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1 **BDSM in North America, Europe and Oceania: A Large-Scale International**
2 **Survey Gauging BDSM Interests and Activities.**

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Introduction

BDSM – an acronym for bondage and discipline, dominance and submission, and sadism and masochism – refers to a spectrum of (often, but not always, sexual; e.g., Winter-Gray & Hayfield, 2021) interpersonal experiences and interactions, including the use of physical restraints, punishments, intense physical stimulation, sensorial play, and power exchange between consensual partners (De Neef et al., 2019; Holvoet et al., 2017; Paarnio et al., 2023). There are several roles with which BDSM practitioners can identify themselves, often reflecting the types of BDSM activities they engage in. BDSM practitioners who can be referred to as D-type mainly identify themselves as either dominant (i.e., a person who consensually receives power, authority, or control in a relationship, scene or activity), rigger (i.e., a person who practices the art of bondage), top (i.e., a person who is in control of the action or who administers the stimulation during kinky activities), sadist (i.e., a person who enjoys consensually inflicting a form of pain on someone), predator (i.e., someone who enters a primal headspace to “hunt” their prey), or a combination of those roles. S-type BDSM practitioners tend to self-identify as submissive (i.e., a person who agrees to submit or give up control in a relationship, scene or activity), rope bunny (i.e., a person who receives rope bondage), bottom (i.e., a person who agrees to give up control or receives the stimulation during kinky activities that may or may not include submission), masochist (i.e., a person who enjoys receiving pain or humiliation consensually, whether it’s emotionally, physically, or mentally), prey (i.e., someone who enters into a primal headspace and seeks to be “hunted”), or a combination of these roles. Additionally, BDSM practitioners can also self-identify as switch, having both D-type and s-type interests depending on their mood, partner and/or the situation (De Neef et al., 2019).

Over the past few years, BDSM research has grown exponentially with results revealing a high level of worldwide interest in BDSM. Research has estimated prevalence

1 rates of BDSM fantasies and activities in up to 69% of the general Belgian population
2 (Holvoet et al., 2017), and additionally provided differences in the age of onset in BDSM
3 interests and practices (Coppens et al., 2020; Walker & Kuperberg, 2022). A Canadian
4 university study by Renaud and Byers (1999) found that 72% of men and 59% of women in
5 their sample had fantasized about being tied up, while 60% of the men and 31% of the
6 women reported positive feelings regarding whipping or spanking. In a recent Nordic study,
7 Paarnio and colleagues (2022) presented somewhat lower prevalence rates in reported BDSM
8 interest (of approximately 38% of the total research sample ($n = 8,137$)), and an earlier
9 Australian study (Richters et al., 2003) indicated only 2% of their respondents having
10 participated in BDSM practices, with only marginal increases to 3% in a follow-up study 10
11 years later (Richters et al., 2014). These variances in prevalence rates between different
12 studies can be due to varying operationalizations of the concept of BDSM and differences in
13 used terminology in the survey (e.g. use of overarching terms such as ‘SM’ versus gauging
14 interest in specific acts). When gauging actual experience with BDSM practices, Holvoet et
15 al. (2017) revealed about half of the Belgian general population had previously engaged in at
16 least one BDSM-related activity, while in the same group only 7.6% actually self-identified
17 as a BDSM practitioner. Other methodological differences may have contributed to these
18 discrepancies (De Neef et al., 2019), including contact method (e.g., telephone interview
19 versus anonymous online survey), the nature of BDSM interests (fantasies versus experience)
20 and differences in time span of interest (e.g., fantasies in last 12 months versus lifetime).
21 Rather than investigating BDSM interests using overarching terminology, it has proven more
22 useful to gauge interests in specific BDSM-related activities (De Neef et al., 2019; Holvoet et
23 al., 2017), as this will provide more accurate estimates of BDSM interest.

24 Several studies have focused on examining the influence of potential driving
25 biological mechanisms (Wuyts et al., 2020; Wuyts et al., 2021; Wuyts & Morrens, 2022) and

1 psychosocial factors on BDSM interests and putting these interests into practice, such as
2 sensation-seeking and the use of active coping strategies (e.g., higher levels of thrill- and
3 experience-seeking in BDSM practitioners; Schuerwegen et al., 2021), personality traits (e.g.,
4 more openness to new experiences and higher levels of extraversion; Wismeijer & van Assen,
5 2013), and a history of traumatic experiences (Nordling et al., 2000; Ten Brink et al., 2021).
6 Despite exponentially growing efforts into documenting demographic and personality
7 features of BDSM practitioners over the past years, however, little research has examined the
8 possible international differences in the age of onset, and nature of BDSM interests and
9 practices across nations. As hypothesized by De Neef et al. (2019), cultural aspects may
10 influence one's interest in BDSM as key differences exist towards stigma, discrimination,
11 sexual free thinking, legislation, and experiencing sexuality between different nationalities
12 and cultures. It can be considered that the previously mentioned differences found in
13 prevalence rates between studies may at least partially reflect potential cultural and
14 international differences. For instance, both Shibari and Kinbaku¹ are known Japanese
15 practices which have found their way into Western countries over the past decades (Ordean &
16 Pennington, 2019), with each country focusing on a different aspect of Kinbaku and thereby
17 creating different ways to perform Kinbaku (Doron, 2021). In contrast, while some Islamic
18 countries have a BDSM community, people outside of the BDSM community tend to mainly
19 focus on the aspects of violence and harmful behavior, and therefore recommend not
20 practicing BDSM activities (Saimima & Kelderak, 2023). Although few studies investigated
21 the impact of cultural, political and religious factors on BDSM, several researchers have
22 more generally focused on these influences on sexual orientation and expression. For
23 example, the Rainbow Europe ranking (ILGA-Europe, 2023) shows significant differences

¹ Both Shibari and Kinbaku are styles of Japanese rope bondage. While Kinbaku is used to refer to more restraining ties, Shibari refers to ties that do not by definition restrain. Additionally, Kinbaku is described as being sexual, and Shibari as being artistic (Fetlife, 2023).

1 between 49 European countries regarding the human rights situation of LGBTQIA+ people,
2 with, for example, Malta scoring 92.93% for respect of human rights and Turkey scoring only
3 4%, resulting in gross violations of human rights and high rates of discrimination of
4 LGBTQIA+ people. In a recent study, exploring homopositivity across Europe, Withworth
5 and Moretti (2023) found a widespread acceptance of homosexuality across Western
6 European and Scandinavian countries in contrast to Eastern European countries. Religiosity,
7 socioeconomic drivers (e.g., education, welfare regimes, and income), and basic human
8 values (such as Universalism) were deemed to be key factors in explaining homopositivity. In
9 this line, several other researchers have examined the possible influence of cultural, political,
10 and religious factors on sexual expression and sexual orientation across several nations
11 (Adamczyk & Pitt, 2009; Raham et al., 2019; Tskhay & Rule, 2015; see also Absalon, 2016;
12 Bradshaw et al., 2022). Some, yet not all, found evidence for the existence of such influence.
13 Adamczyk and Pitt (2009), for instance, found that the cultural orientation of a country
14 moderated the relationship between religious importance and attitudes towards
15 homosexuality. Studies focusing on stigma towards homosexuality and the LGBTQIA+
16 community found differences in intracontinental regions (Pachankis et al., 2017), with some
17 countries even having legislation targeting non-traditional forms of sexuality (Pachankis et
18 al., 2015). Although it does not necessarily mean that countries showing higher rates of anti-
19 LGBTQIA+ legislation and/or attitudes also uphold the same attitudes towards BDSM
20 practices, it seems likely that this might be the case for some nations.

21 Given the aforementioned, we explored these international differences in the nature of
22 BDSM interests. Specifically, we compared the differences in nationality and culture on (a)
23 prevalence and age of onset of BDSM-related interests, (b) the nature of BDSM fantasies and
24 practices, and (c) the context of BDSM interactions in people who self-identified as a BDSM
25 practitioner in an international survey of the FetLife community (i.e., the largest online social

1 platform for BDSM, fetish and kink). The current study and the comparison across
2 continents, however, was primarily exploratory and not grounded in a specific theoretical
3 rationale. The results of this study could provide insights into the world of BDSM and could
4 serve as a stepping stone for future research.

5

6 **Method**

7 **Participants**

8 A cross-sectional international Anglophone online survey was created with Qualtrics
9 and distributed on FetLife between February and March 2022. Due to limited resources, the
10 survey was solely distributed in English. A standardized invitation was posted containing
11 information on the general focus of the survey (i.e. the exploration of differences in
12 nationality and culture in the nature of BDSM fantasies and interests) as well as the time
13 needed for full survey completion (15-20 minutes). Only individuals aged 18 years or older,
14 and who self-identified as a BDSM practitioner were included in the current study.

15 **Measures and procedure**

16 BDSM was defined by its acronym (bondage & discipline, dominance & submission,
17 sadism & masochism) in the survey. No further definitions of BDSM were provided, as the
18 survey only included BDSM-practitioners on FetLife.

19 ***Demographic information***

20 Participants who had provided informed consent were presented with a series of
21 questions concerning demographics (age, gender, education, and living environment) (for all
22 response options, please see Table 1)..

23 ***BDSM identity and activities***

24 Participants had to indicate with which BDSM roles they identified. The list of
25 subtypes was subsequently recoded into three main categories: 1) D-type (including

1 dominant, rigger, top, sadist, predator or any combination) 2) s-type (including submissive,
2 rope bunny, bottom, masochist, prey or any combination) and 3) switch (i.e., actively self-
3 identifying as a switch or as a combination of D-type and s-type roles). In addition, a series of
4 yes/no questions examining whether participants had practiced BDSM in specific contexts
5 (private, public and virtual context) were presented. Thereafter, participants were asked if
6 they had attended a munch (i.e., a social gathering for people interested in BDSM), BDSM
7 club, BDSM conference, BDSM-oriented swinger events, private BDSM parties, fetish
8 events and if they ever visited a professional Dom(me).

9 ***BDSM-Q-II***

10 The 64-item BDSM-Q-II (see supplementary Table 1), an adapted version of the
11 ‘BDSM Questionnaire’ (Holvoet et al., 2017), was presented, gauging fantasy (F) and activity
12 (A) levels in each of 64 BDSM-related activities. The original BDSM Questionnaire
13 consisted of only 52 items. Several items were added to the original questionnaire in order to
14 query both D-type and s-type variants of BDSM-related activities. Further, the items were
15 originally scored on a 9-point Likert scale, ranging from “I would never do this” to “This is
16 indispensable to me”. In the BDSM-Q-II, on an item-level, participants had to indicate their
17 level of interest in terms of fantasizing (“I have never fantasized about this”, “I fantasize
18 about this occasionally” or “I fantasize about this frequently”) and actually performing the
19 activity (“I have never done this”, “I have done this occasionally” or “I have done this
20 frequently”). The BDSM-Q-II ($\alpha = .795$) generates a fantasy-subscore and an activity-
21 subscore in 8 subdomains: Bondage (6 items; A-items, $\alpha = .667$; F-items, $\alpha = .674$),
22 Discipline (6 items; A-items, $\alpha = .354$; F-items, $\alpha = .478$), Dominance (12 items; A-items, α
23 = $.914$; F-items, $\alpha = .920$), Submission (12 items; A-items, $\alpha = .881$; F-items, $\alpha = .895$),
24 Sadism (11 items; A-items, $\alpha = .914$; F-items, $\alpha = .912$), masochism (11 items; A-items, $\alpha =$
25 $.895$; F-items, $\alpha = .888$), Voyeurism (3 items; A-items, $\alpha = .820$; F-items, $\alpha = .731$),

1 Exhibitionism (3 items; A-items, $\alpha = .744$; F-items, $\alpha = .716$). Cronbach's Alpha scores of α
2 $\geq .700$ are considered acceptable to good, whereas scores of $\alpha \leq .600$ are considered low and
3 unacceptable. According to these guidelines, the reliability of the Discipline subscale was
4 very low, which implies caution in interpreting this specific subscale. Each of these subscores
5 was calculated by the summation of the individual item scores. It should be noted that the
6 aforementioned subdomains do not refer to the respective DSM-5 diagnoses but rather to
7 nonpathological manifestations of these BDSM interests.

8 ***Compliance with Ethical Standards***

9 The current study was approved by the ethical committee of the University (Hospital)
10 of Antwerp, the Ethical Committee of the Northern Illinois University, and from caretakers at
11 FetLife.

12 **Data analysis**

13 Only data of participants who completed at least 70% of the entire survey were used
14 in data analyses. In total, 389 participants did not complete the entire survey.

15 Groups were defined based on nationality. Primary analyses compared continents
16 (North America, Europe, Oceania), with follow-up analyses comparing within-continent
17 regions for North America (USA, Canada) and Europe (Central Europe, Eastern Europe,
18 Southern Europe, Northern Europe, UK) (see supplementary Table 2).

19 Evaluation of nominal data was done using crosstabulation Chi Square tests (χ^2);
20 continuous data were evaluated with ANOVA tests. None of the BDSM-Q-II subscores were
21 normally distributed, as evidenced by Kolmogorov-Smirnov tests that were highly significant
22 on each of the scales. Moreover, visual inspection of data distribution demonstrated skewness
23 of the data in most of the subscales. ANOVA analyses are not indicated for non-normally
24 distributed data, especially when group sizes are not equal (Field, 2018). Because of
25 significant differences between the demographic data, Quade's nonparametric ANCOVA

1 analyses were used to perform follow-up group comparisons for non-normally distributed
2 data, a method that allows controlling for covariates. False Discovery Rate (FDR),
3 Benjamini-Hochberg method was used to correct for multiple testing in all analyses.

4 In all analyses, the three continents (North America, Europe, Oceania) were
5 compared, with follow up analyses comparing the regions per continent, for North America
6 (USA, Canada) and Europe (Central Europe, East Europe, South Europe, North Europe, UK;
7 see supplementary Table 1) to investigate the presence of interregional differences within
8 continents.

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Results

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Table 1 presents the demographic variables of the three included continents.
Significant differences were present for age, gender, education and living environment.

Intercontinental Age of Onset of BDSM Fantasy and Practice

1 Out of 1,112 North American, European and Oceanian respondents, 1,065 (95.8%)
2 indicated they actively engaged in BDSM related practices. No significant differences were
3 found between the three continents ($\chi^2 = .782; p = .676$) nor between intracontinental regions
4 within each continent (North America: $\chi^2 = .343, p = .558$; Europe: $\chi^2 = 7.971; p = .093$).
5 Thus, the percentage of respondents who reported putting their BDSM interest into practice
6 was not significantly influenced by geographical location.

7 Overall, 265 participants (23.9%) self-identified as D-type, 370 (33.4%) as s-type, and
8 473 (42.7%) as switch, with no indications of intercontinental ($\chi^2 = 7.825, p = .098$) or
9 intracontinental regional (North America: $\chi^2 = 1.039, p = .595$; Europe: $\chi^2 = 11.124, p = .195$)
10 differences.

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12 -- INSERT FIGURE 1 ABOUT HERE --

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14 When comparing age of first BDSM related fantasies over the three continents
15 (overall $\chi^2 = 40.676, p = .004$; see Figure 1), significant differences emerged, with Europeans
16 reporting that they started fantasizing about BDSM at an earlier age than North Americans
17 (pairwise difference Europe vs. North America $\chi^2 = 29.818, p < .001$). Quade's
18 nonparametric ANCOVA covariate control analyses for age, gender, education and living
19 environment did not confirm this difference in Fantasy Age between the three continents as
20 significant ($F = 2.473, p = .085$). Moreover, a younger age of onset in Europe vs. North
21 America was not significant (Quade's ANCOVA covariate analysis $t = 1.936; p = .053$),
22 showing these intercontinental differences could likely be explained by these potential
23 covariates. No intracontinental regional differences were found for either North America ($F =$
24 $.068, p = .794$) or Europe ($F = .621; p = .647$) when controlling for the same covariates.

1 Although intercontinental discrepancies were evident in the age of first BDSM-related
2 fantasies, ages of first translation of these fantasies into actual practices did not differ
3 significantly over the investigated continents (overall $\chi^2 = 21.063$, $p = .393$; $F = 1.548$, $p =$
4 $.213$ after integrated covariate analysis). However, follow-up analyses did reveal
5 dissimilarities within Europe after controlling for covariates ($F = 2.991$; $p = .018$), which
6 could be explained by younger age at first practice in UK participants (54.1% at age 18 or
7 younger) compared to Central Europe (34.2% at age 18 or younger; $t = 2.716$, $p = .007$),
8 Eastern Europe (32.5% at age 18 or younger; $t = 3.137$, $p = .002$) and Southern Europe
9 (25.6% at age 18 or younger; $t = .2741$, $p = .006$); all pairwise differences remained after
10 FDR correction. No such intracontinental differences were demonstrable for North America.

11

12 -- INSERT FIGURE 2 ABOUT HERE --

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14 **Regional Comparison of BDSM Practice Context and Location**

15 Participants had to indicate the context and location of their BDSM activities. No
16 intercontinental differences were found in the percentage of private ($\chi^2 = .976$, $p = .614$) or
17 virtual practice ($\chi^2 = .516$, $p = .773$), with 98% of North Americans, 97% of Europeans, and
18 96% of Oceanians indicating they practiced BDSM in private (see Figure 2). Virtual practice
19 was reported most by Oceanians (74%), followed by Europeans (72%), and North Americans
20 (70%). Continents did significantly differ concerning play in public ($\chi^2 = 14.250$, $p < .001$, V
21 $= .115$, 95% CI [.064, .178]) as 79% of North Americans indicated performing BDSM in a
22 social context ($n = 360$) compared to only 69% and 65% in Europe and Oceania, respectively.
23 Follow up regional comparisons further demonstrated USA practitioners to be more publicly
24 active than Canadians ($\chi^2 = 4.380$, $p = .036$, $V = .098$, 95% CI [.008, .201]); however, after
25 controlling for demographic covariates this finding did not prove to be significant ($F = 3.644$,

1 $p = .057$). Similarly, public practice preferences in Europe significantly varied between
2 regions (overall $\chi^2 = 30.137, p < .001, V = .231, 95\% \text{ CI } [.161, .323]$); including covariate
3 analyses for demographic variables: $F = 6.611; p < .001$). Specifically, public play is
4 practiced more in Central Europe (75.4%) than in Eastern (53.3%; $t = -2.650, p = .008$) and
5 Southern Europe (42.9%; $t = -4.535; p < .001$), and more public activity was documented in
6 Northern Europe (74.3%) vs. Southern Europe (42.9%; $t = 3.143; p = .002$) and the UK
7 (62.3%; $t = 2.326; p = .020$). Other interregional comparisons in Europe did not reveal
8 significant differences.

9 To further explore geographical divergence in public BDSM activities, attendance at
10 various BDSM-related events was examined. Significant intercontinental differences were
11 found for the percentage of individuals having visited a munch, a BDSM club or conference,
12 a private BDSM party or a fetish event at least once in the past (see Table 2), with North
13 Americans participating significantly more in such activities (with similar participation rates
14 for both the USA and Canada). Within Europe, interregional differences were equally found,
15 for visits to a munch ($\chi^2 = 11.985; p = .017$), a BDSM club ($\chi^2 = 30.822, p < .001$), a BDSM
16 conference ($\chi^2 = 21.897, p < .001$) a BDSM-oriented swingers event ($\chi^2 = 16.099, p = .003$), a
17 professional Dom(me) ($\chi^2 = 13.091; p = .011$) and a private BDSM party ($\chi^2 = 10.727, p =$
18 $.030$). All comparisons remained significant after FDR Benjamini-Hochberg corrections and
19 after controlling for age, gender, education and living environment.

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23 Specifically, Central Europeans more often visited a BDSM club than Eastern ($t =$
24 $4.029, p < .001$) and Southern Europeans ($t = 3.053, p = .002$) and more frequently attended
25 BDSM conferences ($t = 3.761, p < .001$) and BDSM swingers events ($t = 3.228, p < .001$)

1 than did Eastern Europeans. UK participants frequented a professional Dom(me) (26%) more
2 than their peers from Central Europe (13%; $t = -2.584, p = .010$), South Europe (5%; $t = -$
3 $3.114, p = .002$) and North Europe (6%; $t = -2.834, p = .005$).

4

5 **Characteristics of BDSM Interests in Fantasy and Practices**

6 All participants completed the BDSM-Q-II, generating a fantasy-score and an
7 activity-score for each of 8 BDSM subdomains (see Table 3). Significant intercontinental
8 dissimilarities were found for fantasy and activity in the Discipline-subscores, as well as for
9 the activity score in Exhibitionism, systematically explained by higher scores in North
10 America compared to Europe. These differences could not be accounted for by any of the
11 demographic variables and each remained after FDR correction. To investigate whether
12 higher rates of exhibitionism were associated with the higher prevalence of public BDSM
13 practices in North America, post-hoc Quade's ANCOVA analyses were performed
14 additionally controlling for practice in public, but significance was maintained for all
15 findings. There were no significant differences between the USA and Canada in any of the
16 subscales.

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20 When comparing European regions on the BDSM-Q-II subscales, significant
21 differences emerged for Bondage-activity, Voyeurism-activity and Exhibitionism-activity
22 (see Table 4). Pairwise comparisons revealed these differences to result from higher activity
23 scores in Central Europe participants.

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Discussion

This is the first large-scale international survey gauging worldwide variation in BDSM interests and activities within the online BDSM community. We inquired about general BDSM interest, but also about the nature and context of BDSM experiences as well as intensity of BDSM fantasies. Ninety-six percent of the 1,112 respondents actively practice(d) BDSM, with the sole international dissimilarity being a younger age of first BDSM-related interest described by Europeans compared to North Americans. North Americans tend to be more outgoing than Europeans or Oceanians regarding their BDSM activities, as they visited munches and BDSM-themed events more frequently (79% vs. 69% and 65%, respectively). Within Europe, more public activities were reported in the central and northern countries compared to other parts of the continent. Lastly, North Americans scored higher than Europeans on both fantasy and activity subscales for Discipline and Exhibitionism while within Europe, activity scores for Bondage, Voyeurism and Exhibitionism were higher in countries of Central Europe compared to other parts of Europe.

These discrepant observations on inter- and intracontinental levels might be caused by both disparate cultural backgrounds and ruling stigmas towards non-traditional sexual interests. Little research has investigated the cultural aspects surrounding sexual minorities in large-scale intercontinental studies. However, when looking at research on stigma in European countries, cultural stigma towards sexual minorities of the LGBTQIA+ community is less prevalent in Central and Northern European countries than in Eastern and Southern European countries (Pachankis et al., 2017). Stigma towards BDSM seems to be higher than stigma towards the LGBTQIA+ community (Hansen-Brown & Jefferson, 2022), and in some countries, national policies and legislation are aimed against non-traditional forms of sexuality (Pachankis et al., 2015). The resulting marginalization of this type of sexual

1 behavior (Coppens et al., 2020) may stimulate people to experience their sexuality behind
2 closed doors and may drive the limited availability and accessibility of public BDSM-themed
3 clubs and events (“SM International”, 2006). This could underlie the lower prevalence of
4 public BDSM activity found in our Eastern and Southern European BDSM community
5 samples. Professional or commercial BDSM workers (i.e., BDSM practitioners who provide
6 BDSM services to paying customers) suffer from even more stigma, also from within the
7 BDSM community (Lindemann, 2013). This stigma was potentially reflected in the current
8 study in very diverging prevalence rates between regions in visits to professional Dom(me)s.
9 The highest rates were reported in the UK (26% of the participants), versus 13% in Central
10 Europe and 11% in North America and 5% in South Europe and 6% in Northern Europe.
11 Another hypothesis for the difference between the UK and other regions on visiting
12 professional Dom(me)s could be that, since clients of professional Dom(me)s tend to be
13 wealthy men, often in positions of power, there are differences in disposable income and
14 general wealth between these countries (Zucman, 2019). Future research should map
15 international differences in BDSM-related stigma, disposable income and wealth to confirm
16 these notions.

17 Overall, these data indicate that North Americans tend to practice their BDSM-related
18 activities more in public settings (i.e., BDSM clubs, munches, etc.) than other continental
19 regions. This might be a consequence of the sexual conservatism in the US, as evidenced by
20 less acceptance of premarital sex and sexual minority orientations than in some European
21 cultures (Bahr & Marcos, 2003). It is possible that the North American participants of the
22 current study preferred to practice their BDSM interests in places where they could meet like-
23 minded people, without having to face stigmatizing or discriminatory reactions, because of
24 the taboo. It might even be considered that the stigma which they face motivates a sense of
25 community building. The current finding that Europeans tended to start fantasizing about

1 BDSM at an earlier age than North Americans may indeed result from this sexuality-related
2 taboo discrepancies. Intuitively, the great disparity in the degree of religiosity (77% US
3 citizens vs. only 51% of Europeans) self-labeling as religious (Public Religion Research
4 Institute, 2020; TNS Opinion & Social, 2010) could lay at the base of the marked differences
5 between North America and Europe regarding sexual beliefs and attitudes in the general
6 population. Indeed, higher degrees of religiosity have been associated with sexual prejudice
7 and negative attitudes towards sexual minorities (Bills & Hayes, 2020; Herek & McLemore,
8 2013). In addition, sex education in the United States tends to mainly focus, in many places,
9 on “abstinence-only education”, while sex education in Europe tends to be more liberal
10 (Weiss, 2018).

11

12 When investigating the nature of fantasies and activities by use of a self-developed
13 BDSM rating scale (adapted version of Holvoet et al., 2017), North Americans displayed
14 higher rates of disciplinary dynamics (kneeling before your partner, use of rules and titles to
15 address your partner), as well as higher levels of exhibitionism regarding their BDSM
16 interactions. However, some caution is advised in interpreting these findings, given the low
17 value of the Cronbach’s alpha for the Discipline subscale. Nonetheless, more interest and
18 focus on discipline may again be associated with cultural aspects, including aforementioned
19 differences in religion or a stronger focus on authority in the US, as evidenced by higher
20 national investments in military and police forces and research demonstrating Americans to
21 score higher on top-down vs. consensual decision making in corporate management than
22 Western European countries (Meyer, 2017). It is attractive to hypothesize that the higher rates
23 of exhibitionism are associated with the higher prevalence of public BDSM practices in
24 North America, but the differences in exhibitionism remained significant after controlling for
25 public practice scores. The data thus appear to fall in line with a global personality survey

1 mapping the personality of more than 40 million people worldwide that generally found
2 Northern Americans to be rather extraverted, while many European countries fell on the
3 introverted spectrum (Irving, 2018). Of note, an early study associated non-BDSM related
4 sexual exhibitionism specifically with industrialized Western culture as exhibitionism was
5 hardly observed (or reported) in African and Asian countries (Rooth, 1973).

6 Within the total international BDSM community, less than a quarter of participants
7 self-identified as a D-type, one out of three self-identified as an s-type, while the majority of
8 the participants (43%) saw themselves as switch. This falls in line with data from other,
9 regional BDSM community samples (Botta et al., 2019; Coppens et al., 2020). No inter- or
10 intracontinental differences were found, suggesting a comparable role identity distribution
11 worldwide. This is not surprising, as the collected sample was more homogeneous than
12 would be expected at first glance since many participants were recruited via the same website
13 (www.fetlife.com). Although FetLife is the largest social network for BDSM worldwide, it is
14 unlikely to contain a representative sample of BDSM practitioners. Moreover, most BDSM
15 studies found practitioners to typically be White and well-educated (A. Brown et al., 2020; S.
16 L. Brown et al., 2017; Pascoal et al., 2015), which may result in homogeneous populations
17 being included over different studies, in turn resulting in comparable BDSM role identity
18 distributions. Findings suggesting BDSM to be a White phenomenon tend to be due to
19 recruiting methods, rather than a true phenomenon (Sheff & Hammers, 2011), with evidence
20 emerging about kinky Black, Indigenous, People of Color (Cruz, 2016; Erickson et al., 2022;
21 Martinez, 2021).

22 **Strengths and Limitations**

23 There are some limitations that may affect the general interpretability of the current
24 study. First, as described above, the funnel recruitment via FetLife may have introduced an
25 important selection bias as the representativeness of the sample of BDSM practitioners on the

1 social network platform is questionable. Moreover, participants were recruited within the
2 BDSM community and not in the general population. Higher levels of social BDSM-related
3 activity within an enclosed community would thus not necessarily reflect more openness and
4 higher levels of acceptance in the general population. Survey language further contributed to
5 this selection bias, as the questionnaire was only distributed in English, which is not
6 commonly spoken in many parts of the world. It is possible that people are less inclined to
7 participate in an English survey when English is not their native language, because they
8 might fear not fully understanding the specific concepts studied in the survey. In addition,
9 defining these activities as ‘BDSM’ may also have introduced a bias, given that in some parts
10 of the world certain activities will use a different framework despite implementing activities
11 that would fall under this category, e.g., Shibari or Kinbaku (i.e., rope play or bondage).
12 Furthermore, inclusion in the study inevitably required internet access, which is not readily
13 available in certain parts of the world. While being the largest international survey to date,
14 Asian, South American and African countries were unfortunately not represented in the
15 current study, which might be due to the previously mentioned biasing factors. As such, this
16 study should mainly be seen as a comparison between North America, Europe and Oceania
17 (i.e., Western English speaking regions and countries), rather than an international survey
18 including all countries and cultures. In addition, several countries were clustered in
19 intracontinental regions to render statistical analyses feasible, unfortunately resulting in rather
20 small sample sizes. This may have influenced the interpretability of the results, as cultural
21 dissimilarities may still be present between those countries in the same cluster. Finally,
22 although overall reliability analyses of the BDSM-Q-II subscales resulted in acceptable to
23 very good Cronbach’s alpha’s, a low score was found in the Discipline subscale, thus limiting
24 the interpretation of significant results found concerning this specific subscale. Future studies
25 should dissect these differences and explore the different cultural aspects contributing to

1 interregional differences in BDSM interest (including traditions and views on relationships,
2 openness about and stigma towards non-normative forms of sexuality, religion, regional
3 availability of BDSM-themed events and locations, representation of BDSM in media).

4 **Conclusion**

5 To conclude, this is the first international large scale study to investigate BDSM
6 interests and activities worldwide in a sample of BDSM practitioners. Whereas no inter- or
7 intracontinental differences emerged in the proportion of respondents who put their BDSM
8 interests into practice (~95%) within North America, Europe and Oceania, North Americans
9 appear to experience their interactions more in public than Europeans (mainly driven by
10 lower social activities in Eastern and Southern European countries). In addition, more North
11 Americans leaned toward disciplinary dynamics and exhibitionism than Europeans and
12 Oceanians. Although interest in BDSM is reported earlier in Europeans, the age of first
13 practice does not differ between continents. Future research should focus on clarifying
14 whether cultural mechanisms underlie these geographical and social dissimilarities. Crucially,
15 more research is needed focusing on BDSM interests and practices in non-Western cultures
16 and Asian, African, and South and Central American regions.

17

18 **Disclosure Statement**

19 No potential conflict of interest was reported by the author(s).

20

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TABLES AND FIGURES

Table 1: Demographic characteristics of the 3 continent groups.

Table 2: Prevalence rates of visiting BDSM-themed events.

Table 3: Continental and intercontinental differences in fantasy- and activity-score for each of eight BDSM subdomains.

Table 4: Differences in fantasy- and activity-score for each of eight BDSM subdomains for each European region.

Figure 1: Age of onset of BDSM-related fantasies in North America, Europe, and Oceania.

Figure 2: Percentage of participants indicating active practice in different continents.

