

Engagement in One-Night Stands in Germany and Spain:
Does Personality Matter?

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Abstract

Casual sex such as spontaneous sexual interactions with strangers (i.e., one-night stands) represents a common sexual experience for many young adults. Previous research focused either on individual differences or on cross-cultural effects that predict the engagement in one-night stands. This study integrates both lines of research and examines the effects of four personality traits (extraversion, neuroticism, sensation seeking, and the need for affect) on the number of one-night stands in two countries (Germany and Spain). A web-based study on $N = 913$ adults (759 women) showed that extraversion and sensation seeking are the strongest predictors of engagement in one-night stands. These results were replicated for participants from both countries indicating universal personality effects across cultures. The study highlights the importance of adopting an individual difference perspective in sex research.

Keywords: casual sex; extraversion; sensation seeking; neuroticism; need for affect; cross-cultural; gender

Introduction

Casual sex is a sexual encounter outside of a committed or romantic relationship (Lyons, 2015). A specific form of casual sex are so-called one-night stands, that is, single spontaneous sexual encounters between strangers or casual acquaintances without intimate self-disclosure (Wentland & Reissing, 2014). In western societies, one-night stands are widespread among adults (Baumeister & Mendoza, 2011) and college students (Claxton & van Dulmen, 2013). Studies highlighted that the engagement in casual sex such as one-night stands is partly determined by individual differences in personality such as extraversion or sensation seeking (Jonason, Hatfield, & Boler, 2015; Nguyen et al., 2012). A limitation of previous research in this area is its focus on members of a single society. Given pronounced cross-cultural differences in personality (Schmitt, Allik, McCrae, & Benet-Martínez, 2007) and evidence indicating different prevalence rates of one-night stands across cultures (Baumeister & Mendoza, 2011), it might be speculated that individual differences affect the likelihood of engaging in one-night-stands differently across countries. Therefore, the present study integrates these two lines of research and examines the joint influence of personality and culture on the engagement in one-night stands in Germany and Spain.

Personality traits and casual sex

According to Eysenck (1967), the two basic dimensions of human personality are extraversion (versus introversion) and emotional stability (versus instability/neuroticism). Extraverted persons are characterized as impulsive, sociable, and cheerful, whereas introverted individuals are more distant, serious, and neat. In contrast, neuroticism reflects a rather instable emotionality, combined with nervousness and irritability. In the context of sexuality, Eysenck (1976) argued that introverts have a higher level of arousal and, therefore, tend to avoid strongly stimulating experiences such as sexual encounters, whereas extraverts seek out such experiences on purpose to reach an optimal level of arousal. This hypothesis is supported by findings indicating that extraverts reported more high-risk sexual behavior

(Turchik, Garske, Probst & Irvin, 2010), more sexual partners by the age of 20 (Miller, et al., 2004) as well as more one-night stands (Gute & Eshbaugh, 2008). Also, further studies showed substantial correlations between extraversion and promiscuity (Schmitt, 2004) or the number of booty-call relationships (Jonason et al., 2015). Additionally, Eysenck (1976) assumed that emotional instability would be associated with sorrows and fears towards sexuality. Therefore, neurotic people should engage less in sexual interactions; they should even feel repelled by some aspects of sexuality. However, empirical tests of these assumptions were less clear. Some authors found that neuroticism was negatively correlated with sexual desires (Miri, AliBesharat, Asadi, & Shahyad, 2011), whereas others reported that neuroticism increased (instead of decreased) the likelihood of engaging in non-committed sex (Gute & Eshbaugh, 2008) and of extramarital sexual relations (Whisman, Gordon, & Chatav, 2007). Based on these findings, we expected that extraversion would be positively correlated with the engagement in one-night stands. In light of the inconsistent empirical findings, a respective hypothesis was not put forward for neuroticism.

H1: Extraversion positively predicts the engagement in one-night stands.

Sensation seeking represents the willingness to seek out novel and intense sensations and to take personal risks in pursuing these sensations (Zuckerman, 1979). Within the context of sexuality, sensation seeking has been related to various forms of sexual high-risk behaviors (e.g., Charnigo et al., 2013; Hendershot, Stoner, George, & Norris, 2007). Moreover, sensation seeking was also positively correlated with the number of sexual partners, the number of short-term relationships, and the frequency of casual sex (e.g., Nguyen et al., 2012; Seto et al., 1995). Taken together, these results led to Hypothesis 2:

H2: Sensation seeking positively predicts the engagement in one-night stands.

The need for affect represents a general motivation to approach or avoid emotion-evoking situations, independent of their emotional valence (Maio & Esses, 2001). Hitherto, this personality trait has been neglected in the context of sexual behavior. Need for affect

reflects individual differences in people's attitudes towards emotions and whether they generally tend to seek out or avoid emotional experiences. Although a one-night stand (as compared to romantic partnerships), per definition, does not satisfy the need for belongingness and relatedness (cf, Baumeister & Leary, 1996), it was found to elicit considerable positive affect (particularly in men) but also some negative affect the morning after (Campell, 2008). Moreover, U.S. college students reported that vaginal sex was positively linked to negative affect associated with the most recent hookup, whereas oral sex showed a slight positive correlation with positive affect (Lewis, Granato, Blayney, Lostutter, & Kilmer, 2012). Thus, the need for affect might represent an important trait explaining the engagement in one-night-stands beyond extraversion and sensation-seeking.

H3: The need for affect positively predicts the engagement in one-night stands.

Sexual Behaviors across Countries

Given significant cross-cultural differences in extraversion and neuroticism (Lynn & Martin, 1995) as well as sensation seeking (Pizam et al., 2004), a joint analysis of personality and culture is necessary to disentangle the contribution of both factors to casual sex. Also, having promiscuous sex may result in higher risks for sexually transmitted diseases (cf. Christianson, Johansson, Emmelin, & Westman, 2003; Schmitt, 2004) and psychological well-being (Bersamin et al., 2014), leading to culture-specific consequences for health prevention and promotion. However, hitherto engagement in casual sex has been primarily examined from a mono-cultural perspective. Few studies investigated cross-cultural differences; in one of the rare studies Spanish adults scored higher on scales measuring risky sexual behavior and permissive sexual attitudes than Dutch respondents (Jong, Pieters, & Stremersch, 2012). Moreover, Dennerstein and Leher (2004) demonstrated that women of southern European countries reported more sexual intercourse than women from Northern or Eastern Europe. These cultural differences indicate more sexual partners and more sexual encounters in southern regions. Consequently, we hypothesized:

H4: Spanish participants engage in more one-night stands than German participants.

In addition to main effects of personality traits and country membership, the current study examined whether individual differences are comparably important predictors of the engagement in one-night stands in Germany and Spain. Moderating effects of culture have been rarely explored before in casual sex research. Investigating promiscuity across 52 nations, Schmitt (2004) found differential effects for some personality traits across geographical groups, proposing that personality effects on one-night stands are not necessarily universal across countries.

Method

Participants

A cross-sectional sample of 1,155 German and Spanish students was recruited over the Internet using snowball sampling. They were invited in academic mailing lists, bulletin boards, and social networks to complete an unproctored, web-based questionnaire. All participants who finished the survey were eligible to enter a lottery for a gift certificate. To control for potential confounds resulting from the non-probability sampling strategy we selected two matched subsamples of German and Spanish respondents. Using a genetic matching algorithm (Diamond & Sekhon, 2013) the two cultural groups were matched on sex, age, employment status, and relationship status. Propensity score matching has become increasingly popular in survey research because it asymptotically balances two samples on observed covariates and, thus, removes potential biases conditional on these covariates (cf. Li, 2013). The final sample selected for this study included 730 participants from Germany and 183 participants from Spain that had comparable distributions on the four covariates: About 80% of the participants were female, they were between 18 and 31 years old ($M = 21.84$, $SD = 2.83$), and most of them (86%) were active students of various majors. Regarding their relationship status, 60% of the sample reported being currently in a long-term relationship,

15% were never in a long-term relationship before, and the rest reported being currently single.

Measures

Participants were either administered the German or Spanish language version of the instruments. The Spanish language versions were rigorously constructed in line with state-of-the-art standards in cross-cultural research involving translation-back-translation method.

Engagement in one-night stands. After presenting a brief definition of an one-night stand—that is, a singular, non-monetary, voluntary sexual (either genital or oral) intercourse with a stranger or acquaintance—participants were asked to indicate their lifetime prevalence of one-night stands. This operationalization of a one-night stand includes a sexual intercourse (i.e., vaginal or penile penetration) and thus is not synonymous with “hookups” that may or may not include sexual intercourse (Paul, McManus, & Hayes, 2000).

Extraversion and neuroticism. The two basic dimensions of human personality sensu Eysenck (1967) were captured with two subscales of the Freiburg Personality Inventory (Fahrenberg, Hampel, & Selg, 2010). Each scale included 14 dichotomous items with response scales from 0 (do not agree) to 1 (agree). The extraversion scales resulted in coefficient alpha reliabilities of $\alpha = .77$ in the German sample and $\alpha = .74$ in the Spanish sample. The respective reliabilities for the neuroticism scale were $\alpha = .74$ and $.76$.

Sensation seeking. Following Zuckerman’s (1979) four-factorial model of sensation seeking, the construct was operationalized with a short instrument including two items per dimension (Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002). Responses were indicated on 5-point response scales from 1 (strongly disagree) to 5 (strongly agree). The total score for sensation seeking resulted in reliabilities of $\alpha = .75$ and $.78$ in the German and Spanish sample, respectively.

Need for affect. The need for affect was measured with 10 statements (e.g., “I feel that I need to experience strong emotions regularly”, “I think it is important to explore my

feelings”, or “In find strong emotions overwhelming and therefore try to avoid them”) taken from Appel, Gnambs, and Maio (2012). Participants responded to each statement using 7-point response scales from 1 (strongly disagree) to 7 (strongly agree). In the Spanish sample the reliability of the scale, $\alpha = .69$, was slightly impaired, whereas the need of affect scale resulted in a good reliability of $\alpha = .79$ in the German sample.

Comparability of measures across countries

Comparisons of individuals across cultures require that the scale scores represent comparable indicators of a latent construct in both countries; that is, measurement equivalence across cultures must hold (cf. Chen, 2008; Gnambs & Hanfstingl, 2014). Differential item functioning was examined for each instrument separately using the multiple-indicator multiple-cause approach advocated by Woods and Grimm (2011). The results of these analyses are summarized in the online supplement and corroborated acceptable measurement models of all scales for cross-cultural comparisons.

Results

Descriptive statistics, reliabilities, and bivariate correlations between all measures are presented in Table 1. Most correlations were rather small, indicating that the self-report measures captured different constructs.

Differences between Countries

Initially, we examined a potential culture effect in the reported prevalence rates of one-night stands. To this end, the number of one-night stands was regressed on a dummy-coded indicator for the respondents' country (0 = Germany, 1 = Spain). Because the dependent variable was censored on the lower end (the smallest possible value was 0), we estimated a Tobin (1958) regression model. Respondents' sex, age, and relationship status were included as control variables. Supporting Hypothesis 4, we found a main effect of the country of origin (Model 1 in Table 2). Spanish participants reported significantly more one-night stands ($M = 2.37, SD = 3.95$) than Germans ($M = 1.52, SD = 2.39$).

Personality traits and one-night stands

It was hypothesized that personality traits would predict the number of one-night stands (H1, H2, and H3). Therefore, the number of one-night stands was regressed on the four traits in Table 1. Supporting the hypotheses, extraversion (H1) and sensation seeking (H2), but also neuroticism, significantly predicted the number of one-night stands (Model 2 in Table 2). In contrast to H3, the need for affect showed no main effect. Together, the four personality traits explained about 13% of variance in the number of one-night stands. Thus, these results confirm the importance of individual differences for sexual behavior. More importantly, respondents' country of origin did not moderate the effect of any personality (Model 3 in Table 2). Extraversion, sensation seeking, and neuroticism were comparable predictors of sexual behaviour in Germany and Spain, lending no support for the hypothesis of cross-cultural differences in personality effects as previously suggested (Schmitt, 2004; but see below).

Gender differences in cross-cultural effects

Because some authors (Peterson & Hyde, 2010; Sprecher et al., 2013) identified pronounced sex differences with regard to sexual attitudes and behaviors, we also examined whether associations between personality traits and the number of one-night stands might differ for men and women. Therefore, regression model 4 in Table 2 analyzed the joint moderating effect of country and sex on the number of one-night stands. These analyses identified significant sex-specific cultural differences in the number of one-night stands. In Spain men ($M = 3.4$, $SD = 5.3$) reported more one-night stands than women ($M = 2.1$, $SD = 3.5$), whereas Germans reported the opposite pattern (men: $M = 1.2$, $SD = 2.2$; women: $M = 1.6$, $SD = 2.4$). This two-way interaction was further qualified by significant three-way interactions for two of the four traits (neuroticism and need for affect). In order to examine the form of this moderation more closely, the respective correlations representing these effects are plotted in Figure 1. It is striking that the importance of these two traits for the prediction of

the number of one-night stands are limited to men but are less relevant for women, whereby men showed opposing effects in Germany and Spain. The number of one-night stands in Germany was associated with larger levels of neuroticism and need of affect, whereas in Spain one-night stands increased for lower levels of these traits. However, these results should be considered preliminary and interpreted with caution because the present samples included rather few men (German: $n = 119$, Spanish: $n = 35$).

Discussion

An increasing body of research is devoted to the understanding of predictors of sexual behaviors. This study focused on an increasingly prevalent (Baumeister & Mendoza, 2011) form of sexual activities, one-night stands. To deepen our understanding of casual sex, we examined the role of personality traits for the engagement in casual sex across two culturally diverse countries. The study resulted in three main findings:

First, in line with previous results (Dennerstein & Lebert, 2004; de Jong et al., 2002) we identified pronounced cross-country differences. Spanish participants reported more one-night stands than Germans. Second, personality predicted participants' prevalence rates of one-night-stands. Extraversion, neuroticism, and sensation seeking were predictors of the number of one-night stands, whereas the need of affect showed no incremental effect. Higher levels of these traits were accompanied by higher rates of one-night stands. These results fall in line with some previous research reporting that neuroticism increased non-committed sex (Gute & Eshbaugh, 2008) and extramarital relations (Whisman et al., 2007), and research that found positive correlations between extraversion or sensation seeking and the number of sexual partners and high risk sexual behaviors (e.g., Charnigo et al., 2013; Miller, et al., 2004; Seto et al., 1995; Turchik et al., 2010). Third, the effects of the personality traits on the number of one-night stands were not moderated by participants' country of origin. Thus, personality traits seem to be universally related to sexual activities. However, cultural effects

seemed to interact with participant's gender. Cross-cultural differences in neuroticism and the need for affect effects were limited to male participants.

Overall, the predictor variables explained a rather small amount of variance in the prevalence rate of one-night stands. This suggests that engagements in one-night stands may be more strongly determined by situational factors than by time-invariant personality characteristics. Future studies are encouraged to examine aspects of the situational context in which one-night stands are pioneered. Regarding cross-cultural differences in one-night stand behavior, a systematic cross-cultural variation of such contextual factors is also conceivable. Thus, cultural effects might reflect for instance differences in flirtation contexts instead of culture-specific differences in personality. Finally, our knowledge is very sparse regarding the actual mechanisms that may mediate effects of personality characteristics, including cultural background, on the willingness to commit one-night stands. For example, Petersen and Hyde (2010) pointed out that there have been considerable changes in the presentation of sexual behavior in media such as sexually permissive behaviors and the frequency of sexualized media images. Recipients' may learn and adopt such sexual behavior by observing others' behavior displayed in media. Given that some studies reported a link between media consumption preferences and personality traits (e.g., Finn, 1997) as well as the cultural background of the recipient (e.g., Lee & Tse, 1994), media consumption behavior might be one potential mediator.

Limitations

These findings have to be interpreted in light of some limitations. The observed cross-cultural differences might represent a form of self-selection bias in case Spaniards only participated if they had frequent one-night-stands. Alternatively, it might be that social norms regarding casual sex differ between Spain and Germany so that the results represent a true cultural difference. Furthermore, it is conceivable that Spaniards have a higher tendency for impression management in the way that they tend to emphasize sexual openness. However,

Gnambs and Kaspar (2015) showed in a recent meta-analysis that unproctored computerized testing (as in the present study) increases the tendency for self-disclosure. Against this background, the present result may indeed indicate a valid cultural effect. However, online assessments did not allow controlling for participants' actual engagement in the survey, environmental distractions during responding, and technical problems at the receiver's side. Also, we did not assess potential differences in used contraceptive methods for birth control that has been found to differ across European countries (Skouby, 2004) and that may also affect casual sex behavior. In general, more research is needed that focuses on other socioeconomic groups due to differences in sexual behavior (Singh, Darroch, & Frost, 2001) and self-disclosure tendencies (Consedine, Sabag-Cohen, & Krivoshekova, 2007).

Conclusions

The present study showed that personality traits of individuals comparably predict the number of one-night stands in Germany and Spain. However, in light of the small percentage of variance that is explained by time-invariant characteristics, these results call for a stronger consideration of contextual factors and caution against overestimating the importance of personality for the prediction of casual sex. A better understanding of the antecedents of one-night stands will expand our knowledge of mate selection behavior by uncovering those determinants that differ between a single spontaneous sexual encounter and a long-lasting relationship.

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Table 1.

Descriptive Statistics and Correlations among Study Variables

	<i>M</i>	<i>SD</i>	α	Correlations					<i>M</i>	<i>SD</i>	α
				1.	2.	3.	4.	5.			
1. Number of one-night stands	1.26	2.42			.20*	.01	.21*	-.09	2.37	3.94	
2. Extraversion	0.57	0.23	.77	.23*		-.22*	.36*	.25*	0.67	0.20	.74
3. Neuroticism	0.39	0.22	.74	.03	-.13*		.06	-.34*	0.38	0.23	.76
4. Sensation seeking	2.99	0.79	.75	.28*	.44*	-.02		.11	3.36	0.71	.78
5. Need for affect	5.28	0.83	.79	.07	.22*	-.19*	-.10*		5.23	0.70	.69

Note. α = Coefficient alpha reliability. Correlations for Germany are below the diagonal and correlations for Spain are above the diagonal

* $p < .05$

Table 2.

Regression of Reported One-Night Stands on Individual Differences and Country

		Model 1		Model 2		Model 3		Model 4	
		<i>B</i> (<i>SE</i>)	β	<i>B</i> (<i>SE</i>)	β	<i>B</i> (<i>SE</i>)	β	<i>B</i> (<i>SE</i>)	β
Intercepts		-9.31* (1.54)		-10.05* (1.48)		-9.81* (1.48)		-9.04* (1.44)	
		1.59* (0.04)		1.52* (0.04)		1.51* (0.04)		1.47* (0.04)	
<i>Main effects</i>									
1.	Country ^a	2.08* (0.45)	.30	1.05* (0.43)	.15	0.90 (0.49)	.13	0.74 (0.51)	.11
2.	Extraversion			3.79* (0.92)	.31	3.46* (1.01)	.28	-3.44* (1.07)	.28
3.	Neuroticism			2.00* (0.83)	.16	2.51* (0.94)	.21	0.95 (1.02)	.35
4.	Sensation seeking			2.11* (0.30)	.54	2.21* (0.34)	.57	2.41* (0.36)	.62
5.	Need for affect			-0.04 (0.25)	-.01	0.14 (0.27)	.04	-0.16 (0.30)	-.04
<i>Control variables</i>									
6.	Sex ^b	-1.26* (0.49)	-.17	-1.43* (0.02)	-.19	-1.43* (0.48)	-.19	-1.52* (0.59)	-.20
7.	Age	0.40* (0.07)	.35	0.43* (0.06)	.38	0.42* (0.06)	.37	0.39* (0.06)	.34
8.	Relationship status ^c	-1.08* (0.39)	-.19	-0.61 (0.38)	-.11	-0.60 (0.38)	-.11	-0.50 (0.37)	-.09
<i>Moderating effects of country</i>									
9.	2. x 1.					1.41 (2.39)	.05	0.70 (2.59)	.02
10.	3. x 1.					-2.67 (2.01)	-.10	1.67 (2.13)	.06
11.	4. x 1.					-0.33 (0.66)	-.04	-1.25 (0.71)	-.15
12.	5. x 1.					-1.11 (0.63)	-.13	-0.20 (0.66)	-.02

Table 2 (continued).

		Model 1		Model 2		Model 3		Model 4	
		<i>B (SE)</i>	β	<i>B (SE)</i>	β	<i>B (SE)</i>	β	<i>B (SE)</i>	β
<i>Moderating effects of sex</i>									
13.	6. x 1.							-3.34 (1.89)	-.23
14.	2. x 2.							0.40 (2.55)	.01
15.	3. x 2.							6.88* (2.36)	.23
16.	4. x 2.							-1.72 (0.91)	-.20
17.	5. x 2.							1.13 (0.64)	.15
18.	2. x 1. x 6.							11.47 (7.22)	.21
19.	3. x 1. x 6.							-34.41* (7.20)	-.50
20.	4. x 1. x 6.							2.24 (1.97)	.15
21.	5. x 1. x 6.							-8.19* (2.08)	-.39
	R^2	.06		.13		.13		.17	

Note. Censored regression analyses (Tobin, 1958). ^a Coded as 0 for Germany and 1 for Spain. ^b Coded as 0 for women and 1 for men. ^c Coded as 0 for individuals within a relationship and 1 for singles.

* $p < .05$

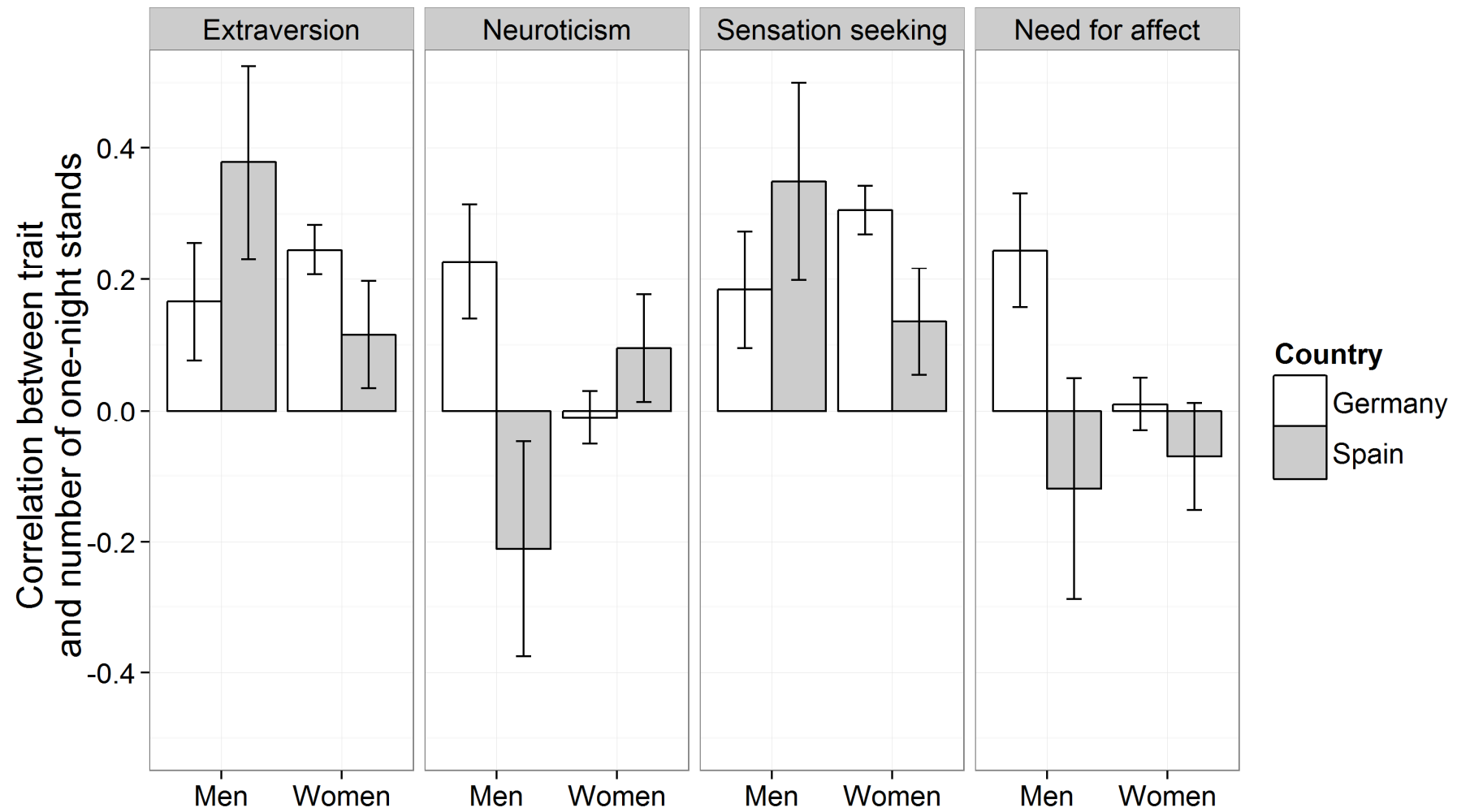


Figure 1. Correlations (including standard errors) between personality traits and number of one-night stands by sex and country.

Running head: ONE-NIGHT-STANDS

Engagement in One-Night Stands in Germany and Spain:

Does Personality Matter?

Supplement

Analysis of Differential Item Functioning

Differential item functioning (DIF) was examined for each instrument separately using the multiple-indicator multiple-cause (Woods & Grimm, 2011). For the purpose of our study, non-uniform DIF was of focal concern because it could bias estimated associations between variables such as regression slopes (Chen, 2008); uniform DIF would be a prerequisite for the analyses of mean differences and, thus, was of no importance for the present study. Following the classification system of the Educational Testing Service (Dorans & Holland, 1993), items were categorized into three groups indicating negligible, moderate, or large DIF (cf. Monahan, McHorney, Stump, & Perkins, 2007). The results of the DIF analyses are summarized in Table S1.

Table S1.

Percentage of Items per Scale with Differential Item Functioning

	Non-uniform DIF			Uniform DIF		
	Negligible	Moderate	Large	Negligible	Moderate	Large
Extraversion	93%	0%	7%	36%	7%	57%
Neuroticism	93%	0%	7%	57%	0%	43%
Sensation seeking	100%	0%	0%	37%	25%	38%
Need for affect	80%	0%	20%	70%	10%	20%

For most scales up to half of the items exhibited uniform DIF across cultures, but the number of items exhibiting non-uniform DIF was quite small. Most scales included a single non-invariant item. Hence, the percentage of items with negligible DIF varied between 80% and 100%. Simulation studies (Chen, 2008) indicated that scales including up to 25% non-invariant items result in negligible biases of regression slopes. Thus, the measurement models of the scales seemed acceptable for cross-cultural comparisons.

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