic guidelines. By validating the PDSS among samples from 42 countries in 26 languages, we attempted to ensure its applicability and relevance across diverse populations, accounting for potential cultural variations in symptom expression, beliefs, and attitudes. The wide-scale adaptation might facilitate cross-cultural research and comparison of findings across countries, enabling a comprehensive understanding of the prevalence of paraphilias, their potential impacts, and associated factors worldwide.

The findings of the current study broadly align with extant literature, repeating that voyeurism is the most commonly reported PI across populations ([Ahlers et al., 2011](#); [Bártová et al., 2021](#); [Joyal & Carpentier, 2022](#)). However, while previous studies reported rates of voyeurism as high as 46-60% ([Joyal & Carpentier, 2017, 2022](#)), the present study observed more conservative estimates, with 19.4% of participants reporting voyeuristic interest and 3.2% meeting diagnostic threshold. This gap between PI and PD however, is consistent with previous findings, showing that only about half of individuals with a PI engage in related behavior or experience clinical distress ([Joyal & Carpentier, 2022](#)). Besides voyeurism, the rest of the prevalence rates - even for the PIs, let alone the PDs - are consistently lower in the current sample than in some previous publications ([Bártová et al., 2021](#); [Joyal & Carpentier, 2022](#)), while they are comparable to rates found in others ([Abdullahi et al., 2015](#); [Ahlers et al., 2011](#); [Dawson et al., 2016](#)). These discrepancies are likely attributable to differences in measurement methods, as previously discussed in the introduction, including variation in how PIs were operationalized and assessed across studies. Overall, the present findings align with prior research, namely that voyeurism and exhibitionism are the most commonly reported PIs, while pedophilia remains the least likely reported ([Abdullahi et al., 2015](#); [Ahlers et al., 2011](#); [Bártová et al., 2021](#); [Dawson et al., 2016](#); [Joyal & Carpentier, 2022](#)).

Based on the present findings, participants who reported interest or met indicators for any PD showed more severe depression and anxiety symptoms,

compared to those not interested in PD behaviors. Speculatively, this elevated psychological distress may arise partly from moral incongruence, stigma, and potential challenges in establishing healthy sexual and romantic relationships (Briken et al., 2019).

Significant differences were observed between genders, sexual orientations, and countries regarding proportions of participants interested in, or meeting criteria for specific PDs. For example, for all PD behaviors, more gender-diverse individuals than men and more men than women were interested, with the exception of voyeurism. More gay, lesbian, and queer individuals were interested in most PD behaviors than any other sexual orientation group. Research on PI among gender minority individuals is limited. However, Abrams (2023) found that women and trans/non-binary participants reported PIs and behaviors more frequently than men, which is partly in line with the present findings. In another study (Dawson et al., 2016), gender non-conforming individuals were excluded from the analysis. The rest of the findings regarding sexual orientation groups are in line with the literature (Bártová et al., 2021; Seto et al., 2021). As for sexual and gender minority individuals (SGM), they often contend with minority stress stemming from social rejection and discrimination against their sexual orientation or gender identity, leading to possible coping mechanisms that may involve sexual risk-taking and acting out behaviors (Burton et al., 2020; Rendina et al., 2017; Scheer & Antebi-Gruszka, 2019). Moreover, SGM communities tend to foster more liberal and accepting attitudes towards diverse sexual behaviors, offering a sense of belonging and validation that encourages exploration (Kaniuka et al., 2019; Saewyc et al., 2020). Historically, limited socializing settings, such as gay bars and fetish clubs, have provided avenues for SGM individuals to connect and explore their sexual interests in pre-internet times, with activities like cruising facilitating encounters conducive to paraphilic behaviors (e.g., exhibitionism, frotteurism). This inclination towards paraphilias may also reflect a developmental aspect of identity exploration among SGM individuals, further underscoring the complex interplay of societal, cultural, and individual factors shaping sexual interests and behaviors (Glover et al., 2009; Parent et al., 2015). However, it is important to consider that these differences may not only reflect actual interest and behavioral rates, but could also be influenced by variations in willingness to disclose. Gender-diverse individuals and sexual minorities may feel less constrained by heteronormative expectations and thus report their sexual interests more openly, whereas heterosexual individuals might underreport certain PIs due to greater social stigma. The role of societal norms in shaping disclosure patterns should be explored in future studies.

Regarding country-based differences, participants from different countries were interested in different paraphilias. Varying occurrence estimates may partly be present due to cross-cultural differences in levels of permissiveness regarding certain sexual interest or behaviors, or in the willingness to report certain fantasies or behaviors (Bártová et al., 2021). Participants from Brazil and South Korea reported higher prevalence rates across several PIs, including Voyeurism, Exhibitionism, and Other Paraphilia Involving Non-Consenting Individuals. In contrast, Germany, Austria, Poland, and Hungary consistently exhibited lower prevalence rates across most PIs.

These differences may be influenced by cultural attitudes toward sexuality, media representations, legal restrictions, and by the level of social stigma or openness in discussing and reporting such behaviors. Additionally, the reluctance to disclose such interests in these societies may contribute to lower reported prevalence. Scandinavian countries, such as Sweden and Norway, also reported relatively low rates, potentially reflecting cultural attitudes that emphasize sexual responsibility and gender equality (Langvasbraten, 2008), which may shape both engagement in and perceptions of paraphilic behaviors. Notable outliers also emerged. For example, Japan reported low prevalence rates despite well-documented sexual subcultures in media and pornography (McLelland, 2015). This discrepancy may reflect a divide between private sexual preferences and public disclosure, as cultural norms surrounding modesty and discretion may reduce willingness to report certain behaviors. To summarize, these findings highlight how cultural, legal, and societal factors may contribute to both the actual engagement in and willingness to report paraphilic behaviors. In some cases, lower reported rates may not necessarily indicate lower engagement, but rather higher stigma or reluctance to disclose said engagement. Conversely, countries with more liberal sexual climates may facilitate greater openness in reporting these behaviors (Bränström & Pachankis, 2019). While these factors provide potential explanations for the observed differences, it is also important to acknowledge that our samples were not nationally representative. As a result, some of the variations across countries may simply reflect sampling error rather than true cultural or societal differences.

Strengths and Limitations

Despite the strengths of the current study, such as a diverse and large sample, the use of rigorous methodology, and adherence to open-science principles, there are some general limitations of the [SUPPORTING DOCUMENTS LINK] project. Although several countries (e.g., Egypt, Iran, Pakistan, and Romania) had initially expressed interest in participating in the ISS study and were included in the study protocol (Böthe, Koós, et al., 2021), timely ethical approval could not be obtained in these countries. The data were self-reported and, as such, may be affected by various biases. For example, participants were asked to recall the frequency of different sexual behaviors over the past year, which may introduce recall errors. Social and cultural norms may also have influenced participants' responses, potentially leading to under- or overreporting of sensitive sexual behaviors. Because data were collected online, the sample was restricted to individuals with internet access, further limiting the generalizability of findings to populations without such access. Furthermore, the survey was advertised on multiple sexuality-related online spaces, which might result in biased sample (i.e., people who are already interested in learning about sexuality might be overrepresented).

While all collaborators followed standardized data collection protocols, some flexibility in recruitment methods was necessary to ensure sufficient participation. In certain countries, participants were recruited through internet-based market research firms (e.g., Czech Republic), or offered incentives such as prize draws (e.g., Spain),

which may have influenced motivations for participation. Although the study protocol initially specified a minimum of 2,000 participants per country, this target was not reached in many cases. Consequently, we decided to determine the appropriate analysis protocols on a case-by-case basis. For example, when conducting country-level comparisons, we first performed preliminary sample size calculations to identify which countries had sufficient data for inclusion and which did not. This approach ensured that analyses were conducted only where the data allowed for reliable and interpretable results. To summarize, even though the study includes data from 42 countries, including sexually diverse populations, the findings cannot be considered fully representative of each country, particularly where sample sizes were relatively small. Finally, as the data were collected cross-sectionally, causal inferences cannot be drawn.

Further studies validating the PDSS in clinical samples are warranted to examine its specificity and sensitivity, and avoid false identification and exclusion of true cases. Another key limitation of the PDSS screener is that it does not assess latent constructs (i.e., factors), which restricts the statistical methods available for validation. While this aligns with the screener's intended purpose as a brief and targeted tool based on ICD-11 criteria, it limits the depth of psychometric evaluation that could be applied. Another limitation concerns the uneven distribution of participants across countries, with Central European nations, particularly Poland and Hungary, comprising approximately 27% of the total sample. Although we applied corrective measures—such as adjusting percentages based on participant numbers per country, gender, and sexual orientation groups using a Bayesian approach—this region remains disproportionately represented. Additionally, individuals with higher education were overrepresented. Such imbalances may affect the generalizability of findings, as cultural and education factors might play a role in the rates of or the willingness to disclose PIs.

Implications and Conclusions

Although existing scales measure paraphilic behaviors, they often omit the clinically essential aspect of distress or impairment, which is explicitly required for diagnosis in all major diagnostic manuals from DSM-IV to ICD-11 ([American Psychiatric Association, 2000, 2013](#); [World Health Organization, 1993, 2022](#)). By neglecting these features, prior scales limit their clinical relevance and utility. The PDSS addresses this gap by aligning with ICD-11 categories, including newly defined PDs that are not based on societal norms or morality but are clinically and legally relevant, and incorporating items on distress and impairment. This provides clinicians and researchers with a tool that not only identifies paraphilic behaviors but also evaluates their clinical significance and public health relevance. Importantly, it also allows for the early identification of individuals whose symptom patterns may indicate a higher risk of offending, which is essential for both clinical risk management and preventive intervention. As a result, enables more accurate diagnosis, treatment planning, and

evaluation of intervention outcomes, while facilitating standardized research across studies.

The PDSS appear to be a reliable screening tool, developed on a broad, diverse, multi-cultural sample, to assess different types of PIs and disorders in general populations. As the field moves towards a more holistic and non-judgmental approach to sexual health (Krueger et al., 2017), the development and validation of screening scales employing current diagnostic considerations should enable clinicians and researchers to better identify individuals with PDs and promote more evidence-based and patient-centered approaches.

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Ethical Considerations

The authors assert that all procedures contributing to this work comply with the relevant national and institutional committees' ethical standards on human experimentation and the Helsinki Declaration. The study received approval either from the national/institutional ethics review boards of all participating countries or from the local ethics committees, which determined that the study was exempt and did not require additional assessment since it had already been approved by the ethics committees of the principal investigators' institutions: [SUPPORTING DOCUMENTS LINK].

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. “Paraphilic disorders are characterised by persistent and intense patterns of atypical sexual arousal, manifested by sexual thoughts, fantasies, urges, or behaviors, the focus of which involves others whose age or status renders them unwilling or unable to consent and on which the person has acted or by which he or she is markedly distressed. Paraphilic disorders may include arousal patterns involving solitary behaviors or consenting individuals only when these are associated with marked distress that is not simply a result of rejection or feared rejection of the arousal pattern by others or with significant risk of injury or death.” (World Health Organization, 2022).
2. Arabic, Bangla, Croatian, Czech, Dutch, English, French, German, Hebrew, Hindi, Hungarian, Italian, Japanese, Korean, Lithuanian, Macedonian, Mandarin – simplified, Mandarin – traditional, Polish, Portugese – Brazil, Portuguese – Portugal, Romanian, Slovak, Spanish – Latin America, Spanish – Spain, Turkish.
3. Algeria, Australia, Austria, Bangladesh, Belgium, Bolivia, Brazil, Canada, Chile, China, Colombia, Croatia, Czech Republic, Ecuador, Egypt, France, Germany, Gibraltar, Hungary, India, Iraq, Ireland, Israel, Italy, Japan, Lithuania, Malaysia, Mexico, New Zealand, North Macedonia, Panama, Peru, Poland, Portugal, Romania, Slovakia, South Africa, South Korea, Spain, Switzerland, Taiwan, Turkey, United Kingdom, United States of America.
4. Egypt, Iran, Pakistan, and Romania were included in the study protocol paper as collaborating countries (Bóthe, Koós, et al., 2021); however, it was not possible to get ethical approval for the study in a timely manner in these countries. Chile was not included in the study protocol paper as a collaborating country (Bóthe, Koós, et al., 2021) as it joined the study after publishing the study protocol. Therefore, instead of the planned 45 countries (Bóthe, Koós, et al., 2021), only 42 individual countries are considered in the present study, see details at <https://osf.io/n3k2c/>.
5. Taiwanese participants received a coupon worth 300 NTD each. 15 vouchers worth of 1000 SAR each were raffled among South African participants, and 15 vouchers worth 100 USD were raffled among Swiss participants. Three vouchers for 30 USD each were raffled among Spanish participants.
6. Answer categories were heterosexual, gay or lesbian, bisexual, queer and pansexual, homo- and heteroflexible identities, asexual, questioning their identities and other.
7. The items measuring paraphilic disorder symptoms (i.e., sexual arousal, subjective suffering and behavior) of the PDSS were only displayed to those who indicated interest in the specific paraphilia. Anyone else, who was not interested, were recoded to the smallest value, not as missing.

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