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Development and Psychometric Validation of the Sexual Fantasies and Behaviors Inventory

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Declarations

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Conflicts of interest/Competing interests

The authors have no relevant financial or non-financial interests to disclose. The authors have no conflicts of interest to declare that are relevant to the content of this article. All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript. The authors have no financial or proprietary interests in any material discussed in this article.

Availability of Data and Material

Data collection started before GDPR regulation took effect in the European Union but ended after this time. As we did not provide information in the informed consent document about making anonymized data publicly available (as per GDPR regulations), we cannot provide data used in this study.

Code availability

Mplus coding for all models can be found in the supplementary material. Pre-registration of analyses can be found at osf.io/ybzqe.

Authors' contributions (CRediT)***Category 1***

- (a) Conception and Design: Ashley Brown, Qazi Rahman, Edward D. Barker
- (b) Acquisition of Data: Ashley Brown
- (c) Analysis and Interpretation of Data: Ashley Brown

Category 2

- (a) Drafting the Article: Ashley Brown, Qazi Rahman
- (b) Revising It for Intellectual Content: Ashley Brown, Qazi Rahman, and Edward D. Barker

Category 3

(a) Final Approval of the Completed Article: Ashley Brown, Qazi Rahman, and Edward D. Barker

Ethics Approval

The questionnaire and methodology for this study was approved by King's College London's Psychiatry, Nursing and Midwifery ethics subcommittee, reference number HR-17/18-5550.

Informed consent was obtained from all individual participants included in the study.

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Abstract

To date, no measures of sexual fantasies and behaviors have been tested using modern structural equation modelling techniques. A total of 4,280 adults from the US, UK, Canada, and Ireland completed a measure of diverse (paraphilic and normophilic) sexual fantasies and behaviors. Data were randomly split in half for a two-part analysis. First, an exploratory factor analysis (EFA) was performed to reduce the item pool and determine general factor structure. Second, we tested several models using confirmatory factor analysis (CFA) and exploratory structural equation modelling (ESEM). These were followed by tests of measurement invariance (based on sex and sexual orientation) and criterion validity. For both the fantasies and behaviors, bifactor ESEMs were the most appropriate models. Similar specific factors emerged: 1) normophilia, 2) rough sex, 3) interest of intrusion, 4) assuming power, and 5) relinquishing power. Findings suggest that sexual interests show a hierarchical measurement structure. Males and non-heterosexuals had higher general fantasy scores; non-heterosexuals had higher general behavior scores. Heterosexuals generally scored lower than non-heterosexuals. Fantasy and behavior scores were positively related to Dark Triad traits and sociosexuality, and there were weak or no relationships with depression and anxiety. Results support the psychometric validation of the Sexual Fantasies and Behaviors Inventory. Strengths of this study include a large, non-clinical sample with relevant psychological correlates and the use of modern psychometric methods. However, the use of an internet sample with self-report measures may be unrepresentative, although the internet has the advantage of being able to recruit from stigmatized groups.

Public Significant Statement: We developed a measure of sexual fantasies and behaviors using modern statistical analyses and results supported its test score validity in a large non-clinical convenience sample of people from the US, UK, Canada, and Ireland. Both fantasy and behavior measures showed paraphilic and non-paraphilic ('normophilic') factors and a general factor, with higher scores being related to being male and non-heterosexual, having higher psychopathic traits, and increased sociosexuality.

Keywords: paraphilias, assessment, psychometrics, sexual fantasies, sexual behavior, sex differences

Development and Psychometric Validation of the Sexual Fantasies and Behaviors Inventory

Sexual interests (comprised of fantasies and behaviors) are broadly categorized as either ‘normophilic’ or ‘paraphilic’, although the consequences of classifying them in this way has been debated. According to the DSM-5 (American Psychiatric Association, 2013), normophilic interests are limited to genital stimulation and preparatory fondling (i.e.. foreplay) with phenotypically normal, consenting adults. Paraphilic interests encompass anything other than normophilia. It is important to distinguish between paraphilic interests, paraphilias, and paraphilic disorders. Paraphilic interests include masochism, sadism, voyeurism, and fetishism. Paraphilias are similar but require that the interest be intense and persistent (usually lasting 6 months or more). People with paraphilias may also find they are more aroused by the paraphilia than they are by normophilic activities or fantasies. Neither paraphilic interests nor paraphilias warrant clinical intervention. For some individuals, paraphilic interests may result in sexual dysfunction or psychological distress. If this occurs, or if the sexual behavior involves non-consenting adults, animals, or children, it is reclassified as a paraphilic disorder.

Another way to classify sexual interests is by prevalence: typical and atypical. However, it is difficult to provide statistical cut-offs for what is to be considered atypical (Joyal et al., 2015). Additionally, researchers, clinicians, and lay people may use ‘atypical’ to refer to sexual interests that are deemed as ‘abnormal’ by society, even if these interests (e.g., sadomasochism) have been shown to be common in the population. In attempt to address this, some researchers have moved towards using ‘non-normative’ sexual interests but this, too, lacks operationalism and consistency in use. The phrase also suggests that what is considered non-normative will change with the zeitgeist of the time. Such terms have become more popular due to the stigma associated with paraphilic disorders. Given the inconsistencies and lack of precision in these terms, we adopt the paraphilic vs normophilic classification system based on the DSM-5. Growing research suggests that paraphilic sexual fantasies and behaviors are not pathological and may represent a broadening of an individuals’ sexual repertoire (Brown et al., 2019). Here, we focus on quantifying both normophilic and paraphilic sexual interests.

There have been a number of measures of sexual fantasy, the most popular being the Wilson Sex Fantasy Questionnaire (WSFQ; Wilson, 1978; Wilson & Lang, 1981). The factor structure of the WSFQ has been replicated in clinical and sub-clinical samples (Bartels et al., 2019; Plaud & Bigwood, 1997; Sierra et al., 2006). Forty items parse into four factors: intimate (e.g., kissing a loved one), exploratory (e.g., group sex), impersonal (e.g., sex with strangers), or sadomasochistic (e.g., using bondage or pain). Thus, it measures both normophilic and paraphilic sexual fantasies, but does not offer much distinction between categories of paraphilic interests. The WSFQ is somewhat predictive of sex drive (Wilson, 1978) and sexual restrictiveness (Bhugra et al., 2006) but it has not been subject to modern measurement of multidimensional constructs. For example, the original validation did not use multi-model testing, had a small sample (45 men, 45 women), and did not test measurement invariance. Some items may also be outdated given cultural changes in sexual norms over time. One replication study of the WSFQ's four-factor structure using a confirmatory approach did not test for measurement invariance based on sex, meaning that there is no empirical evidence that the same constructs were being measured across males and females and thus whether or not scores could be meaningfully compared across groups (195 men, 315 women; Sierra et al., 2006).

Other measures have not been widely used due to a lack of validity and reliability studies (e.g., the Hurlbert Index of Sexual Fantasy; Hurlbert, 1993). Some derive from the DSM-5's eight paraphilic disorder classifications or intend to measure paraphilic interests related to BDSM (bondage/discipline, domination/submission, and sadism/masochism; Holvoet et al., 2017; Joyal & Carpentier, 2017; Seto et al., 2012). The paraphilias most investigated by these measures are voyeurism, exhibitionism, sadism, masochism, fetishism (including cross dressing), pedophilia, and frotteurism. However, such measures were not robustly psychometrically investigated or modified based on factor structure. Without psychometric testing, measures may not be quantitatively capturing the latent constructs they purport to, nor measuring the same constructs across different populations (e.g., men vs women). A new paraphilic interests inventory was created by Seto et al. in a study of sexual sadism (Seto et al., 2012). This measure had many items ($n = 80$), included behavioral items, and greater coverage of sexual interests than previous measures. Despite its use in

several studies, it has not been subject to tests of factor structure or other psychometric properties, nor does it include items focused on normophilic interests (Bouchard et al., 2017; Chivers et al., 2014; Dawson et al., 2016).

Further understanding of the psychometric structure underlying sexual interests may not only help to improve measurement of this construct but also refine theory regarding their etiology. Recent literature has called for measures that 1) differentiate between categories of paraphilic interests (e.g., masochism vs sadism) and 2) allow for the use of factor scores in analyses rather than relying on the DSM-5 classifications (Bártová et al., 2020). Well formulated and tested theoretical models of sexual interests as a construct are lacking. Standard learning, psychosocial, or cultural perspectives have produced conflicting research while biological influences are poorly studied (Quinsey, 2003). Nevertheless, contemporary theoretical frameworks have focused on the multidimensional nature of some paraphilias. Namely, that sexual interests are patterned along the sex, age, and location of targets (Bailey & Hsu, 2017; Brown et al., 2020; Seto, 2017).

Regarding type and scope of sexual interests, paraphilic and normophilic interests tend to co-occur. For example, previous research found that paraphilic sexual interests may not necessarily act as a replacement for normophilic interests, with arousal patterns of men and women interested in sadomasochism being similar across normophilic and paraphilic stimuli (Chivers et al., 2014) and those with paraphilic sexual interests still reporting fantasizing and acting on normophilic interests (Holvoet et al., 2017). Similar results have been found in people with interests in fetishism (Rees & Garcia, 2017). As normophilic sexual interests appear common in both people with and without paraphilic interests, they may be a distinct category or a general underlying factor.

Further testing of any psychometric structure will need to consider sex and sexual orientation differences. Men report higher rates of both normophilic and paraphilic fantasies and behaviors than women (Dawson et al., 2016; Holvoet et al., 2017; Richters et al., 2003). However, women report greater interests in masochism than men (Dawson et al., 2016; Joyal & Carpentier, 2017; Joyal et al., 2015). Non-heterosexual people report more BDSM engagement than heterosexuals (Richters et al., 2008). Sex and sexual orientation differences may help to further

narrow developmental factors. For example, sex differences may reflect the involvement of prenatal androgen exposure or differential sexual socialization (Seto, 2017). Other common correlates of paraphilic sexual interests include greater sociosexuality (reporting having more sexual partners and sexual experience; Dawson et al., 2016; Richters et al., 2008) and higher scores on some Dark Triad personality traits such as psychopathy (and narcissism) in relation to sadomasochism (Baughman et al., 2014; Lodi-Smith et al., 2014). Psychopathology, typically measured via anxiety and depression scales, show little to no-relationship with paraphilic or normophilic sexual interests, though these relationships are sometimes identified in clinical samples and sex offenders (Maniglio, 2011).

In sum, current measures of sexual interests are limited in capturing a diverse range of interests and lack modern psychometric testing. The extent to which dimensions of sexual interests represent theoretically distinct processes, or a common underlying factor, is unclear. Thus, this study had four primary aims. First, we tested the general factor structure of the Sexual Fantasies and Behaviors Inventory (SFBI) and reduced a large item pool using exploratory factor analysis (EFA). As this study is largely exploratory, we have not predicted which factors will emerge. Second, we aimed to find the best fit model by comparing 1) unidimensional, 2) lower order, and 3) bifactor models. We did this using multiple confirmatory factor analyses (CFAs) and exploratory structural equation models (ESEMs). We chose these models based on a suggested analytic framework for systematically comparing hierarchical and ESEM models (Morin et al., 2020). Next, we conducted tests of measurement invariance on the best fitting model between males and females and between heterosexual and non-heterosexual participants given the known sex and sexual orientation differences. Finally, we tested the criterion validity of test scores using comparisons between our resulting factors and measures of sociosexuality, anxiety, depression, and the Dark Triad. All analyses will be run separately for the measures of sexual fantasies and sexual behaviors. We expect similar factors to emerge for both. Note that no measure can capture the full range of sexual interests in humans. Rather our goal was to provide a measure that 1) measures both fantasies and behavior, 2) does not rely on DSM-5 or ICD-11 classification to define the most prevalent sexual interest domains, 3) simultaneously assesses normophilic and paraphilic interests and 4) does not rely on clinical

samples. Conclusions were guided both theory and robust psychometric tests were not focused exclusively on model fit criteria.

Choosing Criterion Validity Variables

We chose variables that would allow us to test both divergent and predictive validity. As research on correlates of normophilic interests outside of sexual dysfunction or distress is rare, and correlates on paraphilic interests are inconsistent, we chose variables that were the most well-tested and replicated in the literature. The correlates chosen were guided by recent systematic reviews of some of the more common paraphilic interests (Brown et al., 2019; De Neef et al., 2019). Divergent validity was assessed using measures of anxiety and depression. Although some evidence has shown higher suicidal ideation or distress in paraphilic interests' groups (e.g., Cramer et al., 2017; Frias et al., 2017), most evidence points to both normophilic and paraphilic interests having little to no relationship with psychological distress (see Brown et al., 2019 for a review), unless it is accompanied by hypersexuality or problematic sexual behaviors (Walton et al., 2017; Roche et al., 2020). Thus, we expect to find no meaningful relationship between measures of psychological distress and any paraphilic or normophilic factors that may emerge.

Predictive validity was assessed via several personality dimensions. Dark Triad traits (psychopathy, Machiavellianism, and narcissism) have been found to be related to both clinical and non-clinical paraphilic interests (Baughman et al., 2014; Hopkins et al., 2016; Smith et al., 2019; Williams et al., 2009), with psychopathic traits being the most consistent and strongest predictor. We predicted Dark Triad traits would have a stronger relationship with paraphilic factors and sexual behaviors than with normophilic factors and sexual fantasies, respectively. This is because evidence has found that engagement in more sexual activity (especially casual sex) is related to higher levels of trait psychopathy (Fernández del Río et al., 2019; Semenyna et al., 2018) and higher sociosexuality. Sociosexuality, a personality dimension that assess comfort with and a preference for sexual activity without commitment, has consistently been found to be linked to more engagement with and broader interest in paraphilic and normophilic sexual interests (Dawson et al., 2016; Lehmiller et al., 2018; Zheng & Zheng, 2014). Here, we expected all dimensions to have a

relationship with sociosexuality (i.e., more arousal to a broader range of sexual fantasies and more engagement in sexual behavior is related to higher sociosexuality). We also expected this relationship to be stronger in behavior dimensions as compared to fantasy dimensions.

ESEM as a Confirmatory Approach: Why We are Using It

ESEM is an integrative approach representing a compromise between the rigidity of CFA/SEM and the flexibility of EFA (Marsh et al., 2014). CFAs rely on overly restrictive models in which cross-loading between items and non-target factors are constrained to zero. Thus, they cannot always provide good model fit nor aid in theoretical model interpretation for multidimensional constructs, especially those with multiple factors each with a reasonable number of items (Dicke et al., 2018; Marsh et al., 2005; Morin, Arens, Tran, et al., 2016). This is often the case with psychological constructs; items are rarely perfect indicators of what they are intended to measure due in part to their potential association with other similar or related constructs. In the case of constructs that have overlapping domains (e.g., sexual interests), CFAs may be unnecessarily restrictive and result in biased parameter estimates, as some forms of construct-relevant multidimensionality is ignored in CFA models (Marsh et al., 2014; Morin & Asparouhov, 2018). ESEM reduces the misspecification in the measurement model while retaining features of CFA and SEM, such as goodness of fit and multi-group invariance testing (Asparouhov & Muthén, 2009). Additionally, instruments (particularly psychological ones) that have well defined EFA structures often systematically fail to show good fit in CFA models (Marsh et al., 2014). This is because CFAs fail to take certain types of construct-related multidimensionality into account, specifically that items will often represent some portion of true-score variance on other conceptually related factors (Morin et al., 2020). This is especially true in psychological assessments, and specific factors are often related. Importantly, a review of simulation studies has found that EFA is better than CFA at estimating true population factor correlations and this difference becomes more extreme when a few cross loadings of items as low as .10 are fixed to be zero in the CFA model (Asparouhov et al., 2015).

Although EFA is more suitable for exploratory analyses than CFA, there is no statistical preclusion in using both EFA and CFA for confirmatory purposes (Morin et al., 2020). Because ESEM contains an EFA measurement model, the choice of factor rotation method is essential. Here, we use the target rotation, which allows ESEM to be used in a confirmatory manner as we specify a-priori cross loadings (Asparouhov & Muthén, 2009; Browne, 2001; Morin et al., 2020). The cross loadings for non-targeted items (defined by initial EFA and item reduction) are specified to be as close to zero as possible, without unnecessarily restricting them to zero as is done in a CFA. Studies support the superiority of ESEM models compared to CFAs (Asparouhov & Muthén, 2009; Mai et al., 2018; Xiao et al., 2019) in regard to the number of factors, size of factor correlations, mean cross-loadings, and loading variance, where both simulation and empirical studies showed more precise parameter estimates. Simulation studies (e.g., Xiao et al., 2019) have also found that ESEMs provide better recovery of true factor loadings and correlations than CFAs when target rotations were used. In order to justify the use of ESEM as a confirmatory method, the proposed scale needs to be assessing conceptually related constructs (Morin et al., 2020). Sexual interests are likely to overlay one another and are related, thus we have chosen to use ESEM as a confirmatory approach.

Bifactor Measurement Models

One source of construct-relevant multidimensionality comes from hierarchically ordered constructs, which is when items are designed to measure both a specific dimension and a general factor (Morin et al., 2020). Historically, this has been assessed in hierarchical measurement models, in which items define a first order factor, and those first order factors then define a general factor. However, this does not allow for the testing of the direct influence of the items on both specific and general factors; items are only indirectly related to the general factor in the hierarchical model. Comparatively, bifactor models are a more flexible type of hierarchical model. They allow us to simultaneously determine an individual effect on 1) a general factor and 2) a specific factor. Bifactor models have orthogonal factors, meaning that they are uncorrelated. There is evidence that bifactor models should be favored over traditional hierarchical models, unless there is an explicit theoretical justification not to (Gignac, 2016; Morin et al., 2020). However, there is also growing criticism of

their over misuse and misinterpretation in relation to 'g' factors in psychological constructs (Bonifay et al., 2016). Theoretically, it is likely sexual interests demonstrate hierarchical multidimensionality (i.e., there is both a general factor of sexual interests and specific interest domains); this is suggested as a requirement for the justification of bifactor model use, and thus we will test a bifactor model as both CFA and ESEM models.

Method

This study received ethical approval from King's College London's Psychiatry, Nursing and Midwifery ethics subcommittee, reference number HR-17/18-5550. The survey used for this study utilized a range of variables in order to perform additional investigations of the correlates of sexual interests and under-studied paraphilias. Variables not used in analysis here will be used in subsequent studies. All participants were presented the measures in the same order, starting with the SFBI and followed by measures of personality (Big 5 and Dark Triad), psychological distress, disgust sensitivity, dyadic sexual communication, sociosexuality, sexual compulsivity and sensation seeking, attitudes towards sadomasochism, and childhood gender nonconformity.

Participants

Participants were 4280 adults that resided in the United States (US), Canada, the United Kingdom (UK), or the Republic of Ireland. They were recruited through social media, advertisement posters, and Mechanical Turk via Qualtrics survey software. There were 6025 responses, but 1,745 were removed due to one or more of the following: providing an age of < 18, having not fully completed either of the sexual fantasy or behavior measures, having more than 20% missing data, or responding 'not at all' (on a 1-4 scale of 'completely' to 'not at all') to either of two social desirability questions: 1) "To what extent do you feel you were able to be completely open in answering this questionnaire?" and 2) "How accurately do you believe your answers to the above questions reflect your true feelings and behavior?" (Dunne et al., 2000). In terms of natal sex, there were 2146 females, 2121 males, and 10 unidentified. Regarding gender identity, the final sample was comprised of 2097 men, 2062 women, and 113 non-binary or other identified individuals. The majority ($n = 2722$), were from the US, followed by the UK or Ireland ($n = 1051$), and Canada ($n =$

507). Age ranged from 18-87 ($M = 31.26$, $SD = 11.04$). Most (82.6%, $n = 3537$) identified as White, followed by mixed (4.5%, $n = 194$), East or Southeast Asian (3.5%, $n = 149$), Hispanic or Latino (3.4%, $n = 146$), Black (2.8%, $n = 120$), South Asian (1.5%, $n = 64$), Native (0.5%, $n = 20$), or other (1.1%, $n = 50$). Heterosexual was the most common sexual orientation (64.2%, $n = 2748$), followed by bisexual (21.7%, $n = 929$), gay/lesbian (6.3%, $n = 271$), other (5.4%, $n = 232$), and asexual (2.3%, $n = 100$). Demographic correlates did not differ significantly ($ps > .05$) based on site of recruitment.

Measures

Sexual Fantasies Inventory (SFI)

This was initially comprised of 94 items (see Table S1). The measurement scale used was adapted from Seto et al. (2012). Participants were instructed to report their level of sexual arousal when thinking or imagining each of the items (e.g., you are being spanked) using a 7-point Likert scale ranging from -3 (very repulsive) to 3 (very arousing), with 0 indicating indifference. Different interests were represented by items of varying intensity. For example, sadistic interests had items ranging from 'you are spanking someone' to 'you are imagining amputating one or more parts of someone's body'. While some items were adapted from a previous measure (Seto et al., 2012) most items were determined based on agreement between the authors after consulting relevant literature. The purpose of the large item pool was to capture the multidimensionality of sexual interests. Thus, initial items spanned many potential fantasies (including the eight paraphilias listed in the DSM-5), such as normophilia (e.g., you are receiving oral sex), sadism, bondage, masochism, roleplay, power exchange (domination/submission), fetishism of different objects and body parts, and niche sexual interests (e.g., age play/age regression, autogynephilia).

Sexual Behaviors Inventory (SBI)

The initial behavior inventory included 75 items (see Table S2). Participants were asked to respond to each behavior item with the frequency that they had engaged in each behavior (e.g., you are being blindfolded) on a 6-point Likert scale: -1 (never, don't want to try), 0 (never, do want to try), 1 (once or twice ever), 2 (once a year or more on average), 3 (once a month or more on average), 4 (once a week or more on average). The response format was adapted from a previous

scale (Seto et al., 2012) with the addition of negative scale items that capture the desire to act (or not act) upon each sexual behavior. All behavior items had a parallel fantasy item. The initial list of behavior items is shorter than the fantasy items, as some fantasy items (e.g., you are imagining amputating one or more parts of someone's body) were very unlikely to have ever been acted upon.

The Dark Triad

These traits were measured via the Short Dark Triad (Jones & Paulhus, 2014). Twenty-seven items measured Machiavellianism, Psychopathy, and Narcissism (nine items each) on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). For example, participants were asked how much they agreed with the statement 'most people can be manipulated'. The subscales and overall score were determined via factor scores estimated in a CFA model ($\alpha_{total} = .811$, $\alpha_{Mach} = .782$, $\alpha_{Narc} = .731$, $\alpha_{Psych} = .567$).

Sociosexuality

Sociosexuality was assessed using the Revised Sociosexuality Inventory (Penke, 2011). Seven items were measured on a 9-point scales. Response scales differed based on the question. The measure was designed to assess number of sexual partners in differing scenarios (e.g., number of partners had in a committed vs non-committed relationship) and beliefs about sexual behavior (e.g., 'sex without love is okay'). As with the Dark Triad, factor scores were estimated in an independent CFA model ($\alpha = .832$).

Anxiety

The General Anxiety Disorder measure (GAD-7; Spitzer et al., 2006) was used to assess anxiety with seven items on a 4-point scale. Items assessed the frequency (not at all; several days; more than half the days; nearly every day) with which participants had been bothered by anxiety symptoms (e.g., feeling nervous, anxious, or on edge). Scores were estimated as a single latent factor in a CFA ($\alpha = .925$).

Depression

Depression was measured via the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001). Nine items assessed how often participants had been bothered by depressive symptoms in

the past two weeks on a 4-point scale (identical to that used for the GAD-7). Items were combined into a single latent factor and estimated in a CFA ($\alpha = .906$).

Statistical Analysis

All data analysis was performed in Mplus version 7.4. The planned analyses were pre-registered via the Open Science Framework registry at osf.io/ybzqe.

Step 1: Exploratory Analysis

Due to limited empirical evidence from which to hypothesize the specific factor structure of sexual fantasies and behavior (e.g., would sadism and masochism parse into two factors or one?), initial data analysis was performed via EFA. The purpose of an EFA is to determine the potential factor structure for a specific set of variables and is done with no a priori hypotheses. CFAs (and ESEMs with target rotation) differ in that they aim to test (or confirm) the factor structure that has been predetermined (Henson & Roberts, 2006; Morin et al., 2020). Ideally, when determining the factor structure of a new measure, exploratory and confirmatory models should be conducted in different samples. To address this, the initial dataset ($N = 4,280$) was randomly split in two. One half was used for the EFA, while the other was used for the CFA and ESEM analyses. After this split, the sample to item ratio (or the number of participants per item) was 22.77:1 for fantasies and 28.16:1 for behaviors- both well above the recommended 10:1 ratio (Costello, 2005). Having appropriate sample-to-item ratios is important for two reasons: 1) it results in adequately powered studies, and 2) larger samples can help determine whether the emerging factor structure is valid and help increase generalizability.

Here, we used EFA to 1) reduce the item pool and 2) determine general factor structure. Because some of the data indicated non-normality, maximum likelihood with robust standard errors (MLR) was used. Data were treated as continuous, as is recommended with ordinal data with more than five response categories (Rhemtulla et al., 2012). Factors were examined for item loadings and eigenvalues. Generally, factors with eigenvalues ≥ 1 and a minimum of three items per factor were retained (Costello, 2005). Items with primary factor loadings $\leq |.40|$ were eliminated. Cross loadings were examined, and items were removed if the difference between their primary and secondary

factor loading was $< .15$. We chose a less conservative eigenvalue cut-off to look at factor patterns and gradually reduce item numbers in successive EFAs. The factors in the final EFA (after item reduction) were used in subsequent CFA and ESEM analyses. The final EFA was selected based on eigenvalues, factor loadings, and theory.

Step 2: Model Fitting

We examined the best-fitting confirmatory model for the fantasy (28 items) and behavior (28 items) inventories with the other half of the sample ($n = 2,140$); the final SFBI items can be found in Appendix A of the supplemental file. All analyses were conducted independently for each inventory. Mplus code for all models can be seen in the supplementary file. First, we examined three CFA models: 1) unidimensional, 2) correlated lower order factors (as specified by the final EFA), and 3) bifactor model with one general factor and specific factors (orthogonal) from model 2. We then examined two ESEM models: 1) correlated lower order factors, and 2) bifactor model. MLR was used for all models. Following a suggested analytic framework, the superiority of an ESEM model would be supported by 1) improved model fit, 2) smaller factor correlations, 3) smaller cross loadings (or larger cross loadings that can be easily theoretically explained) and 4) well-defined factors (Morin, Arens, & Marsh, 2016; Morin et al., 2020). Observing moderate to large cross loadings across a number of items in the lower order models would indicate the presence of a general factor. A bifactor model would be considered superior if there was 1) an improved fit in comparison to lower order correlated factor models, 2) a well-defined general factor, and 3) well defined specific factors.

A number of fit indices were used to assess each model. The χ^2 goodness of fit statistic assessed absolute model fit, with non-significant ($p > .05$) values indicating good fit. However, the χ^2 is sensitive to sample size and nearly always rejects models when large samples are used (Hooper, 2008). Because of the large sample used here, absolute model fit was also assessed using the root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR), with values $< .05$ = good and $< .08$ = acceptable fit for both. Relative fit was assessed using the comparative fit index (CFI) and Tucker-Lewis index (TLI), with values $> .95$ and $> .90$ indicating excellent and good fit, respectively (Hu & Bentler, 1999). When comparing between models, the

Akaike Information Criteria (Akaike, 1987) and the Bayesian Information Criteria (BIC; Schwarz, 1978) were also used, with lower values in one model reflecting better fit than a model with higher values.

For final bifactor models, we estimated additional fit indices using the Omega program (Watkins, 2013). The decision to use ω instead of α for test score reliability calculations comes from limitations of α 's assumption that all indicators have equal factor loadings across the constructs of interest (Dunn et al., 2014). In hierarchical models where indicators load onto more than one factor, this assumption can be particularly problematic with respect to differing factor loadings of items on specific and general factors. Thus, we estimated multiple variants of the omega coefficient (for full details on calculations, see Rodriguez et al., 2016). The overall omega (ω) is used as the latent variable equivalent to α , and represents the proportion of variance in the total score accounted for by all sources of common variance. Omega subscale (ω_S) is similar in that it estimates the proportion of variance in the subscale score attributable to all sources. Omega hierarchical (ω_H) estimates the proportion of variance from total scores that is accounted for by the general factor. Similarly, omega hierarchical subscale (ω_{HS}) reflects the reliability of subscale scores after the variance from the general factor is controlled for. Both ω_H and ω_{HS} differ from ω and ω_S in that they do not estimate the proportion of variance explained by all sources of variation (or both lower order and higher order factors). The difference between ω and ω_{HS} for each specific factor shows the degree to which common variance explained by the subscale is accounted for by the variance in the general factor. Although there are no specific cut-offs for the interpretation of ω values and, taking into consideration the flexibility needed in the assessment of bifactor CFA and ESEM models, values $> .50$ will be considered sufficient (see Perreira et al., 2018 for a more detailed explanation). This indicates that the factor being analyzed explains at least as much variance as it does random measurement error.

Tests of construct reliability, or the extent to which a factor is well-defined by its indicators, were also performed via Omega for bifactor models (Watkins, 2013). This will be measured using H , where a high value ($> .70$) indicates that replicability across samples is more likely, though values of $> .60$ also indicate that a factor is relatively well defined by its items (Rodriguez et al., 2016).

Additionally, explained common variance (ECV) and percentage of uncontaminated correlations (PUC) will be used estimate the extent to which a bifactor model is truly multi-dimensional. ECV represents the proportion of variance accounted for by all factors that is explained by the general factor. For example, an ECV of .80 indicates that the general factor explains 80% of the variance, while the other 20% of common variance is spread across all factors. PUC represents the proportion of correlations that are influenced by the general factor. When both PUC and ECV are high ($> .70$), this indicates a strong general factor, in which case a unidimensional model may be a more parsimonious solution.

Step 3: Measurement Invariance

Tests of measurement invariance were performed on the final best fitting model between males and females (based on natal sex), and heterosexuals and non-heterosexuals (based on responses to sexual orientation identity labels, which were subsequently divided into binary groups). First, we tested mean differences on subscale and general factor scores between males and females and heterosexuals and non-heterosexuals using independent samples *t*-tests. This was done with the CFA/ESEM sample ($N = 2,140$). Measurement invariance was examined at three levels (Morin, Arens, Tran, et al., 2016). First, configural invariance, which identifies whether the overall latent factor structure was equal across groups, was tested by simultaneously estimating the unconstrained model between males and females or heterosexuals and non-heterosexuals. Next, factor loadings were constrained to be equal across groups to test metric (or weak) invariance. Lastly, we tested scalar (or strong) invariance by constraining item intercepts to be equal across groups. If scalar invariance is achieved, groups can be meaningfully compared on mean latent factor scores. However, scalar invariance has been recognized as overly strict, and in the case of poor model fit at this level, use partial scalar invariance is supported where parameters are iteratively freed (Marsh et al., 2018; Putnick & Bornstein 2016). However, modification indices and intercepts should be assessed for patterns, such as consistent differences in item intercepts between groups (e.g., males always have higher incepts on certain factors as compared to females), which may point to true group differences.

Models at each level of invariance were compared to the preceding model, with the configural model being compared to the final model from Step 2. Goodness of fit of invariance models were estimated using the same statistics described in Step 2. As χ^2 is sensitive to sample size, we also examined ΔCFI , $\Delta RMSEA$, and $\Delta SRMR$. In order to have considered a level of measurement invariance to be reached, there needed to be a deterioration of no more than .010 in CFI and the change in RMSEA needed to be $< .015$ (Chen, 2007). The change in SRMR needed to be $< .030$ in the test of configural and metric invariance and $< .010$ in the test of scalar invariance.

Step 4: Criterion Validity

Criterion validity of the latent factors from the final best-fit model from Step 2 was examined via bivariate correlations with external correlates. These were calculated using weighted factor scores estimated via CFAs on measures of Dark Triad traits, anxiety, depression, and sociosexuality. Given the sample size, we expected many significant correlations at $\alpha = .05$; thus, we considered only significant correlations $> |.15|$ to be meaningful.

Results: Sexual Fantasies

Step 1: Exploratory Analysis

The initial EFA with all 94 items yielded 12 factors with eigenvalues > 1 . One factor was removed because it only contained two items. In a subsequent EFA, items were removed based on primary loadings of $< |.40|$ and cross loadings within .15 of the primary loadings. After this, the final EFA had six factors with eigenvalues > 1 and included 28 of the initial 94 items (see supplemental Table S3 for the primary rotated loadings and Table S4 for factor correlations). Fit statistics were adequate, $\chi^2(225) = 2670.41$, $p < .001$, $RMSEA = .071$, 90% CI [.069, .074], $RMSR = .021$. However, the purpose of this EFA was to reduce the item pool and determine a general factor structure, not to find a best fitting model. Based on item placement, the six factors were named: 1) submission/masochism (e.g., you are receiving corporal punishment), 2) rough sex (e.g., hair pulling, biting), 3) normophilia (e.g., you are having penetrative sex), 4) domination/sadism (e.g., you make others refer to you as a superior), 5) degradation and humiliation (e.g., you are verbally humiliating

someone), and 6) fantasies of intrusion (e.g., you are exposing your genitals to unsuspecting persons).

Step 2: Model Fitting

CFA

Fit statistics for the 28-item measure (Table 1) favored the bifactor model over the unidimensional and six factor models, as did the examination of cross loadings.

Table 1

Model Fit Information for Estimated SFI Models and Invariance Testing

Model Type	Model fit statistics											
	χ^2	df	p-value	RMSEA [90% CI]	CFI	TLI	SRMR	AIC	BIC	Δ CFI	Δ RMSEA	Δ SRMR
CFA												
Unidimensional	16823.986	350	<.001	.148 [.146, .150]	.500	.460	.122	225039.091	225515.25	-	-	-
Lower order (6 factor)	9410.940	335	<.001	.113 [.111, .114]	.727	.689	.115	216251.287	216812.475	-	-	-
Bifactor	5266.079	312	<.001	.086 [.084, .088]	.850	.818	.105	211546.45	212238.015	-	-	-
ESEM												
Lower order (6 factor)	2878.092	225	<.001	.074 [.072, .077]	.919	.865	.024	208828.51	208024.078	-	-	-
Bifactor	2079.863	203	<.001	.066 [.063, .068]	.943	.894	.021	210013.239	209333.516	-	-	-
Invariance Testing: Sex												
Configural	2341.058	406	<.001	.067 [.064, .069]	.941	.890	.021	205978.584	208596.162	.002	.008	.000
Metric/weak	2622.400	553	<.001	.059 [.057, .062]	.937	.914	.036	206104.348	207889.061	.004	.008	-.015
Scalar/strong (full)	3481.419	581	<.001	.068 [.066, .071]	.912	.885	.068	207003.906	208629.977	.025	-.009	-.032
Scalar/strong (partial)	2946.573	571	<.001	.062 [.060, .065]	.928	.904	.050	206423.193	208105.922	.009	-.003	-.014
Invariance Testing: Sexual Orientation												
Configural	2336.354	406	<.001	.067 [.064, .069]	.942	.891	.023	207848.196	210467.071	.001	-.001	-.002
Metric/weak	2466.444	553	<.001	.057 [.055, .059]	.942	.921	.029	207769.088	209554.684	.000	.010	-.006
Scalar/strong	2694.148	581	<.001	.058 [.056, .061]	.936	.917	.038	207949.907	209576.784	.006	-.001	-.009

Note. Measurement invariance levels were said to be reached if 1) CFA did not deteriorate by $> .10$ in the more restrictive model, 2) Δ RMSEA $< .015$, and 3) Δ SRMR was $< .030$ in the configural model and $< .010$ in the scalar model.

In comparison with other CFA models, the bifactor model had the lowest χ^2 , RMSEA, SRMR, AIC, and BIC and the highest CFI and TLI, but did not demonstrate acceptable fit. Standardized item loadings for all fantasy models can be found in the supplementary file Tables S15-S19. All lower order factors had exclusively positive and significant loadings ($|\lambda_{range}| = .35, .84$). All but two items loaded significantly onto the general sexual interest factor ($|\lambda_{range}| = .33, .51$), indicating that the general factor accounted for the variance of most items. Twelve items had negative loadings on the general factor.

ESEM

Again, a bifactor solution was the best fitting model when compared to a five factor and higher order model. Of all models, (both CFA and ESEM), the bifactor ESEM had the lowest χ^2 , RMSEA, SRMR, AIC, and BIC and the highest CFI and TLI, with all fit indices (aside from χ^2) indicating good or excellent fit. The superiority of an ESEM model was supported by 1) improved model fit in comparison to CFA, 2) smaller factor correlations in the lower order ESEM model compared to the CFA model, and 3) cross loadings that were smaller or had theoretical support. Further, the superiority of the bifactor model was supported by 1) improved fit of bifactor models compared to other models, 2) a well-defined general factor, and 3) well-defined specific factors. Thus, the bifactor ESEM was our final model (see Figure S1 and Table S5 for the model and standardized factor loadings, respectively). Fit indices for other models can be seen in Table 1. All items loaded significantly and positively on the general factor ($|\lambda_{range}| = .27, .85$) and four of the six subscales ($|\lambda_{range}| = .36, .73$). The submission/masochism items did not load significantly onto their specific factor ($|\lambda_{range}| = -.09, .46$). These were also the items that loaded most strongly onto the general factor. The normophilic factor demonstrated similar issues, with only two of the six items loading significantly onto their specific factor ($|\lambda_{range}| = .00, .21$), although many of these items had strong loadings on the general factor. Guided by both theory and model-fit information, we decided to retain these two specific factors.

Additional fit indices estimated via Omega program (Watkins, 2013) can be seen in Table 2.

Table 2

Additional Fit Indices for the Estimated SFI Bifactor Model

	Bifactor fit statistics				
	ω or ω_S	ω_H or ω_{HS}	H	ECV	PUC
General	.950	.850	.948	.594	.860
Submission	.905	.039	.247		
Rough sex	.820	.482	.664		
Domination	.916	.549	.741		
Humiliation	.871	.342	.585		
Intrusion	.736	.553	.744		
Normophilia	.695	.021	.145		

Based on the omega coefficient (ω), a large proportion of the variance in the total score was attributable to common variance sources (general and specific factors). Similarly, reliabilities of five sub-scales were high ($\omega_S > .70$); the normophilic factor was close. The ω_H calculation indicated that

the general sexual interest factor accounted for 85.0% of the total variance in the total fantasy score and the H value (.95) indicated that this was very well defined by its items. The rough sex, domination/sadism, and fantasies of intrusion specific factors were also well defined by their items ($H > .60$). Humiliation had a value close to this cut-off. The submission/masochism and normophilic factors did not meet this criterion, likely due to their high cross loadings on the general factor, with most items having larger loadings on the general factor than the targeted specific factor. For both factors, the ω_S value was considerably higher than the ω_{HS} , indicating that its variance was better explained by the general factor. Similarly, the ω_{HS} met the criteria of $> .50$ in all subscales except submission/masochism and normophilia. Consequently, these two subscales were likely to possess too little ‘true score’ variance to enable a useful interpretation. As both measures of dimensionality did not reach threshold levels of ECV and PUC, we concluded that the data were multidimensional. This was reflected in the very poor fit of the unidimensional model (see Table 1). In sum, the bifactor ESEM model was superior to others and additional fit indices showed the multidimensionality of sexual fantasies and indicated that most factors were well defined by their items.

Step 3: Measurement Invariance

All levels of invariance, up to scalar invariance, were assumed to be reached (see Table 1 for increasingly strict measurement invariance models). The results from the full scalar invariance model indicated poor fit for sex. We then followed a sequential processes of freeing item intercepts based on the modification indices. Examination of modification indices did not suggest that intercepts of items from any one specific factor were causing poor fit; rather, it was small differences in intercepts between males and females on several items across factor. Partial scalar invariance was reached after 10 item intercepts were freed. Descriptive statistics for SFI scores based on sex and sexual orientation are presented in Table S6. As expected, males had higher general fantasy scores than females, $t(1974) = 3.69, p < .001, d = .17$. Females scored significantly higher than males on submission/masochism $t(1963.11) = 4.00, p < .001, d = .18$ and rough sex $t(1974) = 3.40, p < .001, d = .15$. The largest sex difference found was in fantasies of intrusion, where males scored significantly higher, $t(1974) = 13.95, p < .001, d = .63$. Males also scored higher than females on all other

subscales. Heterosexuals had lower general fantasy scores than non-heterosexuals, $t(1888) = 2.98$, $p = .003$, $d = .15$. Non-heterosexuals had higher average scores on submission/masochism, rough sex, and humiliation/degradation, whereas heterosexuals had higher scores on fantasies of intrusion. However, there were no significant sexual orientation differences on domination/sadism.

Step 4: Criterion Validity

Factor scores of criterion variables were then and correlated with SFI scores (see Table 3).

Table 3

Correlations Amongst Estimated SFI Factor Scores and Dark Triad Traits, Anxiety, Depression, and Sociosexuality

Variable	SFI Factor						
	General	Rough sex	Sub/mas	Dom/sad	Deg/humil	Intrusion	Norm.
Gen. Dark Triad	.194***	.137***	-.008	.255***	.192***	.243***	.105***
Machiavellianism	.114***	.065**	-.029	.173***	.133***	.133***	.033
Narcissism	.151***	.162***	.021	.187***	.071**	.220***	.159***
Psychopathy	.214***	.136***	.008	.262***	.242***	.264***	.106***
Anxiety	.060*	.102***	.057*	-.035	.059*	-.139***	-.052*
Depression	.043	.045	.048*	-.027	.091***	-.112***	-.091***
Sociosexuality	.346***	.295***	.173***	.300***	.254***	.367***	.340***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, bolded correlations indicate meaningful correlations $r > |.15|$

As predicted, sexual fantasies were positively related to the Dark Triad and sociosexuality, but less so with measures of anxiety and depression. Of the Dark Triad traits, psychopathy had the strongest relationship with general and specific sexual fantasy domains. Sociosexuality was the strongest correlate of general and specific fantasy factors. Anxiety and depression did not have meaningful relationships with any factors. Results demonstrated the criterion validity of SFI scores.

Results: Sexual Behaviors

Step 1: Exploratory Analysis

The initial EFA with all 75 items yielded eight factors with eigenvalues > 1 . Two factors were removed because they had less than 3 items. As with the fantasy EFA, items were then removed based on primary loadings $< |.40|$ and cross loadings within .15 of the primary loading. The final EFA (see Table S7 for rotated loadings and Table S8 for factor correlations) included 28 items that loaded onto five factors with eigenvalues > 1 : 1) rough sex (e.g., hair pulling, biting), 2) relinquishing power (related to submission, masochism, and being humiliated/degraded), 3) assuming power (related to

domination, sadism, or humiliating/degrading others), 4) behaviors of intrusion (e.g., you are watching others engage in sexual behaviors without them being aware of your presence), and 5) normophilia (e.g., someone is giving you oral sex). This final model had poor fit, $\chi^2(225) = 2670.41$, $p < .001$, RMSEA = .071, 90% CI [.069, .074]. Unlike the SFI, the humiliation and degradation items parsed into 'giving' and 'receiving' categories; they were now included in the relevant relinquishing or assuming power factors.

Step 2: Model Fitting

CFA

All models were identified; see Table 4 for fit statistics.

Table 4
Model Fit Information for Estimated SBI Models and Invariance Testing

Model Type	Model fit statistics											
	χ^2	df	p-value	RMSEA [90% CI]	CFI	TLI	SRMR	AIC	BIC	Δ CFI	Δ RMSEA	Δ SRMR
CFA												
Unidimensional	13677.92	350	<.001	.140 [.138, .142]	.460	.417	.134	150248.689	150717.296	-	-	-
Lower order (6 factor)	4544.226	340	<.001	.080 [.077, .082]	.830	.811	.075	138232.323	138756.717	-	-	-
Bifactor	3377.463	316	<.001	.070 [.068, .073]	.876	.852	.064	136847.611	137505.892	-	-	-
ESEM												
Lower order (6 factor)	2786.993	248	<.001	.072 [.070, .075]	.897	.843	.029	136376.593	137414.223	-	-	-
Bifactor	2141.661	225	<.001	.066 [.063, .069]	.922	.880	.023	135498.766	136664.705	-	-	-
Invariance Testing: Sex												
Configural	2427.902	450	<.001	.067 [.065, .070]	.920	.875	.033	133290.711	135621.305	.002	.005	-.001
Metric/weak	2712.934	582	<.001	.061 [.059, .064]	.914	.898	.036	133443.399	135038.016	.006	-.023	-.003
Scalar/strong (full)	3416.939	610	<.001	.069 [.066, .071]	.886	.869	.059	134226.053	135664.554	.028	.029	-.023
Scalar/strong (partial)	2953.043	604	<.001	.063 [.061, .065]	.905	.891	.043	133673.688	135145.643	.009	.007	-.007
Invariance Testing: Sexual Orientation												
Configural	2390.321	450	<.001	.068 [.065, .071]	.916	.861	.025	207848.196	210467.071	.006	.009	-.002
Metric/weak	2560.311	582	<.001	.060 [.058, .063]	.914	.889	.032	207769.088	209554.684	.002	-.028	-.007
Scalar/strong	2758.211	610	<.001	.061 [.059, .064]	.907	.885	.047	207949.907	209576.784	.007	.004	-.015

Note: Measurement invariance levels were said to be reached if 1) CFA did not deteriorate by $> .10$ in the more restrictive model, 2) Δ RMSEA $< .015$, and 3) Δ SRMR was $< .030$ in the configural model and $< .010$ in the scalar model.

The bifactor CFA provided the best fit as it had the lowest χ^2 , RMSEA, SRMR, AIC, and BIC and the highest CFI and TLI compared to all other CFA models. However, only the SRMR and RMSEA fell within the criterion for acceptable fit. All items loaded significantly and positively onto their target factor ($|\lambda_{range}| = .37, .83$) and general factor ($|\lambda_{range}| = .09, .84$), except for item 53. This was targeted to be on the relinquishing power factor; it had a non-significant loading ($\lambda = .01$) on the

specific factor but had the highest loading of all items on the general factor. Standardized item loadings for all behavior models can be found in the supplementary file Tables S20-S24.

ESEM

The bifactor model had the lowest χ^2 , RMSEA, SRMR, AIC, and BIC and the highest CFI and TLI when compared to all other CFA and ESEM models. RMSEA indicated acceptable fit, and CFI and SRMR indicated good or excellent fit. TLI was slightly below typically acceptable fit levels. As was the case for the fantasy measure, the superiority of an ESEM model was supported by 1) improved model fit in comparison to CFA, 2) smaller factor correlations in the lower order ESEM model compared to the CFA model, and 3) cross loadings that were smaller or had theoretical support. Results also demonstrated 1) improved fit of bifactor models compared to other models, 2) a well-defined general factor, and 3) well-defined specific factors. Thus, the bifactor ESEM was our final model (see Figure S2 and Table S9 for the model, and standardized factor loadings, respectively). All items loaded significantly and positive onto the general factor ($|\lambda_{range}| = .19, .76$) and their specific factor ($|\lambda_{range}| = .38, .74$), with the exception of item 53, which loaded non-significantly ($\lambda = .23$) on its target factor and strongly onto the general factor.

Additional fit indices estimated via the Omega program (Watkins, 2013) are in Table 5.

Table 5

Additional Fit Indices for the Estimated SBI Bifactor Model

	Bifactor statistics				
	ω or ω_S	ω_H or ω_{HS}	H	ECV	PUC
General	.950	.738	.911	.426	.812
Normophilia	.853	.589	.785		
Rough Sex	.849	.458	.677		
Assuming Power	.912	.550	.742		
Relinquishing Power	.920	.355	.596		
Intrusive Behaviors	.763	.621	.788		

The Omega coefficient (ω) indicated that a large proportion of the variance in the total scores were accounted for by sources of common variance (general and specific factors). The reliabilities of all specific factors were high ($\omega_S > .70$). Similar to the SFI, the ω_H showed that the general factor accounted for 73.8% of the total variance in the overall score. An H value of .91 indicated that the general factor was well defined by the items, as were the specific factor ($H > .60$).

Rough sex and relinquishing power factors had values $< .50$ for ω_{HS} , indicating that the variance from both was better explained by the general factor, though both factors had a number of items with strong specific factor loadings. As both ECV and PUC were not above .70, the data were concluded to be multidimensional; this is reflected in the poor fit of the unidimensional model. Results indicated the bifactor ESEM showed the best model fit and supported the multidimensionality of sexual behaviors.

Step 3: Measurement Invariance

All levels of invariance were reached (Table 4). In terms of group differences, females were found to have significantly higher general behavior scores than males, indicating that, on average, they participated in sexual behaviors more than males, $t(1831) = 3.82$, $p < .001$, $d = .18$ (see Table S10). However, the effect size was small. Similar to measures of submission/masochism in sexual fantasies, females scored significantly higher than males on relinquishing power. Females also scored higher on normophilic and rough sex behaviors. Conversely, males scored higher than females on assuming power and intrusion behaviors. For the general, rough sex, and relinquishing/assuming power factors, those who identified as non-heterosexual had significantly higher scores (meaning they engaged in sexual behaviors more often) than those who were heterosexual. The largest group difference here was in the relinquishing power subscale, with a small-medium effect size, $t(721.63) = 8.12$, $p < .001$, $d = .49$. All other differences had small effects.

Step 4: Criterion Validity

Correlations between SBI factor scores and criterion variables are presented in Table 6.

Table 6

Correlations Amongst Estimated SBI Factor Scores and Dark Triad Traits, Anxiety, Depression, and Sociosexuality

Variable	SBI Factor					
	General	Norm.	Rough Sex	Assum. Pow.	Relenq. Pow.	Intrusion
7. Machiavellianism	.096***	.015	.075**	.149***	.048*	.111***
8. Narcissism	.162***	.181***	.147***	.130***	.030	.175***
9. Psychopathy	.200***	.064**	.105***	.243***	.152***	.271***
10. Gen. Dark Triad	.180***	.084***	.127***	.215***	.097***	.223***
11. Anxiety	.083**	-.055*	.077**	.012	.134***	-.077**
12. Depression	.060*	-.131***	.031	.055*	.141***	-.036
13. Sociosexuality	.402***	.402***	.295***	.243***	.240***	.282***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, bolded correlations indicate meaningful correlations ($r > |.15|$)

As was the case with fantasies (and in previous literature), psychopathy had stronger relationships with specific factors than narcissism or Machiavellianism. This relationship was strongest with the assuming power and intrusive behaviors factors. There were no meaningful ($r > |.15|$) correlations between any of the factors and measures of anxiety and depression. As expected, sociosexuality had the strongest relationship with all six factors. Results supported the criterion validity of SBI scores.

Factor Score Correlations

Lastly, we correlated the factor scores from the SFI and SBI; all meaningful results showed positive correlations (see in Table S11). Within the SFI and SBI, the strongest correlations were generally between specific factors and general factors. In the SFI, rough sex and normophilia correlated moderately and domination correlated moderate with both. Submission and domination factors did not show a meaningful relationship, though both had moderate-to-strong relationships with the degradation/humiliation factor. Intrusion correlated most strongly with the domination/sadism factor and had meaningful relationship with all dimensions except for submission/masochism. For the SBI, rough sex and normophilia correlated strongly, assuming and relinquishing power correlated moderately, and intrusion correlated moderately with both power dimensions. Between the SFI and SBI, results indicated that the strongest relationships were between ‘mirrored’ fantasy and behavior factors scores. Thus, more reported arousal to a fantasy dimension was related to more behavioral engagement in that dimension. The strongest relationship between mirrored dimensions was rough sex, followed by general, domination/sadism and assuming power, degradation/humiliation with both behavioral power dimensions, submission/masochism and relinquishing power, intrusion, and normophilia. General fantasies correlated with all behavior dimensions and vice-versa.

SFBI Scoring

Finding bifactor models for both the SFI and SBI supports calculating both overall and subscale scores for use in future studies. The most robust way of scoring the SFBI would be via

bifactor ESEM modelling and extraction of factor scores; the best method of factor scoring will differ by analysis (e.g., whether scores are to be used as a predictor or an outcome). We have provided a Mplus coding template (see supplemental file) for modelling the SFBI for this purpose. The Mplus Automation package in R would allow for similar coding and factor score extraction. However, we recognize this is a more labor-intensive process and may not be suitable for all applications of the SFBI. Average and sum-scores may provide a more accessible alternative to using SEM. We recommend the former, as calculation of average scores allows users to better interpret results using the original Likert scale. For example, an average negative value for any given SFI factor would represent an overall repulsion to a fantasy domain. To test this method, we calculated average total and sub-scale scores for all SFBI factors. We then re-ran criterion variable (see Tables S12 and S13) and factor score (see Table S14) correlations. Results were similar for criterion variables: of the Dark Triad traits, psychopathy had the most consistent relationship with SFBI factors; there were no meaningful associations with anxiety and depression; and sociosexuality was meaningfully and positively related to all SFBI factors. For factor scores, the strongest correlations were between related fantasy and behavior dimensions (e.g., the SFI submission/masochism factor and the SBI relinquishing power factor). Both general factors correlated with all specific factors. In sum, results were replicated when using average SFBI scores.

Discussion

The present study found that sexual fantasies and behaviors parse into similar dimensions. Both demonstrated a strong general factor and specific factors for 1) normophilia, 2) rough sex (capturing more physically intense/imposing behaviors like biting and scratching), 3) power dynamics (e.g., dominance vs. submission), and 4) interests of intrusion (violation of boundaries and/or privacy). Consequently, results indicated that bifactor ESEMs were the best fit for sexual fantasies and behaviors; both demonstrated significant multidimensionality. For example, the item 'you are biting or scratching someone' measured the rough sex dimension but was associated with conceptually related factors like dominance/sadism, as can be seen by examining cross loadings. Thus, ESEM offered a better quantification model approach for the complex, multidimensional

psychological constructs of sexual fantasies and behaviors (Morin & Asparouhov, 2018; Morin et al., 2020; Perreira et al., 2018). Sexual fantasies and behaviors also showed hierarchical multidimensionality, which is why bifactor ESEMs were selected as our final model.

We did not replicate factor structures found in other sexual interest measures (e.g., Wilson, 1978; Wilson & Lang, 1981). Although we did not directly test these other factor structures, we included relevant items in the initial item pool. Items did not parse into factors based on paraphilic interest, despite including items about all DSM-5 listed paraphilias (Seto et al., 2012), nor were all items pertaining to these paraphilias retained in final models (e.g., items about cross dressing and fetishism were dropped). The closest parallel between the SFBI and previous scales was between the WSFQ impersonal factor and the intrusion factor found here. In contrast to the WSFQ, sadism and masochism did not combine to form one factor, but rather were two distinct constructs relating to either side of a power dynamic. Thus, specific factors largely related to so called ‘courtship disorders’ (e.g., frotteurism, exhibitionism, and voyeurism) and power dynamics. Many specific factors appear representative of BDSM. One of the aims was to capture a measurement of the most common paraphilic interests; BDSM interests have been found to have high prevalence in Western populations. Importantly, although BDSM is generally seen as a single group, this represents a *very* broad category that is inclusive of multiple types of role-playing involving power dynamics (e.g., age play, pet play), fetishism (e.g., leather and latex), sadomasochist behaviors of varying intensity, and sometimes cross-dressing, especially if used for the purposes of humiliation (e.g., ‘sissys’).

Although the overall structure of the fantasy and behavior models were similar, there were some notable differences. For example, there was the lack of a humiliation/degradation factor in the sexual behavior model. In the fantasy model, items such as ‘you are verbally degrading and humiliating someone’ and ‘you have humiliating statements written on your body’ combined into a single factor that represented both degrading others and being degraded by others. However, in the behavior model, these items were ‘absorbed’ by relevant power dimensions. This may be due to humiliation and degradation behaviors frequently being paired during sexual activity with other power exchange behaviors. Another difference was the low reliabilities of the normophilic and

submission/masochism factor in the SFI. Omega coefficients largely showed that the factors were well defined by their items and that the data were multidimensional. However, the normophilic and submission/masochism factor in the SFI did not meet criterion set for either ω_{HS} or H values. The variance from these factors were almost wholly accounted for by the general factor, as can be seen by the strong general factor loadings of items used to represent these factors. This might be explained by the nature of sexual fantasies; studies have shown that fantasies of submission and normophilia (e.g., oral sex) are some of the most common and most intense (Critelli & Bivona, 2008; Joyal, 2015). This is consistent with evidence suggesting that normophilic interests might act as a 'baseline' for sexual interests (Brown et al., 2019; Chivers et al., 2014; Holvoet et al., 2017). Thus, these specific factors may be better measured by the general factor and associations between these two factors and external correlates are to be interpreted cautiously. However, calculation of ω_{HS} in the Omega programme assumes that the bifactor models are done via CFA and that cross-loadings between specific factors are constrained to zero. Thus, the values presented here only show the percentage of variance explained by the *target items* for each factor, not the factor in its entirety. All factor scores were derived from the ESEM model, where every item loaded onto every factor. This means that the true score variance accounted for by each ESEM factor is higher than reflected in the ω_{HS} ; values presented are under-estimates.

Correlational analyses supported the criterion validity of SFBI scores. As has been found in other studies (Baughman et al., 2014; Lodi-Smith et al., 2014; Williams et al., 2009), there were significant, meaningful, positive correlations between factors of the SFBI and Dark Triad traits, particularly with psychopathy. For both the SFI and SBI, the weakest relationship between Dark Triad traits and sexual interests were normophilia and submission/relinquishing power and the strongest relationships were with domination/assuming power and intrusive behaviors. Anxiety and depression scores were by and large unrelated to factor scores, supporting the notion that particular facets of sexual interests (like sadomasochism) are not associated psychopathology per se (Brown et al., 2019). Sociosexuality was the strongest correlate of general and specific factors for the SFBI, supporting previous findings (Dawson et al., 2016; Oliveira Júnior & Abdo, 2010; Richters et al.,

2008). Sociosexuality had a stronger relationship with behaviors than with fantasies, most likely due to sociosexuality being a measure of overall sexual activity. Although we are unable to determine the directionality of these relationships, estimating correlations via factor scores can help correct for measurement error (Morin, Arens, Tran, et al., 2016). Future studies should aim to also assess concurrent validity with other sexual interest measures.

Tests of measurement invariance found that the same constructs were being measured across sex and sexual orientation groups. However, for both the SFI and SBI, full scalar invariance was not reached. Partial invariance was achieved after freeing some item intercepts and this is considered sufficient to compare mean differences across groups (Elosua & Mujika, 2015; Marsh et al., 2018; Putnick & Bornstein, 2016). For fantasies, males had significantly higher scores than females for the general, normophilia, domination/sadism, humiliation, and fantasies of intrusion factor, consistent with prior work (Dawson et al., 2016; Hsu et al., 1994; Zurbriggen & Yost, 2004). Females had more arousal to submission and masochism as expected (Joyal et al., 2015).

Results were similar for sexual behaviors, except for the normophilia and general factor, in which females had higher scores than males, but the effect sizes here were small. Non-heterosexuals had significantly higher scores than heterosexuals on most fantasy and behavior factors. The only non-significant differences here were for intrusion and domination/sadism in the SFI and intrusion and normophilia in the SBI. This supports the finding that non-heterosexuality is associated with a wider range of sexual interests (Richters et al., 2008). Correlations within and between the SFBI indicated that more arousal to fantasy dimensions was moderately or strongly related to increased engagement in behavior. In addition, more arousal to general sexual fantasies related to more engagement in general sexual behaviors. Dimensions within the scales largely correlated with each other and specific dimensions correlated most strongly with the general factor.

Implications

Using latent variables to reach conclusions about overarching constructs (e.g., 'sexual fantasies') is beneficial as many individual variables (e.g., specific/narrow sexual interests) can be aggregated to represent underlying concepts. In this way, assessing the psychometric structure of

sexual fantasies and behaviors can provide a basis for a theoretical framework for the classification and organization of sexual interests. In turn, an evidenced-based theoretical structure may help ensure greater consistency in the empirical investigation of sexual interests, such that research takes a 'dimensional' approach to measuring sexual interests, rather than relying on single items to assess individual fantasies or behaviors. Such a framework may also have implications for future scale development, in which similar models can be tested for more comprehensive measures of sexual fantasies and behaviors (e.g., an 'MMPI' for sexual interests). Future studies should also aim test the validation of the SFBI in different populations. For example, there may be forensic or clinical implications if it can identify differences between offending and paraphilic disorder populations. This may also help with the identification of sub-groups. Our results indicated that, although using SEM and factor score extraction may be the most robust method of scoring, average scores largely reach the same conclusions and can be implemented in future studies, increasing usability and accessibility.

Strengths and Limitations

The present study benefited from having one of the largest, non-clinical samples of sexual interests to date ($N = 4,280$; c.f. Bartels et al., 2019; Sierra et al., 2006), a sophisticated approach to quantifying latent factor structure, a large initial item pool of diverse sexual fantasies and behaviors, tests of measurement invariance between theoretically important populations, and tests of association with known psychological correlates. The use of confirmatory ESEM allowed us to identify multiple sources of construct-relevant multidimensionality. Importantly, we did not rely solely on fit information to determine the most appropriate model; we also examined factor loadings, factor correlations, and general factor structure in conjunction with theory.

However, there were some important limitations. First, these data were cross-sectional, and we cannot make any causal conclusions. Second, this study relied on self-reports about a sensitive topic. However, research has found relative consistency of data collected on sexual behavior with different data collection techniques, including self-report (Hamilton & Morris, 2010). The use of an internet survey sample may be unrepresentative and systematic, but this is a problem in all studies

of sexual preferences. The internet has the unique advantage of being able to access people whose feelings and desires are hidden or socially stigmatized. Participation was also anonymous and so could not result in embarrassment, social stigma, or criminal sanctions. Arousal levels were not validated via measures of genital arousal due to the relative impossibility of capturing this on such a large scale. However, we did use sensible conceptual anchors for fantasy and behavior items allowing for more precise interpretation. Lastly, we did not perform the EFA and CFA/ESEM in two entirely independent samples, though we used different data portions for each step of analysis.

There are two primary theoretical limitations of the SFBI. First, it is limited in its range of sexual fantasies and behaviors captured. For example, items related to pedophilia, fetishism, and other less common paraphilias were dropped (e.g., autogynephilia, pet play), and we did not include items related to other known sexual interests, such as somnophilia. Second, the SFI assumed that arousal and repulsion to fantasies are on a single polar scale, but they might be measuring different aspects of sexual fantasies. For example, an individual might become aroused at the thought of being sadistic towards a partner but may be simultaneously repulsed or experience guilt because of that arousal. This relates to the incentive motivation (Toates, 2009) and information processing (Janssen et al., 2000) models of sexual motivation, which hypothesize parallel conscious and unconscious processing of sexual stimuli (including thoughts/fantasies). When exposed to stimuli, there may be an automatic genital or physiological arousal response before and during the subjective appraisal process, where this appraisal may dampen, heighten, or reinforce the arousal. Here, an individual could have a physiological arousal response while being subjectively repulsed by it. In contrast, the SFBI response scale focuses on *subjective* appraisal of the fantasy, where it might be less possible to have simultaneous positive and negative subjective appraisal of a stimulus. Currently, there is a lack of literature on how common this discordance might be and how it may affect scale responses and should be considered in future scale development/revision.

At a broader theoretical level, our results indicated that sexual interests are underpinned by a unique latent bifactor structure. Different sexual interests appeared to coalesce onto factors of their own, pointing to the involvement of distinct processes in a model of multifactorial causation

(Brown et al., 2019; Seto, 2017). We found no evidence for a general “paraphilic” factor but there was evidence for a general sexual interest factor. However, we recognize that this interpretation of ‘g’ factors in this way can be problematic, and there have been several concerns raised about bifactor models (Bonifay et al., 2016; Eid et al., 2018; Sellbom & Tellegen, 2019). One such concern is that bifactor models almost always show improved model fit, as they are by nature capturing more variance. To address this, we chose final models based on fit information, factors loading, and theory using a suggested analytic framework (Morin et al., 2020). In addition, we assessed additional bifactor fit indices (ω s) to check for multidimensionality; this also partially addresses the criticism of misinterpretation of both general and specific factors. However, this does not allow us to conclude that the ‘g’ factor is not due to a different psychological process aside from fantasy arousal and behavioral engagement and interpretation of factors with higher general factor loadings are less clear. Lastly, there is criticism about using bifactor models to validate the existence of latent variables. Although we began with exploratory analyses, we had a-priori chosen our latent constructs (sexual fantasies and sexual behaviors) and found factors that matched with previous theoretical understanding of sexual interests (e.g., the way courtship paraphilias group together in the ‘intrusion’ factor).

Our results are also silent on whether biological or psychosocial factors are important in influencing components of the factor structure we found. Furthermore, we were unable to provide tests of alternative theoretical models, such as whether sexual orientation and sexual interests are distinct domains because of lack of sufficient items regarding sexual orientation. As this is a preliminary validation of the SFBI, we were only able to test construct and criterion validity. Future studies should aim to test concurrent validity with other scales such as the WSFQ and measures of paraphilias and test-retest reliability in a variety of populations.

Conclusion

The results indicate that sexual interests are underpinned by a unique latent bifactor structure and possibly represent distinct measurement or etiological processes. The SFI includes 28 items and has six specific factors: normophilia, domination/sadism, submission/masochism,

humiliation/degradation, rough sex, and fantasies of intrusion. The SBI also has 28 items and has five specific factors: normophilia, assuming power, relinquishing power, rough sex, and behaviors of intrusion. Good model fit was found for both using bifactor ESEMs and ω calculations found that these patterns were multidimensional. Expected sex and sexual orientation differences were also found and criterion validity was supported through positive correlations with Dark Triad traits (particularly psychopathy) and sociosexuality and small or non-significant correlations with anxiety and depression. Future studies should aim to test whether these factors are reliable in other samples.

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Table S1*Initial Items for the SFI*

<i>Number</i>	<i>Item</i>
1.	Your partner is kissing you and caressing your body
2.	You are being spanked
3.	You are being heavily beaten, flogged, or whipped
4.	Your hair is being pulled
5.	You are being bitten or scratched
6.	Your breathing is being restricted
7.	You are being forced into sexual activity
8.	You are being held underwater or water boarded
9.	Your breasts and/or nipples are being beaten, pinched, or clamped
10.	You are imagining that one or more parts of your body is being amputated
11.	You are having sex with a woman
12.	You are having penetrative sex
13.	You are spanking someone
14.	You are heavily beating, flogging or whipping someone
15.	You are pulling someone's hair
16.	You are biting or scratching someone
17.	You are restricting someone's breathing
18.	You are forcing someone into sexual activity
19.	You are waterboarding someone or holding them underwater
20.	You are imagining amputating one or more parts of someone's body
21.	You are hurting someone's breasts or nipples
22.	You are verbally degrading or humiliating someone
23.	You are sexually degrading someone by making them perform embarrassing tasks
24.	You are forcing others to wear (or not wear) items of clothing (i.e., making a man dress in female clothing)
25.	You are having sex with a man
26.	You are using someone as human furniture, i.e., putting your feet on them like a stool, or using them as a table
27.	You are urinating on someone ("golden showers")
28.	You are defecating on someone
29.	You are writing or forcing an individual to write humiliating statements on their body
30.	You are degrading someone in any other manner not already specified
31.	You are being verbally degraded or humiliated, i.e., name calling, verbal insults/manipulation
32.	You are being degraded and/or embarrassed by being made to perform certain tasks you don't want to participate in
33.	Someone is stimulating your genitals with their mouth and tongue
34.	Someone is giving you an enforced dress code, like the requirement of being naked or not wearing underwear
35.	You are being used as "human furniture"
36.	You are being urinated on ("golden showers")
37.	You are being defecated on
38.	You have humiliating statements written on your body
39.	You are being degraded in any other manner not already specified
40.	You are handcuffing someone
41.	You are blindfolding someone
42.	You are gagging someone

43. You are purposely impairing someone's hearing by using earplugs or headphones
44. You are using your body to restrict someone's movements, i.e., holding them down, stepping on them
45. You are binding someone in any other way (e.g. rope, bondage tape)
46. You are wrapping someone's entire body in material to reduce or prevent mobility
47. You are being handcuffed
48. You are being blindfolded
49. You are masturbating
50. You are being gagged
51. Your hearing is being impaired by the use of earplugs or headphones
52. Someone is restricting your movements with their own body, i.e., holding you down, stepping on you
53. Someone is binding you in any other way (e.g. rope, bondage tape)
54. Someone is making you completely immobile by wrapping up your entire body in material
55. You are having sex with 2 or more people at a time
56. You control when and how many orgasms someone else is allowed to have
57. You are controlling or dominating someone in the bedroom
58. You control someone as a slave
59. You create a list of rules and regulations for others to follow
60. You are delivering corporal punishment to someone else
61. You make others refer to you as a superior by calling you mistress, master, sir, etc.
62. You are roleplaying as the dominant in a common power dynamic relationship, like teacher/student, doctor/patient, or boss/employee
63. Someone is controlling or dominating you in the bedroom
64. Someone is stimulating your genitals with their hands
65. When and how many orgasms you get are decided by someone else
66. You are someone's slave
67. Someone gives you a list of rules you must follow
68. You are receiving some form of corporal punishment
69. You are forced to refer to someone as a superior by calling them names like mistress, master, sir, etc.
70. You are roleplaying as the submissive in a common power dynamic relationship, like teacher/student, doctor/patient, or boss/employee
71. You are engaging in sexual activities with a consenting adult acting like an infant or child
72. You are treating someone as a child, watching them partake in childish activities or dress in a childish manner
73. You are having sex in a new or unusual place
74. You are acting as a parental figure or caregiver and your partner may refer to you as "mommy" or "daddy"
75. You are looking at an adult wearing diapers/nappies
76. You are behaving like or mimicking an infant or child
77. Someone is treating you like a child, i.e., making you wear childish clothing, talking to you as they would a baby
78. Your partner(s) takes on a parental role, and you may refer to them as mommy or daddy
79. You are wearing diapers/nappies
80. You are exposing your genitals to unsuspecting persons
81. You are watching a pornographic video
82. You are rubbing your genitals on unsuspecting individuals in public places

83. You are watching others engage in sexual behaviours without them being aware of your presence
 84. Strangers are watching you participate in sexual activities or activities that involve nudity, like showering
 85. You are watching your partner masturbate
 86. You are kissing, fondling, or touching feet
 87. Someone is kissing, fondling, or touching your feet
 88. You are having sex with someone of a different race
 89. You are having sex with a family member or someone who is pretending to be a family member
 90. You are wearing and/or touching someone in latex, PVC, or leather
 91. You treat someone as if they are an animal by making them dress as one and/or making them engage in animal like behaviours
 92. You take on animal like qualities and wear things like tails, ears, and an animal collar ("pet play")
 93. You are wearing a full animal costume or 'fursuit'
 94. For males: You identify as male and are dressing and/or acting like a female
For females: You Identify as female and are dressing and/or acting like a male
-

Table S2*Initial Items for the SBI*

<i>Number</i>	<i>Item</i>
1.	You are watching your partner masturbate
2.	You are being spanked
3.	You are being heavily beaten, flogged, or whipped
4.	Your hair is being pulled
5.	You are being bitten or scratched
6.	Your breathing is being restricted
7.	You are being held underwater or waterboarded
8.	Your breasts and/or nipples are being beaten, pinched, or clamped
9.	You are spanking someone
10.	You are heavily beating, flogging or whipping someone
11.	You are pulling someone's hair
12.	You are biting or scratching someone
13.	You are restricting someone's breathing
14.	You are waterboarding someone or holding them underwater
15.	You are hurting someone's breasts or nipples
16.	You are verbally degrading or humiliating someone
17.	You are sexually degrading someone by making them perform embarrassing tasks
18.	You are using someone as human furniture, i.e., putting your feet on them like a stool, or using them as a table
19.	You are masturbating
20.	You are writing or forcing an individual to write humiliating statements on their body
21.	You are degrading someone in any other manner not already specified
22.	You are being verbally degraded or humiliated
23.	You are being degraded and/or embarrassed by being made to perform certain tasks you don't want to participate in
24.	You are being used as "human furniture"
25.	You are having humiliating statements written on your body
26.	You are being degraded in any other manner not already specified
27.	You are having sex with a man
28.	You are handcuffing someone
29.	You are blindfolding someone
30.	You are gagging someone
31.	You are impairing someone's hearing by using earplugs or headphones
32.	You are having sex with 2 or more people at a time
33.	You are using your body to restrict someone's movements, i.e., holding them down, stepping on them
34.	You are having penetrative sex
35.	You are binding someone's body in any other way (rope, bondage tape, etc)
36.	You are being handcuffed
37.	Someone is stimulating your genitals with their mouth and tongue
38.	You are being blindfolded
39.	You are being defecated on ("scat")
40.	You are being urinated on ("golden showers")
41.	You are being gagged
42.	Your hearing is being impaired by the use of earplugs or headphones
43.	Someone is restricting your movements with their own body, i.e., holding you down, stepping on you

44. Someone is binding your body in any other way (rope, bondage tape, etc)
 45. You are controlling or dominating someone in the bedroom
 46. You are defecating on someone ("scat")
 47. You are urinating on someone ("golden showers")
 48. You create a list of rules and regulations that you make someone follow
 49. You are having sex with a woman
 50. You are delivering corporal punishment
 51. You have others refer to you as a superior by calling you mistress, master, sir, etc.
 52. You are roleplaying as the dominant in a common power dynamic relationship, like teacher/student, doctor/patient, or boss/employee
 53. Someone is controlling or dominating you in the bedroom
 54. A partner has established rules and regulations that you must follow
 55. You are receiving some form of corporal punishment
 56. You are forced to refer to someone as a superior by calling them names like mistress, master, sir, etc.
 57. You are roleplaying as the submissive in a common power dynamic relationship, like teacher/student, doctor/patient, or boss/employee
 58. You are behaving like or mimicking an infant or child
 59. Someone is treating you like a child, i.e., making you wear childish clothing, talking to you as they would a baby
 60. You are watching a pornographic video
 61. You are participating in childish activities with the intent of trying to feel like a child
 62. Your partner(s) takes on a parental role, and you may refer to them as mommy or daddy
 63. You are exposing your genitals to unsuspecting persons
 64. You are rubbing your genitals on unsuspecting individuals in public places
 65. You are watching others engage in sexual behaviours without them being aware of your presence
 66. You are allowing strangers to watch you participate in sexual activities or activities that involve nudity, like showering
 67. You take on animal like qualities and wear things like tails, ears, and an animal collar ("pet play")
 68. You are being gagged
 69. Your partner is kissing you and caressing your body
 70. You treat someone as if they are an animal by making them dress as one and/or making them engage in animal like behaviours
 71. You are wearing and/or touching someone in latex, PVC, or leather
 72. For females: You identify as a female and are dressing and/or acting like a male
For males: You identify as a male and are dressing and/or acting like a female
 73. You are having sex in a new or unusual place
 74. You are kissing, fondling, or touching feet
 75. Someone is kissing, fondling, or touching your feet
-

Table S3*Final EFA Promax Rotated Factor Loadings for the SFI*

Item	Factor					
	Rough sex λ	Domination/sadism λ	Normophilia λ	Degradation/humiliation λ	Submission/masochism λ	Intrusion λ
5	.577					
6	.822					
16	.637					
17	.869					
58		.640				
59		.819				
60		.832				
61		.676				
62		.746				
13			.582			
34			.680			
50			.573			
56			.458			
65			.734			
74			.565			
23				.732		
24				.689		
31				.671		
32				.505		
39				.453		
66					.624	
68					.872	
69					.797	
70					.810	
81						-.898
83						-.830
84						-.520
85						-.447

Table S4*Factor Correlations for Final SFI EFA Model*

<i>Factor</i>	1	2	3	4	5	6
1. Submission/masochism	1					
2. Rough sex	.404	1				
3. Normophilia	.280	.367	1			
4. Domination/sadism	.267	.320	.318	1		
5. Intrusion	-.282	-.097	-.367	-.329	1	
6. Degradation/humiliation	.444	.336	.120	.439	-.335	1

Table S5*Standardized Factor Loadings for target items of the SFI Bifactor ESEM*

Item	Factor						
	General λ	Rough sex λ	Submission/ masochism λ	Domination/ sadism λ	Degradation/ humiliation λ	Intrusion λ	Normophilia λ
5	0.497	0.589					
6	0.537	0.442					
13	0.358						0.044
16	0.411	0.674					
17	0.419	0.520					
23	0.465				0.462		
24	0.392				0.355		
31	0.688				0.492		
32	0.684				0.551		
34	0.653						0.076
39	0.695				0.489		
50	0.707						0.036
56	0.340						0.205
58	0.563			0.648			
59	0.521			0.628			
60	0.602			0.603			
61	0.520			0.675			
62	0.412			0.645			
65	0.694						0.175
66	0.846		-0.092				
68	0.853		0.116				
69	0.824		0.199				
70	0.689		0.458				
74	0.291						0.000
81	0.267					0.448	
83	0.249					0.726	
84	0.483					0.545	
85	0.265					0.479	

Table S6*Descriptive Statistics for Fantasy Scores between Females and Males and Heterosexuals and Non-Heterosexuals*

Factor	M (SD)					Sex Differences		Sexual Orientation Differences			
	Total Sample	Females	Males	Heterosexual	Non- Heterosexual	<i>t</i> (df)	<i>p</i> -value	Cohen's <i>d</i>	<i>t</i> (df)	<i>p</i> -value	Cohen's <i>d</i>
General	2.21 (15.23)	0.98 (15.54)	3.50 (14.80)	1.88 (14.78)	4.12 (15.12)	-3.69 (1974)	<.001	.17	-2.98 (1888)	.003	.15
<i>n</i> =	1981	1015	961	1208	741						
Rough sex	2.48 (3.56)	2.74 (3.63)	2.20 (3.46)	2.44 (3.38)	2.90 (3.68)	3.40 (1974)	.001	.15	-2.56 (936.39)	.011*	.14
<i>n</i> =	1981	1015	961	1208	741						
Submission	0.29 (1.50)	0.42 (1.58)	0.15 (1.39)	0.20 (1.45)	0.57 (1.57)	4.00 (1963.11)	<.001*	.18	-4.70 (940.91)	<.001*	.25
<i>n</i> =	1981	1015	961	1208	741						
Domination	-0.22 (6.57)	-1.96 (6.12)	1.62 (6.54)	0.05 (6.52)	-.47 (6.37)	-12.56 (1944.85)	<.001*	.57	1.57 (1888)	.116	.08
<i>n</i> =	1981	1015	961	1208	741						
Humiliation	-2.84 (3.54)	-3.38 (3.42)	-2.29 (3.58)	-3.03 (3.42)	-2.41 (3.73)	-6.88 (1974)	<.001	.31	-3.35 (935.13)	.001*	.18
<i>n</i> =	1981	1015	961	1208	741						
Intrusion	-0.77 (3.67)	-1.84 (3.40)	0.36 (3.60)	-0.52 (3.62)	-1.09 (3.65)	-13.95 (1974)	<.001	.63	3.12 (1888)	.002	.16
<i>n</i> =	1981	1015	961	1208	741						
Normophilia	1.67 (1.07)	1.56 (1.12)	1.80 (0.99)	1.72 (0.99)	1.71 (1.08)	-5.04 (1970.61)	<.001*	.23	0.18 (935.44)	.858	.01
<i>n</i> =	1987	1019	963	1208	741						

**Note.* Due to a significant Levene's test of equality of variances, statistics for equal variances not assumed are reported. Note that the sample used for confirmatory analyses was used for calculation.

Table S7*Final EFA Promax Rotated Factor Loadings for the SBI*

Item	Factor				
	Normophilia λ	Rough Sex λ	Assuming Power λ	Relinquishing Power λ	Intrusive Behaviors λ
1	.471				
34	.866				
37	.860				
69	.755				
74	.588				
4		.591			
5		.826			
11		.674			
12		.890			
16			.778		
17			.875		
20			.702		
21			.825		
48			.598		
50			.653		
51			.678		
22				.812	
23				.797	
25				.551	
26				.748	
53				.658	
54				.673	
55				.726	
56				.784	
63					.880
64					.846
65					.554
66					.442

Table S8*Factor Correlations for Final SBI EFA Model*

<i>Factor</i>	1	2	3	4	5
1. Normophilia	1				
2. Rough sex	.553	1			
3. Assuming Power	.228	.310	1		
4. Relinquishing Power	.301	.395	.526	1	
5. Intrusive Behaviors	.235	.104	.437	.367	1

Table S9*Standardized Factor Loadings for target items of the SBI Bifactor ESEM*

Item	Factor					
	General λ	Normophilia λ	Rough Sex λ	Assuming Power λ	Relinquishing Power λ	Intrusive Behaviors λ
1	0.429	0.384				
4	0.539		0.454			
5	0.545		0.632			
11	0.473		0.493			
12	0.511		0.658			
16	0.474			0.653		
17	0.456			0.717		
20	0.362			0.622		
21	0.426			0.687		
22	0.573				0.562	
23	0.536				0.651	
25	0.409				0.579	
26	0.479				0.676	
34	0.362	0.744				
37	0.417	0.703				
48	0.483			0.467		
50	0.552			0.505		
51	0.626			0.515		
53	0.688				0.230	
54	0.636				0.337	
55	0.650				0.364	
56	0.757				0.347	
63	0.246					0.771
64	0.193					0.702
65	0.250					0.502
66	0.444					0.396
69	0.388	0.697				
74	0.426	0.486				

Table S10*Descriptive Statistics for Behavior Scores between Females and Males and Heterosexuals and Non-Heterosexuals*

Factor	M (SD)					Sex Differences			Sexual Orientation Differences		
	Total Sample	Females	Males	Heterosexual	Non- Heterosexual	<i>t</i> (df)	<i>p</i> -value	Cohen's <i>d</i>	<i>t</i> (df)	<i>p</i> -value	Cohen's <i>d</i>
General	-8.96 (9.49)	-8.15 (9.76)	-9.84 (9.11)	-9.79 (8.71)	-6.25 (10.05)	3.82 (1831)	<.001	.18	6.88 (801.75)*	<.001	.39
<i>n</i> =	1838	948	885	1257	495						
Norm.	4.23 (3.27)	4.41 (3.25)	4.05 (3.21)	4.41 (3.00)	4.47 (3.04)	2.35 (1831)	.019	.11	0.41 (1750)	.685	.02
<i>n</i> =	1838	948	885	1257	495						
Rough Sex	1.52 (3.27)	2.04 (3.30)	0.96 (3.15)	1.42 (3.19)	2.08 (3.23)	7.22 (1829.92)*	<.001	.34	3.89 (1750)	<.001	.21
<i>n</i> =	1838	948	885	1257	495						
Assum. P.	-7.16 (3.79)	-7.96 (3.45)	-6.31 (3.95)	-7.36 (3.62)	-6.78 (4.06)	9.53 (1759.36)*	<.001	.45	2.78 (819.89)*	.006	.15
<i>n</i> =	1838	948	885	1257	495						
Relenq. P.	-5.62 (3.56)	-5.14 (3.78)	-6.14 (3.23)	-6.12 (3.13)	-4.42 (4.19)	6.12 (1817.22)*	<.001	.29	8.12 (721.63)*	<.001	.49
<i>n</i> =	1838	948	885	1257	495						
Intrusion	-4.50 (1.45)	-4.82 (1.33)	-4.15 (1.50)	-4.50 (1.32)	-4.47 (1.74)	10.03 (1765.88)*	<.001	.47	0.25 (728.51)*	.801	.02
<i>n</i> =	1838	948	885	1257	495						

Note. *Due to a significant Levene's test of equality of variances, statistics for equal variances not assumed are reported

Table S11*Correlations Between SFI and SBI Factor Scores*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1.General (B)	<i>r</i> 1												
	<i>N</i> 1838												
2.Normophilia(B)	<i>r</i> .579***	1											
	<i>N</i> 1838	1838											
3.Rough Sex (B)	<i>r</i> .714***	.738***	1										
	<i>N</i> 1838	1838	1838										
4.Assuming Power (B)	<i>r</i> .662***	.081***	.243***	1									
	<i>N</i> 1838	1838	1838	1838									
5.Relinquishing Power (B)	<i>r</i> .791***	.115***	.288***	.553***	1								
	<i>N</i> 1838	1838	1838	1838	1838								
6.Intrusion (B)	<i>r</i> .263***	.069**	-.079**	.365***	.257***	1							
	<i>N</i> 1838	1838	1838	1838	1838	1838							
7.General (F)	<i>r</i> .696***	.336***	.461***	.530***	.561***	.215***	1						
	<i>N</i> 1720	1720	1720	1720	1720	1720	1981						
8.Normophilia (F)	<i>r</i> .233***	.432***	.359***	.077**	-.045	.110***	.368***	1					
	<i>N</i> 1725	1725	1725	1725	1725	1725	1981	1987					
9.Rough Sex (F)	<i>r</i> .542***	.476***	.719***	.300***	.207***	-.064**	.621***	.468***	1				
	<i>N</i> 1720	1720	1720	1720	1720	1720	1981	1981	1981				
10.Domination/sadism (F)	<i>r</i> .462***	.232***	.288***	.644***	.196***	.233***	.730***	.369***	.536***	1			
	<i>N</i> 1720	1720	1720	1720	1720	1720	1981	1981	1981	1981			
11.Submission/masochism (F)	<i>r</i> .435***	.102***	.145***	.145***	.519***	.055*	.571***	.047*	.151***	.142***	1		
	<i>N</i> 1720	1720	1720	1720	1720	1720	1981	1981	1981	1981	1981		
12.Deg./humiliation (F)	<i>r</i> .581***	.105***	.271***	.689***	.570***	.205***	.779***	.106***	.416***	.681***	.268***	1	
	<i>N</i> 1720	1720	1720	1720	1720	1720	1981	1981	1981	1981	1981	1981	
13.Intrusion (F)	<i>r</i> .238***	.221***	.088***	.298***	.075**	.587***	.478***	.507***	.244***	.554***	.129***	.317***	1
	<i>N</i> 1720	1720	1720	1720	1720	1720	1981	1981	1981	1981	1981	1981	1981

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, bolded correlations indicate meaningful correlations $r > |.15|$. A dotted line has been drawn between SFI and SBI factors for readability.

Table S12*Correlations Amongst Average SFI Scores and Dark Triad Traits, Anxiety, Depression, and Sociosexuality*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. General	1													
2. Rough sex	.645***	1												
3. Submis./masoc.	.750***	.443***	1											
4. Domin./sadism	.790***	.397***	.455***	1										
5. Deg./Humiliation	.791***	.394***	.557***	.633***	1									
6. Intrusion	.596***	.149***	.304***	.354***	.352***	1								
7. Normophilia	.561***	.338***	.313***	.311***	.194***	.393***	1							
8. Gen. Dark Triad	.251***	.149***	.074***	.259***	.199***	.248***	.103***	1						
9. Machiavellianism	.140***	.068***	.054**	.178***	.144***	.111***	.024	.777***	1					
10. Narcissism	.166***	.122***	.020	.165***	.063***	.190***	.138***	.679***	.235***	1				
11. Psychopathy	.268***	.153***	.097***	.244***	.242***	.267***	.083***	.796***	.471***	.333***	1			
12. Anxiety	.033	.149***	.100***	-.030	.047**	-.077***	-.070***	.026	.097***	-.157***	.107***	1		
13. Depression	.034*	.116***	.095***	-.010	.078***	-.055**	-.108***	.057**	.137***	-.187***	.163***	.756***	1	
14. Sociosexuality	.375***	.223***	.175***	.252***	.262***	.349***	.379***	.275***	.083***	.174***	.375***	-.037*	-.013	1

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, bolded correlations indicate meaningful correlations $r > |.15|$. A dotted line has been down where SFI factors end for readability.

Table S13*Correlations Amongst Average SBI Scores and Dark Triad Traits, Anxiety, Depression, and Sociosexuality*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. General	1												
2. Normophilia	.639***	1											
3. Rough Sex	.733***	.527***	1										
4. Assum. Power	.745***	.245***	.363***	1									
5. Relinq. Power	.819***	.309***	.432***	.539***	1								
6. Intrus. Behaviors	.488***	.261***	.165***	.357***	.332***	1							
7. Gen. Dark Triad	.229***	.116***	.158***	.249***	.108***	.263***	1						
8. Machiavellianism	.103***	-.009	.071***	.150***	.049**	.115***	.777***	1					
9. Narcissism	.171***	.174***	.139***	.154***	.049**	.177***	.679***	.235***	1				
10. Psychopathy	.249***	.108***	.153***	.261***	.151***	.312***	.796***	.471***	.333***	1			
11. Anxiety	.079***	-.047**	.112***	.019	.138***	-.039*	.026	.097***	-.157***	.107***	1		
12. Depression	.069***	-.113***	.081***	.059**	.140***	-.003	.057**	.137***	-.187***	.163***	.756***	1	
13. Sociosexuality	.417***	.418***	.286***	.270***	.253***	.364***	.275***	.083***	.174***	.375***	-.037*	-.013	1

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, bolded correlations indicate meaningful correlations ($r > |.15|$). A dotted line has been down where SBI factors end for readability.

Table S14*Correlations* Between SFI and SBI Average Scores*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. General (B)	1												
2. Normophilia(B)	.639	1											
3. Rough Sex (B)	.733	.527	1										
4. Assuming Power (B)	.745	.245	.363	1									
5. Relinquishing Power (B)	.819	.309	.432	.539	1								
6. Intrusion (B)	.488	.261	.165	.357	.332	1							
7. General (F)	.677	.340	.476	.577	.554	.381	1						
8. Normophilia (F)	.325	.485	.283	.111	.136	.213	.561	1					
9. Rough Sex (F)	.564	.313	.763	.310	.384	.091	.645	.338	1				
10. Domin./ sadism (F)	.488	.197	.298	.649	.293	.225	.790	.311	.397	1			
11. Submis./masochism (F)	.534	.201	.323	.299	.666	.196	.750	.313	.443	.455	1		
12. Deg./ humiliation (F)	.572	.121	.272	.645	.567	.255	.791	.194	.394	.633	.557	1	
13. Intrusion (F)	.329	.215	.107	.247	.212	.640	.596	.393	.149	.354	.304	.352	1

Note. *all correlations were significant at $p < .001$, bolded correlations indicate meaningful correlations $r > |.15|$. A dotted line has been drawn between SFI and SBI factors for readability.

Fantasies: Factor loadings for CFA and ESEM models

Table S15*Factor loadings for SFI unidimensional CFA*

Item	Factor	
	General	
	λ	p
5	0.485	<.001
6	0.503	<.001
13	0.487	<.001
16	0.465	<.001
17	0.528	<.001
23	0.637	<.001
24	0.550	<.001
31	0.680	<.001
32	0.679	<.001
34	0.613	<.001
39	0.708	<.001
50	0.670	<.001
56	0.438	<.001
58	0.672	<.001
59	0.637	<.001
60	0.700	<.001
61	0.660	<.001
62	0.540	<.001
65	0.604	<.001
66	0.734	<.001
68	0.743	<.001
69	0.758	<.001
70	0.605	<.001
74	0.397	<.001
81	0.278	<.001
83	0.289	<.001
84	0.489	<.001
85	0.298	<.001

Table S16

Factor loadings for SFI lower-order CFA

Item	Factor											
	Rough sex		Submission/ masochism		Domination/ sadism		Degradation/ humiliation		Intrusion		Normophilia	
	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>
5	0.766	<.001										
6	0.652	<.001										
13											0.404	<.001
16	0.783	<.001										
17	0.672	<.001										
23							0.545	<.001				
24							0.439	<.001				
31							0.872	<.001				
32							0.891	<.001				
34											0.668	<.001
39							0.864	<.001				
50											0.716	<.001
56											0.381	<.001
58					0.859	<.001						
59					0.839	<.001						
60					0.830	<.001						
61					0.851	<.001						
62					0.720	<.001						
65											0.688	<.001
66			0.844	<.001								
68			0.819	<.001								
69			0.869	<.001								
70			0.713	<.001								
74											0.317	<.001
81									0.530	<.001		
83									0.687	<.001		
84									0.745	<.001		
85									0.481	<.001		

Table S17

Factor loadings for SFI bifactor CFA

Item	Factor													
	General		Rough sex		Submission/ masochism		Domination/ sadism		Degradation/ humiliation		Intrusion		Normophilia	
	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>
5	-0.066	0.181	0.729	<.001					0.725	<.001			0.485	<.001
6	-0.268	<.001	0.737	<.001										
13	0.508	<.001												
16	0.185	<.001	0.728	<.001										
17	0.312	<.001	0.709	<.001										
23	0.481	<.001												
24	0.427	<.001												
31	-0.328	<.001												
32	-0.306	<.001												
34	-0.229	<.001												
39	-0.233	0.002												
50	-0.234	<.001												
56	0.445	<.001												
58	0.516	<.001												
59	0.494	<.001												
60	0.432	<.001												
61	0.509	<.001												
62	0.501	<.001												
65	-0.259	<.001			0.688	0.083					0.681	0.661		
66	-0.273	<.001	0.801	<.001										
68	-0.276	<.001	0.785	<.001										
69	-0.256	<.001	0.821	<.001										
70	-0.264	<.001	0.655	<.001										
74	0.327	<.001												
81	0.098	0.001												
83	0.212	<.001												
84	0.039	0.478												
85	0.143	<.001												
													0.347	0.024
											0.518	<.001		
											0.733	<.001		
											0.709	<.001		
											0.434	<.001		

Table S18*Factor loadings for SFI lower order ESEM*

Item	Factor											
	Rough sex		Submission/ masochism		Domination/ sadism		Degradation/ humiliation		Intrusion		Normophilia	
	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>
5	0.804	<.001	0.081	<.001	-0.116	<.001	-0.028	0.160	-0.017	0.408	-0.007	0.776
6	0.639	<.001	0.095	<.001	-0.180	<.001	0.136	<.001	-0.064	0.014	0.171	<.001
13	0.309	<.001	-0.125	<.001	0.381	<.001	0.017	0.475	0.224	<.001	-0.111	0.003
16	0.850	<.001	-0.067	0.007	0.037	0.076	-0.073	<.001	-0.001	0.977	-0.104	<.001
17	0.618	<.001	-0.250	<.001	0.210	<.001	0.127	<.001	0.041	0.063	0.046	0.125
23	-0.019	0.248	-0.242	<.001	0.422	<.001	0.627	<.001	0.090	<.001	-0.101	0.003
24	0.023	0.299	-0.146	<.001	0.359	<.001	0.489	<.001	0.054	0.034	-0.169	<.001
31	0.085	<.001	0.147	<.001	-0.195	<.001	0.801	<.001	-0.013	0.493	0.023	0.350
32	-0.038	0.101	0.109	<.001	-0.183	<.001	0.875	<.001	0.048	0.005	0.054	0.018
34	0.071	0.002	0.408	<.001	-0.075	0.002	0.231	<.001	0.240	<.001	0.042	0.776
39	0.051	0.001	0.103	<.001	-0.097	<.001	0.796	<.001	0.002	0.908	0.050	0.006
50	0.360	<.001	0.275	<.001	-0.003	0.886	0.213	<.001	0.023	0.307	0.219	<.001
56	0.227	<.001	0.012	0.690	0.368	<.001	-0.154	<.001	0.315	<.001	-0.054	0.330
58	0.014	0.393	0.032	0.291	0.783	<.001	0.038	0.070	0.153	<.001	0.162	<.001
59	0.009	0.602	0.108	<.001	0.765	<.001	0.022	0.238	0.082	<.001	0.064	0.023
60	0.134	<.001	0.037	0.177	0.726	<.001	0.174	<.001	-0.071	0.012	0.091	0.053
61	0.055	0.001	0.149	<.001	0.759	<.001	0.148	<.001	-0.066	<.001	-0.150	<.001
62	0.044	0.014	0.286	<.001	0.592	<.001	0.013	0.652	0.089	0.005	-0.443	<.001
65	0.136	<.001	0.549	<.001	0.017	0.528	-0.048	0.015	0.235	<.001	0.191	0.004
66	-0.040	0.028	0.584	<.001	0.245	<.001	0.087	<.001	0.124	<.001	0.384	<.001
68	0.128	<.001	0.477	<.001	0.217	<.001	0.226	<.001	-0.091	0.007	0.297	<.001
69	0.033	0.031	0.680	<.001	0.211	<.001	0.186	<.001	-0.026	0.158	0.075	0.038
70	0.051	0.002	0.795	<.001	0.028	0.335	0.044	0.071	0.089	<.001	-0.198	<.001
74	-0.018	0.488	-0.053	0.067	0.307	<.001	0.224	<.001	0.144	<.001	-0.098	0.003
81	0.009	0.705	0.040	0.107	-0.067	0.006	-0.046	0.087	0.579	<.001	-0.026	0.447
83	-0.171	<.001	-0.148	<.001	-0.048	0.088	0.101	0.001	0.784	<.001	0.014	0.472
84	0.027	0.203	0.028	0.265	-0.058	0.051	0.124	<.001	0.630	<.001	0.096	<.001
85	0.146	<.001	0.006	0.827	-0.065	0.008	-0.038	0.154	0.497	<.001	-0.085	0.015

Note. Bolded items represent target items for factor.

Table S19*Factor loadings for SFI bifactor ESEM*

Item	Factor													
	General		Rough sex		Submission/ masochism		Domination/ sadism		Degradation/ humiliation		Intrusion		Normophilia	
	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>
5	0.497	<.001	0.589	<.001	0.063	0.119	-0.067	<.001	-0.069	0.009	-0.036	0.089	0.010	0.875
6	0.537	<.001	0.442	0.004	-0.056	0.541	-0.223	<.001	0.047	0.201	-0.108	<.001	0.021	0.791
13	0.358	<.001	0.285	<.001	-0.003	0.985	0.485	<.001	0.022	0.333	0.209	<.001	0.044	0.571
16	0.411	<.001	0.674	<.001	0.059	0.527	0.161	<.001	-0.061	0.010	0.021	0.331	0.016	0.833
17	0.419	<.001	0.520	<.001	-0.153	0.378	0.296	<.001	0.117	0.071	0.046	0.227	0.059	0.233
23	0.465	<.001	0.042	0.334	-0.099	0.589	0.517	<.001	0.462	<.001	0.098	0.001	0.007	0.848
24	0.392	<.001	0.069	0.001	0.012	0.935	0.452	<.001	0.355	<.001	0.086	<.001	-0.028	0.720
31	0.688	<.001	0.013	0.379	0.034	0.754	-0.196	<.001	0.492	<.001	-0.085	<.001	-0.016	0.483
32	0.684	<.001	-0.083	<.001	-0.009	0.921	-0.186	<.001	0.551	<.001	-0.046	0.002	0.013	0.694
34	0.653	<.001	-0.028	0.484	0.161	0.301	-0.148	<.001	0.068	0.109	0.117	<.001	0.076	0.325
39	0.695	<.001	-0.010	0.563	-0.170	0.878	-0.111	<.001	0.489	<.001	-0.057	<.001	-0.053	0.093
50	0.707	<.001	0.187	<.001	-0.045	0.786	-0.143	<.001	0.071	0.059	-0.073	0.001	0.036	0.638
56	0.340	<.001	0.205	<.001	0.043	0.823	0.422	<.001	-0.089	<.001	0.224	<.001	0.205	0.021
58	0.563	<.001	-0.007	0.940	-0.228	0.110	0.648	<.001	0.039	0.726	0.079	0.219	0.230	0.027
59	0.521	<.001	-0.001	0.981	-0.088	0.233	0.628	<.001	0.024	0.653	0.057	0.060	0.100	0.001
60	0.602	<.001	0.079	0.090	-0.194	0.211	0.603	<.001	0.071	0.262	-0.017	0.527	-0.273	0.002
61	0.520	<.001	0.055	0.005	0.007	0.135	0.675	<.001	0.102	<.001	-0.005	0.812	-0.017	0.848
62	0.412	<.001	0.069	0.445	0.360	<.001	0.645	<.001	-0.008	0.949	0.130	0.052	0.041	0.873
65	0.694	<.001	-0.017	0.459	0.111	0.572	-0.176	<.001	-0.136	<.001	0.044	0.036	0.175	<.001
66	0.846	<.001	-0.208	<.001	-0.092	0.730	-0.112	0.081	-0.062	0.390	-0.073	0.078	0.219	0.118
68	0.853	<.001	-0.070	0.004	0.116	0.483	-0.099	0.002	-0.029	0.442	-0.148	<.001	-0.318	0.017
69	0.824	<.001	-0.111	0.029	0.199	0.543	-0.055	0.086	0.002	0.973	-0.102	0.007	-0.013	0.800
70	0.689	<.001	-0.072	0.546	0.458	0.097	-0.102	0.273	-0.104	0.465	0.003	0.976	0.049	0.802
74	0.291	<.001	0.015	0.522	0.009	0.129	0.356	<.001	0.160	<.001	0.158	<.001	0.000	0.998
81	0.267	<.001	0.007	0.776	0.067	0.129	0.055	0.004	-0.075	0.001	0.448	<.001	0.079	0.178
83	0.249	<.001	-0.112	<.001	-0.056	0.509	0.125	<.001	0.037	0.237	0.726	<.001	0.014	0.476
84	0.483	<.001	-0.003	0.902	-0.042	0.377	0.016	0.564	0.015	0.618	0.545	<.001	-0.020	0.446
85	0.265	<.001	0.129	<.001	0.101	0.244	0.091	<.001	-0.055	0.093	0.479	<.001	0.088	0.335

Note. Bolded items represent target items for factor.

Behaviours: Factor loadings for CFA and ESEM models

Table S20*Factor loadings for SBI unidimensional CFA*

Item	Factor	
	General	
	λ	p
1	0.405	<.001
4	0.474	<.001
5	0.515	<.001
11	0.444	<.001
12	0.465	<.001
16	0.647	<.001
17	0.668	<.001
20	0.598	<.001
21	0.670	<.001
22	0.716	<.001
23	0.736	<.001
25	0.633	<.001
26	0.729	<.001
34	0.314	<.001
37	0.351	<.001
48	0.521	<.001
50	0.631	<.001
51	0.638	<.001
53	0.589	<.001
54	0.625	<.001
55	0.671	<.001
56	0.718	<.001
63	0.267	<.001
64	0.228	<.001
65	0.264	<.001
66	0.478	<.001
69	0.322	<.001
74	0.364	<.001

Table S21*Factor loadings for SBI lower-order CFA*

Item	Factor					
	Normophilia		Rough sex		Domination/sadism	
	λ	p	λ	p	λ	p
1	0.553	<.001				
4			0.702	<.001		
5			0.838	<.001		
11			0.715	<.001		
12			0.836	<.001		
16					0.808	<.001
17					0.857	<.001
20					0.734	<.001
21					0.820	<.001
22						0.805 <.001
23						0.840 <.001
25						0.699 <.001
26						0.805 <.001
34	0.828	<.001				
37	0.838	<.001				
48					0.654	<.001
50					0.728	<.001
51					0.759	<.001
53						0.627 <.001
54						0.699 <.001
55						0.730 <.001
56						0.790 <.001
63						0.796 <.001
64						0.704 <.001
65						0.579 <.001
66						0.571 <.001
69	0.803	<.001				
74	0.651	<.001				

Table S22*Factor loadings for SBI bifactor CFA*

Item	Factor									
	General		Normophilia		Rough sex		Domination/ sadism		Submission/ masochism	
	λ	p	λ	p	λ	p	λ	p	λ	p
1	0.404	<.001	0.397	<.001						
4	0.637	<.001			0.372	<.001				
5	0.545	<.001			0.615	<.001				
11	0.378	<.001			0.627	<.001				
12	0.454	<.001			0.740	<.001				
16	0.264	<.001					0.762	<.001		
17	0.210	<.001					0.841	<.001		
20	0.164	<.001					0.727	<.001		
21	0.239	<.001					0.789	<.001		
22	0.619	<.001							0.512	<.001
23	0.535	<.001							0.675	<.001
25	0.382	<.001							0.637	<.001
26	0.491	<.001							0.681	<.001
34	0.357	<.001	0.759	<.001						
37	0.400	<.001	0.735	<.001						
48	0.214	<.001					0.609	<.001		
50	0.311	<.001					0.656	<.001		
51	0.338	<.001					0.677	<.001		
53	0.838	<.001							0.012	0.846
54	0.602	<.001							0.366	<.001
55	0.638	<.001							0.373	<.001
56	0.708	<.001							0.384	<.001
63	0.145	<.001								0.825 <.001
64	0.093	0.002								0.721 <.001
65	0.154	<.001								0.522 <.001
66	0.364	<.001								0.453 <.001
69	0.392	<.001	0.706	<.001						
74	0.414	<.001	0.503	<.001						

Table S23*Factor loadings for SBI lower order ESEM*

Item	Factor									
	Normophilia		Rough sex		Domination/sadism		Submission/masochism		Intrusion	
	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>
1	0.480	<.001	0.047	0.102	0.125	<.001	0.063	0.003	0.034	0.092
4	0.056	0.003	0.621	<.001	-0.181	<.001	0.285	<.001	-0.024	0.171
5	-0.050	0.005	0.825	<.001	-0.014	0.434	0.078	<.001	0.053	<.001
11	0.107	<.001	0.647	<.001	0.246	<.001	-0.163	<.001	-0.032	0.050
12	-0.031	0.066	0.872	<.001	0.101	<.001	-0.104	<.001	0.018	0.208
16	0.049	0.002	0.056	0.005	0.800	<.001	0.006	0.759	-0.059	0.012
17	0.022	0.112	-0.048	0.004	0.851	<.001	0.043	0.028	0.008	0.627
20	-0.072	<.001	-0.011	0.618	0.687	<.001	0.075	0.005	0.103	0.001
21	-0.055	0.001	0.034	0.074	0.777	<.001	0.098	<.001	-0.019	0.357
22	-0.009	0.553	0.039	0.069	0.034	0.091	0.786	<.001	-0.039	0.067
23	-0.008	0.595	-0.110	<.001	0.099	<.001	0.836	<.001	-0.004	0.820
25	-0.082	<.001	-0.086	0.001	0.116	<.001	0.660	<.001	0.115	0.001
26	-0.056	0.002	-0.052	0.035	0.156	<.001	0.765	<.001	-0.020	0.346
34	0.865	<.001	-0.045	0.029	-0.011	0.356	-0.013	0.293	-0.032	0.012
37	0.826	<.001	0.023	0.276	0.014	0.239	-0.029	0.017	-0.004	0.756
48	0.022	0.232	0.017	0.492	0.617	<.001	-0.040	0.131	0.128	<.001
50	0.050	0.007	0.065	0.011	0.667	<.001	0.057	0.017	-0.015	0.576
51	0.040	0.040	0.102	<.001	0.707	<.001	0.022	0.347	-0.030	0.198
53	0.138	<.001	0.286	<.001	-0.203	<.001	0.609	0.846	-0.035	0.091
54	0.042	0.024	-0.026	0.320	-0.043	0.071	0.698	<.001	0.085	0.001
55	0.015	0.427	0.044	0.098	0.012	0.592	0.708	<.001	-0.010	0.697
56	0.032	0.069	0.035	0.147	0.008	0.690	0.768	<.001	-0.015	0.486
63	-0.055	<.001	0.020	0.286	-0.067	<.001	0.015	0.458	0.836	<.001
64	-0.090	<.001	0.032	0.132	-0.101	0.642	-0.035	0.116	0.754	<.001
65	0.164	<.001	-0.056	0.031	0.057	0.020	-0.037	0.110	0.535	<.001
66	0.161	<.001	0.022	0.421	0.129	<.001	0.135	<.001	0.431	<.001
69	0.831	<.001	-0.029	0.208	-0.021	0.074	0.022	0.075	-0.056	<.001
74	0.576	<.001	0.081	0.002	-0.038	0.070	0.022	0.301	0.189	<.001

Note. Bolded items represent target items for factor.

Table S24*Factor loadings for SBI bifactor ESEM*

Item	Factor											
	General		Normophilia		Rough sex		Domination/ sadism		Submission/ masochism		Intrusion	
	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>	<i>λ</i>	<i>p</i>
1	0.429	<.001	0.384	<.001	0.068	0.003	0.054	0.002	-0.024	0.207	0.024	0.224
4	0.539	<.001	0.135	<.001	0.454	<.001	-0.188	<.001	0.113	<.001	-0.08	<.001
5	0.545	<.001	0.110	<.001	0.632	<.001	-0.031	0.028	0.033	0.026	-0.005	0.725
11	0.473	<.001	0.195	<.001	0.493	<.001	0.152	<.001	-0.143	<.001	-0.072	<.001
12	0.511	<.001	0.131	<.001	0.658	<.001	0.046	0.001	-0.098	<.001	-0.042	0.009
16	0.474	<.001	0.020	0.197	0.057	0.009	0.653	<.001	0.067	0.009	-0.024	0.275
17	0.456	<.001	-0.012	0.338	-0.014	0.385	0.717	<.001	0.129	<.001	0.056	0.001
20	0.362	<.001	-0.053	0.004	0.029	0.133	0.622	<.001	0.191	<.001	0.149	<.001
21	0.426	<.001	-0.040	0.008	0.071	<.001	0.687	<.001	0.206	<.001	0.029	0.130
22	0.573	<.001	-0.023	0.125	0.048	0.024	0.063	0.001	0.562	<.001	-0.024	0.232
23	0.536	<.001	-0.033	0.011	-0.040	0.022	0.145	<.001	0.651	<.001	0.033	0.061
25	0.409	<.001	-0.064	<.001	-0.014	0.523	0.184	<.001	0.579	<.001	0.153	<.001
26	0.479	<.001	-0.031	0.026	0.041	0.024	0.216	<.001	0.676	<.001	0.027	0.152
34	0.362	<.001	0.744	<.001	0.105	<.001	-0.061	<.001	-0.050	<.001	-0.017	0.172
37	0.417	<.001	0.703	<.001	0.131	<.001	-0.051	<.001	-0.084	<.001	-0.002	0.896
48	0.483	<.001	-0.076	<.001	-0.100	<.001	0.467	<.001	-0.110	<.001	0.109	<.001
50	0.552	<.001	-0.038	0.045	-0.030	0.279	0.505	<.001	-0.024	0.476	-0.021	0.417
51	0.626	<.001	-0.082	<.001	-0.061	0.013	0.515	<.001	-0.120	<.001	-0.063	0.003
53	0.688	<.001	0.066	<.001	0.124	<.001	-0.242	<.001	0.230	0.846	-0.098	<.001
54	0.636	<.001	-0.078	<.001	-0.137	<.001	-0.073	0.002	0.337	<.001	0.048	0.029
55	0.650	<.001	-0.080	<.001	-0.062	0.029	-0.025	0.271	0.364	<.001	-0.040	0.122
56	0.757	<.001	-0.111	<.001	-0.124	<.001	-0.061	0.002	0.347	<.001	-0.068	<.001
63	0.246	<.001	-0.032	0.015	-0.049	0.003	0.020	0.330	0.046	0.048	0.771	<.001
64	0.193	0.002	-0.055	0.002	-0.030	0.104	0.065	0.002	0.028	0.244	0.702	<.001
65	0.250	<.001	0.122	<.001	-0.070	0.003	0.074	0.002	-0.023	0.366	0.502	<.001
66	0.444	<.001	0.109	<.001	-0.023	0.327	0.118	<.001	0.069	0.009	0.396	<.001
69	0.388	<.001	0.697	<.001	0.096	<.001	-0.080	<.001	-0.052	<.001	-0.048	0.001
74	0.426	<.001	0.486	<.001	0.103	<.001	-0.074	<.001	-0.061	0.002	0.163	<.001

Note. Bolded items represent target items for factor.

Figure S1

Final bifactor ESEM model for the SFI. Solid lines denote target indicators for each factor.

Figure S2

Final bifactor ESEM model for the SBI. Solid and dark lines denote target indicators for each factor.

Supplemental Appendix A: The SFBI

Sexual Fantasies

The following group of questions pertain to sexual fantasies. Please indicate how sexually aroused you become when you think/ imagine about each of the following items using the scale below, whether you have tried it or not.

-3	-2	-1	0	1	2	3
Very repulsive	Somewhat repulsive	Mildly repulsive	Indifferent	Mildly arousing	Somewhat arousing	Very arousing

1. Your hair is being pulled (RS)
2. You are being bitten or scratched (RS)
3. You are having penetrative sex (N)
4. You are pulling someone's hair (RS)
5. You are biting or scratching someone (RS)
6. You are verbally degrading or humiliating someone (DH)
7. You are sexually degrading someone by making them perform embarrassing tasks (DH)
8. You are degrading someone in any other manner (DH)
9. You are being verbally degraded or humiliated, i.e., name calling, verbal insults/manipulation (DH)
10. Someone is stimulating your genitals with their mouth and tongue (N)
11. You have humiliating statements written on your body (DH)
12. You are masturbating (N)
13. You are having sex with 2 or more people at a time (N)
14. You are controlling or dominating someone in the bedroom (DS)
15. You control someone as a slave (DS)
16. You create a list of rules and regulations for others to follow (DS)
17. You are delivering corporal punishment to someone else (DS)
18. You make others refer to you as a superior by calling you mistress, master, sir, etc. (DS)
19. Someone is stimulating your genitals with their hands (N)
20. When and how many orgasms you get are decided by someone you view as a superior (SM)
21. Someone gives you a list of rules you must follow (SM)
22. You are receiving some form of corporal punishment (SM)
23. You are told to refer to someone as a superior by calling them names like mistress, master, sir, etc. (SM)
24. You are having sex in a new or unusual place (N)
25. You are exposing your genitals to unsuspecting persons (I)
26. You are rubbing your genitals on unsuspecting individuals in public places (I)
27. You are watching others engage in sexual behaviors without them being aware of your presence (I)
28. Strangers are watching you participate in sexual activities or activities that involve nudity (I)

*RS = rough sex factor, SM = submission/masochism factor, DS = domination/sadism factor, DH = degradation/humiliation factor, I = intrusion factor, N = normophilia factor

Sexual Behaviors

The following group of questions pertain to sexual behaviors. Please indicate how often you have engaged in any of the following behaviors using the scale below:

-1	0	1	2	3	4
Have not done & <i>do not</i> want to	Have done & <i>do</i> want to	Once or twice ever	Once a year or more on average	Once a month or more on average	Once or more a week on average

1. You are watching your partner masturbate (N)
2. Your hair is being pulled (RS)
3. You are being bitten or scratched (RS)
4. You are pulling someone's hair (RS)
5. You are biting or scratching someone (RS)
6. You are verbally degrading or humiliating someone (AP)
7. You are sexually degrading someone by making them perform embarrassing tasks (AP)
8. You are writing or forcing an individual to write humiliating statements on their body (AP)
9. You are degrading someone in any other manner (AP)
10. You are being verbally degraded or humiliated, i.e., name calling, verbal insults/manipulation (RP)
11. You are being degraded and/or embarrassed by being made to perform certain tasks you do not want to participate in (RP)
12. You are having humiliating statements written on your body (RP)
13. You are being degraded in any other manner (RP)
14. You are having penetrative sex (N)
15. Someone is stimulating your genitals with their mouth and tongue (N)
16. You control certain parts of your partner's life outside of sexual activity by creating a list of rules and regulations they must follow (AP)
17. You are delivering corporal punishment to someone else (AP)
18. You have others refer to you as a superior by calling you mistress, master, sir, etc. (AP)
19. Someone is controlling or dominating you in the bedroom (RP)
20. A partner has established rules and regulations that you must follow (RP)
21. You are receiving some form of corporal punishment (RP)
22. You are told to refer to someone as a superior by calling them names like mistress, master, sir, etc. (RP)
23. You are exposing your genitals to unsuspecting persons (IB)
24. You are rubbing your genitals on unsuspecting individuals in public places (IB)
25. You are watching others engage in sexual behaviors without them being aware of your presence (IB)
26. You are allowing strangers to watch you participate in sexual activities or activities that involve nudity, like showering (IB)
27. Your partner is kissing you and caressing your body (N)
28. You are having sex in a new or unusual place (N)

*N = normophilic factor, RS = rough sex factor, AP = assuming power factor, RP = relinquishing power factor, IB = intrusive behaviors factor

Annotated Coding Used in Mplus for Confirmatory Models

Fantasies**Title: Unidimensional Model**

! In all input files, statements preceded by ! are annotations

! The following statement is used to identify the data file.

DATA: FILE IS newcfa.dat;

! The variables names function identifies all variables in the data set, in order of appearance.

! The usevar command identifies the variables used in the analysis.

! Variable names will be the same across all input

VARIABLE: NAMES ARE

ID age gender sex_at_birth Q77_QB1 Q77_QB2 Q77_QB3 Q77_QB4
 Q77_QB5 Q77_QB6 Q77_QB7 Q77_QB8 Q77_QB9 Q77_QB10 Q77_QB11
 Q77_QB12 Q77_QB13 Q77_QB14 Q77_QB15 Q77_QB16 Q77_QB17 Q77_QB18
 Q77_QB19 Q77_QB20 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB24 Q77_QB25
 Q77_QB26 Q77_QB27 Q78_QB28 Q78_QB29 Q78_QB30 Q78_QB31 Q78_QB32
 Q78_QB33 Q78_QB34 Q78_QB35 Q78_QB36 Q78_QB37 Q78_QB38 Q78_QB39
 Q78_QB40 Q78_QB41 Q78_QB42 Q78_QB43 Q78_QB44 Q78_QB45 Q78_QB46
 Q78_QB47 Q78_QB48 Q78_QB49 Q78_QB50 Q78_QB51 Q78_QB52 Q78_QB53
 Q78_QB54 Q79_QB55 Q79_QB56 Q79_QB57 Q79_QB58 Q79_QB59 Q79_QB60
 Q79_QB61 Q79_QB62 Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66 Q79_QB67
 Q79_QB68 Q79_QB69 Q79_QB70 Q79_QB71 Q79_QB72autoandro Q79_QB73autogyno
 Q79_QB74 Q79_QB75 Q79_QB76 Q84_BIG1 Q84_BIG2 Q84_BIG3 Q84_BIG4
 Q84_BIG5 Q84_BIG6 Q84_BIG7 Q84_BIG8 Q84_BIG9 Q84_BIG10 Q85_DT1
 Q85_DT2 Q85_DT3 Q85_DT4 Q85_DT5 Q85_DT6 Q85_DT7 Q85_DT8 Q85_DT9
 Q85_DT10 DTq11rev Q85_DT11 Q85_DT12 Q85_DT13 Q85_DT14 DTq15rev
 Q85_DT15 Q85_DT16 DTq17rev Q85_DT17 Q85_DT18 Q85_DT19 DTq20rev
 Q85_DT20 Q85_DT21 Q85_DT22 Q85_DT23 Q85_DT24 Q85_DT25 Q85_DT26
 Q85_DT27 Q86_ANX1 Q86_ANX2 Q86_ANX3 Q86_ANX4 Q86_ANX5 Q86_ANX6
 Q86_ANX7 Q87_DEP1 Q87_DEP2 Q87_DEP3 Q87_DEP4 Q87_DEP5 Q87_DEP6
 Q87_DEP7 Q87_DEP8 Q87_DEP9 Q100_SOC1 Q101_SOC2 Q102_SOC3 Q103_SOC4
 Q103_SOC5 SOCq6rev Q103_SOC6 Q104_SOC7 handedness MenKinseyHeteroHomo
 WomanKinseyHeteroHomo GenKinseyHeteroHomo Hetro_homo_binary DTtotal_weighted
 mach_weighted narc_weighted psych_weighted anx_weighted dep_weighted
 sociosex_weighted general_weighted roughsex_weighted submission_weighted
 domination_weighted deghumil_weighted intrusion_weighted normophilia_weighted;

!The use variable command identifies the variables used in the analysis

!These are the final items used for the B-SFI

USE VARIABLES ARE

Q32_QF5 Q32_QF6 Q35_QF13 Q35_QF16 Q35_QF17 Q36_QF23
 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF34 Q38_QF39
 Q39_QF50 Q40_QF56
 Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62
 Q41_QF65 Q41_QF66 Q41_QF68 Q41_QF69 Q41_QF70 Q42_QF74

Q58_QF81 Q58_QF83 Q58_QF84 Q58_QF85;

! Missing values must be identified

MISSING ARE ALL (-99);

! The next section defines the analysis. Here Maximum Likelihood with robust standard errors (MLR) is used

ANALYSIS:
ESTIMATOR = MLR;

! The next section defines the model. A unidimensional model is specified.

MODEL:
onefactor BY
Q32_QF5 Q32_QF6 Q35_QF13 Q35_QF16 Q35_QF17 Q36_QF23
Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF34 Q38_QF39 Q39_QF50 Q40_QF56
Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62;

! Specific sections of output are requested.

OUTPUT: MODINDICES SAMPSTAT H1SE STDYX TECH4;

Title: Lower-order CFA

! Previously presented sections of inputs are skipped to focus only on changes in the MODEL section
! A lower-order model with no cross loadings and five factors is defined

ANALYSIS:

ESTIMATOR = MLR;

MODEL:

sub BY Q41_QF66 Q41_QF68 Q41_QF69 Q41_QF70;

roughsex BY Q32_QF5 Q32_QF6 Q35_QF16 Q35_QF17;

norm BY Q35_QF13 Q38_QF34 Q39_QF50 Q40_QF56 Q41_QF65 Q42_QF74;

dom BY Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62;

deghumil BY Q36_QF23 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF39;

intrus BY Q58_QF81 Q58_QF83 Q58_QF84 Q58_QF85;

Title: Bifactor CFA

! A bifactor model is specified with five lower order/specific factors

! All items are also used to define a general factor

! Variances of specific factors were fixed at 1

! Specific factors were constrained to correlate with the general factor at 0

ANALYSIS:

ESTIMATOR = MLR;

MODEL:

```
sub BY Q41_QF66* Q41_QF68 Q41_QF69 Q41_QF70;
roughsexBY Q32_QF5* Q32_QF6 Q35_QF16 Q35_QF17;
norm BY Q35_QF13* Q38_QF34 Q39_QF50 Q40_QF56 Q41_QF65 Q42_QF74;
dom BY Q40_QF58* Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62;
deghumil BY Q36_QF23* Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF39;
intrus BY Q58_QF81* Q58_QF83 Q58_QF84 Q58_QF85;
general BY Q32_QF5* Q32_QF6 Q35_QF13 Q35_QF16 Q35_QF17 Q36_QF23
  Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF34 Q38_QF39
  Q39_QF50 Q40_QF56
  Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62
  Q41_QF65 Q41_QF66 Q41_QF68 Q41_QF69 Q41_QF70 Q42_QF74
  Q58_QF81 Q58_QF83 Q58_QF84 Q58_QF85;
```

sub@1;

prim@1;

norm@1

dom@1;

deghumil@1;

intrus@1;

general@1;

! orthogonal bifactor representation: correlations (WITH) fixed @ 0

sub prim norm dom deghumil intrus WITH general @ 0;

sub WITH prim norm dom deghumil intrus @0;

prim WITH norm dom deghumil intrus @0;

norm WITH dom deghumil intrus @0;

dom WITH deghumil intrus @0;

deghumil WITH intrus @0;

Title: Lower-order ESEM

! The next section defines the analysis. Here the MLR estimation is used together with target rotation.

ANALYSIS:

ESTIMATOR = MLR;

ROTATION = TARGET;

! An ESEM model is specified with target oblique rotation allowing factor correlation.

! The 5 factors are defined with main loadings from items presented in the CFA models with lower order factors and are listed first

*! All other cross-loadings are estimated but targeted to be as close to 0 as possible (~0). Factors forming a single set of ESEM factors (with cross-loadings between factors) are indicated by using the same label in parenthesis after * (*1).*

MODEL:

!sub specific factor

sub BY Q41_QF66 Q41_QF68 Q41_QF69 Q41_QF70

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
Q41_QF65~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!prim specific factor

prim BY Q32_QF5 Q32_QF6 Q35_QF16 Q35_QF17

Q35_QF13~0 Q36_QF23~0 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0
Q38_QF39~0 Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0
Q40_QF61~0 Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0
Q41_QF69~0 Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0
Q58_QF85~0 (*1);

!dom specific factor

dom BY Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!deghumil specific factor

deghumil BY Q36_QF23 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF39

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q38_QF34~0
Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0
Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!intrus specific factor

intrus BY Q58_QF81 Q58_QF83 Q58_QF84 Q58_QF85

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
Q42_QF74~0 (*1);

!normophilia specific factor

norm BY Q35_QF13 Q38_QF34 Q39_QF50 Q40_QF56 Q41_QF65 Q42_QF74

Q32_QF5~0 Q32_QF6~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF39~0
Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0 (*1);

Title: Bifactor ESEM

*! The next section defines the analysis. Here the MLR estimation is used together with
! orthogonal (uncorrelated) target rotation.
! Target items for each factor are listed first
! All items load onto all factors. The general factor is the only factor where all items are freely
estimated.*

ANALYSIS:

ESTIMATOR = MLR;

ROTATION = TARGET (orthogonal);

MODEL:

!prim specific factor

prim BY Q32_QF5 Q32_QF6 Q35_QF16 Q35_QF17
Q35_QF13~0 Q36_QF23~0 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0
Q38_QF39~0 Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0
Q40_QF61~0 Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0
Q41_QF69~0 Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0
Q58_QF85~0(*1);

!sub specific factor

sub BY Q41_QF66 Q41_QF68 Q41_QF69 Q41_QF70

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
Q41_QF65~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0(*1);

!dom specific factor

dom BY Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!deghumil specific factor

deghumil BY Q36_QF23 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF39

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q38_QF34~0
Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0
Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!intrus specific factor

intrus BY Q58_QF81 Q58_QF83 Q58_QF84 Q58_QF85

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0

Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
 Q42_QF74~0 (*1);

!norm specific factor

norm BY Q35_QF13 Q38_QF34 Q39_QF50 Q40_QF56 Q41_QF65 Q42_QF74

Q32_QF5~0 Q32_QF6~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF39~0
 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0 (*1);

!general factor with all items

general BY Q32_QF5 Q32_QF6 Q35_QF13 Q35_QF16 Q35_QF17 Q36_QF23
 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF34 Q38_QF39 Q39_QF50 Q40_QF56
 Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62 Q41_QF65 Q41_QF66
 Q41_QF68 Q41_QF69 Q41_QF70 Q42_QF74 Q58_QF81 Q58_QF83
 Q58_QF84 Q58_QF85(*1);

ANALYSIS:

ESTIMATOR = MLR;

!Target rotation is an orthogonal (uncorrelated factors) rotation

ROTATION = TARGET (orthogonal);

Title: Configural Invariance for Bifactor ESEM of SFI (based on sexual orientation)

!Coding was the same when testing invariance between sex and sexual orientation.

!Only sexual orientation invariance testing is shown here. Sex invariance testing code

!can be seen for the SBI scale below

VARIABLE:

! [...]

! the grouping function is added to the Variable section to define the groups based on sex

! (male = 1 and female = 0)

! for sexual orientation, 1 = heterosexual and 2 = non-heterosexual

GROUPING = Hetro_homo_binary (1=H 2=NH);

!Model for all groups

MODEL:

! see model specification for the bifactor-ESEM model

! Factor loadings and cross- loadings are freely estimated in all groups. In this context,

! Mplus fixes the factor variance to be 1 in all groups. Uniquenesses are freely estimated in

! all groups by default.

!sub specific factor

sub BY Q41_QF66 Q41_QF68 Q41_QF69 Q41_QF70

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
Q41_QF65~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!prim specific factor

prim BY Q32_QF5 Q32_QF6 Q35_QF16 Q35_QF17

Q35_QF13~0 Q36_QF23~0 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0
Q38_QF39~0 Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0
Q40_QF61~0 Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0
Q41_QF69~0 Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0
Q58_QF85~0(*1);

!dom specific factor

dom BY Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!deghumil specific factor

deghumil BY Q36_QF23 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF39

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q38_QF34~0
 Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0
 Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
 Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
 (*1);

!intrus specific factor

intrus BY Q58_QF81 Q58_QF83 Q58_QF84 Q58_QF85

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
 Q42_QF74~0 (*1);

!norm specific factor

norm BY Q35_QF13 Q38_QF34 Q39_QF50 Q40_QF56 Q41_QF65 Q42_QF74

Q32_QF5~0 Q32_QF6~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF39~0
 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0 (*1);

!general factor with all items

general BY Q32_QF5 Q32_QF6 Q35_QF13 Q35_QF16 Q35_QF17 Q36_QF23
 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF34 Q38_QF39 Q39_QF50 Q40_QF56
 Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62 Q41_QF65 Q41_QF66
 Q41_QF68 Q41_QF69 Q41_QF70 Q42_QF74 Q58_QF81 Q58_QF83
 Q58_QF84 Q58_QF85(*1);

!item intercepts freely estimated in all groups

[Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
 Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
 Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
 Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
 Q58_QF84* Q58_QF85*];

!for item intercepts to be freely estimated the factor means are

!set to zero in all groups

[sub@0 prim@0 dom@0 deghumil@0 intrus@0 norm@0 general@0];

!item uniqueness freely estimated in all groups

Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
 Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
 Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
 Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
 Q58_QF84* Q58_QF85*;

!Model for reference group (heterosexual)

MODEL H:

!ESEM bifactor model with orthogonal (uncorrelated) g and s factors
!Non-target item for s factors targeted @0

!sub specific factor

sub BY Q41_QF66 Q41_QF68 Q41_QF69 Q41_QF70

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
 Q41_QF65~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
 (*1);

!prim specific factor

prim BY Q32_QF5 Q32_QF6 Q35_QF16 Q35_QF17

Q35_QF13~0 Q36_QF23~0 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0
 Q38_QF39~0 Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0
 Q40_QF61~0 Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0
 Q41_QF69~0 Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0
 Q58_QF85~0(*1);

!dom specific factor

dom BY Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
 Q40_QF56~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
 Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
 (*1);

!deghumil specific factor

deghumil BY Q36_QF23 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF39

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q38_QF34~0
 Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0
 Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
 Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
 (*1);

!intrus specific factor

intrus BY Q58_QF81 Q58_QF83 Q58_QF84 Q58_QF85

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
 Q42_QF74~0 (*1);

!norm specific factor

norm BY Q35_QF13 Q38_QF34 Q39_QF50 Q40_QF56 Q41_QF65 Q42_QF74

Q32_QF5~0 Q32_QF6~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF39~0
 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0 (*1);

!general factor with all items

general BY Q32_QF5 Q32_QF6 Q35_QF13 Q35_QF16 Q35_QF17 Q36_QF23
 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF34 Q38_QF39 Q39_QF50 Q40_QF56
 Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62 Q41_QF65 Q41_QF66
 Q41_QF68* Q41_QF69 Q41_QF70 Q42_QF74 Q58_QF81 Q58_QF83
 Q58_QF84 Q58_QF85(*1);

!item intercepts freely estimated in all groups

[Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
 Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
 Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
 Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
 Q58_QF84* Q58_QF85*];

*!for item intercepts to be freely estimated the factor means are**!set to zero in all groups*

[sub@0 prim@0 dom@0 deghumil@0 intrus@0 norm@0 general@0];

!item uniqueness freely estimated in all groups

Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
 Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
 Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
 Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
 Q58_QF84* Q58_QF85*];

Title: Metric Invariance for Bifactor ESEM of SFI (based on sexual orientation)*!Model section only, other sections identical to previous invariance model*

MODEL:

*! In Mplus, the item intercepts are set to be invariant across groups by default. To estimate
! invariant item intercepts, one simply has to take out the statements related to item intercept
! from all sections of the input. With invariant item intercepts, Mplus constrains the factor
! means to be zero in the first group, and freely estimated in the other groups. The rest of the
! input remains unchanged.*

!Model for all groups

MODEL:

*! see model specification for the bifactor-ESEM model
! Factor loadings and cross- loadings are freely estimated in all groups. In this context,
! Mplus fixes the factor variance to be 1 in all groups. Uniquenesses are freely estimated in
! all groups by default.*

!sub specific factor

sub BY Q41_QF66 Q41_QF68 Q41_QF69 Q41_QF70

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
Q41_QF65~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!prim specific factor

prim BY Q32_QF5 Q32_QF6 Q35_QF16 Q35_QF17

Q35_QF13~0 Q36_QF23~0 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0
Q38_QF39~0 Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0
Q40_QF61~0 Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0
Q41_QF69~0 Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0
Q58_QF85~0(*1);

!dom specific factor

dom BY Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!deghumil specific factor

deghumil BY Q36_QF23 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF39

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q38_QF34~0
Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0
Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0

Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!intrus specific factor

intrus BY Q58_QF81 Q58_QF83 Q58_QF84 Q58_QF85

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
Q42_QF74~0 (*1);

!norm specific factor

norm BY Q35_QF13 Q38_QF34 Q39_QF50 Q40_QF56 Q41_QF65 Q42_QF74

Q32_QF5~0 Q32_QF6~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF39~0
Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0 (*1);

!general factor with all items

general BY Q32_QF5 Q32_QF6 Q35_QF13 Q35_QF16 Q35_QF17 Q36_QF23
Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF34 Q38_QF39 Q39_QF50 Q40_QF56
Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62 Q41_QF65 Q41_QF66
Q41_QF68 Q41_QF69 Q41_QF70 Q42_QF74 Q58_QF81 Q58_QF83
Q58_QF84 Q58_QF85(*1);

!item intercepts freely estimated in all groups

[Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
Q58_QF84* Q58_QF85*];

!for item intercepts to be freely estimated the factor means are

!set to zero in all groups

[sub@0 prim@0 dom@0 deghumil@0 intrus@0 norm@0 general@0];

!item uniqueness freely estimated in all groups

Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
Q58_QF84* Q58_QF85*;

!Model for reference group (heterosexual)

MODEL H:

!item intercepts freely estimated in all groups

[Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
 Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
 Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
 Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
 Q58_QF84* Q58_QF85*];

*!for item intercepts to be freely estimated the factor means are
 !set to zero in all groups*

[sub@0 prim@0 dom@0 deghumil@0 intrus@0 norm@0 general@0];

!item uniqueness freely estimated in all groups

Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
 Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
 Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
 Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
 Q58_QF84* Q58_QF85*;

Title: Scalar Invariance for Bifactor ESEM of SFI (based on sexual orientation)

!Model section only, other sections identical to previous invariance model

MODEL:

*! In Mplus, the item intercepts are set to be invariant across groups by default. To estimate
! invariant item intercepts, one simply has to take out the statements related to item intercept
! from all sections of the input. With invariant item intercepts, Mplus constrains the factor
! means to be zero in the first group, and freely estimated in the other groups. The rest of the
! input remains unchanged.*

!sub specific factor

sub BY Q41_QF66 Q41_QF68 Q41_QF69 Q41_QF70

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
Q41_QF65~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!prim specific factor

prim BY Q32_QF5 Q32_QF6 Q35_QF16 Q35_QF17

Q35_QF13~0 Q36_QF23~0 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0
Q38_QF39~0 Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0
Q40_QF61~0 Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0
Q41_QF69~0 Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0
Q58_QF85~0(*1);

!dom specific factor

dom BY Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
Q40_QF56~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!deghumil specific factor

deghumil BY Q36_QF23 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF39

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q38_QF34~0
Q39_QF50~0 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0
Q40_QF62~0 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0
Q41_QF70~0 Q42_QF74~0 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0
(*1);

!intrus specific factor

intrus BY Q58_QF81 Q58_QF83 Q58_QF84 Q58_QF85

Q32_QF5~0 Q32_QF6~0 Q35_QF13~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF34~0 Q38_QF39~0 Q39_QF50~0
 Q40_QF56~0 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
 Q41_QF65~0 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
 Q42_QF74~0 (*1);

!norm specific factor

norm BY Q35_QF13 Q38_QF34 Q39_QF50 Q40_QF56 Q41_QF65 Q42_QF74

Q32_QF5~0 Q32_QF6~0 Q35_QF16~0 Q35_QF17~0 Q36_QF23~0
 Q36_QF24~0 Q36_QF31~0 Q38_QF32~0 Q38_QF39~0
 Q40_QF58~0 Q40_QF59~0 Q40_QF60~0 Q40_QF61~0 Q40_QF62~0
 Q41_QF66~0 Q41_QF68~0 Q41_QF69~0 Q41_QF70~0
 Q58_QF81~0 Q58_QF83~0 Q58_QF84~0 Q58_QF85~0 (*1);

!general factor with all items

general BY Q32_QF5 Q32_QF6 Q35_QF13 Q35_QF16 Q35_QF17 Q36_QF23
 Q36_QF24 Q36_QF31 Q38_QF32 Q38_QF34 Q38_QF39 Q39_QF50 Q40_QF56
 Q40_QF58 Q40_QF59 Q40_QF60 Q40_QF61 Q40_QF62 Q41_QF65 Q41_QF66
 Q41_QF68 Q41_QF69 Q41_QF70 Q42_QF74 Q58_QF81 Q58_QF83
 Q58_QF84 Q58_QF85(*1);

!item intercepts freely estimated in all groups

[Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
 Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
 Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
 Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
 Q58_QF84* Q58_QF85*];

!for item intercepts to be freely estimated the factor means are

!set to zero in all groups

[sub@0 prim@0 dom@0 deghumil@0 intrus@0 norm@0 general@0];

!item uniqueness freely estimated in all groups

Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
 Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
 Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
 Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
 Q58_QF84* Q58_QF85*;

!Model for reference group (heterosexual)

MODEL H:

!item uniqueness freely estimated in all groups

Q32_QF5* Q32_QF6* Q35_QF13* Q35_QF16* Q35_QF17* Q36_QF23*
 Q36_QF24* Q36_QF31* Q38_QF32* Q38_QF34* Q38_QF39* Q39_QF50* Q40_QF56*
 Q40_QF58* Q40_QF59* Q40_QF60* Q40_QF61* Q40_QF62* Q41_QF65* Q41_QF66*
 Q41_QF68* Q41_QF69* Q41_QF70* Q42_QF74* Q58_QF81* Q58_QF83*
 Q58_QF84* Q58_QF85*;

Behaviors

Title: Unidimensional Model

! The input file, variable names, and output requested are the same as presented in the fantasy model code

! The variables used are different and are listed below

USEVARIABLES ARE

Q77_QB1 Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12 Q77_QB16 Q77_QB17
 Q77_QB20 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB34
 Q78_QB37 Q78_QB48 Q78_QB50 Q78_QB51 Q78_QB53 Q78_QB54 Q79_QB55
 Q79_QB56 Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66 Q79_QB69 Q79_QB74;

MISSING ARE ALL (-99);

! This specifies the analysis. Here Maximum Likelihood with robust standard errors (MLR) is used

ANALYSIS:

ESTIMATOR = MLR;

! The next section defines the model. A unidimensional model is specified.

MODEL:

onefactor BY Q77_QB1 Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12 Q77_QB16 Q77_QB17 Q77_QB20
 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB34 Q78_QB37 Q78_QB48
 Q78_QB50 Q78_QB51 Q78_QB53 Q78_QB54 Q79_QB55 Q79_QB56 Q79_QB63 Q79_QB64
 Q79_QB65 Q79_QB66 Q79_QB69 Q79_QB74;

Title: Lower-order CFA

! A lower-order model with no cross loadings and four factors is defined

MODEL:

norm BY Q77_QB1 Q78_QB34 Q78_QB37 Q79_QB69 Q79_QB74;

roughsex BY Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12;

dom BY Q77_QB16 Q77_QB17 Q77_QB20 Q77_QB21 Q78_QB48 Q78_QB50 Q78_QB51;

sub BY Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB53 Q78_QB54 Q79_QB55 Q79_QB56;

intrus BY Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66;

Title: Bifactor CFA

! A bifactor model is specified with five lower order/specific factors

! All items are also used to define a general factor

! Variances of specific factors were fixed at 1

! Specific factors were constrained to correlate with the general factor at 0

MODEL:

norm BY Q77_QB1* Q78_QB34 Q78_QB37 Q79_QB69 Q79_QB74;

roughsex BY Q77_QB4* Q77_QB5 Q77_QB11 Q77_QB12;

dom BY Q77_QB16* Q77_QB17 Q77_QB20 Q77_QB21 Q78_QB48 Q78_QB50 Q78_QB51;

sub BY Q77_QB22* Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56;

intrus BY Q79_QB63* Q79_QB64 Q79_QB65 Q79_QB66;

general BY Q77_QB1* Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12 Q77_QB16 Q77_QB17
Q77_QB20 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB34
Q78_QB37 Q78_QB48 Q78_QB50 Q78_QB51 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56 Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66 Q79_QB69 Q79_QB74;

norm@1;

roughsex@1;

dom@1;

sub@1;

intrus@1;

general@1;

!orthogonal bifactor representation: correlations (WITH) fixed @ 0

norm roughsex dom sub intrus WITH general @ 0;

norm WITH roughsex dom sub intrus @0;

roughsex WITH dom sub intrus @0;

dom WITH sub intrus @0;

sub WITH intrus @0;

Title: Lower-order ESEM

! The next section defines the analysis. Here the MLR estimation is used together with target rotation.

ANALYSIS:

ESTIMATOR = MLR;

ROTATION = TARGET;

! An ESEM model is specified with target oblique rotation.

! The 5 factors are defined with main loadings from items presented in the CFA models with lower order factors and are listed first

*! All other cross-loadings are estimated but targeted to be as close to 0 as possible (~0). Factors forming a single set of ESEM factors (with cross-loadings between factors) are indicated by using the same label in parenthesis after * (*1).*

MODEL:

!normophilia specific factor

norm BY Q77_QB1 Q78_QB34 Q78_QB37 Q79_QB69 Q79_QB74

Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0
Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 (*1);

!roughsex specific factor

roughsex BY Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12

Q77_QB1~0 Q77_QB16~0 Q77_QB17~0 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0
Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0 Q79_QB56~0
Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!domination, sadism, and humiliation specific factor

dom BY Q77_QB16 Q77_QB17 Q77_QB20 Q77_QB21 Q78_QB48 Q78_QB50 Q78_QB51

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB53~0
Q78_QB54~0 Q79_QB55~0 Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0
Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!submission, masochism, and humiliation specific factor

sub BY Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0 Q78_QB50~0 Q78_QB51~0
Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0
Q79_QB74~0(*1);

!intrusion specific factor

intrus BY Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0
Q78_QB37~0 Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB69~0 Q79_QB74~0(*1);

Title: Bifactor ESEM

*! The next section defines the analysis. Here the MLR estimation is used together with
! orthogonal (uncorrelated) target rotation.
! Target items for each factor are listed first
! Non-target item for s factors targeted @0
! All items load onto all factors. The general factor is the only factor where all items are freely
estimated.*

ANALYSIS:

ESTIMATOR = MLR;

ROTATION = TARGET (orthogonal);

MODEL:*!normophilia specific factor*

norm BY Q77_QB1 Q78_QB34 Q78_QB37 Q79_QB69 Q79_QB74

Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0
Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 (*1);

!roughsex specific factor

roughsex BY Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12

Q77_QB1~0 Q77_QB16~0 Q77_QB17~0 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0
Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0 Q79_QB56~0
Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!domination, sadism, and humiliation specific factor

dom BY Q77_QB16 Q77_QB17 Q77_QB20 Q77_QB21 Q78_QB48 Q78_QB50 Q78_QB51

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB53~0
Q78_QB54~0 Q79_QB55~0 Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0
Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!submission, masochism, and humiliation specific factor

sub BY Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0 Q78_QB50~0
Q78_QB51~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0
Q79_QB74~0(*1);

!intrusion specific factor

intrus BY Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0
Q78_QB37~0 Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB69~0 Q79_QB74~0(*1);

!general factor with all items

general BY Q77_QB1 Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12 Q77_QB16 Q77_QB17
Q77_QB20 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB34
Q78_QB37 Q78_QB48 Q78_QB50 Q78_QB51 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56 Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66 Q79_QB69 Q79_QB74(*1);

Title: Configural Invariance for Bifactor ESEM of SBI (Grouping based on sex)

!Coding was the same when testing invariance between sex and sexual orientation.

!Only sex invariance testing is shown here. Sexual orientation invariance testing code

!can be seen for the SFI scale above

VARIABLE:

! [...]

! the grouping function is added to the Variable section to define the groups based on sex

! (male = 1 and female = 0)

! for sexual orientation, 1 = heterosexual and 2 = non-heterosexual

GROUPING = sex_at_birth (0=F 1=M);

!Model for all groups

MODEL:

! see model specification for the bifactor-ESEM model

! Factor loadings and cross-loadings are freely estimated in all groups. In this context,

! Mplus fixes the factor variance to be 1 in all groups. Uniquenesses are freely estimated in

! all groups by default.

!normophilia specific factor

norm BY Q77_QB1 Q78_QB34 Q78_QB37 Q79_QB69 Q79_QB74

Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0
Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 (*1);

!roughsex specific factor

roughsex BY Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12

Q77_QB1~0 Q77_QB16~0 Q77_QB17~0 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0
Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0 Q79_QB56~0
Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!domination, sadism, and humiliation specific factor

dom BY Q77_QB16 Q77_QB17 Q77_QB20 Q77_QB21 Q78_QB48 Q78_QB50 Q78_QB51

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB53~0
Q78_QB54~0 Q79_QB55~0 Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0
Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!submission, masochism, and humiliation specific factor

sub BY Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
 Q77_QB20~0 Q77_QB21~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0 Q78_QB50~0
 Q78_QB51~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0
 Q79_QB74~0(*1);

!intrusion specific factor

intrus BY Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0
 Q78_QB37~0 Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
 Q79_QB56~0 Q79_QB69~0 Q79_QB74~0(*1);

!general factor with all items

general BY Q77_QB1 Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12 Q77_QB16 Q77_QB17
 Q77_QB20 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB34
 Q78_QB37 Q78_QB48 Q78_QB50 Q78_QB51 Q78_QB53 Q78_QB54 Q79_QB55
 Q79_QB56 Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66 Q79_QB69 Q79_QB74(*1);

!item intercepts freely estimated in all groups

[Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
 Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
 Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
 Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*];

!for item intercepts to be freely estimated the factor means are

!set to zero in all groups

[norm@0 roughsex@0 sub@0 dom@0 intrus@0 general@0];

!item uniqueness freely estimated in all groups

Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
 Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
 Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
 Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*;

!Model for reference group (female)

MODEL F:

!normophilia specific factor

norm BY Q77_QB1 Q78_QB34 Q78_QB37 Q79_QB69 Q79_QB74

Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0
 Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
 Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 (*1);

!roughsex specific factor

roughsex BY Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12

Q77_QB1~0 Q77_QB16~0 Q77_QB17~0 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0

Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0
 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0 Q79_QB56~0
 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!domination, sadism, and humiliation specific factor

dom BY Q77_QB16 Q77_QB17 Q77_QB20 Q77_QB21 Q78_QB48 Q78_QB50 Q78_QB51

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB22~0
 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB53~0
 Q78_QB54~0 Q79_QB55~0 Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0
 Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!submission, masochism, and humiliation specific factor

sub BY Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB53 Q78_QB54 Q79_QB55
 Q79_QB56

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
 Q77_QB20~0 Q77_QB21~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0 Q78_QB50~0
 Q78_QB51~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0
 Q79_QB74~0(*1);

!intrusion specific factor

intrus BY Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0
 Q78_QB37~0 Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
 Q79_QB56~0 Q79_QB69~0 Q79_QB74~0(*1);

!general factor with all items

general BY Q77_QB1 Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12 Q77_QB16 Q77_QB17
 Q77_QB20 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB34
 Q78_QB37 Q78_QB48 Q78_QB50 Q78_QB51 Q78_QB53 Q78_QB54 Q79_QB55
 Q79_QB56 Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66 Q79_QB69 Q79_QB74(*1);

!item intercepts freely estimated in all groups

[Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
 Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
 Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
 Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*];

!for item intercepts to be freely estimated the factor means are

!set to zero in all groups

[norm@0 roughsex@0 sub@0 dom@0 intrus@0 general@0];

!item uniqueness freely estimated in all groups

Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
 Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
 Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
 Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*

Title: Metric Invariance for Bifactor ESEM of SBI (Grouping based on sex)*!Model section only, other sections identical to previous invariance model***MODEL:**

*! In Mplus, the item intercepts are set to be invariant across groups by default. To estimate
! invariant item intercepts, one simply has to take out the statements related to item intercept
! from all sections of the input. With invariant item intercepts, Mplus constrains the factor
! means to be zero in the first group, and freely estimated in the other groups. The rest of the
! input remains unchanged.*

!normophilia specific factor

norm BY Q77_QB1 Q78_QB34 Q78_QB37 Q79_QB69 Q79_QB74

Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0
Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 (*1);

!roughsex specific factor

roughsex BY Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12

Q77_QB1~0 Q77_QB16~0 Q77_QB17~0 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0
Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0 Q79_QB56~0
Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!domination, sadism, and humiliation specific factor

dom BY Q77_QB16 Q77_QB17 Q77_QB20 Q77_QB21 Q78_QB48 Q78_QB50 Q78_QB51

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB53~0
Q78_QB54~0 Q79_QB55~0 Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0
Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!submission, masochism, and humiliation specific factor

sub BY Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0 Q78_QB50~0
Q78_QB51~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0
Q79_QB74~0(*1);

!intrusion specific factor

intrus BY Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0
Q78_QB37~0 Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB69~0 Q79_QB74~0(*1);

!general factor with all items

general BY Q77_QB1 Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12 Q77_QB16 Q77_QB17
Q77_QB20 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB34
Q78_QB37 Q78_QB48 Q78_QB50 Q78_QB51 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56 Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66 Q79_QB69 Q79_QB74(*1);

!item intercepts freely estimated in all groups

[Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*];

!for item intercepts to be freely estimated the factor means are

!set to zero in all groups

[norm@0 roughsex@0 sub@0 dom@0 intrus@0 general@0];

!item uniqueness freely estimated in all groups

Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*];

!Model for reference group (female)

MODEL F:

!item intercepts freely estimated in all groups

[Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*];

!for item intercepts to be freely estimated the factor means are

!set to zero in all groups

[norm@0 roughsex@0 sub@0 dom@0 intrus@0 general@0];

!item uniqueness freely estimated in all groups

Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*];

Title: Scalar Invariance for Bifactor ESEM of SBI (Grouping based on sex)*!Model section only, other sections identical to previous invariance model***MODEL:**

*! In Mplus, the item intercepts are set to be invariant across groups by default. To estimate
! invariant item intercepts, one simply has to take out the statements related to item intercept
! from all sections of the input. With invariant item intercepts, Mplus constrains the factor
! means to be zero in the first group, and freely estimated in the other groups. The rest of the
! input remains unchanged.*

!normophilia specific factor

norm BY Q77_QB1 Q78_QB34 Q78_QB37 Q79_QB69 Q79_QB74

Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0
Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 (*1);

!roughsex specific factor

roughsex BY Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12

Q77_QB1~0 Q77_QB16~0 Q77_QB17~0 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0
Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0 Q79_QB56~0
Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!domination, sadism, and humiliation specific factor

dom BY Q77_QB16 Q77_QB17 Q77_QB20 Q77_QB21 Q78_QB48 Q78_QB50 Q78_QB51

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB53~0
Q78_QB54~0 Q79_QB55~0 Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0
Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

*!submission, masochism, and humiliation specific factor*sub BY Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0 Q78_QB50~0
Q78_QB51~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0
Q79_QB74~0(*1);

!intrusion specific factor

intrus BY Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0
Q78_QB37~0 Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB69~0 Q79_QB74~0(*1);

!general factor with all items

general BY Q77_QB1 Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12 Q77_QB16 Q77_QB17
Q77_QB20 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB34
Q78_QB37 Q78_QB48 Q78_QB50 Q78_QB51 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56 Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66 Q79_QB69 Q79_QB74(*1);

!item uniqueness freely estimated in all groups

Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*;

!Model for reference group (female)

MODEL F:

!item uniqueness freely estimated in all groups

Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*;

Title: Partial Scalar Invariance for Bifactor ESEM of SBI (Grouping based on sex)

!Model section only, other sections identical to previous invariance model

MODEL:

*! In Mplus, the item intercepts are set to be invariant across groups by default. To estimate
! invariant item intercepts, one simply has to take out the statements related to item intercept
! from all sections of the input. With invariant item intercepts, Mplus constrains the factor
! means to be zero in the first group, and freely estimated in the other groups. The rest of the
! input remains unchanged.*

!normophilia specific factor

norm BY Q77_QB1 Q78_QB34 Q78_QB37 Q79_QB69 Q79_QB74

Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0
Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0
Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 (*1);

!roughsex specific factor

roughsex BY Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12

Q77_QB1~0 Q77_QB16~0 Q77_QB17~0 Q77_QB20~0 Q77_QB21~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0
Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0 Q79_QB56~0
Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!domination, sadism, and humiliation specific factor

dom BY Q77_QB16 Q77_QB17 Q77_QB20 Q77_QB21 Q78_QB48 Q78_QB50 Q78_QB51

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB22~0
Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0 Q78_QB37~0 Q78_QB53~0
Q78_QB54~0 Q79_QB55~0 Q79_QB56~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0
Q79_QB66~0 Q79_QB69~0 Q79_QB74~0(*1);

!submission, masochism, and humiliation specific factor

sub BY Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q78_QB34~0 Q78_QB37~0 Q78_QB48~0 Q78_QB50~0
Q78_QB51~0 Q79_QB63~0 Q79_QB64~0 Q79_QB65~0 Q79_QB66~0 Q79_QB69~0
Q79_QB74~0(*1);

!intrusion specific factor

intrus BY Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66

Q77_QB1~0 Q77_QB4~0 Q77_QB5~0 Q77_QB11~0 Q77_QB12~0 Q77_QB16~0 Q77_QB17~0
Q77_QB20~0 Q77_QB21~0 Q77_QB22~0 Q77_QB23~0 Q77_QB25~0 Q77_QB26~0 Q78_QB34~0
Q78_QB37~0 Q78_QB48~0 Q78_QB50~0 Q78_QB51~0 Q78_QB53~0 Q78_QB54~0 Q79_QB55~0

Q79_QB56~0 Q79_QB69~0 Q79_QB74~0(*1);

!general factor with all items

general BY Q77_QB1 Q77_QB4 Q77_QB5 Q77_QB11 Q77_QB12 Q77_QB16 Q77_QB17
Q77_QB20 Q77_QB21 Q77_QB22 Q77_QB23 Q77_QB25 Q77_QB26 Q78_QB34
Q78_QB37 Q78_QB48 Q78_QB50 Q78_QB51 Q78_QB53 Q78_QB54 Q79_QB55
Q79_QB56 Q79_QB63 Q79_QB64 Q79_QB65 Q79_QB66 Q79_QB69 Q79_QB74(*1);

!item uniqueness freely estimated in all groups

Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*;

!Model for reference group (female)

MODEL F:

!examination of item intercepts and modindicies showed the largest

!difference for items 4, 12, 22, 53, 65, and 66. Here, the intercept

!for these items have been freely estimated to test for partial scalar invariance

[Q77_QB4* Q77_QB12* Q77_QB22* Q78_QB53* Q79_QB65* Q79_QB66*];

!item uniqueness freely estimated in all groups

Q77_QB1* Q77_QB4* Q77_QB5* Q77_QB11* Q77_QB12* Q77_QB16* Q77_QB17*
Q77_QB20* Q77_QB21* Q77_QB22* Q77_QB23* Q77_QB25* Q77_QB26* Q78_QB34*
Q78_QB37* Q78_QB48* Q78_QB50* Q78_QB51* Q78_QB53* Q78_QB54* Q79_QB55*
Q79_QB56* Q79_QB63* Q79_QB64* Q79_QB65* Q79_QB66* Q79_QB69* Q79_QB74*;