

## **Narcissism and the Strategic Pursuit of Short-Term Mating: Universal Links across 11 World Regions of the International Sexuality Description Project-2**

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Data collection representing Costa Rica was from the University of Costa Rica and was  
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## Abstract

Previous studies have documented links between sub-clinical narcissism and the active pursuit of short-term mating strategies (e.g., unrestricted sociosexuality, marital infidelity, mate poaching). Nearly all of these investigations have relied solely on samples from Western cultures. In the current study, responses from a cross-cultural survey of 30,470 people across 53 nations spanning 11 world regions (North America, Central/South America, Northern Europe, Western Europe, Eastern Europe, Southern Europe, Middle East, Africa, Oceania, Southeast Asia, and East Asia) were used to evaluate whether narcissism (as measured by the Narcissistic Personality Inventory; NPI) was universally associated with short-term mating. Results revealed narcissism scores (including two broad factors and seven traditional facets as measured by the NPI) were functionally equivalent across cultures, reliably associating with key sexual outcomes (e.g., more active pursuit of short-term mating, intimate partner violence, and sexual aggression) and sex-related personality traits (e.g., higher extraversion and openness to experience). Whereas some features of personality (e.g., subjective well-being) were universally associated with socially adaptive facets of Narcissism (e.g., self-sufficiency), most indicators of short-term mating (e.g., unrestricted sociosexuality and marital infidelity) were universally associated with the socially maladaptive facets of narcissism (e.g., exploitativeness). Discussion addresses limitations of these cross-culturally universal findings and presents suggestions for future research into revealing the precise psychological features of narcissism that facilitate the strategic pursuit of short-term mating.

**Keywords:** Narcissism, sexuality, personality, cross-cultural psychology

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The psychological needs and motivations underlying narcissism have been of great interest to personality psychologists at least since the 1970s (Lasch, 1979; Raskin & Hall, 1979). Although differences exist between conceptions of narcissism as a "normal" personality trait and narcissism as a diagnosis of personality disorder, most scholarly portraits of narcissism share a common psychological core (Cain, Pincus, & Ansell, 2008; Emmons, 1987; Foster & Campbell, 2007; Miller & Campbell, 2010; Miller, Lynam, & Campbell, 2016; Raskin & Terry, 1988). For instance, more narcissistic individuals are usually assumed to have a strong sense of self-importance, entitlement, and arrogance (e.g., they often feel they are "special" or even unique; Campbell, Rudich, & Sedikides, 2002; Kohut, 1966; Rhodewalt & Morf, 1995). Narcissists have an above-average need for admiration, feel simultaneously superior to and envious of others, and tend to overreact when

criticized (Bushman & Baumeister, 1998; Thomaes, Brummelman, Reijntjes, & Bushman, 2013). Narcissists feel a compulsion to be the center of attention, tend to be interpersonally exploitative, and lack empathy toward others (Buss & Chiodo, 1991; Hepper, Hart, & Sedikides, 2014; Schimmenti et al., 2017; Watson, Grisham, Trotter, & Biderman, 1984). Finally, narcissists tend to possess unrealistic fantasies concerning high-level achievements of power, beauty, intelligence, and romance (Campbell & Foster, 2007; Emmons, 1989; Lee et al., 2013).

There is some evidence the narcissistic inclination toward having unrealistic fantasies about success in the romantic domain serves as a motivational impetus for seeking larger numbers of sexual partners (Egan & McCorkindale, 2007; Foster, Shrira, & Campbell, 2006; Jonason, Li, Webster, & Schmitt, 2009). Empirically, narcissists have been found to exhibit a relatively unrestricted sociosexual orientation (i.e., are more favorable toward having sex without commitment; Foster et al., 2006), are less committed to and interested in staying within existing long-term relationships (Campbell & Foster, 2002; Jonason & Buss, 2012), frequently flirt with others who are not their current romantic partners (Campbell, Foster, & Finkel, 2002; Tortoriello, Hart, Richardson, & Tullett, 2017), and engage in relatively high rates of relationship infidelity (Adams, Luevano, & Jonason, 2014; Hunyady, Josephs, & Jost, 2008; Jones & Weiser, 2014; McNulty & Widman, 2014). Jonason et al. (2009) have argued several key features of narcissism—especially feelings of entitlement, comfort with interpersonal exploitation, and agentic motives for sexual success—enable narcissistic individuals to more actively and effectively pursue short-term reproductive strategies (see also Baughman, Jonason, Veselka, & Vernon, 2014; Holtzman & Strube, 2011; Jonason, Girgis, & Milne-Home, 2017; McDonald, Donnellan, & Navarrete, 2012).

Even so, much of the extant evidence on narcissism's links with short-term mating has been generated from studies of Western cultures or WEIRD<sup>1</sup> samples (Henrich, Heine, & Norenzayan, 2010). This is unfortunate, as previous studies have found narcissism and its links to sexual outcomes (e.g., mate choices; Feng, Liang, Zhou, & Yi, 2012; Tanchotsrinon, Maneesri, & Campbell, 2007), as well as more general self-enhancement processes (Kitayama, Takagi, & Matsumoto, 1995; Tatara, 1993), may function differently when assessed in non-Western cultures. If narcissism were not reliably associated with short-term mating strategies in non-Western cultures, this would indicate narcissism does not have *functional equivalence* across cultures (Hui & Triandis, 1985; van de Vijver & Leung, 2001). Such a finding would call into question the view that key psychological features of narcissism serve as evolved mechanisms facilitating the functional pursuit of short-term reproductive strategies (Holtzman & Strube, 2011; Jonason et al., 2009), or could identify important cultural boundary conditions that facultatively-mediate or emergently-moderate the adaptive links between narcissism and short-term mating (Schmitt, 2015). In this article, we address these issues by evaluating links between narcissism and multiple indicators of short-term mating psychology as assessed across dozens

of Western and non-Western cultures from the International Sexuality Description Project-2 (ISDP-2; Schmitt et al., 2017).

### *The Measurement of Narcissism*

The most common measure of narcissism as a personality trait is the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979; Raskin & Terry, 1988). The NPI was intended to measure the clinical criteria for features of narcissistic personality disorder as expressed in a general population (Morf & Rhodewalt, 2001). The NPI, therefore, was purposefully designed to be a measure of "sub-clinical" or personality trait-level narcissism (Raskin & Terry, 1988).

The underlying structure of the NPI has been subject to intense debate for decades (Ackerman et al., 2011; Ackerman, Donnellan, & Robins, 2012; Brown, Budzek, & Tamborski, 2009; Corry, Merritt, Mrug, & Pamp, 2008; Emmons, 1984; Kubarych, Deary, & Austin, 2004; Miller & Campbell, 2011). Originally, Raskin and Terry (1988) argued narcissism is best conceived (and measured) as the overall confluence of multiple facets, seven of which are key individual differences designed to be captured by the NPI as facet subscales. These seven facets include: *Authority* (e.g., "I see myself as a good leader"), *Self-Sufficiency* (e.g., "I like to take responsibility for making decisions"), *Superiority* (e.g., "I think I am a special person"), *Exhibitionism* (e.g., "I get upset when people don't notice how I look when I go out in public"), *Entitlement* (e.g., "I insist on getting the respect that is due me"), *Exploitativeness* (e.g., "I find it easy to manipulate people"), and *Vanity* (e.g., "I like to look at myself in the mirror").

Many investigators have argued the NPI, and narcissism more generally, is best viewed as containing two basic dimensions (e.g., Corry et al., 2008): One socially adaptive dimension linked to positive qualities and outcomes (e.g., confidence and effective leadership) and one more socially maladaptive dimension linked to psychological and interpersonal maladjustment (e.g., negative emotionality and relationship dysfunction). For instance, NPI items from Authority and Self-Sufficiency facet subscales have been considered the more socially adaptive forms of narcissism as these appear to enhance self-confidence, assertiveness, and persistence (Ackerman et al., 2011; Barry, Frick, Adler, & Grafeman, 2007; Corry et al., 2008; Raskin & Terry, 1988). In contrast, the facet subscales of Exploitativeness, Entitlement, and Exhibitionism are considered the more socially maladaptive forms of narcissism as these are usually linked with psychological maladjustment, poor academic outcomes, and social dysfunction (Ackerman et al., 2011; Corry et al., 2008; Raskin & Terry, 1988). Corry et al. (2008) found these two major dimensions form a relatively reliable factor structure in the NPI, labelling the scales *Leadership/Authority* (i.e., the socially adaptive factor) and *Exhibitionism/Entitlement* (i.e., the socially maladaptive factor).

Others have argued the best fitting factor structure of the NPI contains three or four fundamental dimensions (Ackerman et al., 2011, 2012; Emmons, 1984; Kubarych et al., 2004). In early work, Emmons (1984) argued the NPI produces a reliable four factor structure of *Leadership/Authority* (again, the more adaptive component), *Self-Admiration/Self-Absorption*, *Superiority/Arrogance*, and *Exploitativeness/Entitlement*. Often, the precise number of dimensions claimed often depends on the criteria used for evaluating factor structures. For instance, Ackerman et al. (2011) relied less on emphasizing the internal consistency of scales than did Corry et al. (2008) or Emmons (1984) and found a robust three-factor structure best underlies NPI responses, with subscales of *Leadership/Authority* (the more adaptive aspect of Narcissism), *Grandiose Exhibitionism*, and *Entitlement/Exploitativeness*.

Ultimately, most cross-cultural researchers who use the NPI do so with the intention of assessing narcissism as an overall psychological trait (Foster, Campbell, & Twenge, 2003; Miller et al., 2015). However, in a large cross-cultural study of 53 nations, Schmitt et al. (2017) found the 7-factor structure of Raskin and Terry (1998) provided the best factor structure fit in most individual nations. In this study, the overall NPI score, the two-factor approach of Corry et al. (2008), and the seven-facet approach originally proposed by Raskin and Terry (1998) were used to evaluate the links among narcissism, personality, and sexuality across 11 major regions of the world: North America, Central/South America, Northern Europe, Western Europe, Eastern Europe, Southern Europe, Middle East, Africa, Oceania, Southeast Asia, and East Asia.

### *The Personality Correlates of Narcissism*

Cross-cultural researchers have documented that Big Five personality traits (i.e., extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience) are closely linked to short-term mating (Schmitt & Shackelford, 2008). Within Western cultures, several studies have found links between narcissism and these sex-related personality traits. For instance, narcissists typically display relatively high levels of extraversion, conscientiousness, and openness to experience while displaying relatively low levels of agreeableness (and to some extent neuroticism; Barelds & Dijkstra, 2010; Bradlee & Emmons, 1992; Campbell et al., 2002; Corbitt, 2002; Jacobowitz & Egan, 2006; Muris, Merckelbach, Otgaar, & Meijer, 2017; Paulhus & Williams, 2002). In this study, we expected these previously documented links between narcissism and personality, as measured using etically translated self-report measures (Berry, 1999; Cheung, van de Vijver, & Leong, 2011), would be universal across cultures.

*Hypothesis 1:* Based on the view that narcissism as measured by the NPI will possess *conceptual* or *construct equivalence* across cultures (Davidov, Meuleman, Cieciuch, Schmidt, & Billiet, 2014; Hui & Triandis, 1985; van de Vijver & Leung, 2001), we hypothesized that the NPI and its subscales will have similar associations

with self-esteem, Big Five personality traits, and subjective well-being across all world regions of the ISDP-2.

*Prediction 1a: Self-esteem.* Narcissism and self-esteem are not identical psychological constructs (Brown & Zeigler-Hill, 2004). For instance, Brummelman, Thomaes, and Sedikides (2016) found narcissism was higher among individuals whose parents had provided overvaluation (i.e., "I am superior to others") during childhood and who positioned the child to think of themselves as always hierarchically related to others. As a consequence, narcissists' sense of superiority is always precarious, as they need to continuously validate themselves against others and make sure they are still a "winner." In contrast, those with higher self-esteem have parents who provided parental warmth (i.e., "I am worthy"), and positioned the child to think of themselves horizontally in relation to others. Still, several studies have found narcissism is positively correlated and causally intertwined with general self-esteem in important ways (Bosson et al., 2008; Brown & Zeigler-Hill, 2004; Geukes et al., 2017; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004; Tracy, Cheng, Robins, & Trzesniewski, 2009), and that self-esteem functions in similar ways across Western and non-Western cultures (Schmitt & Allik, 2005; Sedikides, Gaertner, & Cai, 2015). Consequently, we predicted narcissism and self-esteem would be moderately and positively associated ( $r \approx +.25$  based on previous studies) across all world regions of the ISDP-2.

*Prediction 1b: Big Five.* Previous studies using Western samples have found higher scores on the NPI are associated with higher levels of extraversion, conscientiousness, and openness to experience and lower levels of agreeableness and neuroticism, with the neuroticism connections depending somewhat on the facet of narcissism (e.g., Narcissistic self-sufficiency being negatively associated with neuroticism but narcissistic entitlement being positively associated with neuroticism; Campbell et al., 2002; Corry et al., 2008; Jacobwitz & Egan, 2006; Kubarych et al., 2004; Muris et al., 2017; Paulhus & Williams, 2002). We predicted these associations would be universal across all world regions of the ISDP-2, with narcissism significantly correlating with extraversion ( $r \approx +.40$ ), conscientiousness ( $r \approx +.10$ ), openness to experience ( $r \approx +.25$ ), agreeableness ( $r \approx -.20$ ), and neuroticism ( $r \approx -.20$ ).

*Prediction 1c: Subjective well-being.* Previous studies have found narcissism is associated with subjective well-being (Egan, Chan, & Shorter, 2014; Hill & Roberts, 2012; Rose & Campbell, 2004; Sedikides et al., 2004; Zuckerman & O'Loughun, 2009). We predicted narcissism and subjective well-being would be positively associated ( $r \approx +.15$ ) across all world regions of the ISDP-2.

### *The Sexual Correlates of Narcissism*

Short-term mating can be defined as a sexual relationship of a relatively brief duration, such as a one-night stand or brief affair (Buss & Schmitt, 1993). Narcissism has been shown to positively correlate with multiple measures of short-term mating

(Brewer, Hunt, James, & Abell, 2015; Campbell & Foster, 2007; Egan & McCorkindale, 2007; Foster et al., 2006; Holtzman & Strube, 2011; Jones & Weiser, 2014; McNulty & Widman, 2014; Webster & Bryan, 2007; Wurst et al., 2017). For example, Jonason et al. (2009) found narcissism as measured by the NPI correlated positively with unrestricted sociosexuality,  $r(222)=+.41, p<.01$ , and active short-term mate seeking,  $r(222)=+.21, p<.01$ . Previous studies also have found narcissism is positively correlated with agentic sexuality, including sexual risk-taking (Emmons, 1981; Foster, Shenese, & Goff, 2009; Llewellyn, 2008) and multiple indicators of sexual aggression such as intimate partner violence and rape (Baumeister, Catanese, & Wallace, 2002; Bushman, Bonacci, Van Dijk, & Baumeister, 2003; Widman & McNulty, 2010). Often, it is the socially maladaptive entitlement components of narcissism that display the strongest associations with aggressive actions (Reidy, Zeichner, Foster, & Martinez, 2008). Indeed, Jonason et al. (2009) argue it is these specific features of narcissism - entitlement, exploitativeness, and agentic motives for sexual success - that enable narcissistic individuals to more actively and effectively pursue short-term reproductive strategies (see also Holtzman & Strube, 2011; Jonason et al., 2017).

*Hypothesis 2:* Based on the view that narcissism as measured by the NPI will have *functional equivalence* across cultures (Davidov et al., 2014; Hui & Triandis, 1985; van de Vijver & Leung, 2001), we hypothesized the NPI will have similar associations with sexual attitudes and behaviors of men and women across all world regions. Specifically, we expected narcissism would be positively associated with scales measuring short-term mating interests (*Prediction 2a*; Schmitt, 2005a;  $r\approx+.15$ ), short-term mate poaching behavior (*Prediction 2b*; Jonason, Li, & Buss, 2010; Kardum, Hudek-Knezevic, Schmitt, & Grundler, 2015; Schmitt et al., 2004;  $r\approx+.15$ ), unrestricted sociosexuality (*Prediction 2c*; Schmitt, 2005b; Simpson & Gangestad, 1991;  $r\approx+.20$ ), HIV risk-taking (*Prediction 2d*; Huba et al., 2000;  $r\approx+.15$ ), intimate partner violence perpetration (*Prediction 2e*; Dobash, Dobash, Cavanagh, & Lewis, 1998;  $r\approx+.15$ ), perpetration of sexual aggression (*Prediction 2f*; Bushman et al., 2003; Hines, 2007; Hurlbert & Apt, 1991; Jonason, 2015; Jonason et al., 2017; Mosher & Anderson, 1986;  $r\approx+.15$ ), and if married, with the tendency to have had an affair (*Prediction 2g*; Jones & Weiser, 2014; McNulty & Widman, 2014). Finally, we also expected (*Prediction 2h*) the observed narcissism-sexuality linkages across world regions of the ISDP-2 would be stronger among the more socially maladaptive scales compared to socially adaptive scales of narcissism as assessed by the NPI (Jonason et al., 2009).

## Method

### *Samples*

The findings reported in this article are a result of the International Sexuality Description Project-2 (ISDP-2), a collaborative research effort from 2004 to 2006 involving the administration of anonymous surveys to 30,470 participants (12,753 men and 17,717 women) from 53 nations<sup>2</sup> across 11 major regions of the world (see Table 1). The nations and regions in the ISDP-2 are not fully independent "cultures" because many ISDP-2 nations share systems of learned behaviors and symbols (Pollet, Tybur, Frankenhuys, & Rickard, 2014). Nonetheless, we considered it reasonable to investigate patterns and trends in the correlations between narcissism and sexual outcomes at the broad regional level. Doing so at the regional level provided us with enough statistical power to evaluate associations previously shown to exhibit even weak effect sizes ( $r \approx .15$ ). For instance, a sample size of 463 is needed for evaluating a Pearson product-moment correlation of .15 at  $\alpha = .05$  and  $\beta = 10\%$ . Because this is one of the first reports produced by the ISDP-2, we provide here details on our sampling and assessment procedures.

Table 1. *Sample Characteristics across 53 Nations and 11 World Regions of the ISDP-2*

Nation	Sample Size			Sampling Target	Age		Language
	Men	Women	Total		<i>M</i>	<i>SD</i>	
	<i>n</i>	<i>n</i>	<i>n</i>				
<i>North America</i>							
Canada	607	992	1,599	College Students	20.1	3.3	English
Mexico	58	110	168	College/Community	23.3	8.7	Spanish
United States	2,577	4,187	6,764	College Students	20.8	4.3	English
<i>Central/South America</i>							
Argentina	200	200	400	College Students	25.5	5.6	Spanish
Brazil	280	283	563	College Students	22.5	4.8	Portuguese
Chile	260	272	532	College Students	21.6	3.2	Spanish
Colombia	168	141	309	College Students	20.1	1.5	Spanish
Costa Rica	183	176	359	College Students	20.4	2.2	Spanish
Ecuador	123	107	230	College Students	20.6	2.7	Spanish
<i>Northern Europe</i>							
Denmark	112	411	523	College Students	23.7	4.2	Danish
Finland	276	175	451	College Students	25.6	6.7	Finnish
Iceland	169	344	513	College Students	22.2	3.3	Icelandic
Norway	45	78	123	College Students	22.8	2.4	Norwegian
<i>Western Europe</i>							
Austria	413	467	880	College/Community	31.4	10.9	German
Germany	908	1,517	2,425	Col./Com./Internet	25.0	7.9	German
Switzerland	59	195	254	College Students	25.0	7.0	German
United Kingdom	148	327	475	College Students	25.4	10.0	English

Nation	Sample Size			Sampling Target	Age		Language
	Men	Women	Total		<i>M</i>	<i>SD</i>	
	<i>n</i>	<i>n</i>	<i>n</i>				
<i>Eastern Europe</i>							
Croatia	190	210	400	College Students	21.0	2.1	Croatian
Czech Rep.	133	85	218	College Students	26.6	6.8	Czech
Estonia	118	134	252	College Students	20.8	3.1	Estonian
Hungary	154	25	179	College Students	21.3	3.6	Hungarian
Latvia	108	274	382	College Students	23.7	6.8	Latvian
Lithuania	187	200	387	College Students	20.7	3.4	Lithuanian
Poland	225	239	464	College Students	21.4	2.6	Polish
Romania	187	206	393	College Students	21.0	3.4	Romanian
Russia	126	113	239	College Students	20.2	1.7	Russian
Serbia	119	261	380	College Students	22.9	3.7	Serbian
Slovakia	385	391	776	College Students	21.6	2.8	Slovak
Slovenia	78	122	200	College Students	22.3	3.5	Slovenian
<i>Southern Europe</i>							
Cyprus	60	87	147	College Students	21.3	3.1	Greek
Greece	161	281	442	College/Community	29.5	10.6	Greek
Italy	308	416	724	College Students	22.8	5.0	Italian
Malta	38	101	139	College Students	20.9	4.6	English
Portugal	399	591	990	College Students	24.1	4.3	Portuguese
Spain	254	260	514	College Students	28.7	10.3	Spanish
<i>Middle East</i>							
Iran	88	94	182	College Students	21.6	2.6	Persian
Lebanon	108	220	328	College Students	19.6	1.8	English
Turkey	113	231	344	College Students	23.7	5.6	Turkish
<i>Africa</i>							
Ethiopia	184	138	322	College Students	26.2	5.7	English
Nigeria	141	149	290	College Students	24.3	4.5	English
South Africa	121	225	346	College Students	24.5	8.2	English
Swaziland	58	77	135	College Students	25.8	4.5	English
Tanzania	151	214	365	College Students	26.5	4.7	English
<i>Oceania</i>							
Australia	141	359	500	College Students	21.4	4.8	English
New Zealand	208	206	414	College Students	22.3	6.8	English
<i>Southeast Asia</i>							
India	200	125	325	College Students	24.2	4.4	English
Indonesia	373	341	714	College Students	20.0	1.9	Indonesian
Malaysia	163	198	361	College Students	22.6	2.0	Malay
Philippines	279	434	713	College Students	19.3	1.7	English <sup>6</sup>
<i>East Asia</i>							
China	89	104	193	College/Community	24.9	5.7	Mandarin
Japan	217	269	486	College Students	19.3	1.3	Japanese
South Korea	187	263	450	College Students	20.7	2.1	Korean
Taiwan	116	92	208	College Students	22.0	1.9	Mandarin
<i>Worldwide</i>	12,753	17,717	30,470	Col./Com./Internet	22.6	6.0	29 Languages

Note: Col./Com./Internet = Included College Students, Community Members, and an Internet Sample;

<sup>6</sup> = Some words were also presented in Cebuano.

Table 1 provides summary information for the nations and world regions of the ISDP-2. The number of men and women, the sampling methodology, average age, and language of survey administration are provided for each of 53 nations. The world region of "North America" included 8,531 participants across six samples from Canada ( $N=1,599$ ), 26 samples from the United States ( $N=6,764$ ), and one sample from Mexico ( $N=168$ ). All Canadian and United States participants were college students administered surveys in English, the Mexican sample contained both college students and community members administered the survey in Spanish. The world region of "Central/South America" included 2,393 participants across two samples from Chile and one sample each from Argentina, Brazil, Colombia, Costa Rica, and Ecuador. Brazilian participants were surveyed in Portuguese, all other Central/South American samples were administered surveys in Spanish.

European samples were divided into four world regions. In the original ISDP (Schmitt et al., 2003, 2004), only three European regions were sampled with Finland included in Western Europe. These European regions displayed conspicuous psychological differences in the original ISDP (Schmitt et al., 2003, 2004), and have been shown to possess distinct, clustered psychologies in other studies (Minkov & Hofstede, 2012). In the ISDP-2, new samples from across Scandinavia were added and a "Northern Europe" world region was utilized. The world region of "Northern Europe" included 1,610 participants across two samples from Iceland and one sample each from Denmark, Finland, and Norway. The world region of "Western Europe" included 4,034 participants across four samples from the United Kingdom, three samples each from Austria and Germany, and one sample from Switzerland. One of the samples from Germany was administered the ISDP-2 survey with an Internet assessment. The world region of "Eastern Europe" included 4,270 participants across two samples from Poland, Serbia, and Slovakia, and one sample each from Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Romania, Russia, and Slovenia. The sample from Hungary had relatively few women due to shipping problems and an organizational error by the first author. The world region of "Southern Europe" included 2,956 participants across two samples each from Greece, Italy, and Spain, and one sample each from Cyprus, Malta, and Portugal.

The world region of "Middle East" included 854 participants across one sample each from Iran, Lebanon, and Turkey. The placement of some of these nations into distinct "world regions" is problematic because there are many potential ways of dividing and sorting these nations. Given the number and geography of nations included in the ISDP-2, we chose these divisions in order to economize our presentation while maintaining the genuine regional variation (Minkov & Hofstede, 2012). For instance, the placement of Turkey in the "Middle East" region is problematic in that Turkey could have been placed into Southeastern Europe, a Mediterranean region, or a Southwestern Asia category. For comparative purposes using our present groupings, we placed Turkey in the Middle East world region.

The world region of "Africa" included 1,458 participants across one sample each from Ethiopia, Nigeria, South Africa, Swaziland, and Tanzania. The world region of "Oceania" included 914 participants across three samples from Australia and one sample from New Zealand. The world region of "Southeast Asia" included 2,113 participants across two samples from Indonesia and the Philippines and one sample each from India and Malaysia. The world region of "East Asia" included 1,337 participants across two samples from Japan and one sample each from China, South Korea, and Taiwan. Although Taiwan is often considered part of the nation of China, for statistical purposes these two cultures were kept separate when conducting regional correlations while controlling for nation. The mainland Chinese sample was secured across several research sites and included both college student and community members.

Overall, this collection of nations and world regions represents a diverse array of ethnic, geographic, and linguistic categories. Most samples were comprised of college students (indicated in Table 1 under the Sample Type column by "College Students" or "College"); some included general members of the community (indicated by "Community Sample" or "Community"); some were administered the ISDP-2 survey over the Internet. All samples were convenience samples. Most samples were recruited as volunteers, some received course credit for participation and others received a small monetary reward for their participation. All samples were administered an anonymous self-report survey, most surveys were returned via sealed envelope and/or the usage of a drop-box. Return rates for college student samples were high. Return rates for community samples were around 50%. Not all participants received the full ISDP-2 survey<sup>2</sup>, though most samples received the Narcissistic Personality Inventory examined in this article. Further details on the sampling and assessment procedures within each of the 53 nations are available from the authors.

### *Procedure*

All ISDP-2 collaborators were asked to administer a 22-page survey to around 200 men and 200 women. As seen in Table 1, not all collaborators reached this ideal sample size. Sample sizes possessed power sufficient for conducting the correlational analyses described here at the regional level. Again, a sample size of 463 was needed for evaluating a correlation of .15 at  $\alpha=.05$  and  $\beta=10\%$ . Participants were provided with a brief description of the study, including the information that their responses would be anonymous. The instructional set provided by each collaborator varied and was adapted to fit the specific culture and type of sample. Further details on incentives and cover stories are available from the authors. The survey took about one hour to complete.

## Measures

*Translation procedures.* Researchers from nations where English was not the primary language were asked to use a translation/back-translation process and administer the ISDP-2 survey in their native language. This procedure typically involved the primary collaborator translating the measures into the native language of the participants, and then having a second psychologist back-translate the measures into English. Differences between the original English and the back-translation were discussed, and mutual agreements were made as to appropriate translations (Brislin, 1980). ISDP-2 translators were not professionally trained translators, however, leaving open the question of translation quality. As seen in Table 1, the ISDP-2 survey was translated from English into 28 additional languages.

*Narcissistic Personality Inventory.* Narcissism was assessed with the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979; Raskin & Terry, 1988), which consists of 40 forced-choice items, each containing two alternative statements. Examples of the statements include "I will be a success" (indicating higher narcissism) and "I am not too concerned about success" (indicating lower narcissism). The seven facet scales of Narcissism suggested by Raskin and Terry (1988) are Authority (based on 8 items,  $\alpha=.72$ ; e.g., "I see myself as a good leader"), Self-sufficiency (based on 6 items,  $\alpha=.43$ ; e.g., "I like to take responsibility for making decisions"), Superiority (based on 5 items,  $\alpha=.52$ ; e.g., "I think I am a special person"), Exhibitionism (based on 7 items,  $\alpha=.63$ ; e.g., "I get upset when people don't notice how I look when I go out in public"), Entitlement (based on 6 items,  $\alpha=.44$ ; e.g., "I insist on getting the respect that is due me"), Exploitativeness (based on 5 items,  $\alpha=.48$ ; e.g., "I find it easy to manipulate people"), and Vanity (based on 3 items,  $\alpha=.61$ ; e.g., "I like to look at myself in the mirror"). The two factor scales proposed by Corry et al. (2008) are Leadership/Authority (based on 9 items,  $\alpha=.74$ ) and Exhibitionism/Entitlement (based on 14 items,  $\alpha=.68$ ). Further details regarding psychometrics of this measure as translated across languages and administered across cultures can be found in Schmitt et al. (2017) and are available from the authors.

*Self-esteem measure.* All participants were asked to complete a measure of global self-esteem, the Rosenberg's Self-Esteem Scale (Rosenberg, 1965). This scale contains 10 counter-balanced 4-point items with response options ranging from *Strongly agree* to *Strongly disagree* ( $\alpha=.85$ ). The Rosenberg Self-Esteem Scale is coded so that higher scores indicate higher levels of global self-esteem. This measure has been validated across several cultures (e.g., Pullmann & Allik, 2000; Schmitt & Allik, 2005), and it was expected that higher scores on this measure would relate positively to a participant's narcissism levels across all cultures.

*Personality trait measure.* Participants were administered the Big Five Inventory (BFI; Benet-Martinez & John, 1998). The BFI has been used effectively across cultures and languages (Benet-Martinez & John, 1998; Schmitt et al., 2007), and contains Extraversion ( $\alpha=.79$ ), Agreeableness ( $\alpha=.71$ ), Conscientiousness

( $\alpha=.78$ ), Neuroticism ( $\alpha=.79$ ), and Openness ( $\alpha=.76$ ) scales. Further details regarding psychometrics of this measure as translated across languages and administered across cultures can be found in Schmitt et al. (2004) and are available from the authors.

*Subjective well-being measure.* As an index of subjective well-being, participants were asked to complete the Affect Balance Scale (Bradburn, 1969;  $\alpha=.55$ ) and a single-item measure of life satisfaction (Inglehart, Basanez, & Moreno, 1998) using a 10-point scale ranging from 1 (*dissatisfied*) to 10 (*satisfied*). Further details regarding psychometrics of these measures as translated across languages and administered across cultures are available from the authors.

*Short-Term Mating Interests scale.* The desire and pursuit of short-term mating is not a monolithic construct. Because of the potential differences between sexual desires and behaviors, short-term tendencies were assessed in this study using multiple measures. Included first was a seven-item index designed to tap current interest in short-term mating, the Short-Term Mating Interests (STMI) scale (Schmitt, 2005a). The first three STMI items are from the Number of Partners measure (Buss & Schmitt, 1993; Schmitt et al., 2003), which asks, using open-ended scales, for the number of sex partners desired across various future time periods. Three of the most commonly analyzed items include the time periods of 1 month, 1 year, and 5 years (Schmitt et al., 2001, 2003). For the STMI, all values on these three items that were above three were truncated to three to control for extreme values. The next three STMI items are from the Time Known measure (Buss & Schmitt, 1993; Schmitt et al., 2003), which asks the likelihood of consenting to sex with someone viewed as desirable (using a scale of +3=*definitely yes* to -3=*definitely not*) after knowing that person for various time intervals. For the STMI, the time periods of 1 month, 1 year, and 5 years were used. Also included in the STMI was the Short-Term Seeking scale (Buss & Schmitt, 1993; Schmitt et al., 2003). This is a single-item 7-point rating scale ranging from 1 ("*currently not at all seeking a short-term mate*") to 7 ("*currently strongly seeking a short-term mate*"). All seven items (three from the Number of Partners measure, three from the Time Known measure, and the Short-Term Seeking scale) were combined to form the STMI. Overall, Cronbach's alpha for this STMI is typically around .79; see Schmitt, 2005a). Further details regarding psychometrics of this measure as translated across languages and administered across cultures can be found in Schmitt (2005a).

*Short-term mate poaching behavior.* All participants were presented with a questionnaire entitled "Anonymous Romantic Attraction Survey" (Schmitt & Buss, 2001), which asks a series of questions about personal experiences with romantic attraction and mate poaching (i.e., romantically attracting someone else's partner). Each rating scale on the questionnaire asks participants to describe their experiences with a specific attraction behavior. For the frequency of attempting or succumbing to mate poaching behaviors, rating scale values range from 1 (*Never*) to 7 (*Always*). Intermediate values are labeled *rarely*, *seldom*, *sometimes*, *frequently*, and *almost always*. The item pertaining to short-term poaching was relevant to the present study.

This question asks about the frequency with which participants have attempted to short-term mate poach, "Have you ever tried to attract someone who was *already in a romantic relationship with someone else* for a short-term sexual relationship with you?" (for further details, see Schmitt & Buss, 2001; Schmitt et al., 2004).

*Sociosexuality*. A seven-item measure of willingness to have sex without commitment, the Sociosexuality Orientation Inventory (SOI; Simpson & Gangestad, 1991), was also administered. The first three items of the SOI are intended to capture overt behavioral expressions of short-term mating. Item 1 is, "With how many different partners have you had sex (sexual intercourse) within the past year?" Item 2 is, "How many different partners do you foresee yourself having sex with during the next five years? (Please give a specific, realistic estimate)." Item 3 is, "With how many different partners have you had sex on one and only one occasion?" Open-ended blanks are provided after each of the first three questions of the SOI. The fourth item was designed to assess covert sociosexual behavior: "How often do (did) you fantasize about having sex with someone other than your current (most recent) dating partner?" This item was followed by an 8-point scale ranging from 1 ("*never*") to 8 ("*at least once a day*"). Items 5, 6, and 7 were designed to assess sociosexual attitudes. Item 5 is, "Sex without love is OK." Item 6 is, "I can imagine myself being comfortable and enjoying 'casual' sex with different partners." Item 7 is, "I would have to be closely attached to someone (both emotionally and psychologically) before I could feel comfortable and fully enjoy having sex with him or her." All three attitudinal items were followed by 9-point scales ranging from 1 ("*I strongly disagree*") to 9 ("*I strongly agree*"). Responses to Item 7 are reverse-coded so that higher scores indicate more unrestricted sociosexuality.

According to Simpson and Gangestad (1991), responses to Items 5, 6, and 7 are highly correlated and should be merged to form a single attitudinal score. This attitudinal score is then combined with the first four SOI items to form the total SOI composite measure. However, each item of the SOI composite measure is first weighted using the following formula:  $(5 \times \text{Item 1}) + (1 \times \text{Item 2 [with a cap on Item 2 of 30]}) + (5 \times \text{Item 3}) + (4 \times \text{Item 4}) + (2 \times \text{mean of Items 5, 6, and 7}) = \text{total SOI}$ . Again, using this formula produces an SOI composite such that higher scores are associated with unrestricted sociosexuality (i.e., more short-term mating). Cronbach's alpha for the SOI is typically around .79 (Simpson & Gangestad, 1991). Further details regarding psychometrics of this measure as translated across languages and administered across cultures can be found in Schmitt (2005b).

*HIV risk-taking*. The HIV/AIDS Risk Behavior Form was used to assess risky sexual behavior in the form of HIV risk (Huba et al., 1997, 2000). This survey contains 17 progressive questions like "Have you ever had unprotected sex with a man (i.e., without using condoms)? Yes or No. If Yes, in the past 30 Days? Yes or No. If Yes, in the last 24 hours? Yes or No." These responses were added together to provide an overall HIV risk ( $\alpha = .88$ ). Further details regarding psychometrics of this

measure as translated across languages and administered across cultures are available from the authors.

*Intimate partner violence.* Intimate partner violence was investigated using the Violence Assessment Index (VAI; Dobash et al., 1998;  $\alpha=.89$ ). The brief 20-question version of the VAI asks how often a behavior, like screaming at a partner or hitting, has occurred in a relationship, and if it has happened in the last month. Next to each item, participants use zero for *never happened* and up to five if the event occurred *11 or more times*. Further details regarding psychometrics of this measure as translated across languages and administered across cultures are available from the authors.

*Sexual aggression.* Sexual aggression was measured using an abbreviated 10-item version of the Aggressive Sexual Behaviors Inventory (ASBI; Mosher & Anderson, 1996;  $\alpha=.91$ ). Each ASBI question is rated from 1 (*Never*) to 7 (*Extremely frequently*). Questions on this survey include "I have threatened to leave or end a relationship if a partner wouldn't have sex with me" and "I have gotten a little drunk and forced a person that I'm with to have sex with me." Further details regarding psychometrics of this measure as translated across languages and administered across cultures are available from the authors.

*Demographics.* Participants completed a measure labelled "Personal Information and Family History." Questions are asked concerning their demographic and other personal information, including sex (male/female), age, weight, height, sexual orientation (heterosexual, homosexual, bisexual), current relationship status (Married [if so, how long? \_\_\_\_\_ years], Engaged, Cohabiting/Living with Someone, Divorced, Widowed, Dating Multiple Persons, Dating One Person Exclusively Not Currently Involved with Anyone, Have Never Had a Sexual Relationship). Questions were also asked about socioeconomic status, urbanity, education level, religion, religiosity, handedness, siblings, and number of children. A full list of all questions and response options is available from the first author.

## Results

### *Narcissism and Personality*

*Hypothesis 1:* Based on the assumption narcissism as measured by the NPI has construct or conceptual equivalence across cultures, we hypothesized the NPI would have similar associations with self-esteem, Big Five personality traits, and subjective well-being across the world regions of the ISDP-2. All correlations reported below are partial correlations controlling for the effects of participant sex and individual nation within world regions.

*Prediction 1a: Self-esteem.* As predicted, narcissism was moderately and positively correlated with self-esteem across all major world regions of the ISDP-2 (see Table 2), including North America<sup>3</sup>,  $r(8517)=+.35$ ,  $p<.001$ , Central/South

Table 2. *Personality Correlates of the NPI across 11 World Regions of the ISDP-2*

World Region	Total Score	Corry et al.'s (2008) 2 Factors				Raskin and Terry's (1988) 7 Factors						
		Leadership/ Authority	Exhibitionism/ Entitlement	Exploita- tive	Entitle- ment	Exhibi- tionism	Authority	Self- sufficiency	Vanity	Super- iority		
<i>Self-Esteem</i>												
North America	.35***	.32***	.18***	.11***	.05***	.12***	.33***	.35***	.25***	.32***		
Central/South America	.32***	.31***	.13***	.14***	.06***	.08***	.33***	.28***	.22***	.24***		
North Europe	.42***	.35***	.30***	.20***	.08***	.25***	.36***	.35***	.32***	.27***		
Western Europe	.18***	.18***	.10***	.07***	-.10***	.08***	.21***	.14***	.22***	.18***		
Eastern Europe	.39***	.32***	.26***	.27***	.12***	.21***	.33***	.36***	.28***	.25***		
Southern Europe	.28***	.26***	.13***	.11***	-.01	.11***	.27***	.32***	.21***	.21***		
Middle East	.33***	.31***	.15***	.18***	.02	.13***	.34***	.35***	.16***	.23***		
Africa	.14	.17***	-.05*	.09***	-.01	-.07**	.19***	.20***	.07***	.10***		
Oceania	.29***	.28***	.15***	.07***	.05	.09***	.29***	.28***	.25***	.29***		
Southeast Asia	.31***	.31***	.06**	.15***	.01	.01	.33***	.36***	.15***	.31***		
East Asia	.47***	.43***	.27***	.32***	.13***	.23***	.46***	.36***	.31***	.35***		
Worldwide	.32***	.30***	.15***	.13***	.02	.11***	.32***	.32***	.24***	.26***		
<i>Extraversion</i>												
North America	.47***	.48***	.33***	.27***	.12***	.45***	.49***	.18***	.15***	.24***		
Central/South America	.41***	.38***	.31***	.24***	.10***	.39***	.39***	.13***	.18***	.26***		
North Europe	.47***	.44***	.37***	.23***	.08***	.48***	.45***	.20***	.22***	.24***		
Western Europe	.48***	.47***	.38***	.30***	.06***	.46***	.48***	.18***	.27***	.26***		
Eastern Europe	.47***	.46***	.36***	.32***	.16***	.43***	.47***	.24***	.22***	.24***		
Southern Europe	.34	.31***	.27***	.17***	.04*	.34***	.32***	.17***	.15***	.22***		
Middle East	.40***	.39***	.27***	.25***	.10***	.32***	.41***	.22***	.13***	.24***		
Africa	.14	.16***	.08**	.11***	.04	.09***	.16***	.03	.04	.08***		
Oceania	.48***	.52***	.33***	.28***	.16***	.44***	.52***	.22***	.14***	.25***		
Southeast Asia	.37***	.37***	.23***	.21***	.11***	.22***	.38***	.21***	.17***	.23***		
East Asia	.44***	.42***	.36***	.23***	.10***	.45***	.44***	.19***	.21***	.29***		
Worldwide	.43***	.43***	.32***	.27***	.09***	.40***	.44***	.19***	.18***	.23***		

World Region	Total Score	Corry et al.'s (2008) 2 Factors				Raskin and Terry's (1988) 7 Factors													
		Leadership/ Authority	Exhibitionism/ Entitlement	Exploitive	Entitlement	Exhibitionism	Authority	Self-sufficiency	Vanity	Superiority									
<i>Agreeableness</i>																			
North America	-.17***	-.08***	-.25***	-.16***	-.29***	-.18***	-.07***	.03**	-.05***	-.01									
Central/South America	-.13***	-.12***	-.14***	-.10***	-.22***	-.11***	-.10***	.00	.00	-.01									
Northern Europe	-.08***	-.08***	-.11***	-.04	-.26***	-.09***	-.05*	.10***	.04	.02									
Western Europe	-.21***	-.18***	-.21***	-.15***	-.35***	-.17***	-.15***	-.04*	.04*	-.06***									
Eastern Europe	-.17***	-.15***	-.20***	-.09***	-.28***	-.17***	-.13***	.00	-.05***	-.01									
Southern Europe	-.20***	-.20***	-.21***	-.14***	-.26***	-.18***	-.19***	.07***	-.04*	-.09***									
Middle East	-.22***	-.15***	-.25***	-.12***	-.28***	-.22***	-.12***	.03	-.10**	-.13***									
Africa	-.11***	-.01	-.14***	-.13***	-.15***	-.12***	.03	-.02	-.01	-.07**									
Oceania	-.09***	-.04	-.18***	-.10***	-.21***	-.19***	-.03	.08**	.02	.05*									
Southeast Asia	-.08***	-.01	-.19***	-.04*	-.23***	-.21***	.01	.09***	-.02	.05**									
East Asia	-.04	.03	-.13***	.02	-.18***	-.12***	.06*	.08***	-.02	-.01									
Worldwide	-.15***	-.09***	-.21***	-.13***	-.27***	-.17***	-.07***	.05***	-.02	-.02									
<i>Conscientiousness</i>																			
North America	.10***	.21***	-.08***	-.05***	-.02*	-.10***	.22***	.26***	.01	.07***									
Central/South America	.19***	.23***	.01	.09***	.03	.01	.24***	.30***	.03	.06***									
Northern Europe	.08***	.12***	-.01	.02	-.06**	-.03	.13***	.25***	.07**	.00									
Western Europe	.07***	.16***	-.02	-.05***	-.06***	-.06***	.17***	.21***	.08***	.00									
Eastern Europe	.12***	.17***	-.00	.03	.04**	-.06***	.18***	.27***	.07***	.05***									
Southern Europe	.11***	.17***	-.02	-.02	-.03*	-.04***	.18***	.27***	.06***	.04*									
Middle East	.10***	.15***	-.01	.00	.03	-.10***	.16***	.27***	.02	.04									
Africa	.05***	.15***	-.07**	.00	-.08***	-.08***	.18***	.11***	.03	.02									
Oceania	.10***	.20***	-.06*	-.04	-.01	-.11***	.21***	.25***	.02	.10***									
Southeast Asia	.23***	.29***	.01	.12***	.03	-.07***	.30***	.35***	.06**	.15***									
East Asia	.26***	.32***	.06*	.18***	.07**	.02	.33***	.33***	.11***	.13***									
Worldwide	.12***	.21***	-.03***	-.01*	-.02	-.07***	.22***	.27***	.06***	.06									

World Region	Total Score	Corry et al.'s (2008) 2 Factors				Raskin and Terry's (1988) 7 Factors						
		Leadership/ Authority	Exhibitionism/ Entitlement	Exploitive	Entitlement	Exhibitionism	Authority	Self-sufficiency	Vanity	Superiority		
<i>Neuroticism</i>												
North America	-.18***	-.19***	-.03**	-.08**	.06**	-.05***	-.20**	-.25***	-.09***	-.16***		
Central/South America	-.13***	-.11***	.01	-.11***	.13***	-.01	-.13***	-.23***	-.11***	-.13***		
North Europe	-.15***	-.14***	-.03	-.10***	.13***	-.07**	-.17***	-.25***	-.14***	-.08***		
Western Europe	-.17***	-.18***	-.05**	-.11***	.13***	-.06	-.20***	-.26***	-.15***	-.11***		
Eastern Europe	-.15***	-.14***	-.03	-.11***	.07**	-.03	-.16***	-.26***	-.08***	-.13***		
Southern Europe	-.09***	-.09***	.03	-.04*	.12***	.02	-.11***	-.24***	-.09***	-.06***		
Middle East	-.07***	-.09***	.07*	-.07*	.13***	.06*	-.12***	-.24***	-.04	-.04		
Africa	-.06***	-.09***	.03	-.02	.06**	.02	-.11***	-.14***	.01	-.04*		
Oceania	-.17***	-.21***	-.02	-.09**	.04	-.03	-.22***	-.24***	-.05	-.11***		
Southeast Asia	-.15***	-.16***	.05**	-.14***	.10***	.09**	-.18***	-.28***	-.07***	-.15***		
East Asia	-.14***	-.16***	.01	-.19***	.04	.00	-.18***	-.23***	-.06**	-.05*		
Worldwide	-.16***	-.17***	-.01*	-.10***	.09***	-.02	-.19***	-.24***	-.10***	-.13***		
<i>Openness</i>												
North America	.21***	.18***	.11***	.16**	.03**	.13***	.19***	.08**	.09***	.20***		
Central/South America	.25***	.22***	.13***	.15***	.07**	.16***	.24***	.12**	.10***	.20***		
North Europe	.31***	.20***	.23***	.16***	.10***	.28***	.22***	.13***	.13***	.30***		
Western Europe	.25***	.19***	.18***	.17***	.03*	.17***	.22***	.14**	.18***	.22***		
Eastern Europe	.34***	.29***	.22***	.23**	.13***	.22***	.30***	.21***	.17***	.28***		
Southern Europe	.23***	.19***	.14***	.12***	.03	.17***	.20***	.12***	.12***	.21***		
Middle East	.35***	.30***	.21***	.21***	.16***	.19***	.32***	.22***	.12***	.29***		
Africa	.11***	.18***	-.02	.07**	.05*	-.06	.20***	.07**	.03	.08**		
Oceania	.31***	.29***	.17***	.17***	.11***	.21***	.30***	.15***	.12***	.27***		
Southeast Asia	.35***	.30***	.17***	.23***	.12***	.16***	.31***	.24***	.13***	.27***		
East Asia	.35***	.30***	.25***	.18***	.13***	.26***	.32***	.17***	.19***	.31***		
Worldwide	.26***	.21***	.16***	.18***	.07***	.17***	.23***	.14***	.13***	.22***		

World Region	Total Score	Corry et al.'s (2008) 2 Factors				Raskin and Terry's (1988) 7 Factors						
		Leadership/ Authority	Exhibitionism/ Entitlement	Exploitive	Entitlement	Exhibitionism	Authority	Self-sufficiency	Vanity	Superiority		
<i>Subjective-Well Being</i>												
North America	.21***	.18***	.07***	.04***	-.03**	.05***	.22***	.28***	.15***	.21***		
Central/South America	.19***	.18***	.06**	.10***	-.05**	.08***	.20***	.20***	.14***	.13***		
Northern Europe	.17***	.17***	.07**	.08***	-.09***	.07**	.19***	.24***	.18***	.09***		
Western Europe	.21***	.20***	.12***	.08***	-.07***	.12***	.21***	.23***	.22***	.14***		
Eastern Europe	.21***	.20***	.11***	.11***	-.03*	.11***	.21***	.26***	.16***	.14***		
Southern Europe	.19***	.19***	.08***	.05**	-.09***	.09***	.20***	.27***	.19***	.12***		
Middle East	.16***	.18***	.03	.10**	-.09**	.01	.22***	.26***	.09**	.09**		
Africa	.14***	.10***	-.01	.08**	.01	-.03	.09***	.22***	.04	.16***		
Oceania	.16***	.18***	.05*	.01	-.02	.03	.19***	.20***	.13***	.18***		
Southeast Asia	.17***	.22***	-.02	.05**	-.05**	-.05**	.23***	.22***	.11***	.20***		
East Asia	.14***	.13***	.04	.15***	-.12***	.05*	.15***	.21***	.16***	.12***		
Worldwide	.20***	.20***	.07***	.06***	-.06***	.06***	.22***	.26***	.16***	.16***		

Note: Correlations represent partial correlations controlling for sex of participant and nation within each world region.  
 \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

America,  $r(2317)=+.32$ ,  $p<.001$ , Northern Europe,  $r(1605)=+.42$ ,  $p<.001$ , Western Europe,  $r(4027)=+.18$ ,  $p<.001$ , Eastern Europe,  $r(4262)=+.39$ ,  $p<.001$ , Southern Europe,  $r(2949)=+.28$ ,  $p<.001$ , Middle East,  $r(838)=+.33$ ,  $p<.001$ , Africa<sup>4</sup>,  $r(1448)=+.14$ ,  $p<.001$ , Oceania,  $r(908)=+.29$ ,  $p<.001$ , Southeast Asia,  $r(2106)=+.31$ ,  $p<.001$ , and East Asia,  $r(1329)=+.47$ ,  $p<.001$ .

As with previous studies, it appeared the stronger association with self-esteem was with the socially adaptive narcissism factor of Leadership/Authority (worldwide;  $r(30346)=+.30$ ,  $p<.001$ ) relative to the socially maladaptive factor of Exhibitionism/Entitlement (worldwide;  $r(30346)=+.15$ ,  $p<.001$ ) in the 2-factor model of Corry et al. (2008). Because these are dependent sample correlations, we used an updated version of Steiger's  $Z$  ( $Z_H$ ; Hoerger, 2013; Steiger, 1980) for evaluating whether correlations were significantly different. The association of self-esteem with the socially adaptive narcissism factor of Leadership/Authority was significantly different from the association of self-esteem with socially maladaptive factor of Exhibitionism/Entitlement,  $Z_H=25.37$ ,  $p<.001$ . Similarly self-esteem was most highly correlated with the relatively adaptive Raskin and Terry (1988) facets of Authority (worldwide;  $r(30346)=+.32$ ,  $p<.001$ ), Self-Sufficiency (worldwide;  $r(30346)=+.32$ ,  $p<.001$ ), Vanity (worldwide;  $r(30346)=+.26$ ,  $p<.001$ ), and Superiority (worldwide;  $r(30346)=+.24$ ,  $p<.001$ ).

*Prediction 1b: Extraversion.* As predicted, narcissism was positively correlated with extraversion across all major world regions of the ISDP-2, including North America,  $r(8473)=+.47$ ,  $p<.001$ , Central/South America,  $r(2342)=+.41$ ,  $p<.001$ , Northern Europe,  $r(1593)=+.47$ ,  $p<.001$ , Western Europe,  $r(3960)=+.48$ ,  $p<.001$ , Eastern Europe,  $r(4212)=+.47$ ,  $p<.001$ , Southern Europe,  $r(2881)=+.34$ ,  $p<.001$ , Middle East,  $r(812)=+.40$ ,  $p<.001$ , Africa,  $r(1332)=+.14$ ,  $p<.001$ , Oceania,  $r(904)=+.48$ ,  $p<.001$ , Southeast Asia,  $r(2089)=+.37$ ,  $p<.001$ , and East Asia,  $r(1324)=+.44$ ,  $p<.001$ .

Worldwide, the stronger associations with extraversion were with the socially adaptive narcissism factor of Leadership/Authority,  $r(29962)=+.43$ ,  $p<.001$ , in the 2-factor model of Corry et al. (2008),  $Z_H=19.75$ ,  $p<.001$ , and with the Raskin and Terry (1988) facets of Authority,  $r(29962)=+.44$ ,  $p<.001$ , Exhibitionism,  $r(29962)=+.40$ ,  $p<.001$ , Exploitativeness,  $r(29962)=+.27$ ,  $p<.001$ , and Superiority,  $r(29962)=+.23$ ,  $p<.001$ .

*Prediction 1c: Agreeableness.* Narcissism was negatively correlated with agreeableness across most, but not all, major world regions of the ISDP-2, including North America,  $r(8460)=-.17$ ,  $p<.001$ , Central/South America,  $r(2342)=-.13$ ,  $p<.001$ , Northern Europe,  $r(1597)=-.08$ ,  $p<.001$ , Western Europe,  $r(3967)=-.21$ ,  $p<.001$ , Eastern Europe,  $r(4213)=-.17$ ,  $p<.001$ , Southern Europe,  $r(2907)=-.20$ ,  $p<.001$ , Middle East,  $r(837)=-.22$ ,  $p<.001$ , Africa,  $r(1352)=-.11$ ,  $p<.001$ , Oceania,  $r(907)=-.09$ ,  $p<.01$ , Southeast Asia,  $r(2089)=-.08$ ,  $p<.001$ . Narcissism and agreeableness were not significantly correlated in East Asia,  $r(1326)=-.04$ .

Worldwide, the stronger associations with agreeableness were among the socially maladaptive narcissism factor of Exhibitionism/Entitlement,  $r(30037)=-.21$ ,  $p<.001$ , in the 2-factor model of Corry et al. (2008),  $Z_H=19.79$ ,  $p<.001$ , and with the Raskin and Terry (1988) maladaptive facets of Entitlement,  $r(30037)=-.27$ ,  $p<.001$ , Exhibitionism,  $r(30037)=-.17$ ,  $p<.001$ , and Exploitativeness,  $r(30037)=-.13$ ,  $p<.001$ .

*Prediction 1d: Conscientiousness.* As predicted, narcissism was positively correlated with conscientiousness across all major world regions of the ISDP-2, including North America,  $r(8455)=+.10$ ,  $p<.001$ , Central/South America,  $r(2345)=+.19$ ,  $p<.001$ , Northern Europe,  $r(1601)=+.08$ ,  $p<.001$ , Western Europe,  $r(3958)=+.07$ ,  $p<.001$ , Eastern Europe,  $r(4177)=+.12$ ,  $p<.001$ , Southern Europe,  $r(2897)=+.11$ ,  $p<.001$ , Middle East,  $r(831)=+.10$ ,  $p<.01$ , Africa,  $r(1349)=+.05$ ,  $p<.05$ , Oceania,  $r(909)=+.10$ ,  $p<.001$ , Southeast Asia,  $r(1905)=+.23$ ,  $p<.001$ , and East Asia,  $r(1325)=+.26$ ,  $p<.001$ .

Worldwide, the stronger associations with conscientiousness were among the socially adaptive narcissism factor of Leadership/Authority,  $r(29792)=+.21$ ,  $p<.001$ ) in the 2-factor model of Corry et al. (2008),  $Z_H=31.20$ ,  $p<.001$ , and with the Raskin and Terry (1988) adaptive facets of Self-Sufficiency,  $r(29792)=+.27$ ,  $p<.001$ , and Authority,  $r(29792)=+.22$ ,  $p<.001$ .

*Prediction 1e: Neuroticism.* As predicted, narcissism was negatively correlated with neuroticism across all major world regions of the ISDP-2, including North America,  $r(8478)=-.18$ ,  $p<.001$ , Central/South America,  $r(2313)=-.13$ ,  $p<.001$ , Northern Europe,  $r(1592)=-.15$ ,  $p<.001$ , Western Europe,  $r(3957)=-.17$ ,  $p<.001$ , Eastern Europe,  $r(4226)=-.15$ ,  $p<.001$ , Southern Europe,  $r(2921)=-.09$ ,  $p<.001$ , Middle East,  $r(839)=-.07$ ,  $p<.05$ , Africa,  $r(1344)=-.06$ ,  $p<.01$ , Oceania,  $r(905)=-.17$ ,  $p<.001$ , Southeast Asia,  $r(2083)=-.15$ ,  $p<.001$ , and East Asia,  $r(1325)=-.14$ ,  $p<.001$ .

Worldwide, the stronger associations with neuroticism were among the socially adaptive narcissism factor of Leadership/Authority,  $r(30023)=-.17$   $p<.001$ , in the 2-factor model of Corry et al. (2008),  $Z_H=26.16$ ,  $p<.001$ , and with the Raskin and Terry (1988) relatively adaptive facets of Self-Sufficiency,  $r(30023)=-.24$ ,  $p<.001$ , Authority,  $r(30023)=-.19$ ,  $p<.001$ , and Superiority,  $r(30023)=-.13$ ,  $p<.001$ .

*Prediction 1f: Openness.* As predicted, narcissism was positively correlated with openness to experience across all major world regions of the ISDP-2, including North America,  $r(8449)=+.21$ ,  $p<.001$ , Central/South America,  $r(2335)=+.25$ ,  $p<.001$ , Northern Europe,  $r(1595)=+.31$ ,  $p<.001$ , Western Europe,  $r(3837)=+.25$ ,  $p<.001$ , Eastern Europe,  $r(4215)=+.34$ ,  $p<.001$ , Southern Europe,  $r(2910)=+.23$ ,  $p<.001$ , Middle East,  $r(831)=+.35$ ,  $p<.001$ , Africa,  $r(1333)=+.11$ ,  $p<.001$ , Oceania,  $r(907)=+.31$ ,  $p<.001$ , Southeast Asia,  $r(2050)=+.35$ ,  $p<.001$ , and East Asia,  $r(1323)=+.35$ ,  $p<.001$ .

Worldwide, the stronger associations with openness were among the socially adaptive narcissism factor of Leadership/Authority,  $r(29825)=+.21$ ,  $p<.001$ , in the 2-factor model of Corry et al. (2008),  $Z_H=8.27$ ,  $p<.001$ , and with the Raskin and Terry (1988) adaptive facets of Authority,  $r(29825)=+.23$ ,  $p<.001$ , and Self-Sufficiency,

$r(29825)=+.14, p<.001$ , but also with Exploitativeness,  $r(29825)=+.18, p<.001$ , and Exhibitionism,  $r(29825)=.17, p<.001$ .

*Prediction 1g: Subjective well-being.* As predicted, narcissism was positively correlated with subjective well-being across all major world regions of the ISDP-2, including North America,  $r(8443)=+.21, p<.001$ , Central/South America,  $r(2365)=+.19, p<.001$ , Northern Europe,  $r(1599)=+.17, p<.001$ , Western Europe,  $r(3970)=+.21, p<.001$ , Eastern Europe,  $r(4167)=+.21, p<.001$ , Southern Europe,  $r(2878)=+.19, p<.001$ , Middle East,  $r(826)=+.16, p<.001$ , Africa,  $r(1344)=+.14, p<.001$ , Oceania,  $r(904)=+.16, p<.001$ , Southeast Asia,  $r(2078)=+.17, p<.001$ , and East Asia,  $r(1326)=+.14, p<.001$ .

Worldwide, the stronger associations with subjective well-being were among the socially adaptive narcissism factor of Leadership/Authority,  $r(29940)=+.20, p<.001$ , in the 2-factor model of Corry et al. (2008),  $Z_H=21.35, p<.001$ , and with the Raskin and Terry (1988) adaptive facets of Self-Sufficiency,  $r(29940)=+.26, p<.001$ , and Authority,  $r(29940)=+.22, p<.001$ .

### *Narcissism and Sexuality*

*Hypothesis 2:* Based on the assumption that narcissism as measured by the NPI has functional equivalence across cultures, we hypothesized the NPI will have similar associations with short-term mating and aggressive sexuality across all world regions of the ISDP-2. All correlations reported below are partial correlations controlling for the effects of participant sex and nation within world regions

*Prediction 2a: Short-term mating interests.* As predicted, narcissism was positively correlated with self-reported short-term mating interests across all major world regions of the ISDP-2 (see Table 3), including North America<sup>5</sup>,  $r(6632)=+.17, p<.001$ , Central/South America,  $r(2017)=+.16, p<.001$ , Northern Europe,  $r(1340)=+.22, p<.001$ , Western Europe,  $r(3714)=+.16, p<.001$ , Eastern Europe,  $r(3638)=+.16, p<.001$ , Southern Europe,  $r(2239)=+.11, p<.001$ , Middle East,  $r(428)=+.17, p<.001$ , Africa,  $r(714)=+.09, p<.01$ , Oceania,  $r(856)=+.19, p<.001$ , Southeast Asia,  $r(1219)=+.14, p<.001$ , and East Asia,  $r(1110)=+.07, p<.01$ .

As predicted, the stronger association with short-term mating interests was with the socially maladaptive narcissism factor of Exhibitionism/Entitlement (worldwide;  $r(23947)=+.18, p<.001$ ) relative to the socially adaptive Narcissism factor of Leadership/Authority (worldwide;  $r(23947)=+.10, p<.001$ ) in the 2-factor model of Corry et al. (2008),  $Z_H=11.75, p<.001$ . The strongest associations with short-term mating interests also were among the relatively maladaptive Raskin and Terry (1988) facets of Exhibitionism,  $r(23947)=+.17, p<.001$ , Exploitativeness,  $r(23947)=+.11, p<.001$ , and Vanity,  $r(23947)=+.11, p<.001$ .

*Prediction 2b: Short-term mate poaching behavior.* As predicted, narcissism was positively correlated with self-reported short-term mate poaching across all

Table 3. Sexuality Correlates of Sub-clinical Narcissism across 11 World Regions of the ISDP-2

World Region	Corry et al.'s (2008) 2 Factors		Raskin and Terry's (1988) 7 Factors							
	Total Score	Leadership/ Authority	Exhibitionism/ Entitlement	Exploitative	Entitlement	Exhibitionism	Authority	Self-sufficiency	Vanity	Superiority
<i>Short-Term Mating Interests</i>										
North America	.17***	.09***	.21***	.14***	.12***	.19***	.08***	.03**	.15***	.06***
Central/South America	.16***	.09***	.20***	.04*	.14***	.17***	.08***	-.03	.15***	.14***
Northern Europe	.22***	.12***	.28***	.12***	.12***	.25***	.12***	.01	.20***	.13***
Western Europe	.16***	.09***	.18***	.09***	.11***	.17***	.08***	.06***	.10***	.12***
Eastern Europe	.16***	.09***	.16***	.11***	.15***	.13***	.08***	.03*	.11***	.12***
Southern Europe	.11***	.06***	.14***	.06***	.07***	.13***	.06***	-.03	.09***	.09***
Middle East	.17***	.07***	.21***	.09*	.11***	.20***	.07***	-.02	.16***	.18***
Africa	.09***	.05***	.08***	.04***	.09***	.05***	.04***	.06***	.03***	.07***
Oceania	.19***	.11***	.22***	.15***	.18***	.21***	.10***	.04***	.13***	.08***
Southeast Asia	.14***	.09***	.19***	.07***	.07***	.17***	.08***	.07***	.11***	.03***
East Asia	.07***	.01***	.13***	-.03***	.05**	.12***	.01***	.03***	.04***	.10***
Worldwide	.16***	.10***	.18***	.11***	.09***	.17***	.09***	.04***	.11***	.10***
<i>Short-Term Mate Poaching</i>										
North America	.23***	.15***	.24***	.19***	.17***	.22***	.14***	.03**	.14***	.09***
Central/South America	.17***	.11***	.18***	.11***	.13***	.17***	.10***	.02	.11***	.09***
Northern Europe	.17***	.12***	.20***	.11***	.09***	.19***	.12***	-.03	.16***	.09***
Western Europe	.26***	.18***	.26***	.16***	.16***	.27***	.16***	.08***	.15***	.06***
Eastern Europe	.22***	.15***	.23***	.19***	.17***	.21***	.14***	.05***	.17***	.10***
Southern Europe	.26***	.18***	.27***	.16***	.16***	.27***	.17***	.04***	.15***	.17***
Middle East	.28***	.18***	.29***	.18***	.19***	.27***	.17***	.06***	.21***	.17***
Africa	.10***	.02***	.15***	.06***	.12***	.11***	-.02***	.02***	.05***	.08***
Oceania	.29***	.17***	.29***	.24***	.21***	.27***	.15***	.09***	.17***	.18***
Southeast Asia	.17***	.12***	.21***	.07***	.15***	.18***	.10***	.02	.14***	.09***
East Asia	.24***	.19***	.22***	.18***	.16***	.22***	.18***	.08***	.13***	.13***
Worldwide	.22***	.16***	.23***	.16***	.14***	.22***	.15***	.06***	.14***	.12***

World Region	Corry et al.'s (2008) 2 Factors			Raskin and Terry's (1988) 7 Factors						
	Total Score	Leadership/ Authority	Exhibitionism/ Entitlement	Exploitative	Entitlement	Exhibitionism	Authority	Self-sufficiency	Vanity	Superiority
<i>Sociosexuality</i>										
North America	.22***	.12***	.24***	.19***	.13***	.23***	.12***	.02*	.18***	.10***
Central/South America	.19***	.12***	.20***	.10***	.16***	.18***	.10***	.00	.15***	.14***
Northern Europe	.18***	.13***	.18***	.11***	.09***	.14***	.07***	.07	.13***	.11***
Western Europe	.25***	.16***	.25***	.16***	.15***	.23***	.15***	.08**	.18***	.17***
Eastern Europe	.27***	.18***	.28***	.20***	.19***	.25***	.17***	.11***	.22***	.13***
Southern Europe	.25***	.19***	.25***	.17***	.16***	.23***	.19***	.07***	.13***	.14***
Middle East	.27***	.13***	.33***	.13***	.15***	.30***	.12***	.03	.24***	.25***
Africa	.01	-.04	.05*	-.01	.06*	.04	-.06*	-.02	.02	.02
Oceania	.22***	.18***	.20***	.11***	.15***	.20***	.17***	.07*	.15***	.12***
Southeast Asia	.15***	.11***	.21***	.09***	.13***	.18***	.09***	-.04	.12***	.08***
East Asia	.22***	.16***	.22***	.12***	.12***	.22***	.17***	.07*	.15***	.16***
Worldwide	.22***	.15***	.22***	.17***	.11***	.22***	.15***	.05***	.16***	.12***
<i>HIV Risk-Taking</i>										
North America	.16***	.10***	.16***	.16***	.08***	.17***	.10***	.02*	.11***	.07***
Central/South America	.13***	.12***	.13***	.05***	.10***	.14***	.11***	.00	.12***	.03
Northern Europe	.19***	.14***	.20***	.13***	.08***	.20***	.14***	.01	.16***	.11***
Western Europe	.13***	.07***	.14***	.12***	.01	.15***	.08***	.00	.13***	.09***
Eastern Europe	.17***	.12***	.19***	.15***	.11***	.20***	.12***	.01	.14***	.05***
Southern Europe	.15***	.11***	.13***	.09***	.04*	.16***	.11***	.04*	.07***	.10***
Middle East	.11***	.04	.17***	.06*	.06*	.16***	.03	.01	.12***	.06*
Africa	.04	.01	.05*	.04*	.04	.03	.01	.01	-.02	.02
Oceania	.18***	.11***	.18***	.09***	.15***	.18***	.10***	.07*	.10***	.12***
Southeast Asia	.11***	.07***	.14***	.04	.09***	.16***	.06***	.01	.08***	.05*
East Asia	.18***	.17***	.13***	.12***	.06*	.15***	.18***	.10***	.08***	.10***
Worldwide	.14***	.09***	.14***	.13***	.04	.16***	.10***	.03	.09***	.06**

World Region	Corry et al.'s (2008) 2 Factors				Raskin and Terry's (1988) 7 Factors					
	Total Score	Leadership/ Authority	Exhibitionism/ Entitlement	Exploitative	Entitlement	Exhibitionism	Authority	Self-sufficiency	Vanity	Superiority
<i>Intimate Partner Violence</i>										
North America	.08***	.05***	.10***	.09***	.11***	.08***	.04***	-.04***	.05***	.04***
Central/South America	.03	.04*	.08***	-.02	.10***	.07**	.03	-.08***	.06**	-.01
Northern Europe	.04	.01	.07***	.01	.12***	.09***	.00	-.06*	.03	.00
Western Europe	.08	.04*	.11***	.06***	.12***	.10***	.03	-.01	.01	.04**
Eastern Europe	.10***	.07***	.13***	.10***	.04	.13***	.06**	-.02	.09***	.07***
Southern Europe	.15	.13***	.14***	.13***	.14	.11***	.12	.00	.06**	.07***
Middle East	.13**	.07	.18***	.05	.15***	.20***	.03	.00	.07	.06
Africa	.04	-.02	.08**	-.01	.10***	.08**	-.05*	-.01	-.01	.06*
Oceania	.07***	.13***	.20***	.03	.20***	.19***	.11**	.04	.10**	.07*
Southeast Asia	.06	.08**	.09**	.03	.07*	.09***	.08**	-.03	.05	-.04
East Asia	.17***	.13***	.16***	.07*	.21***	.10***	.11***	.05	.12***	.11**
Worldwide	.08***	.04***	.11***	.08***	.10***	.11***	.03***	-.04***	.05***	.04***
<i>Sexual Aggression</i>										
North America	.11***	.05***	.14***	.10***	.10***	.11***	.04***	.02*	.07***	.03
Central/South America	.06	.00	.12***	.06**	.04*	.12***	-.01	.03	.03	.00
Northern Europe	.12***	.07**	.15***	.06**	.06**	.11***	.07**	.09***	.09***	.05*
Western Europe	.16	.10***	.16***	.10	.11***	.16***	.09***	.05***	.08***	.11***
Eastern Europe	.17***	.11***	.18***	.12***	.11***	.15***	.10***	.05**	.15***	.10***
Southern Europe	.21***	.16***	.19***	.15***	.20***	.15***	.14***	.08***	.07***	.12***
Middle East	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Africa	.09***	-.02	.15***	.05*	.11***	.15***	.00	.03	-.06*	.04
Oceania	.13***	.03	.18***	.09**	.17***	.12***	.01	.09**	.05	.09**
Southeast Asia	.10	.07**	.13***	.02	.13***	.12***	.04*	.03	.07**	.03
East Asia	.15	.11***	.15***	.07*	.17***	.09**	.11***	.10***	.08**	.07*
Worldwide	.10***	.06***	.14***	.05***	.11***	.10***	.04***	.04***	.07***	.06***

Note: Correlations represent partial correlations controlling for sex of participant and nation within each world region. Intimate partner violence correlations only represent those currently in a relationship.  
 \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ . n/a=not assessed.

major world regions of the ISDP-2, including North America,  $r(8166)=+.23, p<.001$ , Central/South America,  $r(2364)=+.17, p<.001$ , Northern Europe,  $r(1590)=+.17, p<.001$ , Western Europe,  $r(4017)=+.26, p<.001$ , Eastern Europe,  $r(4223)=+.22, p<.001$ , Southern Europe,  $r(2928)=+.26, p<.001$ , Middle East,  $r(626)=+.28, p<.001$ , Africa,  $r(1344)=+.10, p<.001$ , Oceania,  $r(907)=+.29, p<.001$ , Southeast Asia,  $r(1725)=+.17, p<.001$ , and East Asia,  $r(1321)=+.24, p<.001$ .

As predicted, the stronger associations with short-term mate poaching were among the socially maladaptive narcissism factor of Exhibitionism/Entitlement (worldwide;  $r(29251)=+.23, p<.001$ ) in the 2-factor model of Corry et al. (2008),  $Z_H=11.50, p<.001$ , and with the relatively maladaptive Raskin and Terry (1988) facets of Exhibitionism,  $r(29251)=+.22, p<.001$ , Exploitativeness,  $r(29251)=+.16, p<.001$ , and Authority,  $r(29251)=+.15, p<.001$ .

*Prediction 2c: Sociosexuality.* Narcissism was positively correlated with self-reported sociosexuality across most, but not all, major world regions of the ISDP-2, including North America,  $r(8191)=+.22, p<.001$ , Central/South America,  $r(2191)=+.19, p<.001$ , Northern Europe,  $r(1437)=+.18, p<.001$ , Western Europe,  $r(3844)=+.25, p<.001$ , Eastern Europe,  $r(3871)=+.27, p<.001$ , Southern Europe,  $r(2453)=+.25, p<.001$ , Middle East,  $r(541)=+.27, p<.001$ , Oceania,  $r(886)=+.22, p<.001$ , Southeast Asia,  $r(1475)=+.15, p<.001$ , and East Asia,  $r(1149)=+.22, p<.001$ , but not within Africa,  $r(1062)=+.01$ .

As predicted, the strongest associations with sociosexuality were among the socially maladaptive narcissism factor of Exhibitionism/Entitlement (worldwide;  $r(27140)=+.22, p<.001$ ) in the 2-factor model of Corry et al. (2008),  $Z_H=11.05, p<.001$ , and with the relatively maladaptive Raskin and Terry (1988) facets of Exhibitionism,  $r(27140)=+.22, p<.001$ , Exploitativeness,  $r(27140)=+.17, p<.001$ , Vanity,  $r(27140)=+.16, p<.001$ , and Authority,  $r(27140)=+.15, p<.001$ .

*Prediction 2d: HIV risk-taking.* Narcissism was positively correlated with self-reported HIV risk-taking across most, but not all, of the major world regions of the ISDP-2, including North America,  $r(8138)=+.16, p<.001$ , Central/South America,  $r(2389)=+.13, p<.05$ , Northern Europe,  $r(1155)=+.19, p<.001$ , Western Europe,  $r(4030)=+.13, p<.001$ , Eastern Europe,  $r(4066)=+.17, p<.001$ , Southern Europe,  $r(2605)=+.15, p<.001$ , Middle East,  $r(668)=+.11, p<.001$ , Oceania,  $r(910)=+.18, p<.001$ , Southeast Asia,  $r(1784)=+.11, p<.001$ , and East Asia,  $r(1170)=+.18, p<.001$ , but not within Africa,  $r(1454)=+.04$ .

As predicted, the strongest associations with HIV risk-taking were among the socially maladaptive narcissism factor of Exhibitionism/Entitlement (worldwide;  $r(28409)=+.14, p<.001$ ) in the 2-factor model of Corry et al. (2008),  $Z_H=7.96, p<.001$ , and with the relatively maladaptive Raskin and Terry (1988) facets of Exhibitionism,  $r(28409)=+.16, p<.001$ , Exploitativeness,  $r(28409)=+.13, p<.001$ , and Authority,  $r(28409)=+.10, p<.001$ .

*Prediction 2e: Intimate partner violence.* Narcissism was positively correlated with self-reported intimate partner violence perpetration across most, but not all, of

the major world regions of the ISDP-2, including North America,  $r(6414)=+.08$ ,  $p<.001$ , Western Europe,  $r(3078)=+.08$ ,  $p<.001$ , Eastern Europe,  $r(3099)=+.10$ ,  $p<.001$ , Southern Europe,  $r(2399)=+.15$ ,  $p<.001$ , Middle East,  $r(408)=+.13$ ,  $p<.001$ , Oceania,  $r(615)=+.17$ ,  $p<.001$ , Southeast Asia,  $r(1002)=+.06$ ,  $p<.05$ , and East Asia,  $r(718)=+.17$ ,  $p<.001$ , but not within Central/South America,  $r(2072)=+.03$ , Northern Europe,  $r(1157)=+.04$ , or Africa,  $r(1275)=+.04$ .

As predicted, the strongest associations with intimate partner violence perpetration were among the socially maladaptive narcissism factor of Exhibitionism/Entitlement (worldwide;  $r(22377)=+.11$ ,  $p<.001$ ) in the 2-factor model of Corry et al. (2008),  $Z_H=9.85$ ,  $p<.001$ , and with the relatively maladaptive Raskin and Terry (1988) facets of Exhibitionism,  $r(22377)=+.11$ ,  $p<.001$ , Entitlement,  $r(22377)=+.11$ ,  $p<.001$ , and Exploitativeness,  $r(22377)=+.08$ ,  $p<.001$ .

*Prediction 2f: Sexual aggression.* Narcissism was positively correlated with self-reported sexual aggression across the world regions of North America,  $r(8377)=+.11$ ,  $p<.001$ , Central/South America,  $r(2303)=+.06$ ,  $p<.01$ , Northern Europe,  $r(1570)=+.12$ ,  $p<.001$ , Western Europe,  $r(3975)=+.16$ ,  $p<.001$ , Eastern Europe,  $r(4001)=+.17$ ,  $p<.001$ , Southern Europe,  $r(2876)=+.21$ ,  $p<.001$ , Africa,  $r(1266)=+.09$ ,  $p<.001$ , Oceania,  $r(904)=+.13$ ,  $p<.001$ , Southeast Asia,  $r(1583)=+.10$ ,  $p<.001$ , and East Asia,  $r(973)=+.15$ ,  $p<.001$ . Sexual aggression was not assessed in any Middle East nations of the ISDP-2.

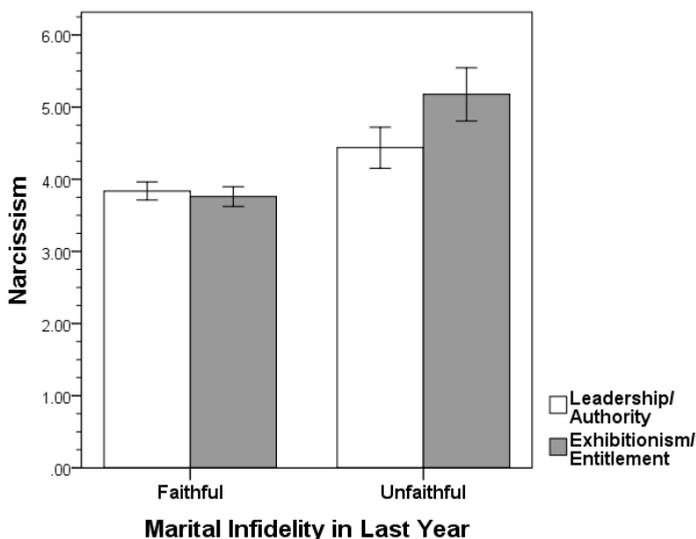
As predicted, the strongest associations with sexual aggression were among the socially maladaptive narcissism factor of Exhibitionism/Entitlement (worldwide;  $r(28099)=+.14$ ,  $p<.001$ ) in the 2-factor model of Corry et al. (2008),  $Z_H=12.65$ ,  $p<.001$ , and with the relatively maladaptive Raskin and Terry (1988) facets of Entitlement,  $r(28099)=+.11$ ,  $p<.001$ , Exhibitionism,  $r(28099)=+.10$ ,  $p<.001$ , and Vanity,  $r(28099)=+.07$ ,  $p<.001$ .

*Prediction 2g: Marital infidelity.* Among participants who reported they are currently married, and have been married for more than one year, we examined how many "sexual partners in the past year" they reported on the Sociosexual Orientation Inventory. Individuals married for more than one year were classified as "Faithful" if they reported one or zero sexual partners in the past year and "Unfaithful" if they reported two or more sexual partners in the past year. Although this distinction is imprecise (i.e., it counts as "unfaithful" those who may have marriages that are open, consensually non-monogamous, or willingly engaged in threesomes), we used it to broadly evaluate whether narcissism would be positively associated with marital infidelity. Because the total number of ISDP-2 participants who were married for at least one year and were classified as Unfaithful was low at the regional level (32 of 325 [10%] of married participants in North America, 27 of 102 [26%] of married participants in Central/South America, 7 of 92 [8%] of married participants in Northern Europe, 76 of 390 [19%] of married participants in Western Europe, 25 of 117 [21%] of married participants in Eastern Europe, 28 of 310 [9%] of married participants in Southern Europe, 1 of 24 [4%] of married participants in the Middle

East, 53 of 200 [27%] of married participants in Africa, 0 of 37 [0%] of married participants in Oceania, 2 of 18 [11%] of married participants in Southeast Asia, and 1 of 20 [5%] of married participants in East Asia), we report findings from the worldwide sample, controlling for sex, nation, and world region.

As predicted, narcissism was significantly higher among Unfaithful married participants ( $M=16.51$ ,  $SD=7.19$ ) compared to Faithful participants ( $M=13.68$ ,  $SD=6.76$ ),  $F(1, 1630)=34.62$ ,  $p<.001$ ,  $d=+0.41$ . These associations were larger for the socially maladaptive facets of narcissism than for the socially adaptive facets. As shown in Figure 1, the socially maladaptive narcissism factor of Exhibitionism/Entitlement (Corry et al., 2008) was significantly higher among Unfaithful married participants ( $M=5.20$ ,  $SD=2.99$ ) compared to Faithful participants ( $M=3.74$ ,  $SD=2.62$ ),  $F(1, 1706)=61.88$ ,  $p<.001$ ,  $d=+0.52$ . The socially adaptive narcissism factor of Leadership/Authority (Corry et al., 2008) displayed less of a difference (less than half the effect size) across among Unfaithful married participants ( $M=4.42$ ,  $SD=2.30$ ) compared to Faithful participants ( $M=3.84$ ,  $SD=2.41$ ),  $F(1, 1726)=13.23$ ,  $p<.001$ ,  $d=+0.25$ .

Figure 1. *Leadership/Authority Narcissism and Exhibitionism/Entitlement Narcissism associated with Marital Infidelity in the International Sexuality Description Project-2*



## Discussion

The psychology underlying narcissism would appear to facilitate the pursuit of short-term mating strategies in several ways. Narcissists are interpersonally exploitative, lack empathy, and possess unrealistic fantasies concerning romantic success (Buss & Chiodo, 1991; Campbell & Foster, 2007; Emmons, 1989). Indeed, previous research has found narcissists possess unrestricted sociosexual orientations (Foster et al., 2006), are less committed to their long-term partners (Campbell & Foster, 2002; Jonason & Buss, 2012), and engage in relatively high rates of infidelity (Adams et al., 2014; Jones & Weiser, 2014; McNulty & Widman, 2014). However, nearly all evidence supporting this portrait of narcissism's functional connection to short-term mating has been generated from studies of WEIRD cultures. There is some evidence the psychological conceptualization of what narcissism is, and how it functions, does not fully generalize across non-Western cultures (Feng et al., 2012; Fukunishi et al., 1996; Heine, Lehman, Markus, & Kitayama, 1999; Tanchotsrinon et al., 2007). In this article, we directly addressed these concerns by evaluating links between narcissism, personality traits, and multiple indicators of short-term mating psychology across the dozens of Western and non-Western cultures from the International Sexuality Description Project-2 (ISDP-2; Schmitt et al., 2017).

In support of the view that narcissism has conceptual equivalence across cultures (*Hypothesis 1*), we found overall narcissism scores and various factor and facet scale scores on the NPI had very similar associations with features of personality across all major world regions of the ISDP-2. Narcissism was moderately and positively correlated with self-esteem across all major world regions of the ISDP-2, including North America, Central/South America, Northern Europe, Western Europe, Eastern Europe, Southern Europe, Middle East, Africa, Oceania, Southeast Asia, and East Asia. As with previous studies, the strongest associations with self-esteem were among the more socially adaptive narcissism factor of Leadership/Authority in the 2-factor model of Corry et al. (2008), and with the relatively adaptive Raskin and Terry (1988) facets of Authority and Self-Sufficiency, and to a lesser degree with Vanity and Superiority. Similarly, universal links were predictably observed between narcissism and Big Five personality traits, including positive correlations with extraversion, conscientiousness, and openness to experience, and negative correlations with agreeableness and neuroticism. Finally, narcissism (particularly socially adaptive narcissism) was predictably associated with slightly higher subjective well-being across all world regions of the ISDP-2.

In support of the view that narcissism has functional equivalence across cultures (*Hypothesis 2*), we found overall narcissism scores and various facet scale scores on the NPI had similar associations with features of short-term mating and sexual aggression across all, or nearly all, major world regions of the ISDP-2. Narcissism was panuniversally linked with short-term mating interests, short-term mate poaching, and unrestricted sociosexuality with very few exceptions. Narcissism also

was universally, or near-universally, linked with HIV risk-taking, perpetration of intimate partner violence, and sexual aggression perpetration, though these links were weaker in magnitude than narcissism's links with short-term mating strategies. Across nearly all sexuality measures in this study, associations were especially pronounced with the socially maladaptive components of narcissism, including facets of Exhibitionism, Exploitativeness, and Entitlement (Reidy et al., 2008). Overall, the current findings provide suggestive evidence that narcissism—particularly Exhibitionism, Exploitativeness, and Entitlement—may constitute part of a specialized, functional psychology that facilitates short-term mating as a sexual strategy (Holtzman & Strube, 2011; Jonason et al., 2009), and does so in universal ways across human cultural forms.

### *Limitations and Future Research Directions*

This study has several significant limitations that should caution against definitively concluding the NPI has conceptual and functional equivalence across all human cultures. For instance, the samples of the ISDP-2 were not representative of all people, nor were they particularly representative of the nations from which they were drawn. Many human populations, including many forms of small-scale societies, were entirely missing from the ISDP-2, and extreme caution is warranted to generalizing these results to pre-industrial cultures (Henrich et al., 2001). Moreover, our participants were mostly volunteer college students, leaving open the possibility that those who participated in this study were especially erotophilic, extraverted, and sexually experienced compared to those who did not participate (Wiederman, 1999). These factors may have affected the range of scores on many of our sexuality and personality measures in ways that limit the generalizability of our findings to general populations (Hanel & Vione, 2017). Indeed, the relatively weaker associations between Narcissism and short-term mating indicators within our African world region may reflect the relatively restricted levels of short-term mating found among college student samples from those cultures (Schmitt, 2005b). Limitations due to the relatively youthful age of our participants are also important, as younger participants may tend to score higher in certain features of narcissism (Cai, Kwan, & Sedikides, 2012; Cramer, 2011; Foster, Campbell, & Twenge, 2003; Twenge, Konrath, Foster, Campbell, & Bushman, 2008).

This study was also limited to a particular operationalization of narcissism—the NPI. The NPI factor structure has been a source of debate and confusion for decades (Ackerman et al., 2011; Brown et al., 2009; Emmons, 1984; Miller & Campbell, 2011), and in this study the two-factor (Corry et al., 2008) and seven-facet (Raskin & Terry, 1988) approaches had relatively weak internal reliability and measurement invariance in less developed cultures, especially samples from sub-Saharan Africa (see Schmitt et al., 2017). Still, the seven-facet approach has the best factor structure fit across nearly all nations (Schmitt et al., 2017), and in this study appeared to possess both conceptual and functional equivalence in that the seven facets correlated,

almost always as predicted, with measures of personality and sexuality within world regions.

The NPI is also conceptually limited in that it is consensually regarded as a measure of the more grandiose aspects of narcissism, and not of the vulnerable aspects of narcissism that are central to narcissism as a personality disorder (Miller et al., 2016; Miller, Lynam, Hyatt, & Campbell, 2017; Wink, 1991). Future researchers should examine a wider range of narcissism conceptualizations and operationalizations - including measures of Pathological Narcissism (Pincus et al., 2009), Sexual Narcissism (Hurlbert, Apt, Gasar, Wilson, & Murphy, 1994; McNulty & Widman, 2014), and Collective Narcissism (de Zavala, Cichocka, Eidelson, & Jayawickreme, 2009) - and investigate how the factors and facets of these measures are universally linked, or not, to personality and short-term mating strategies across cultures. Future studies should also examine whether narcissism versus other traits are most operative when evoking short-term mating (Carton & Egan, 2017; Kiire, 2017), how the specific subtypes of narcissism relate to short-term mating (e.g., Wetzell, Leckelt, Gerlach, & Back, 2016; Zeigler-Hill, Clark, & Pickard, 2008), how narcissism relates to subtypes of short-term mating (Jonason, Luevano, & Adams, 2012), as well as how the differing affective-motivational processes of narcissistic admiration and rivalry (Back et al., 2013; Wurst et al., 2017) and impulse control (Vazire & Funder, 2006) play different roles in generating narcissism's functional evocation of short-term mating strategies across cultures.

In addition, future researchers should examine potential multi-cultural moderators of our observed narcissism-sexuality linkages. Several studies indicate psychological traits, including narcissism, have different conceptual and functional equivalences across factors such as socioeconomic status (Brown & Zeigler-Hill, 2004; Kraus, Piff, & Keltner, 2011; Piff, 2014), ethnicity (Zeigler-Hill & Wallace, 2011), religiosity (Łowicki & Zajenkowski, 2016), biological sex (Ciani, Summers, & Easter, 2008; Grijalva et al., 2015; Lyons, Croft, Fairhurst, Varley, & Wilson, 2017; Tschanz, Morf, & Turner, 1998), sexual orientation (Freud, 1905; Rubinstein, 2010), and marital status (Stinson et al., 2008). Each of these factors remain important potential moderators of the current results. Future investigations into these unresolved issues may help researchers understand which psychological mechanisms (e.g., biased perceptions of attractiveness; Dufner, Rauthmann, Czarna, & Denissen, 2013; Gabriel, Critelli, & Ee, 1994; Holtzman & Strube, 2010; John & Robbins, 1994; Rauthmann & Kolar, 2013; increased self-confidence and lowered inhibitions; Campbell, Goodie, & Foster, 2004; Foster & Campbell, 2005; decreased empathy; Watson et al., 1984; or increased entitlement; Bishop & Lane, 2002; Żemojtel-Piotrowska et al., 2015) and associated genetic architectures (Holtzman & Donnellan, 2015; Luo, Cai, Sedikides, & Song, 2014) might functionally undergird narcissism's evocation of short-term mating strategies across diverse multi-cultural contexts.

Finally, the findings of the present study represent results from a mere flashpoint in time. Future, repeated assessments of narcissism and short-term mating strategies need to be conducted before our conclusions warrant more serious consideration. Narcissism has been observed to be rising across generations (Twenge & Foster, 2010; Twenge et al., 2008), alongside increases in self-esteem (Twenge, Carter, & Campbell, 2017) and the lowering of empathy across generations (Konrath, O'Brien, & Hsing, 2011; Roberts, Edmonds, & Grijalva, 2010; Trzesniewski, Donnellan, & Robins, 2008). By tracking how these historical and cohort-related changes in narcissism predictably precede cross-temporal changes in sexual outcomes, researchers will be in a stronger position to infer causal links between facets of narcissistic psychology and the functional evocation of short-term mating strategies (Gangestad & Simpson, 2000; Jonason et al., 2009).

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## **Narcisismo y búsqueda estratégica del emparejamiento a corto plazo a través de las culturas: Enlaces omnipresentes a través de 11 regiones mundiales del Proyecto de la descripción de la sexualidad internacional 2**

### **Resumen**

Estudios previos, en primer lugar a través de las muestras de culturas occidentales, han documentado asociaciones sistemáticas del narcisismo subclínico con múltiples indicadores de estrategias del emparejamiento a corto plazo (p. ej. sociosexualidad ilimitada, infidelidad, caza de pareja). En este estudio se han usado respuestas de la encuesta transcultural de 30.470 personas de 53 naciones de 11 regiones mundiales (América del Norte, América del Sur/América Central, Europa del Norte, Europa del Oeste, Europa del Este, Europa del Sur, Oriente Próximo, África, Asia del Sur/Sudoeste de Asia, Asia del Este y Oceanía) para evaluar si el narcisismo (medido por el Inventario de Personalidad Narcisista; NPI) se asocia panuniversalmente con los indicadores del emparejamiento a corto plazo, tanto en la dirección, como en la intensidad. Los resultados sugieren que el narcisismo (incluidos muchos aspectos suyos medidos por el NPI) tiene las mismas asociaciones básicas con los rasgos de personalidad relacionados con el sexo (p. ej. extraversión alta) y con los resultados sexuales claves (p. ej. búsqueda más activa de las estrategias del emparejamiento a corto plazo) a través de las 11 mayores regiones mundiales del PDSI 2. La discusión se enfoca en las implicaciones y limitaciones del estudio actual.

**Palabras claves:** narcisismo, sexualidad, personalidad, psicología transcultural

Received: March 20, 2017

### Footnotes

- <sup>1</sup> WEIRD is an acronym for Western, educated, industrialized, rich, and democratic cultures. WEIRD people represent less than 13% of the world's population, yet more than 96% of research findings in psychology journals are based on studies limited to WEIRD-only cultures (Henrich, Heine, & Norenzayan, 2010).
- <sup>2</sup> Although 58 nations in total were sampled in the ISDP-2, in only 53 nations was the Narcissistic Personality Inventory administered to participants. The 5 ISDP-2 nations in which Narcissism was not assessed (due to decisions made by individual ISDP-2 researchers) were Bangladesh, Belgium, Israel, the Netherlands, and Zimbabwe.
- <sup>3</sup> All correlations represent partial correlations controlling for sex of participant and nation within each world region. Although some links between Narcissism and personality criterion variables did differ by sex of participant, most findings did not differ significantly between men and women. For instance, in North America the correlation between Narcissism and self-esteem did not differ between men,  $r(3234)=+.34, p<.001$ , and women,  $r(5281)=+.35, p<.001$ . Findings also were largely unaffected by age and relationship status. Multilevel analyses and partial correlation analyses controlling for these additional factors are available from the first author.
- <sup>4</sup> Many of the relatively weak correlations within the ISPD-2 world region of Africa were due to especially weak or missing associations observed in Ethiopia. For instance, the expected positive correlation between Narcissism and self-esteem was not observed in Ethiopia,  $r(318)=-.05$ , but was found in Nigeria,  $r(285)=+.23, p<.001$ , South Africa,  $r(343)=+.18, p<.001$ , Swaziland,  $r(129)=+.21, p<.01$ , and Tanzania,  $r(362)=+.24, p<.001$ . However, the internal reliability of the overall NPI scale within Ethiopia ( $\alpha=.69$ ) was typical of the African world region, comparable to findings from Nigeria ( $\alpha=.78$ ), South Africa ( $\alpha=.71$ ), Swaziland ( $\alpha=.69$ ), and Tanzania ( $\alpha=.67$ ). Additional nation-level findings from within Africa are available from the first author.
- <sup>5</sup> All correlations represent partial correlations controlling for sex of participant and nation within each world region. Links between Narcissism and sexuality criterion variables often did differ by sex of participant, with stronger links observed among men. For instance, in North America the correlation between Narcissism and short-term mating interests was stronger in men,  $r(2596)=+.22, p<.001$ , than women,  $r(4034)=+.14, p<.001$ , Fisher's  $r$  to  $z'=3.29, p<.001$ . For economy of presentation and to maintain the focus on Narcissism and sexuality across world regions, we present findings within each world region partialling out effects of sex of participant. Findings were largely unaffected by age and relationship status. Multilevel analyses and partial correlation analyses controlling for these additional factors are available from the first author.
- <sup>6</sup> = Some words were also presented in Cebuano.

