Sex differences in distress from infidelity in early adulthood and in later life

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A Replication and Meta-Analysis of Shackelford et al. (2004)

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Abstract. Shackelford and colleagues (2004) found that men, compared to women, are more distressed by sexual than emotional infidelity, and this sex difference continued into older age. We conducted four high-powered replications (total $N = 1,952$) of this effect and found different results. A meta-analysis of original and replication studies finds the sex difference in younger samples (though with a smaller effect size), and no effect among older samples. Furthermore, we found attitude toward uncommitted sex to be a mediator (although not consistently in the same direction) between participant sex and relative distress between sexual and emotional infidelity. We hypothesize that the discrepancies between the original and replication studies may be due to changing cultural attitudes about sex across time. Confirming this speculative interpretation requires further investigation.

Keywords: evolutionary psychology, human nature, sex differences, cultural differences, replication

The idea that males are more distressed by sexual infidelity than females is perhaps one of the most widely known theoretical contributions from evolutionary psychology (Buss, Larsen, Westen, & Semmelroth, 1992; Buss et al., 1999; Buunk, Angleitner, Oubaid, & Buss, 1996; Shackelford et al., 2004). These four papers by Buss and colleagues have been cited 1,247 times (Google Scholar, March 2013). For example, Buss and colleagues (1999) compared men to women's responses to which of two events they found more distressing, such as the following example: "(A) Imagining your partner enjoying passionate sexual intercourse with that other person" or "(B) Imagining your partner forming a deep emotional attachment to that other person." Men were more likely to select A than were women.

Buss and his colleagues have replicated the effect in several samples from multiple nations (e.g., American, Dutch, German, Korean, and Japanese). In a 2004 paper by Shackelford and colleagues, the authors reused data from a 1999 student sample (Buss et al.'s, 1999, Study 2; $M_{age} = 20.2$), and compared it to an older sample

($M_{age} = 67.1$ years) that they collected themselves. They found that men in early adulthood are more distressed with sexual infidelity than women, and replicated this effect in their older sample, albeit with a smaller effect size. This latter effect is an important component of the theory that sexual jealousy is evolutionarily prepared, as the theory predicts sex differences for both age groups.

The two samples examined by Shackelford and colleagues (2004) varied in terms of achieved statistical power and their estimated effect sizes. In the young sample, the estimated Cohen's d of the sex effect was 1.29, and the 95% confidence interval suggests that the real effect size could range from Cohen's $d = 1.01$ to Cohen's $d = 1.57$ (Cohen, 1992).[1] Consistent with large effects, the post hoc achieved power of this study was larger than .99, indicating a well-powered study. In their older sample, the estimated Cohen's $d = .53$, and the 95% confidence interval this time suggests that the effect size could range from .21 to .80. The achieved post hoc power in this sample is .57. In other words, the effect size in this older sample

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[1] All effect sizes and confidence intervals in this paper were obtained using Wuensch' (2012) SPSS script to calculate effect sizes with a 95% confidence interval. All Power calculations were conducted with G*Power (Erfelder, Faul, & Buchner, 1996).

may range from being very small to being large. Beyond this replication's theoretical importance, well-powered replications will help clarify the true effect size and narrow the confidence intervals for both age groups around the estimate of sex effect on sexual jealousy.

Methods

We ran four replication studies. We also included people's attitudes toward uncommitted sex as a potential moderator, but discovered in the initial studies that it may be a mediator instead. We updated our predictions throughout the research process (described in detail below). Because the methods of the studies are largely the same, we describe them together and note deviations.

Participants

Our first study was based on a convenience sample in which we collected as many participants as we could get from a convenience sample from a first year Introductory Social Psychology course (87 of 310 students completed the questionnaire). Sampling for Studies 2–4 were based on an *a priori* power calculation with G*Power (Erfelder, Faul, & Buchner, 1996; see Supplementary Materials). Studies 1, 2, and 4 included relatively younger samples; Studies 3 and 4 included relatively older samples. The Study 2 sample was recruited opportunistically through social connections around Tilburg University (105 males, 94 females). For Study 3, we planned to collect an older adult sample from city council members in the Netherlands, but we needed to supplement data collection with additional locations, such as the "50 + Beurs" (http://www.seniorenb eurstilburg.nl/) and at meeting places in Brabant where elderly often meet (like sports clubs, bars, choir practice, and personnel in care homes). We aimed to collect data from 94 older females and 105 older males, but fell short of that goal (72 men, 68 women). Study 4 was conducted using Amazon MTurk (participants received $0.30 in exchange for participation) with eligibility restricted to United States residents that had MTurk approval rates greater than 80%.[2] We aimed for 591 younger males, 591 older males, 591 younger females, and 591 older females (a total sample of 2,364 participants), but ended up collecting a total sample of 644 younger males, 577 younger females, 77 older males, and 168 older females because of far lower representation of older adults on MTurk.

Materials

In all studies, participants answered eight dilemmas in regard to what they find more disturbing in relation to their partner cheating on them. All items compared sexual versus emotional infidelity with a forced-choice format. In line with the original research, we included measures of education, relationship status, age, country of birth, country in which participants were raised, ethnicity and sex, all asked prior to the questions on sexual infidelity. We used the methodological technique of translation and backtranslation to keep the translated questionnaire loyal to the meaning of the original (for information on backtranslation see Brislin, 1970).

Additional Variables

In order to provide us with the maximal chance to obtain the effect and account for any differences with the original research, we included a measure of sociosexual orientation (SOI-R; Penke & Asendorpf, 2008). SOI-R is a measure that assesses orientation toward uncommitted sex, past sexual experiences, attitude toward uncommitted sex, and sociosexual desire. If effects have changed over time or differ by cultural context, this measure may account for those differences. The SOI-R was included after all the original study variables.

Known Differences Between Original and Replication Studies

There are several known differences between our replication attempts and the original studies; however, we do not believe that these differences are substantively relevant for the comparability of the replication. Notable differences:

- The original samples of both young and older people was conducted in English (our Studies 1–3: Dutch) with the young sample comprising of undergraduate students at a large university in the Midwestern United States (our Studies 1–3: The Netherlands) and the older sample from retirement communities (our Study 3: Community Councils and local meeting places; Study 4: Online).
- The original study was conducted with students from Introductory to Psychology classes (our Study 1: Introduction to Social Psychology; Study 2: Coauthors' social connections).
- We presume that the original study was conducted via paper-and-pencil questionnaires (our Studies 1 and 4: Qualtrics; Studies 2 and 3: Paper-and-pencil).
- The questionnaire reported in the 2004 paper included six dilemmas (ours, based on a measure provided by the original authors, included eight).
- We added the sociosexual orientation measure at the end.

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2   MTurkers with a higher approval rate generally provide better quality data than those with lower approval ratings. Although some authors advocate a 95% approval rate (e.g., Pe'er, Vosgerau, & Acquisti, 2013), we chose an 80% approval rate, because of the low representation of older participants in this sample.

Results

Studies 1 and 2

We first report our Study 1 and 2 analyses together because these studies were completed prior to the peer review of the registered report for this journal, and these results informed our hypotheses for Studies 3 and 4. For all studies, prior to analysis, we excluded participants who did not complete the entire questionnaire (N's = 20, 0, 41, 80). Our confirmatory tests were chi-square analyses in SPSS, examining percentages of males and females that chose sexual infidelity as the most disturbing option for each individual scenario (see Table 1). We then calculated a composite score over the 8 dilemmas for a second confirmatory test with an independent samples t-test. Finally, we conducted exploratory tests: One multiple regression analysis including age and sex as factors, and another with SOI-R and sex as factors, then including their interaction terms as additional steps.

Confirmatory Results Studies 1 and 2

In Studies 1 and 2, all effects were in the predicted direction. Men were more troubled than women by their partner's sexual than emotional infidelity. In our first study of young people (M_{age} = 20.3, SD_{age} = 3.6), five out of eight of the dilemmas reached conventional significance levels. In our more highly powered second study of young people (M_{age} = 21.9, SD_{age} = 2.8), only one of the differences was significant.

Like the original studies, we averaged all scores into a composite sexual dilemma score (hereafter referred to as SDS). With SDS, in Study 1, men (M = 1.30, SD = 0.32) found sexual infidelity more distressing than women (M = 1.64, SD = 0.31), d = 1.10, $t(85)$ = 4.18, $p < .01$. Likewise, in Study 2 men (M = 1.38, SD = 0.29) found sexual infidelity more distressing than women (M = 1.47, SD = 0.35), d = 0.28, $t(182.74)$ = 2.11, $p = .03$.

Exploratory Results Study 2

We explored our Study 2 dataset using both SOI-R and age as possible moderating influences of the sex difference. We included SOI-R in Study 2 to assess attitudes toward casual sex and sexually promiscuous behavior (uncommitted sex). Age was theoretically relevant a priori and our second sample was slightly older than Shackelford and colleagues' first study. There was no moderation by SOI-R ($t(197) = .76$, $p = .45$), but there was one of age. The moderated regression analysis revealed a significant interaction effect between sex and mean-centered-age on SDS, $sr = -.17$, $t(197) = -2.44$, $p = .02$, $\beta = -.18$. Analyzing age in our regression analysis, with younger (-1 SD) versus older ($+1$ SD) samples estimated at 19.35 years and 24.71 respectively, we detected a significant age effect for females, $sr = -.14$, $t(197) = -2.44$, $p = .05$, $B = -.08$, meaning that older females in our sample were more distressed by sexual infidelity than younger females. There was no significant effect of age for males, $t(197) = 1.39$, $p = .17$. Importantly, the younger men found sexual infidelity more distressing than younger women, $sr = .22$, $t(197) = 3.18$, $p < .01$, $B = .20$, whereas the comparison between relatively older men and women in our sample yielded no significant effects, $t < 1$. This latter nonsignificant effect is different than Shackelford and colleagues (2004) who found a significant effect in their older sample, despite our sample still being much younger than their older sample.

Finally, while there was no moderation by SOI-R, we did find exploratory support that it could be a mediator. The effect of sex onto SOI ($sr = -.45$, $t(199) = -7.04$, $p < .01$, $B = -.90$), and the effect of SOI onto SDS were both significant ($sr = -.07$, $t(199) = -3.20$, $p < .01$, $B = -.07$), and the addition of SOI-R rendered the impact of sex onto SDS nonsignificant ($p = .41$ compared to $p = .03$). This meets all three requirements for full mediation (Sobel's $Z = 2.93$, $p < .04$). This mediation indicated that men were more likely to be open to uncommitted sex than women, and this difference accounted for greater distress by sexual infidelity.

Confirmatory Results Studies 3 and 4

In Study 3, with just older individuals (M_{age} = 58.7, SD_{age} = 6.9), none of the dilemmas reached significance (all ps > .12). In addition, the averaged SDS was not significantly different when comparing men and women, $d = 0.09$, $t(138) = .51$, $p = .61$. In Study 4, we split the sample into younger (18–30; M_{age} = 24.5, SD_{age} = 3.4) and older (50–70; M_{age} = 55.4, SD_{age} = 4.7) participants. All dilemmas showed a significant sex difference for our younger sample (all ps < .01), with men being more distressed than women by sexual than emotional infidelity. None of the dilemmas showed a significant effect for the older sample (one $p = .07$, all other ps > .38). For our younger sample, SDS was significant, $d = .44$, $t(1520.79) = 8.59$, $p < .01$, with no significant effect for our older sample, -0.05, $t(243) = -.371$, $p = .71$.

Confirmatory Mediation Analyses Studies 3 and 4

Based on the exploratory results from Study 2, we conducted confirmatory tests of whether SOI-R mediated the effect of sex onto SDS (Studies 3 and 4) and whether this mediation effect was moderated by age (Study 4). Despite no direct effect of sex on SDS above, a bootstrap analysis of Study 3 with 1,000 resamples (Preacher & Hayes, 2008) revealed a negative effect of sex onto SOI-R ($b = -.46$, $SE = .20$, $t = -2.29$, $p = .02$) and a positive effect of SOI-R onto SDS ($B = .11$, $SE = .03$, $t = 4.05$, $p < .01$) when including both sex and SOI-R in the equation, suggesting that SOI-R may have suppressed the effect

Table 1. Within-study sex differences in jealousy

	Percent selecting sex as more distressing				
Item #	Men	Women	χ^2 (1 *df*)	Cohen's *d*	*p*
Completed replication Study 1 (N = 87)					
3	**77.8%**	**13.0%**	**30.761**	**1.48**	**< .001**
4	**77.8%**	**42.0%**	**7.299**	**0.59**	**.008**
7	**77.8%**	**40.6%**	**7.911**	**0.63**	**.007**
10	66.7%	43.5%	3.074	0.38	.112
13	72.2%	49.3%	3.026	0.38	.112
18	67.7%	50.7%	1.461	0.38	.292
21	**77.8%**	**36.2%**	**9.963**	**0.72**	**.003**
22	**44.4%**	**8.7%**	**13.512**	**0.86**	**.001**
Overall sex effect, Cohen's *d* = 1.10, *t*(85) = 4.18, *p* < .001					
Completed replication Study 2 (N = 199)					
3	58.9%	46.8%	3.192	0.25	.074
4	69.2%	58.5%	2.181	0.21	.140
7	62.6%	58.5%	0.462	0.10	.562
10	61.7%	48.9%	3.295	0.26	.088
13	65.4%	62.8%	0.331	0.15	.331
18	66.4%	59.6%	1.179	0.15	.305
21	71%	61.7%	1.958	0.20	.179
22	**41.1%**	**22.3%**	**7.528**	**0.40**	**.007**
Overall sex effect, Cohen's *d* = 0.28, *t*(182.74) = 2.11, *p* = .03					
Completed replication Study 3 (Community sample replication, N = 143)					
3	33.3%	41.2%	0.595	0.13	.441
4	34.7%	41.2%	0.442	0.11	.506
7	40.3%	41.2%	0.013	0.02	.910
10	44.4%	41.2%	0.214	0.02	.644
13	48.6%	52.9%	0.281	0.08	.596
18	50.0%	60.3%	2.373	−0.27	.123
21	51.4%	50.0%	0.026	0.03	.872
22	26.4%	27.9%	0.043	0.04	.836
Overall sex effect, Cohen's *d* = 0.08, *t*(124), *p* = .673					
Completed replication Study 4 (MTurk replication; Full sample; N = 1,523)					
3	**58%**	**37.0%**	**67.264**	**0.43**	**< .001**
4	**63.5%**	**46.8%**	**42.710**	**0.34**	**< .001**
7	**64.6%**	**51.1%**	**28.321**	**0.28**	**< .001**
10	**65.1%**	**48.5%**	**42.666**	**0.28**	**< .001**
13	**63.4%**	**51.1%**	**23.405**	**0.25**	**< .001**
18	**63.8%**	**52.0%**	**21.616**	**0.25**	**< .001**
21	**64.4%**	**48.9%**	**37.384**	**0.31**	**< .001**
22	**50.5%**	**28.5%**	**77.337**	**0.46**	**< .001**
Overall sex effect, Cohen's *d* = 0.44, *t*(1,520.788) = 8.589, *p* < .001					
Completed replication Study 4 (MTurk replication, 18–30 Group; N = 1,221)					
3	**58.1%**	**34.8%**	**65.966**	**0.52**	**<.001**
4	**65.1%**	**46.8%**	**41.309**	**0.37**	**<.001**
7	**66.3%**	**51.6%**	**27.108**	**0.30**	**<.001**
10	**66.9%**	**48.5%**	**42.355**	**0.38**	**<.001**
13	**65.1%**	**49.9%**	**28.652**	**0.31**	**<.001**
18	**65.1%**	**51.5%**	**23.171**	**0.28**	**<.001**
21	**65.7%**	**48.7%**	**35.954**	**0.35**	**<.001**
22	**51.9%**	**26.7%**	**80.379**	**0.53**	**<.001**
Overall sex effect, Cohen's *d* = 0.50, *t*(1,187.128) = 8.732, *p* < .001					
Completed replication Study 4 (MTurk replication, 50–70 Group; N = 245)					
3	**54.5%**	**42.3%**	**3.206**	**0.23**	**.073**
4	50.6%	47.6%	0.194	0.06	.660
7	50.6%	48.2%	0.125	0.05	.723
10	50.6%	50.6%	< 0.001	0.00	.994
13	49.4%	55.4%	0.766	0.11	.382
18	51.9%	53.0%	0.022	0.02	.881
21	53.2%	50.0%	0.223	0.06	.637
22	36.4%	34.5%	0.078	0.04	.779
Overall sex effect, Cohen's *d* = 0.05, *t*(243) = .371, *p* = .711					

Note. Bold rows highlight effects consistent with Shackelford and colleagues (2004), in accordance with conventional significance levels.
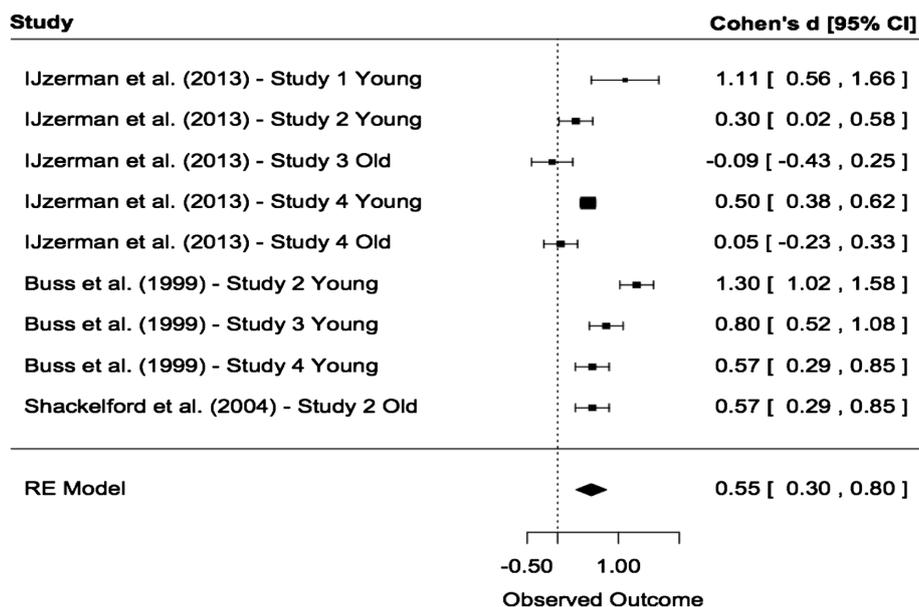
Figure 1. Forest plot of our replication studies and the original studies by Buss and colleagues (1999) and Shackelford and colleagues.

of sex on SDS. Consistent with a suppression effect, the CI of the mediated effect did not overlap with 0 (indirect effect = −.05, 95% CI −.10, −.004). Our female participants were less in agreement with uncommitted sex, and participants scoring higher on SOI-R were more disturbed by emotional infidelity of their partners. Contrary to Study 2, SOI-R served as a suppressor for the relationship between sex and the SDS and the association between SOI-R and SDS was in the opposite direction.

For Study 4, we ran a moderated mediation using PROCESS and 5,000 bias-corrected bootstrapped resamples (Hayes, 2013). For our younger sample, there was a direct positive effect of sex onto SDS ($B = .18$, $SE = .02$, $t = 8.85$, $p < .01$), and a direct negative effect of sex onto SOI-R ($B = -.98$, $SE = .09$, $t = -11.06$, $p < .01$). When adding SOI-R into the model, the effect of sex onto SDS strengthened ($B = .20$, $SE = .02$, $t = 9.14$, $p < .01$), with a direct positive effect of SOI-R onto SDS ($B = .02$, $SE = .01$, $t = 2.27$, $p < .01$). The indirect effect of sex onto SDS did not include 0 in the CI (indirect effect = −.02, 95% CI −.03, −.002). This replicates the mediation and apparent suppressor effects from Study 3.

For our older sample, there was no effect of sex onto SDS ($B = .02$, $SE = .05$, $t = .37$, $p = .71$), but there was again a negative effect of sex onto SOI-R ($B = -1.21$, $SE = .23$, $t = -5.27$, $p < .01$). When adding SOI-R to the model, the effect of sex onto SDS was again strengthened ($B = .07$, $SE = .06$, $t = 1.17$, $p = .25$), although it did not reach conventional significance levels. The (positive) effect of SOI-R onto SDS was again significant ($B = .04$, $SE = .01$, $t = 2.53$, $p = .01$). The indirect effect of sex onto SDS did not include 0 (indirect effect = −.05, 95% CI

−.09, −.01), which again suggests that SOI-R serves as a suppressor.

Age did not moderate the association between sex and SOI-R ($B = -.23$, $SE = .23$, $t = -.99$, $p = .32$), nor SOI-R and SDS ($B = .02$, $SE = .02$, $t = 1.41$, $p = .16$). Finally, we observed the expected interaction effect of age and sex onto SDS ($B = -.13$, $SE = .06$, $t = -2.34$, $p = .02$).

Meta-Analysis

We conducted a meta-analysis with the metafor package in R (Viechtbauer, 2010) to derive the overall mean effect size of sex on the SDS scores ($N = 9$). We included the present studies, Shackelford et al. (2004), and Buss et al. (1999).[3] For each study, one aggregate effect size for SDS was calculated by averaging the items. The random effects meta-analysis produced a mean effect size of $d = 0.55$, 95% CI .30, .80). This aggregate result shows strong support that men are more distressed by sexual than emotional infidelity than are women ($z = 4.34$, $p < .01$). This effect of sex on SDS scores was larger among young samples ($Md = 0.74$, $SE = 0.15$, $p < .01$) than among older samples ($Md = 0.18$, $SE = 0.21$, $p = .39$), $QM(2) = 24.43$, $p < .01$. Further, the effect of sex differences in SDS was larger for the original studies ($Md = 0.63$, $SE = 0.18$, $p < .01$) than for our replication attempts ($Md = 0.39$, $SE = 0.27$, $p = .15$), $QM(2) = 24.27$, $p < .01$. Finally, the effect was larger for American ($Md = 0.60$, $SE = 0.26$, $p = .02$) than Dutch samples ($Md = 0.40$, $SE = 0.32$, $p = .20$), $QM(2) = 6.86$,

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3   The meta-analysis did not include Study 1 by Buss et al. (1999), and Study 1, 2, and 3 by Buunk et al. (1996) because for these studies it was not possible to retrieve the data necessary to include the studies in the meta-analysis.

$p = .03$. Figure 1 provides a forest plot of the effect sizes across studies. We did not use country (Japan, Korea, Netherlands, & USA) as an overall moderator, as we had too little power to detect country differences between these four countries.[4]

Discussion

We conducted four replications of Shackelford and colleagues (2004). We replicated the effect that males are more distressed by sexual infidelity than females in younger samples but we observed an effect size 50% of Shackelford et al's original studies (their $d = 1.04$, our $Md = .52$). We did not replicate the effect in older samples. Both our effect being smaller and the effect not replicating in older samples were confirmed in our meta-analysis. Together, the present findings can be considered a successful replication of the original results with two important qualifications: Size of the effect and whether the effect extends to older adults.

What accounts for these two qualifiers? Multiple factors could be influential. The original effects could be false positives because of random error, demand or instructions, recruitment strategy, or simple mistakes. We think this is unlikely given that the effect has been replicated in earlier research, sometimes with large samples. Another possibility is that cultural attitudes regarding sex may be changing over time, which seems to reduce the overall sex difference and has completely eliminated the effect among older adults. We did find a suppressor through people's attitudes toward uncommitted sex, meaning that people who were more in agreement with uncommitted sex were less distressed from sexual infidelity. The mediation of sex onto the sexual dilemma scores via people's attitudes toward uncommitted sex provides a hint for this possibility, although the mediation effect was not consistent across studies.

A third factor to consider is methodological differences between the original and replication data collections. For example, we conducted Study 4 via the Internet. However, the results are comparable to effects from our paper-and-pencil samples. And, thus far, there is little support that this difference in data collection format should matter for this kind of effect (e.g., Buhrmester, Kwang & Gosling, 2011; Klein et al., 2014). It is true that in Study 3, 57 questionnaires were not returned making it possible that differential self-selection biased the result estimates. Finally, our older samples were not as large as planned because of recruitment challenges. However, the meta-analysis was still very highly powered and at least in our studies we can conclude that the sex effect of distress from sexual versus emotional infidelity was not present in our older samples.

Conclusion

At present, we have detected the basic sex effect in distress from infidelity, showing that men (as compared to women) are more distressed from sexual (as compared to emotional) infidelity. These effects are in line with the existing reasoning. However, we found this effect to be smaller than previously suggested. It could be that the overall effect is smaller than previously suggested (given the existing confidence intervals), or that the effects have become smaller over time due to changing sexual attitudes, possibly pointing to the role of culture in (partly) determining these effects. This last suggestion is speculative, as we did not directly investigate changing attitudes across time. A promising direction for theory and research is to clarify whether and how attitudes toward uncommitted sex facilitate effects toward distress from sexual versus emotional cheating (Study 2), or repress the same effect (Studies 3 and 4).

In order to examine temporal changes and cultural differences, we think this work should be further investigated across different contexts. One option would be to incorporate this study into student replication projects (for an example, see Grahe, Brandt, IJzerman, & Cohoon, 2013). Importantly, by using replications in this special issue as a first stepping-stone on how to conduct convincing and maximally informative replications (see also, Brandt et al., 2013), our field can gain a greater theoretical understanding of the evolutionary and cultural components of the present effect.

Acknowledgments

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[4] In our registered analysis plan, we indicated that we would take number of items in the questionnaire as covariate. Given that all our studies included 8 items, and all the original studies 6 items, we dropped this redundant analysis.

References

Brandt, M. J., IJzerman, H., Dijksterhuis, A., Farach, F. J., Geller, J., Giner-Sorolla, R., Grange, J. A., . . . Van't Veer, A. (2013). The replication recipe: What makes for a convincing replication? *Journal of Experimental Social Psychology, 50*, 217–224.

Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1*, 185–216.

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science, 6*, 3–5.

Buss, D. M., Larsen, R. J., Westen, D., & Semmelroth, J. (1992). Sex differences in jealousy: Evolution, physiology, and psychology. *Psychological Science, 3*, 251–255.

Buss, D. M., Shackelford, T. K., Kirkpatrick, L. A., Choe, J. C., Lim, H. K., Hasegawa, M., . . . Bennett, K. (1999). Jealousy and the nature of beliefs about infidelity: Tests of competing hypotheses about sex differences in the United States, Korea, and Japan. *Personal Relationships, 6*, 125–150.

Buunk, A. P., Angleitner, A., Oubaid, V., & Buss, D. M. (1996). Sex differences in jealousy and evolutionary and cultural perspective: Tests from the Netherlands, Germany, and the United States. *Psychological Science, 7*, 359–363.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*, 155–159.

Erfelder, E., Faul, F., & Buchner, A. (1996). GPOWER: A general power analysis program. *Behavior Research Methods, Instruments, & Computers, 28*, 1–11.

Grahe, J., Brandt, M., IJzerman, H., & Cohoon, J. (2013). *Collaborative Replications and Education Project (CREP)*. Retrieved from Open Science Framework, osf.io/wfc6u.

Hayes, A. F. (2013). *Introduction to mediation moderation, and conditional process analyses*. New York, NY: Guilford Press.

IJzerman, H., Brandt, M. J., & van Wolferen, J. (2013). Rejoice! In replication. *European Journal of Personality, 127*, 128–129.

Klein, R. A., Ratliff, K. A., Vianello, M., Adams, R. B. Jr., Bahník, Š., Bernstein, M. J., . . . Nosek, B. A. (2014). Investigating variation in replicability: A "many labs" replication project. *Social Psychology, 45*, 142–152.

Pe'er, E., Vosgerau, J., & Acquisti, A. (2013). Reputation as a sufficient condition for data quality on Amazon Mechanical Turk. *Behavior Research Methods*, 1–9. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2363822

Penke, L., & Asendorpf, J. B. (2008). Beyond global sociosexual orientations: A more differentiated look at sociosexuality and its effects on courtship and romantic relationships. *Journal of Personality and Social Psychology, 95*, 1113.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891.

Shackelford, T. M., Voracek, M., Schmitt, D. P., Buss, D. M., Weekes-Shackelford, V. A., & Michalski, R. L. (2004). Romantic jealousy in early adulthood and in later life. *Human Nature, 15*, 283–300.

Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software, 36*, 1–48.

Wuensch, K. L. (2012). *Using SPSS to obtain a confidence interval for Cohen's d*. Retrieved from http://core.ecu.edu/psyc/wuenschk/SPSS/CI-d-SPSS.pdf

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