



Brief Report

Sociosexual attitudes and behaviors:
Why two factors are better than one [☆]

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Abstract

Researchers have recently questioned the unidimensionality of the sociosexual orientation inventory [SOI; Simpson, J. A., & Gangestad, S. W. (1991). Individual differences in sociosexuality: evidence for convergent and discriminant validity. *Journal of Personality and Social Psychology*, 60, 870–883], which measures willingness to engage in uncommitted sexual relationships. Previous research, however, has not empirically examined this issue. Thus, 2787 undergraduates completed measures of the SOI, narcissism, and hostility. Confirmatory factor analyses revealed that a dual-factor model of the SOI, which accounted for both behavioral (Items 1–3) and attitudinal (Items 2, 4–7) components, fit the data significantly better than a single-factor model. Although gender did not moderate the factor loadings, the sociosexual attitude-behavior correlation was stronger for women than for men. Sociosexual attitudes and behaviors were differentially related to narcissism and hostility. Researchers should consider scoring the SOI as separate attitudinal and behavioral components. © 2006 Elsevier Inc. All rights reserved.

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1. Introduction

Sociosexuality has been described as “individual differences in willingness to engage in uncommitted sexual relations” (Simpson & Gangestad, 1991, p. 870). To measure sociosexuality, Simpson and Gangestad developed the sociosexual orientation inventory (SOI). People scoring low on the SOI typically require commitment before engaging in a sexual relationship, whereas people scoring high typically require little or no commitment. Although the SOI contains both attitudinal and behavioral items (Table 1), they are nearly always averaged together into a composite score.

The SOI has enjoyed wide and growing popularity as a key individual difference measure not only among social and evolutionary psychologists, but also among personality and human sexuality researchers. For example, according to PsycINFO, Simpson and Gangestad’s original SOI article has been cited 100 times through 2005, with 21 citations appearing in 2005 alone. Of these 21 publications, we reviewed the 16 that were published in peer-reviewed journals. Of these 16 articles that cited the SOI, 12 actually used it. Surprisingly, only two of these dozen studies made the distinction between the SOI’s attitudinal and behavioral items in their analyses (cf. Ostovich & Sabini, 2005; Schmitt, 2005), but there was no clear consensus on which items constituted which component.

Recently, the purported unidimensionality of the SOI has been criticized (cf. Asendorpf & Penke, 2005; Voracek, 2005), yet no study (of which we are aware) has empirically addressed its possible dual-factor structure. The purposes of the present study were to critically examine the dimensionality of the SOI using a large sample and to develop a more optimal scoring system for the SOI.

2. Method

2.1. Participants

Participants were 2787 introductory psychology students (60% women) at the University of Colorado at Boulder who completed self-report measures in mass-testing sessions.

Table 1

The seven items from Simpson and Gangestad’s (1991) sociosexual orientation index (SOI)

1.	With how many different partners have you had sex within the past year? ^a
2.	How many different partners do you foresee yourself having sex with during the next five years? ^b
3.	With how many partners have you had sex on one and only one occasion? ^b
4.	How often do you fantasize about having sex with someone other than your current dating partner? ^c
5.	Sex without love is okay. ^d
6.	I can imagine myself being comfortable and enjoying “casual” sex with different partners. ^d
7.	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. ^{d,e}

^a 1 (0 partners) to 10 (9 + partners).

^b 1 (0 partners) to 10 (15 + partners).

^c 1 (never) to 8 (at least once a day).

^d 1 (strongly disagree) to 10 (strongly agree).

^e Reverse-scored.

2.2. Measures

Sociosexuality was measured using Simpson and Gangestad's (1991) seven-item SOI (Table 1; $\alpha = .85$). Following Simpson and Gangestad, each SOI item was standardized within gender. *Narcissism* was measured using four items from the Narcissistic Personality Inventory (Raskin & Terry, 1988; $\alpha = .61$); one item was used from each of four factors described by Emmons (1987). *Hostility* was measured using the three items with the highest factor loadings from the Hostility subscale of the Aggression Questionnaire (Buss & Perry, 1992; $\alpha = .58$). Both measures used response scales from 1 (*extremely uncharacteristic of me*) to 10 (*extremely characteristic of me*). These abbreviated measures were used to increase efficiency and reduce participant fatigue in mass-testing sessions; in previous research, they were reliable (cf. Webster, 2006; Webster, Kirkpatrick, Nezlek, Smith, & Paddock, in press) and valid (cf. Webster, Kirkpatrick, & Nezlek, 2006) measures of their respective constructs. Although the internal consistencies of both measures may appear to be marginally acceptable, they are actually quite good for using only three or four items, given that coefficient alpha increases as the number of scale items increase, holding other factors constant.

3. Results

3.1. Measurement models

We first tested a *single-factor* model in which all seven items loaded onto a single latent factor (Fig. 1a). The fit was poor ($\chi^2(14) = 1046.80$, $p < .01$, NFI = .862, CFI = .864, RMSEA = 0.163, $p_{\text{close fit}} < .01$). We next tested our *dual-factor* model, which allowed for separate behavioral and attitudinal SOI components (Fig. 1b). The fit was good ($\chi^2(12) = 74.66$, $p < .01$, NFI = .990, CFI = .992, RMSEA = .043, $p_{\text{close fit}} = .87$), and was significantly better than the single-factor model ($\Delta\chi^2(2) = 972.14$, $p < .01$).

The fit for our dual-factor model, in which Item 2 loaded on both factors, was significantly better than alternate dual-factor models in which Item 2 loaded only on the behavioral factor ($\Delta\chi^2(1) = 372.63$) or only on the attitudinal factor ($\Delta\chi^2(1) = 253.29$, $ps < .01$). Moreover, when Item 2 was included in the attitudinal component, its internal consistency increased from .79 to .82. When Item 2 was included in the behavioral component, its internal consistency increased slightly from .783 to .784. These Item 2 results suggest that participants' predictions of their numbers of future sexual partners contain both attitudinal (i.e., a predilection for promiscuity) and behavioral (i.e., an intention to engage in sexual relations) information that is important to both components rather than just one or the other. Additionally, the correlation between the two latent factors in our dual-factor model ($r = .59$) was less than it was in either of these two alternate dual-factor models ($rs = .66$ and $.72$, respectively; all $ps < .01$, $p_{\text{rep}}s > .99$; cf. Killeen, 2005 for a detailed description of the p_{rep} statistic).

3.2. Gender differences

Does gender moderate the fit of these models? We estimated equivalent models for each gender and compared them to models that constrained the factor loadings across genders. For neither the single- nor dual-factor model did factor loadings vary significantly across genders; however, for the dual-factor model, the correlation did differ ($\Delta\chi^2(1) = 6.28$,

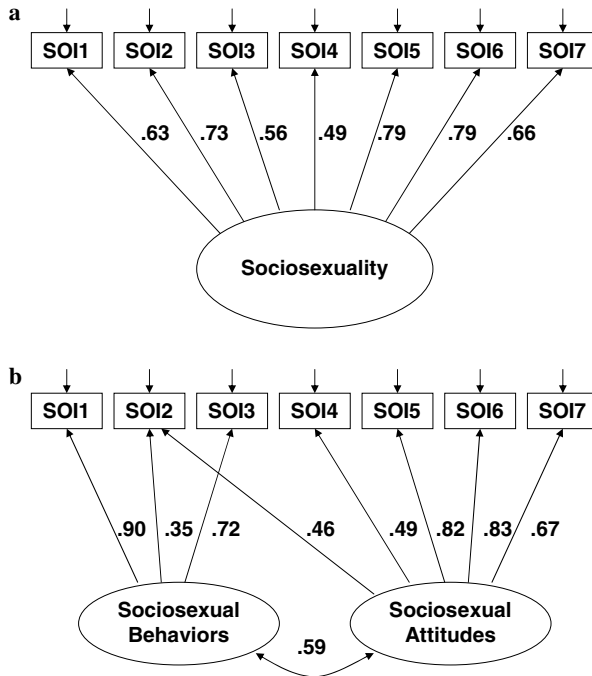


Fig. 1. Results of confirmatory factor analyses for single-factor (a) and dual-factor (b) models of Simpson and Gangestad's (1991) seven-item sociosexuality orientation inventory (SOI). All standardized coefficients and correlations were significant ($ps < .01$, $p_{rep}s > .99$).

$p = .01$), such that women had a higher attitude-behavior correlation ($r = .66$) than men ($r = .49$, $ps < .01$, $p_{rep}s > .99$). From an evolutionary perspective, this gender difference stands to reason, since the number of partners that men want to have often disproportionately outweighs the number of partners they can actually obtain (Buss & Schmitt, 1993). This leads to a greater attitude-behavior discrepancy on the SOI for men than for women, whose sociosexual attitudes and behaviors are comparatively more proportionate. Thus, our dual-factor model accounts for this key gender difference in attitude-behavior consistency, whereas the single-factor model cannot.

3.3. Differential relationships

We next examined narcissism and hostility to demonstrate how using a single-factor SOI model may mask the differential effects of sociosexual attitudes and behaviors. Whereas the single-factor model was positively related to narcissism ($\beta = .12$, $p < .01$, $p_{rep} = .99$), for the dual-factor model, SOI-behavior was positively related to narcissism ($\beta = .12$, $p < .01$, $p_{rep} = .97$), but SOI-attitude was not ($\beta = .02$, $p = .68$, $p_{rep} = .37$) when both served as simultaneous predictors. Similarly, whereas the single-factor model was positively related to hostility ($\beta = .10$, $p < .01$, $p_{rep} = .99$), for the dual-factor model, SOI-attitude was positively related to hostility ($\beta = .12$, $p < .01$, $p_{rep} = .99$), but SOI-behavior was not ($\beta = -.04$, $p = .33$, $p_{rep} = .62$) when both served as simultaneous predictors. Thus, SOI-attitude and SOI-behavior were differentially associated with—and explained unique variance

in—both narcissism and hostility. Accounting for the differences between sociosexual attitudes and behaviors provided a clearer picture, whereas averaging them together masked these important differential effects.

4. Discussion

The present findings suggested that the SOI may not be a unidimensional measure, and need not be scored as such. Instead, a dual-factor model that accounted for both behavioral (Items 1–3) and attitudinal (Items 2, 5–7) sociosexuality was supported. The dual-factor model was (a) superior to the single-factor model in terms of its goodness-of-fit, (a) instrumental in detecting gender differences in attitude-behavior consistency and (c) crucial in disentangling sociosexual attitudes and behaviors as differential correlates of narcissism and hostility.

In defense of Simpson and Gangestad's (1991) SOI, we note that they "sought to construct an inventory whose item content was diverse and whose band-width was broad" (p. 883), which is a goal that the SOI clearly achieves. Indeed, the attitudinal and behavioral items often have substantial overlap; however, sometimes they do not, as evidenced here in their differential relationships with narcissism and hostility (see also Bailey, Gaulin, Agyei, & Gladue, 1994, p. 1086). Simpson and Gangestad have also recommended scoring the SOI by first averaging Items 5–7, and then averaging this composite with Items 1–4 using a complex weighting system. From our review of articles from 2005, however, it appears this complicated scoring system is typically abandoned in favor of a seven-item composite, which is why we chose the single-factor model as our basis of comparison.

Currently, Jackson and colleagues (Jackson & Kirkpatrick, submitted for publication; Jackson & Kruger, 2006) are working on a more comprehensive, three-factor sociosexuality measure that examines not only mating behavior, but also short- and long-term mating attitudes. In the meantime, for those currently using the SOI, we recommend scoring it as separate attitudinal and behavioral components; doing so should allow researchers to make more precise inferences regarding the relationships between sociosexuality and its many correlates.

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