

Validation of the Enjoyment of Sexualization Scales in a Midlife Sample

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ABSTRACT

VALIDATION OF THE ENJOYMENT OF SEXUALIZATION SCALES IN A MIDLIFE SAMPLE

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Enjoyment of Sexualization (ES) describes one's perception of sexualized attention. While ES has been studied in younger samples of women, limited research has addressed how ES functions among men, or at midlife. This study validated the factor structure of the ES scales (Liss et al., 2011; Visser et al., 2014) among a midlife sample and demonstrated construct validity. Confirmatory Factor Analysis (CFA) was conducted on each of the ES scales. Measurement invariance across age groups and parental status was tested. CFA indicated that the model fit well for both scales, with each model reaching appropriate thresholds across most of the fit indices (Kline, 2015.) Invariance was not established for the male and female scales. Relationships between self-perceived sexual attractiveness and ODSC supported the construct validity. Sexuality has implications for broader wellbeing, at midlife and beyond, and as such it is imperative that the research being conducted uses valid measures.

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1 Introduction

Society has historically objectified women, consequently, many women have developed a heightened awareness of themselves as an object of desire; a preoccupation with how they are perceived (Bogaert & Brotto, 2014; Fredrickson & Roberts 1997). Preoccupation with one's perception of one's self as an object of desire has subsequently placed much of women's self-worth in their ability to meet and conform to societal standards. As such, research has demonstrated that many women have a negative body image (Erchull & Liss, 2013; Fredrickson & Roberts, 1997; Noll & Fredrickson, 1998; Liss et al., 2011). Societal expectations for how women should look are ever changing, and with each year there is an increasingly more difficult standard to meet (McKinley, 2006; Robbins & Reissing, 2018). While the objectification and constant critique of the female body has been well documented (Noll & Fredrickson, 1998; Robbins & Reissing, 2018), these same standards are beginning to seep into the societal expectations for men (Matsumoto & Rodgers, 2020; Visser et al., 2014). Whereas women are expected to be unrealistically thin while simultaneously busty, men are expected to be taller, leaner, and more muscular than in previous generations (Matsumoto & Rodgers, 2020; Ward et al., 2016). This standard, which is already unrealistic for young people, becomes even more challenging to meet as people age. Nonetheless, research suggests that many people become more stable in their perception of themselves and their bodies over time, recognizing the emotional and physical damage that unrealistic body standards can cause (McKinley, 2006; Matsumoto & Rodgers, 2020). However, people, predominantly women, who internalize the changes in their aging bodies as inherently negative struggle with societal standards. Thankfully, a romantic partner's perception that they are still sexually attractive and desirable seems to have a protective effect (Brotto et al., 2009; Matsumoto & Rodgers, 2020; Thomas et al., 2019). This

may play an integral role in a person's sexual desire, their sexual functioning, and even their sexual satisfaction (Thomas et al., 2019).

The experience of perceiving oneself as attractive to others (not specifically one's partner) can be encompassed by the term Object of Desire Self Consciousness (ODSC) and the theory of the same name (Bogaert & Brotto, 2014). In recent desire research, "object of desire" has become a relatively well cited construct, especially in objectification literature (Fredrickson & Roberts, 1997), ODSC was developed to describe, explain, and expand on this phenomenon. Importantly, a growing body of ODSC literature has aimed to describe women's romantic and sociosexual functioning as a perception and embodiment of oneself as an object of desire. ODSC theory is a useful framework for understanding many "object of desire" focused phenomena such as self-sexualization and enjoyment of sexualization. In particular, Enjoyment of Sexualization (ES) has recently been explored and new measures developed and validated to assess the extent to which an individual appreciates sexualized attention. Research on enjoyment of Sexualization (ES) suggests that sexualization (e.g. commenting on a woman's physical appearance) can be considered complimentary and experienced positively by many people. ES has been documented in predominantly younger, university samples (Liss et al., 2011; Visser et al., 2014), and mostly among women (Liss et al., 2011; Reimer et al., 2020; Ward et al., 2016); it has not been applied to work with older samples, and even less often, in samples of men. As such, the purpose of the current study is to validate the Enjoyment of Sexualization Scale (ESS) and the Enjoyment of Sexualization Scale for Men (ESS-M) with a sample of midlife women and men. First, models and theories of sexual desire will be presented as a foundation for considering how enjoyment of sexualization is relevant for sexual experience.

1.1 Models and Theories of Sexual Desire

Over the last 30 years, many theories have considered the role of sexual desire and its relationship to other aspects of sexual functioning and satisfaction, several of these suggesting differences between how these constructs function in men and women (Kaplan, 1977; Basson, 2002). Sexual desire has been defined as, “a wish, a need, a drive to seek out sexual objects or sexual activity” (Bogaert & Brotto, 2014; Regan & Berscheid, 1995). Much of the early research in sexual functioning was conducted by Masters and Johnson. Notably, Masters was a practicing gynecologist prior to his work with Johnson and their research focused primarily on the physiological aspects of sex. In Masters and Johnson’s (1966) seminal four stage Sexual Functioning Model, desire as an independent phase or stage was absent; this is likely due to the inability to directly measure desire as an observable stage. The four-stage model portrayed a linear progression from the excitation stage (vasocongestion or an erection in men and vaginal lubrication in women) to the refractory stage (the body returning to an unaroused state) which implied that the desire to engage in sexual activity was automatic or spontaneous (Basson, 2002; Meana, 2010). Other theories, particularly those based on women’s sexual functioning, provide conflicting ideas about whether desire precedes arousal as a part of a linear process or whether desire occurs as a response to arousal (Basson, 2002; Brotto et al., 2009; Chivers & Brotto, 2017; Meana, 2010).

Helen Singer Kaplan was a sex therapist and pioneer in sex research who expanded upon Masters and Johnson’s Sexual Functioning Model and added the element of desire. Early writings by Kaplan added desire to extend Masters and Johnson’s model, placing it directly preceding arousal (1977, 1979, & 1995). As such, Kaplan created the triphasic model of sexual response which outlined the three independent phases: sexual desire, vasocongestion and muscular contractions (1979). When describing sexual desire/motivation, Kaplan related sexual

desire and sexual fulfillment to hunger and satiety. Kaplan suggested that celibacy or prolonged periods between intercourse could lead to an increased desire to have sex; this is compared to the smell or sound of a steak cooking which provokes feelings of hunger or for a person to seek out food (Kaplan, 1995). Hunger, or desire, motivates behaviour aimed at satisfying these urges; consuming the steak when hungry or engaging in sex with a partner when experiencing desire. This discourse suggests that when a person goes a period of time without having sex, they will desire it, and they then seek to engage in sexual activity with a partner. Kaplan's presentation implies that desire is automatic and is experienced before the other stages of the sexual functioning model.

In contrast, Rosemary Basson, a physician and clinical professor at the University of British Columbia developed a sexual response cycle where sexual stimuli and arousal often occur before desire (2002). This theory addresses the ways that intimacy and sexual and nonsexual stimuli can impact how sex is experienced (by women in particular). Further, the theory states that many women engage in sexual activity for reasons outside of desire, such as to experience emotional intimacy, physical intimacy, or maintain a sense of attraction and commitment (Basson, 2002). This cyclical model first presents a person in a state of sexual neutrality; then with the introduction of sexual stimuli, arousal is experienced, followed by desire (Basson, 2002). The experience of arousal and desire may lead to engagement in sexual activity, which often results in emotional and physical satisfaction and, ultimately, an increase in emotional intimacy. The increased emotional intimacy creates a situation where a person, who even in a state of sexually neutrality, may be receptive to sexual stimuli. The cyclical theory is supported by research on women who reported not experiencing any sexual desire before sexual

stimulation began but experienced sexual desire after the introduction of the sexual stimulation (Meana, 2010).

The idea that desire is responsive, or cyclical (Basson, 2002), is also supported by empirical research that suggests sexual functioning in women is impacted by their sexual self-esteem, body image, and their perception of themselves as an object of desire (Brotto et al. 2009; Ellis & Symons, 1990; Erchull & Liss, 2014; Graham et al., 2004; Robbins & Reissing, 2018). To elaborate, sexual self-esteem and body image often factor into whether or not a person will be receptive to sexual stimuli. For example, if a person has poor sexual self-esteem and a negative body image they may not see themselves as desirable and may be less open or responsive to sexual stimuli (Bogaert & Brotto, 2014; Graham et al., 2004). On the other hand, feeling sexy may spark sexual desire and may increase the likelihood of sexual activity. Body image, body appreciation, and positive self-evaluation have repeatedly been linked to better sexual functioning in young adulthood as well as in midlife (Robbins & Reissing, 2018; Wiederman, 2000). Graham et al. (2004) conducted interviews with women and when asked about desire, women stated it was like a switch that could be turned “on and off” as necessary, and that their appearance impacted their desire to engage in sexual activities. Specifically, women reported that “feeling fat” or having a “bad hair day” could diminish their sexual desire (Graham et al., 2004). Comfort with one’s body or positive body image can also be reaffirmed when one experiences themselves as an object of desire (Erchull & Liss, 2014). The feeling of having a “good hair day” can be reinforced by appreciative looks or comments from others, which can increase the feeling of being desirable; Bogaert and Brotto (2014) theorized that a reaction to being desired is feeling desire. Liss et al. (2011) coined the related phrase Enjoyment of Sexualization and developed a measure to assess the enjoyment of being desired sexually by others (Liss et al., 2011). Work

using this measure has demonstrated that enjoying sexualized attention is common among undergraduate samples (Erchull & Liss, 2013; Liss et al., 2011; Visser et al., 2014).

1.2 Object of Desire Self-Consciousness

The role of body image, and specifically, enjoyment of sexualization in individuals' sexual functioning can be understood through the lens of a more recently proposed theory, Object of Desire Self-Consciousness (ODSC) theory (Bogaert & Brotto, 2014). ODSC theory describes how an underlying awareness of objectification influences female romantic and sociosexual functioning and as a result materializes in many women's fantasies, sexual behaviour, language and even sexual dysfunctions. As a concept, ODSC describes the experience of perceiving oneself as desirable in the eyes of another and has been suggested to describe an important role in heterosexual female's romantic and sociosexual functioning (Bogaert & Brotto, 2014; Bogaert et al., 2015). For example, a woman may notice a man looking at her appreciatively, she is cognizant of his gaze and recognizes that she is appealing, that she is an object of desire. The woman may or may not positively acknowledge the gaze, but the perception that she is desirable remains regardless of whether or not the appreciative look was intentional or misconstrued. The women's perception and experience of feeling desired reinforces the idea that she is desirable, thus, priming her ODSC.

Being desired by a potential romantic partner has been a central part of the heterosexual dating script for women. Dating scripts are largely governed by gender roles and social expectations that many people learn as children (Wiederman, 2005). For example, men are expected to initiate sex, and women are expected to be the "gatekeepers" of sex. These scripts perpetuate the idea that men are always pursuing women and sexual experiences, and women are arbitrating the success of those pursuits; men desiring and women being desired (Bogaert &

Brotto, 2014; Sakaluk et al., 2014; Schmitt et al., 2012; Wiederman, 2005). These dating/sexual scripts are widely present in media targeted to female audiences, i.e. TV, movies and romance novels (Starr & Ferguson, 2012). For example, many romance novels incorporate ODSC themes and language to describe relationships and courtship wherein the women are objects of desire. These books are consumed almost exclusively by women and it has been argued that romance novels/erotica often serve as a type of pornography for women (Bogaert & Brotto, 2014).

Feelings of romance and sexual desire overlap for many women, as demonstrated in their sexual fantasies (Bogaert & Brotto, 2014; Bogaert et al. 2015). Themes of ODSC in women's self-reported fantasies provide substantive evidence for ODSC and ES as these fantasies represent one's personal desires and are void of partner influence. Personal sexual fantasies typically represent an individual's ideal sexual scenario (Bogaert et al. 2015). Bogaert et al. (2015) assessed undergraduate participant's fantasies using three different measures. One measure required participants to rate sexual scenarios, another required the participant to complete a sentence about a sexual scenario, and in the last, they were instructed to write about their own ideal sexual scenarios. Women in the study reported more frequent ODSC-coded fantasies than men, which reinforced previous findings that suggested a prevalence of object of desire themes in women's fantasies (Maltz & Boss, 1997). Some of the ODSC themes recorded were the "pretty maiden" theme, the "beloved" theme and the "victim" theme. The pretty maiden theme describes a more experienced powerful man whose object of desire is the "pretty maiden," whereas, the "beloved" theme describes a woman who is being showered with attention from a man who cannot remove his attention from her, the object of his desire. Finally, the "victim" script typically includes a forcefulness, or even violent or coercive means of being with the woman who is the object of desire (Bogaert & Brotto, 2014; Bogaert et al., 2015). The

prevalence of ODSC themes in fantasies speaks to the depth in which ODSC informs women's sexual functioning and may colour their sexual experiences.

The perception of women as an object of desire has also been supported by literature in evolutionary theory (Ellis & Symons, 1990), sexual economics (Baumeister & Vohs, 2004; Bogaert & Brotto, 2014), and feminist theory (Fredrickson & Roberts, 1997). It is speculated that evolutionary theory can help explain ODSC as an evolved behaviour aimed at bettering mate selection (Bogaert & Brotto, 2014). Specifically, evolutionary theory would predict that being an object of desire is advantageous for females, as the more desirable the female is to the opposite sex, the more selective she can be when choosing her mate. In turn, careful selection of a mate to procreate with helps to facilitate the continuation of the woman's genes (Ellis & Symons, 1990). Additionally, sexual economics theories address the advantages of being considered desirable for females (Baumeister & Vohs, 2004). Historically, women have had less access to resources than men, however, men have been more likely to invest resources in exchange for sex than were women. The ability to obtain more resources makes the concept of being an object of desire more appealing to many women. For example, women who invest more into their appearance could raise their perceived "mate value" and, in turn, gain access to more resources (Baumeister & Vohs, 2004). Lastly, feminist theorists have contended that women are objectified but present this as a problematic experience for women (Fredrickson & Roberts, 1997). Specifically, objectification theory puts forth that women are viewed through the "male gaze" which often reduces females to their body parts or objects for the purpose of male pleasure (Fredrickson & Roberts, 1997). When women are reduced to objects via common dating scripts and media advertising etc., women learn to view themselves as objects of desire. Objectification of women is evident when viewing magazine covers and even billboard advertisements which pose women

suggestively, often, as if they are aware they are being looked at or by further reducing them to just parts of their body's. Importantly, feminist theory describes objectification as a harmful process for women's identity and experiences of sexuality. As such, feminist theorists might suggest that ODSC is a by-product of a society that has objectified women for many years (Liss et al, 2011; Fredrickson & Roberts, 1997). While this may elude to the idea that seeing oneself as a sexual object is harmful to women, it is still too early in the research on ODSC and ES to determine this unequivocally. At this point, ODSC has not been explicitly linked in any empirical studies to negative effects. Evolutionary theory, sexual economics, and feminist theory provide some foundations for understanding ODSC. However, ODSC theory goes beyond the tenets of these theories to provide a context for the current literature describing the role of body image and enjoyment of sexualization in sexual functioning. Nonetheless, theorizing on ODSC has been limited largely to the original paper (Bogaert & Brotto, 2014) and research on this area has predominantly been conducted with young, heterosexual women. Future research to support ODSC as a theory with widespread applicability is necessary.

Nonetheless, the current ODSC research supports ES as relevant to sexual functioning, particularly among women. For example, in one study women endorsed ODSC themes in fantasies more than men (Bogaert et al., 2015). However, that does not mean that ODSC or Enjoyment of Sexualization are not relevant to men or that they do not impact men's sexual functioning. Further research is needed to determine the impact of ESS on women's and men's sexual experience.

1.3 Gender, Feeling Desired, and Enjoyment of Sexualization

Earlier research on men's sexual functioning has demonstrated that men were more visually oriented and objectifying and less self-focused than women (Basson, 2002; Bogaert &

Brotto, 2014; Meana, 2010). ODSC theory speculates that women's sexual functioning is, in part, a reflection of men's gaze and sexual objectification (Bogaert & Brotto, 2014). However, more recent research on desire, body image, sexual attractiveness, and sexualization conflicts with this notion indicating that men's sexuality could be more complex than originally speculated (Amos & McCabe, 2016; Brink et al., 2018; Murray et al., 2017; Visser et al., 2014).

Some recent research supports the role of body image in men's sexual functioning (Brink et al., 2018). Brink et al. (2018) evaluated negative body attitudes during sex and sexual dissatisfaction in undergraduate men. Body consciousness in this study was defined as a heightened awareness of one's physical appearance; it was speculated that a person who held negative attitudes toward their body would, consequently, be more body conscious and thus experience more sexual dissatisfaction. Some of the body attitudes assessed pertained to the participant's muscle mass, body fat, genitals, and height. These attitudes were found to be mediated by body consciousness and predictive of 30% of the variance in sexual dissatisfaction. Relatedly, a study by Levitan et al. (2019) investigated the role of body image on sexual functioning in gay and bisexual men and found body muscularity, genital image, and affective body esteem were not predictive of sexual functioning. These conflicting findings might be the result the diverse samples, but such limited research exists on body image in relation to sexuality and sexual functioning in men that this cannot be determined as yet.

In a similar study of first year undergraduate women, Wiederman examined women's self-reports of body image self-consciousness (BSC) during sex (Wiederman, 2000). Women were recruited from an introductory psychology class and filled out information about their demographics and their BMI, they were also asked to complete questionnaires to assess self-monitoring, social avoidance, body dissatisfaction and BSC. Thirty-five percent of the women,

upon reflection, reported BSC during sex, and the women who reported higher levels of BSC had fewer heterosexual interactions, were less sexually assertive, and reported more avoidance of partnered sexual activities (Wiederman, 2000). A more recent cross-sectional study of heterosexual women focused on body appreciation and dissatisfaction in women from young to older adulthood (18 to 88 years of age). Robbins and Reissing (2018) found that body appreciation was associated with higher levels of desire and that body dissatisfaction was associated with decreased levels of desire. Interestingly, in this study, results did not vary with age (Robbins & Reissing, 2018). More consistent findings in studies of women than in men might be explained by stronger norms and internalized standards for women to live up to beauty ideals than for men (Robbins & Reissing, 2018). Nonetheless, the extant body of research provides support for the continued investigation of body image in sexual functioning in both men and women.

A related, but distinct concept from body image is self-perceived sexual attractiveness. Self-perceived sexual attractiveness contributes to how one perceives themselves as a sexual partner. The construct has been associated with sexual functioning in men and women (Amos & McCabe, 2015). Sexual attractiveness is seen as a type of physical attractiveness, but it is more specific as it focuses on a person's perception of their ability to attract a mate or elicit desire in a sexual partner (Amos & McCabe, 2015). Amos and McCabe (2015) studied self-perceptions of sexual attractiveness across genders and sexual orientations. Body esteem was a significant predictor of self-perceived sexual attractiveness across all groups, but it was not the largest predictor for any gender or orientation. The largest predictor of heterosexual women's perceived sexual attractiveness was sexual esteem; sexual esteem was the second greatest predictor of heterosexual men's perceived sexual attractiveness. Sexual esteem refers to an individual's belief

that they can please their partner sexually and/or that they are sexually sufficient (Amos & McCabe, 2016). The largest predictor of men's perceived sexual attractiveness was adherence to the masculine gender norm, whereby men who felt they represented the "masculine" ideal perceived themselves as more sexually attractive. Perhaps men consider masculine men more desirable to women, and as such, they have internalized the desire to be masculine in order to increase their mate value. Although not indicated in the study by Amos and McCabe, previous research has demonstrated the importance of femininity in women's ratings of self-perceived sexual attractiveness (Garcia & Carrigan, 1998).

As noted, much of the literature about desire has described "feeling desirable" or being an "object of desire" as an important part of female sexual functioning (Bogaert & Brotto, 2014; Bogaert et al., 2015; Erchull & Liss, 2014; Fredrickson & Roberts, 1997). Much less has historically been made of the importance of feeling desired for men, until a recent study by Murray et al. (2017). Murray and colleagues examined sexual desire in 30 middle-aged heterosexual men in long-term relationships using grounded theory to analyze one-on-one interviews. Feeling desired was noted by participants as one of the most important factors in eliciting desire; mentioned by 73% of the men in the study. Likewise, the greatest inhibitor of sexual desire was rejection, described by 60% of the participants (Murray et al., 2017). Though participants indicated that exciting/unexpected sexual encounters elicited desire, and physical ailments inhibited desire, the fact that feeling desired and being rejected were the most prevalent speaks to the importance of perceived desirability in men's sexual functioning. Despite this, men in the study described feeling desired infrequently. This disparity may be a function of traditional gender roles which suggest that men should initiate all sexual interactions and/or stereotypes which depict men as constantly pursuing, wanting, and needing sex all the time (Sakaluk et al.,

2014; Schmitt et al., 2012; Wiederman, 2005). These gender roles and stereotypes do not allow space for women to be the pursuers, expressing their sexual interest in and desire for their male partners and neglect the importance of a receptive partner. This study importantly draws attention to the need to further understand men's sexual experiences and that the importance of feeling desired in men as well as women.

A subsequent study by Murray and Brotto (2021) focused specifically on the importance of feeling sexually desirable to men in intimate relationships. Data from the study of 300 men aged 18-65 suggested that feeling sexually desirable was important to men; none of the participants denied the importance. Men in the study were aware of both their need to feel desirable and the ways they wanted their partners to express desire for them. Murray and Brotto suggested four behaviours that partners could engage in that men feel more desired: (1) Initiating and communicate a desire to have sex; (2) Being more flirtatious; (3) Being more romantic; and (4) Showing more interest in sexual activities. This study demonstrates that the heteronormative dating scripts of men desiring and women being desired is an inaccurate depiction of men's needs in intimate relationships and that feeling desirable may be more important to men's sexual experiences than is typically considered (Murray & Brotto, 2021).

Research from Murray et al. (2017, 2021) suggests that feeling desirable (and sexy) is important to men's sexual functioning and relationships. However, theorizing in this area has largely focused on these constructs in women. In their initial paper discussing Enjoyment of Sexualization (ES), Liss, Erchull and Ramsey (2011) stated that women have been "pervasively and undeniably" sexualized by Western society and that women may enjoy elements of sexualization. In a follow-up paper by Visser et al. (2014), a male ES scale was developed to measure ES in a male and female undergraduates. Interestingly, both men and women in the

sample reported similar ratings of enjoyment of sexualization (Visser et al., 2014). The authors hypothesized that men may enjoy the benefits of sexualization without having to experience some of the risks that are associated with the sexualization of women (Visser et al., 2014). For example, enjoyment of sexualization and self-objectification in women have been associated with lowered self-esteem, depression, disordered eating, and sexual harassment/violence (Liss et al., 2011; Visser et al., 2014). Despite this, enjoying sexualization is often perceived by women as empowering and even arousing (Liss et al., 2011). Liss et al. (2011) hypothesize that enjoying sexualization is a largely a product of women internalizing sexual objectification.

Research on Object of Desire Self-Consciousness (ODSC) has highlighted the importance of feeling desirable in women's romantic and sociosexual functioning and how, despite its originating, in part, from Objectification theory (Fredrickson & Roberts, 1997), there are many other reasons why being/feeling desired can be advantageous for female's experience of desire and arousal (Bogaert & Brotto, 2014). Nonetheless, ES has been related to a variety of traits and characteristics, not all of them positive. For example, ES has been positively related to the personality trait extroversion and negatively associated with the trait agreeableness; alluding to ES being related less to psychological vulnerability and more closely with self-pleasing attitudes (Visser et al., 2014). Associations between ES (assessed using the ESS scale developed by Lis, Erchull & Ramsey, 2011) and traditional conservative ideologies and both benevolent and hostile sexism have also been found among samples of women (Liss et al., 2011). Visser et al., (2014) also reported a positive relationship between body shame and ES in women, where increased levels of ES were related to heightened levels of body shame. In summary, researchers have hypothesized that ES originates from the sexual objectification of women and has been linked to many negative outcomes (e.g. disordered eating) (Fredrickson & Roberts, 1997; Liss et

al., 2011). However, as the ES literature has developed, it seems that many factors may contribute to the ES and there may be some benefits to feeling desirable. This may be particularly relevant in a midlife sample, where for some, body image worsens, and the experience of sexual problems increases (Thomas et al., 2019). Further, taken together with the limited research in this area that has included men, it appears men and women may similarly enjoy sexualization, but that there may be important gender differences in the implications of enjoying sexualization. A summary on ES in men women and men follows.

1.3.1 ES in Women

When originally conceptualized, ES was speculated to be to particularly relevant for women (Liss et al., 2011). The seminal article on ES was based on a sample of 282 young women and examined how ES was related to attitudes towards women, ambivalent sexism, and conformity to feminine norms, as well as some clinical outcomes (eating attitudes, self-esteem and, depression; Liss et al., 2011). High levels of ES were related to higher levels of both benevolent and hostile sexism, greater endorsement of conservative beliefs about women, and most of the elements addressed in the Conformity to Feminine Norms Inventory (Liss et al., 2011). Of the clinical outcomes, eating attitudes was the only measure correlated with ES, where higher scores on ES were related to more negative eating attitudes (Liss et al., 2011). This article highlighted some of the negative attributes associated with enjoying sexualization.

A more recent article by Riemer et al. (2020) may shed some light on how women may vary in terms of their experience of ES. Specifically, the authors investigated how critical (glaring, unappreciative, heckling etc.) versus complimentary (gazing and looking appreciatively etc.) objectification interacted with ES to predicts women's perception of objectification. One hundred and twenty one adult women ranging from 18 to 74 years of age were recruited through

Amazon's Mechanical Turk to complete a survey based on their experiences with objectification. While filling out the survey participants were asked to recall either an experience where they were critically objectified or complimentarily objectified. The researchers found that how women perceived the person objectifying them could be predicted by whether the objectification was complimentary or critical and how highly the woman rated enjoying sexualization (Riemer et al., 2020). Even though critical objectification predicted less positive attitudes towards the person objectifying the woman, there was an interaction between women with higher ES and more complimentary experiences that indicated a more positive perception of the men who objectified them (Riemer et al., 2020). Higher ratings of ES also positively predicted the women's perceived closeness to the person objectifying them - when it was complimentary but not critical (Riemer et al., 2020). This study highlights how ES can impact the way women perceive objectification, but also, importantly, differentiates between types of sexualized attention that is enjoyed. Understanding this distinction complicates the idea that all experiences of sexual objectification and enjoyment of sexualization are harmful, in fact suggesting that ES is a more nuanced construct. Additionally, the distinction between complimentary and critical objectification may also help elucidate why objectification research and desire research has produced seemingly conflicting ideas about the negative impacts of objectification and the centrality of being an object of desire in many women's experience of desire and arousal.

1.3.2 ES in Men

Visser et al. (2014) noted that western society's body ideal for men is becoming increasingly muscular, lean and, unrealistic and chose to extend the existing ESS to men. In support of their hypothesis, Visser et al. (2014) study indicated that men also reported high ratings of ES. A sample of 324 undergraduate men and women were recruited to participate in a

study to validate the male ES scale and evaluate ES in men. Further, the study examined how ES was related to personality traits, self-objectification, body shame, perceived attractiveness, and number of sexual partners (Visser et al., 2014). Men reported significantly higher rates of ES than women, but after controlling for one question (“I feel complimented when women ‘check me out’ as I walk past”), the gender difference was no longer significant. Enjoyment of Sexualization was also positively related to men’s reports of higher self-esteem, greater number of partners, and more self-objectification, and was uncorrelated with body shame, suggesting largely positive relationships between ES and other constructs (in contrast to findings on samples of women) (Visser et al., 2014). Further, a study by Ward et al. (2016) examined how exposure to different types of media were predictive of men and women’s ratings of self-sexualization in a large undergraduate sample. To better understand self-sexualization, ES was also measured. Men in the sample reported significantly higher levels of ES than women (Ward et al., 2016). Much of the existing objectification research focuses on the impact sexual objectification has on women, however, it seems that men are also impacted by appearance-based sexual attention. Finally, in the few studies that have examined ES in men, the samples have mainly focused on an undergraduate demographic and while these samples provide support for the presence of ES in men it does not address how ES functions as men age.

Relatedly, Visser et al. (2014) found the question “I love to feel sexy” was not equivalent across sexes, suggesting that this question had a different meaning to men and women in the sample. The term “sexy” is of particular interest as it has been identified as a highly ODSC coded word (Bogaert & Brotto, 2014; Bogaert et al., 2015). Sexy denotes appearance and colloquially is used to describe receptivity to sexual attention. When someone uses phrases such as “I feel sexy” they are, in essence, describing that they feel like they are appealing to their

partner and, in turn, they feel desire. Recent ODSC literature supports gender differences in “feel sexy” phrases with it being a term predominantly used to describe females, their sexuality and their sexual experiences. In contrast, “feel sexy” phrases are not often used to describe men, their sexuality and sexual experiences (Bogaert et al. 2019). Typically, phrases used to describe men’s sexual experiences denote a physiological response, such as “turned on” and “horny” (Bogaert et al. 2019). Nonetheless, the rest of the ES items worked well for both genders, and Visser et al. present the validated measure, including all 8 items, in their 2014 paper.

Although there are differences in how sexual desire is experienced between men and women, some of the more recent literature supports similarities across the importance of feeling desired, the role of body image, self-perceived sexual attractiveness, and enjoyment of sexualization (Amos & McCabe, 2016; Brink et al., 2018; Murray et al., 2017; Visser et al., 2014). Further, ES could be uniquely related to elements of sexual functioning in men and women at mid-life; this rationale described in the subsequent section.

1.4 Factors Associated with Aging and Experiences of Sexuality

Sexual health is associated with overall well-being, but as people age, sexual functioning and desire tend to decline and rates of sexual dysfunction often increase (Mernone et al., 2019; Schmiedeberg & Schroder, 2016). It is important to have a better understanding of the issues people face as they age and the elements which help maintain healthy sexual functioning. As people reach midlife there are many variables which may impact a couple’s ability to maintain a healthy and satisfying sexual life. In midlife, many couples have children, full-time jobs, and many are also caring for their own aging parents (Grundy & Henretta, 2006). This period in a person’s life is often filled with responsibilities and demands outside of the relationship that impact a couple’s ability to experience desire and make time for sex. Frequency of sexual

intercourse and sexual satisfaction decrease when children are younger and more dependent on their parents (Schmiedeberg & Schroder, 2016). Schmiedeberg and Schroder found that the impact of young children on sexual frequency and satisfaction faded as children grew up (2016), however, as couples age they may face additional stressors, such as increasing health concerns or the added element of aging parents who moving into the family home (Grundy & Henretta, 2006). Grundy and Henretta (2006) found that one-third of middle-aged women were caring for both older children and aging parents. Maintaining care taking roles and full-time work leaves little time for intimacy and when combined with aging bodies, it is no surprise that this age group reports low sexual desire and higher rates of sexual dysfunction (Mernone et al., 2019). Middle-aged men and women may also have less time at this stage of life to engage in health or fitness activities (Lee et al., 2005).

Body image has been noted to impact sexual functioning, and these concerns may be particularly prevalent at midlife (Thomas et al., 2019). Body image has been defined as how one perceives their body can be highly influenced by media images and expectations for what is the “idealized” body type for both men and women (Matsumoto & Rodgers, 2020; Thomas et al., 2019). While women are often held to unrealistic body standards of thinness and curviness (Starr & Ferguson, 2012; Visser et al., 2014), men are often expected to be muscular and lean (Matsumoto & Rodgers, 2020; Ward et al., 2016). In addition to the unrealistic expectations portrayed in Western media, Western society also devalues people as they age which can impact the way people perceive themselves and their bodies (Lewis et al., 2010). Research on women in midlife has reported mixed results about negative and positive body image in women (McKinley, 2006; Thomas et al., 2019). Conversely, the literature pertaining to body image in middle age

men is scarce. Outlined is some of the current existing literature about women and men's body image and sexual functioning throughout midlife.

Thomas et al. (2019) conducted 19 qualitative interviews with middle aged women to better understand the impact of body image on sexual satisfaction as women age. The authors described three themes: first, feeling attractive was an important reason for sexual activity, second, changes in appearance, especially weight gain and the appearance of breasts were common, and third, responses to the changes in body appearance affected sexual satisfaction. The first theme supports object of desire research which emphasizes feeling desirable as an important part of female's romantic and sociosexual functioning. Further, the third theme was divided into both positive/neutral and negative reactions to the changes in appearances. Women who accepted the changes in their appearance did not report decreased sexual satisfaction, however, women who perceived the changes to their appearance as negative reported less sexual satisfaction (Thomas et al., 2019). These findings align, in part, with findings by McKinley (2006) who reported that women's body image in midlife was more stable and less comparative than their younger counterparts. Relatedly, a women's perceived desirability from her partner remains an important factor in women's sexual desire, but if she does not perceive herself to be desirable this could potentially have a deleterious effect on her sexual desire and satisfaction.

While men do not report the body image concerns to the same level as women do, many men report being dissatisfied with their appearance (Matsumoto & Rodgers, 2020). The western ideal, portraying men as extremely muscular and lean, has become increasingly unattainable. This idealized body type is reinforced by cultural expectations of hegemonic masculinity (Hobbs & Rice, 2013). The hypermasculine and dominant personality combined with an overly muscular body type creates a very rigid mold for men to fit (Hobbs & Rice, 2013). A study by Matsumoto

and Rodgers (2020) examined eating disorders and body image in middle aged men and created an integrative model that describes how eating disorders may develop in this age group. The authors theorized that the internalization of societal expectations, objectification, and body image concerns can put middle aged men at an increased risk for eating disorders (Matsumoto & Rodgers, 2020). Of particular interest to the current study is the impact of societal expectations, objectification, and body image on men, putting them at their own unique risk for feeling uncomfortable with their bodies as they age. As such, investigations of ES among men and women should take into account factors such as age, body image, relationship status, and parenting.

1.5 Rationale

Enjoyment of Sexualization is a relatively new concept which is quickly gaining popularity for its applied and relevant description of female's perception of sexualized attention. Objectification theory provides a strong basis for understanding the development of ES in women. Further, its functioning and presence is supported by concepts such as ODSC, self-perceived sexual attractiveness, and numerous body image theories. Studies conducted to date have described ES as a predominantly female phenomenon (Liss et al, 2011; Riemer et al., 2020). However, given the more recent research on men's sexual functioning, there is some evidence to suggest that ES may be useful in describing some elements of men's sexuality as well (Amos & McCabe, 2016; Brink et al., 2018; Murray et al., 2017; Visser et al., 2014). Nonetheless, the construct has rarely been investigated in men.

Much of the research on Enjoyment of Sexualization has been conducted on undergraduate samples. The shortcoming of convenience sampling is that the phenomena being examined cannot be generalized outside of the demographic studied, thus little is known about

ES in individuals over age 24 and even less about how long-term relationships (i.e. marriage) and having children may impact Enjoyment of Sexualization. Importantly, recent research shows that sexual functioning and desire tend to decline as people age and postpartum, and that most sexual issues multiply and intensify over time (Mernone et al., 2019; Schröder & Schmiedeberg, 2015; Simon & Lukas, 2017). Additionally, there is support for the unique importance of feeling desired at midlife (Brotto et al., 2009; Murray et al., 2017; Murray & Brotto, 2020; Thomas et al., 2019), as such, studying the phenomena of Enjoyment of Sexualization among individuals at this life stage may be particularly relevant.

Finally, as with most new scales, it is important to establish that the ES scale is measuring a unique construct, but also that it is well aligned with related constructs, demonstrates strong content and factorial validity, and has sufficient internal consistency. Described above were many different body image and sexuality constructs that are related to Enjoyment of Sexualization. Determining statistical associations among these measures will demonstrate construct validity for Enjoyment of Sexuality. As such, this study aims to validate the ES scale among midlife men and women. Confirmatory factor analysis is used to assess factor structure, a correlation matrix is used to examine construct validity and invariance testing is conducted to ensure measurement is consistent across groups. Validating the male and female ES scales will help bridge some of the current gaps in the Enjoyment of Sexualization literature and broaden the understanding of how ES functions at midlife.

2 Methods

2.1 Procedure

This study uses secondary data collected from a previous research project. After receiving approval from the Research Ethics Board, a sample of 700 married participants were

recruited through a Canadian national Qualtrics panel in order to test prior hypotheses. Qualtrics has its own panel of voluntary participants who have agreed to be contacted about surveys that they qualify for. Initially, participants received an email from Qualtrics explaining the study and the incentive and were provided a link to the consent form and more information about the study. The consent form outlined the participant's ability to withdraw from the study if/whenever they felt uncomfortable as well as the efforts made to maintain anonymity. The Qualtrics link was accessible to participants who met the study's qualifications and was accessed by over 1900 people, the survey became unavailable after 700 surveys had been completed. Qualifications for the study included being married, being between the ages of 40 and 59 and living in Canada. The survey consisted of numerous measures about relationships, sexuality, and body image and took about 25 minutes to complete. To test for validity a confirmatory factor analysis was conducted to test model fit. Five other unique, but related, scales were also used to establish the construct validity.

2.2 Participants

After removing participants who failed verification questions or who had patterned responses, the final sample size was 640. The age range was between 40-59 and the average age in this sample was 49.81 years. The sample was predominantly women (72%); 82% were Caucasian, 8% were southeast Asian, 3% were Black. Most participants identified as heterosexual (92.8%) and 3.6% identified as bisexual. Almost half the sample (43%) reported college or university education; additionally, a significant minority of participants reported high school as their highest level of education (16.3%) or were trained in a trade/had technical training (8.1%). A criterion for the original study was that all participants were married, those

who selected other options were redirected to the final page of the survey and removed from the study.

2.3 Demographic Characteristics

Along with the demographics mentioned above, relationship duration, whether or not participants had children and the number of children were assessed. See Appendix A for verbatim items.

2.4 Measures

2.4.1 Enjoyment of Sexualization

The original Enjoyment of Sexualization scale is an 8 item 6-point scale that measures a female participant's enjoyment of being desired sexually/of being sexualized. While other scales assess similar constructs (e.g., the Objectified Body Consciousness Surveillance Scale, McKinley & Hyde, 1996; and the Self Sexualizing scale; Noll & Fredrickson, 1998), ESS assesses a set of attitudes as opposed to behaviours. This scale has acceptable internal reliability as denoted by a Cronbach's alpha of .85 (.86 in subsequent studies; Visser et al., 2014) and has been validated using an EFA and an CFA in the principal article (Liss et al., 2011). Although the EFA indicated two factors with eigenvalues greater than one, a one-factor model was selected by the authors. The first factor accounted for the majority of the variance (40%) and the authors felt a one factor model was a better representation of the data points after evaluating the scree plot. CFA was conducted to confirm the fit of the one-factor model and the authors reported fit indices in appropriate ranges (Liss et al., 2011).

The ES scale was subsequently adapted by a second team of authors to create a male version. These authors validated their measure as an 8-item, 5-point scale (Visser et al., 2014). There was a neutral response option added and a gradient was removed from both the affirmative

and negative options, these changes were not explicitly discussed in the article. Two CFA's were conducted to test the model fit of the ES question in a male and female sample. The CFA run on the female participants yielded a good fit after correlating error terms for two questions (5 and 7 which both referenced showing one's body). The CFA for men initially had a poorer fit, even after correlating the same error terms but reached a more acceptable fit after covariance was included between items 2 and 4. After the aforementioned adjustments, the CFAs supported a one factor model with acceptable fit for both the male and female ES scale according to a nonsignificant Chi square, a CFI above .90, RMSEA between .05-.08, and NFI above .90 (Visser et al., 2014). The female and male scales had acceptable internal reliability with a Cronbach's alpha of .82 and .85, respectively. However, male and female participants responded to one item on the measure differently. As such, the internal reliability was reported after removing one of the items. "I feel complimented when women 'check me out'" and the purposed equivalent on the female scale: "I feel complimented when men 'whistle at me'" (Visser et al., 2014) elicited different responses from participants. These differences in responses are presumed to be a result of inequivalence of the questions (Visser et al., 2014). There are distinct negative connotations associated with being "whistled at" as opposed to being "checked out," which is presumably perceived less negatively.

2.4.2 ODSC

The ODSC scale (Bogaert et al., in process) is comprised of 24 items measured with an 8-point scale that assesses a person's perception of themselves as an object of desire. Information on how the measure should be scored was not available from the primary authors. Based on a Cronbach's alpha of .89, it was determined to use all items together as a unidimensional scale. Some of the items included were: "If I know someone is attracted to me, I find myself trying to

look more sexy around that person, even if I'm not going to pursue the relationship, It makes me smile when I know someone is admiring my body.” Participants responded to the ODSC questions on a Likert scale however, due to a technical error the response options 2 and 3 (disagree and somewhat disagree) were presented out of order.

2.4.3 Self-Perceived Sexual Attractiveness

The Self-Perceived Sexual Attractiveness scale (SPSA) (Amos & McCabe, 2015) is a 6 item 7-point scale that measures a person’s perception of their ability to attract a mate or elicit desire in a sexual partner. Some of the items included were: “I believe I can attract sexual partners, I feel other people would want to be involved in a sexual relationship with me.” Amos and McCabe (2015) reported Cronbach’s alpha of .95 and has been validated the measure using an EFA and CFA. Results of the EFA suggested a one factor model with only one factor holding an eigen value greater than one. The CFA confirmed a one factor model was an acceptable fit.

2.4.4 Objectified Body Consciousness

The Objectified Body Consciousness scale (McKinley & Hyde, 1996) is a 24 item 6-point scale that measures a person’s awareness of the objectification of their body’s. This scale has three section: Shame, Body Surveillance and, Control. A Cronbach’s alpha of .70 for Shame and .76 for Surveillance and Control were reported in a sample of middle-aged women (McKinley & Hyde, 1996). Moreover, this scale was validated in its original paper using an EFA and a CFA (McKinley & Hyde, 1996). The CFA reported the highest GFI and AGFI ratings for a three-factor model compared to a one or two factor model. Notably, a more recent validation study on the scale by Morati and Varnes (2017) conducted an EFA and it suggested that a two-factor model was a better fit than the original three-factor model. Specifically, Morati and Varnes were unable to validate the control factor however, the body surveillance and shame factors were

still valid after abbreviating the measures. The current study only used the body surveillance portion (SS), the items in this section loaded well on their suggested factor and had the least modification suggestions. Some of the items included were: “I think it is more important that my clothes are comfortable than whether they look good on me, During the day, I think about how I look many times.”

2.4.5 Body Image Self-Consciousness

The Body Image Self-Consciousness scale (BISC) (Wiederman, 2000) is a 15 item 6-point scale that measures a person’s consciousness over their physical appearance during sex. Some of the items included were: “I would feel very nervous if a partner were to explore my body before or after having sex, During sexual activity it is difficult (would be difficult) not to think about how unattractive my body is.” Wiederman (2000) reported an acceptable Cronbach’s alpha of .94. Whereas revised versions have been developed since the creation of the initial BISC scale, support continues for use of the scale in its original form (Newby & Gaither, 2012).

2.4.6 Cognitive Distraction

The Cognitive Distraction scale (CDS) (Dove & Wiederman, 2000) is a 20 item 6-point scale that examines how disruptive self-monitoring is during sex. Some of the items included were: “It is difficult to enjoy sex because of my concerns over how appealing my body is to my partner, Thoughts about whether my actions are satisfying my partner distract me during sexual activity”. This scale has an internal consistency of .95 on both of the suggested factors (Performance and Appearance), but the Performance based factor accounted for over 60% of the variance, as such, the two were combined for the one factor model/scale (Dove and Wiederman, 2000).

2.5 Data Analysis

Using SPSS, descriptive statistics were calculated to present the demographic characteristics of the participants (race, gender, age and, sexual orientation); as well as relationship duration, whether or not participants had children, and, if so, how many, were also reported.

Structural Equation Modeling (SEM) in R *lavaan* was used to conduct a CFA on each of the ES scales (Liss et al., 2011; Visser et al., 2014). The fit of the CFAs was assessed using Chi square, Comparative Fit Index (CFI) (>.90), TLI (>.90), Root Mean Square Error of Approximation (RMSEA) (between .05-.08), Standardized Root Mean Square Residual (SRMR) (below .08) consistent with recommendations from Kline (2015). Notably, significance of chi-square is influenced by a large sample size and thus will be interpreted with caution. Further, it is not unusual for CFI and RMSEA to produce conflicting results and as such a “mixed” classification could be obtained if there were multiple other fit indices that were in the appropriate range, as suggested by Hussey and Hughes (2020). Allowing for a “mixed” rating also avoids over-using fit indices to interpret a model (Lai & Green 2016). The reliability of all measures was assessed using Cronbach’s Alpha coefficient and the Omega coefficient using the OMEGA macro in SPSS as the Cronbach’s Alpha is not always an optimal measure of validity and reliability (for full explanation, see Hayes & Coutts, 2020).

Once an appropriate measurement model was established, invariance across age groups and people who have children was tested. Age was dichotomized using a median split so that invariance testing could be conducted with two age groups. Invariance is tested across three increasingly stringent levels: configural, loadings, intercepts and a final, but less crucial level of the residuals (Chen, 2007). Configural invariance is the first and weakest level of invariance and if a model passes this level of invariance testing it suggest that the factor structure, at its most

basic level (without constraints) fits reasonably well across groups (Chen, 2007). Establishing invariance across factor loadings indicates that the relationship between the factors and the items are reasonably equal across groups suggesting that the items are equally representative of the constructs across groups. Intercept invariance includes a constraint that tests for equality between groups of the observed variables when holding the latent variable constant. Establishing intercept invariance is necessary to support the comparisons between means across heterogeneous groups (Chen, 2007). Lastly, residual invariance indicates that all differences in responses are due to differences in the latent variable (Chen, 2007). If a level of invariance passed or was categorized as “mixed” then the next level of invariance was tested but if the level of invariance failed, then the next level of constraint was not tested. The delta scores are used to describe how much the model fit changes between each level of invariance and are compared against thresholds for the amount of change that should occur between each test (Chen, 2007). This provides evidence for comparability of the construct of Enjoyment of Sexualization across age groups in adulthood and among people who have and do not have children. Finally, a correlation matrix was created to examine the relationship between resulting factors and all variables to test for construct validity. To assess construct validity, correlations between the male and female ES measures and other related measures; ODSC, SPSA, BISC, OBC-SS, and CD were calculated.

3 Results

3.1 Data Cleaning

After reviewing the data, a total of 123 participants were removed; 100 people did not complete any items of the ES scales. A further 17 were excluded for missing some of the ES items and 6 participants were removed for completing the questionnaire that did not correspond

with their reported gender. Given the majority of the sample provided complete data, data imputation was not conducted.

3.2 Participant Characteristics

Descriptive statistics and frequencies were calculated to better understand the sample characteristics. The final sample consisted of 517 people; the average age of the participants was 50 years old, 49% identified as female, 41% identified as male and 10% identified as either non-binary, agender, other, or chose not to respond (all of these participants were included in the validation as they were able to choose the men’s or women’s version of the ES, or to choose not to complete the measure). The average relationship duration was 18 years and 61% of the sample had children, with an average of 2 children. Mean scores were calculated for responses on the ESS, ESS-M, ODSC, OBSC-SS, BISC, SPSA, GMSEX, and CDS (see Table 1).

Factor	M	SD	ω	α
ESS	3.74	1.02	.88	.88
ESS-M	3.28	.68	.88	.88
ODSC	4.16	.04	.88	.89
CDS	4.56	.05	.97	.97
OBC Self-Surveillance	4.26	.05	.61	.51
BISC	1.90	.05	.97	.97
SPSA	4.48	.07	.96	.96
SexSat	5.08	.07	.96	.96

Table 1. Measure descriptives

3.3 Confirmatory Factor Analysis

A CFA was conducted on the Enjoyment of Sexualization Scale (ESS) with the full sample of 280 women, using structural equation modeling in R *lavaan* (figure 1). A one-factor model was tested based on the results of a prior EFA conducted in the initial validation article (Liss et al., 2011). The fit of the one factor model was mixed. The CFI and SRMR were in the “good” range (.900, .057, respectively). The chi-square was significant ($X^2(20) = 117.677$, $p < .001$). The TLI was below the desired threshold (.860) and the RMSEA (.132, 90% CI (.110-.156)) was outside the desired range (.05-.08) (Kline, 2015). Due to the mixed results across these indices, the model was modified. Modification indices are suggested model improvements provided in *lavaan*; and of the 27 suggested modifications, one was chosen to help the fit of the model. One modification was chosen based on the overall impact on the model and based on whether it made sense with the scale/existing theory. Specifically, correlating the residuals between item 5 and item 7 were added to increase model fit. Item 5 (“I like showing off my body”) and 7 (“When I wear revealing clothing, I feel sexy and in control”) both address the enjoyment of exposing one’s body in a sexualized way. This modification had the highest modification index suggesting that correlating these terms would improve the model more than the other options. No other modifications were made as there was not enough theoretical support for the other suggested changes with large modification indices. The modification improved the fit of the model; however the model did not meet the desired thresholds and was still classified as mixed (significant chi square, CFI = .926, TLI = .891, RMSEA = .117, 90% CI (.093-.141), SRMR = .051). Results in Table 2.

Next a CFA was conducted on the Men’s Enjoyment of Sexualization Scale (ESS-M), on the full sample of 237 men (Figure 2). A one-factor model was tested based on the results of a prior EFA conducted in the initial validation article (Visser et al., 2014). The fit of the one factor

model was mixed. The CFI and SRMR were in the good range (.919, .056, respectively). The chi-square was significant ($X^2(20)=87.036$ $p < .001$) The TLI was below the necessary threshold (.886) and the RMSEA (.119, 90% CI (.094 -.145)). was outside the expected range (.05-.08). Due to the mixed fit across in these indices the model was modified. The two modifications were chosen based on their overall impact on the model and based on whether they made sense given the item content and relevant theory. Correlations between items 1 and item 3 as well as item 7 and item 8 were added to increase model fit. Item 1 (“It is important to me that people are attracted to me”) and 3 (“I want people to look at me”) both pertain to being viewed appreciatively by others and item 7 (“When I wear revealing clothing, I feel sexy and in control”) and 8 (“I feel empowered when I look good”) involve feelings of power and control related to feeling attractive. These modifications had the highest modification indices suggesting that correlating these terms would improve the model better than the other options. No other modifications were chosen as there was not enough theoretical support for the other suggested changes with large modification indices. The modification improved the fit of the model (significant chi square, CFI = .953, TLI = .927, RMSEA = .095, 90% CI (.068-.124), SRMR = .046), but not significantly enough to fully accept the model, see results in Table 2.

Model	X^2 (df)	X^2 <i>p</i> - value	X^2 Ratio	CFI	TLI	RMSEA 95% [lower, upper]	RMSEA <i>p</i> -value	SRMR	Accept?
ESS One Factor Model	117.67 7 (20)	$p < .000$	5.88 4	.900	.860	.132 [.110, .156]	$p < .000$.057	Mixed
ESS Modified Model	91.281 (19)	$p < .000$	4.80 4	.926	.891	.117 [.093, .141]	$p < .000$.051	Mixed
ESS-M One	87.036 (20)	$p < .000$	4.35 2	.919	.886	.119 [.094, .145]	$p < .000$.056	Mixed

Factor									
Model									
ESS-M	56.718	p<.000	3.15	.953	.927	.095	p<.004	.046	Mixed
Modified	(18)		1			[.068, .124]			
Model									

Table. 2. Note. Good model fit determined by: significant testing of Chi-square, CFI (>.90), TLI (>.90), RMSEA (between .05-.08), SRMR (below .08).

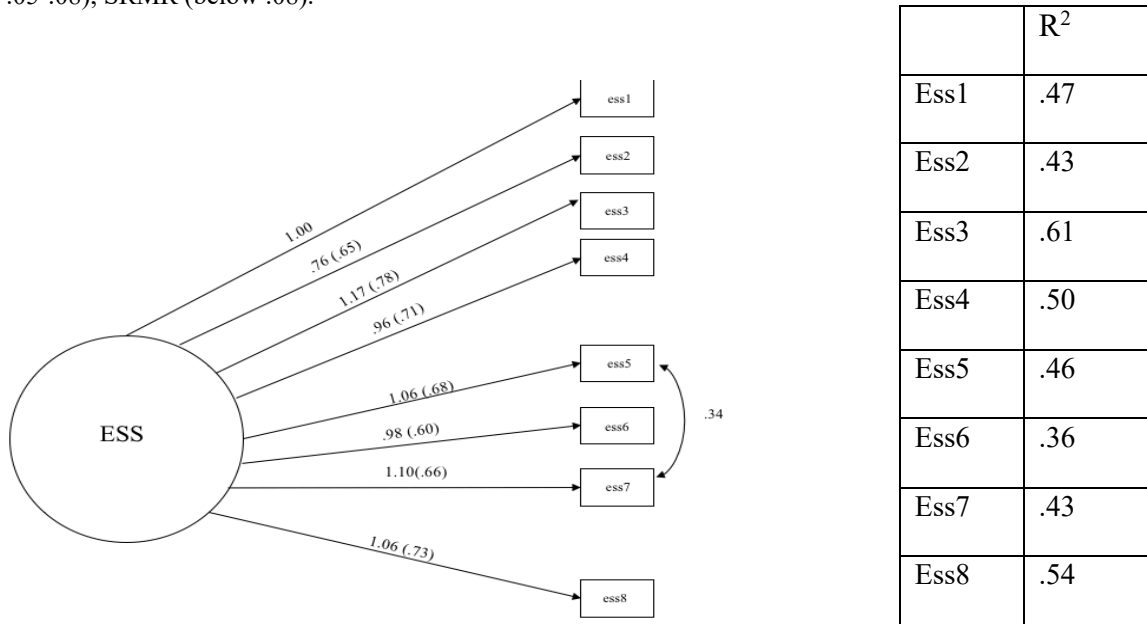


Figure 1. Note. ESS model (female participants) with both standardized (in brackets) and unstandardized loadings and the modification standardized covariance (n=280). All loadings significant at $p<.01$

	R ²
Eosm1	.37
Eosm2	.42
Eosm3	.64
Eosm4	.62
Eosm5	.40

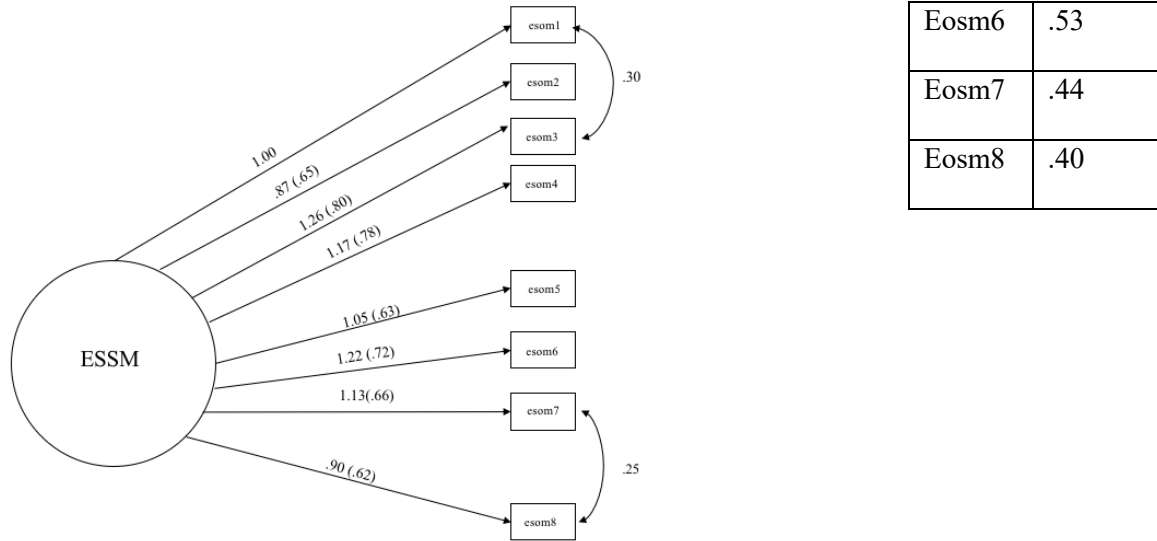


Figure 2. Note. ESS-M model (male participants) with both standardized (in brackets) and unstandardized loadings and the modification standardized covariance (n=237). All loadings significant at $p < .01$

3.4 Construct Validity

The study hypothesized that ES would be significantly related to ODSC, Cognitive Distraction, Body Image Self-Consciousness, Self-Perceived Sexual Attractiveness and Self-Surveillance. As predicted ODSC, Perceived Sexual Attractiveness and Self-Surveillance had significant relationships with both the ESS ($r = .65, p < .001$; $r = .54, p < .001$, and $r = -.25, p < .001$) and the ESS-M ($r = .58, p < .001$, $r = .49, p < .001$, and $r = -.29, p < .001$) respectively. As expected ODSC had the strongest positive correlations with ratings of enjoyment of sexualization on both the male and female scale, where higher levels of ES were related to higher ratings of ODSC. Self-Perceived Sexual Attractiveness also had a significant positive relationship with men and women’s ES ratings where higher ES scores were related to higher ratings of self-perceived attractiveness. Self-Surveillance and ES elicited the only significant negative relationship, whereby higher ES scores were related to lower levels of self-surveillance. However, neither

Cognitive Distraction or Body Image Self- Consciousness were significantly correlated to either the ESS ($r=-.003, p=.96$, & $r=-.09, p=.14$) or the ESS-M ($r=.01, p=.90$, & $r=.06, p=.37$), respectively.

3.5 Invariance Testing

3.5.1 Parenting status

Invariance testing was included to ensure that same construct was being tested across heterogeneous groups. Invariance of the ESS was tested at the configural level to measure group differences in parents vs. non-parents, then invariance was assessed across loadings (weakest level of invariance), the intercepts (strong level of invariance), and at the residual level (strictest level of invariance) (Little, 2013). Invariance was measured using the fit indices and thresholds mentioned previously as well as the delta ratings for CFI and RMSEA (Table 3 & 4). The delta ratings for CFI would fail if the model change exceeded .005 and RMSEA if the change exceeded .01, these standards were chosen based on previous literature (Chen, 2007). At the configural level, the model demonstrated mixed outcomes for invariance, the CFI (.927) and SRMR (.050) were in the good range and the RMSEA (.116, 90% CI (.091-.142)) and the TLI (.893) were not; thus the model was classified as mixed at the configural level. When checking for invariance among the loadings, there were similar issues, CFI (.917) and SRMR (.077) meeting the threshold but not RMSEA (.116, 90% CI (.091 -.138)) and TLI (.896). This again demonstrates mixed results. The delta ratings for the factor loading model however did not pass with Δ CFI (.01) and Δ RMSEA (.001) with only RMSEA within the accepted range for change. When testing intercept invariance (adding constraints), there was an increase in the TLI (.910) to an acceptable level and CFI (.917) and SRMR (.077) remained at acceptable levels, but RMSEA did not reach its threshold (.107, 90% CI (.085-.129)) and thus the model was unable to

conclusively demonstrate invariance at the intercept level and was categorized as mixed. The delta ratings for the intercept model passed with Δ CFI ($<.001$) and Δ RMSEA (.008) both within the accepted range for change. Lastly, the residual model was constrained and tested for invariance which resulted in a mixed categorization per the previous models, with CFI (.914), TLI (.920), SRMR (.075) meeting criteria but not RMSEA (.101, 90% CI (.080-.122)). The delta ratings passed at two levels, with the residual Δ CFI (.003) and Δ RMSEA (.006) indicating change was within acceptable range. The decision to categorize the model invariance as mixed at the configural, loading, intercept, and residual level was based on the importance of RMSEA in invariance testing. Doing so also highlights the importance of not reducing model fit to strict fit indices that can easily be overinterpreted (Lai & Green, 2016).

Similarly, invariance testing was also conducted on the ESS-M scale to assess its ability to measure the proposed constructs across heterogeneous groups. Constraints were placed at the configural level to measure invariance between parents vs. non-parents, then constraints were added to the loadings (weakest level of invariance), the intercepts (strong level of invariance), and at the residual level (strictest level of invariance) (Little, 2013). Invariance was measured using the fit indices and thresholds mentioned previously as well (as the aforementioned delta ratings for CFI and RMSEA (Table 3 & 5)). At the configural level, the model demonstrated mixed invariance, the CFI (.915) and SRMR (.054) were in the good range and the RMSEA .130, (90% CI (.102-.158)) and the TLI (.868) were not; thus the model was categorized as mixed at the configural level. When checking for invariance at the level of the loadings, there were similar issues, CFI (.918) and SRMR (.61) met their respective thresholds but RMSEA (.116, 90% CI (.090 -.143)) and TLI (.893) did not. Thus the model again was rated as “mixed” at this level of invariance. The delta ratings for the loading model, however, did not pass with Δ

CFI (-.003) and Δ RMSEA (.014); RMSEA was outside the accepted range for change. When constraining the intercepts, there was an increase in the TLI (.910) to an acceptable level; CFI (.920) and SRMR (.064) remained at acceptable levels, but RMSEA did not reach its threshold (.107, 90% CI (.082-.132)). Thus, the model demonstrated mixed results for invariance at the intercept level. The delta ratings for the intercept model passed with Δ CFI (-.002) and Δ RMSEA (.009) both within the accepted range for change. Lastly, the residual model was constrained and tested for invariance which resulted in a mixed categorization as per the previous models, with CFI (.923), TLI (.926), SRMR (.066) meeting criteria but RMSEA (.097, 90% CI (.073-.121)) did not. The delta ratings passed at two of the three levels, with the residual Δ CFI (-.003) and Δ RMSEA (.010) indicating change was within acceptable range.

3.5.2 Age

Further invariance testing was conducted on the ES scale to measure invariance between age groups (40-49 and 50-59) (Table 4 & 7). At the configural level, the model demonstrated mixed results for invariance. The CFI (.920) and SRMR (.050) were in the good range and the RMSEA (.122, 90% CI (.098-.148)) and the TLI (.881) were not; thus the model was classified as mixed the configural level. When checking for invariance among the loadings, there were similar issues. CFI (.914) and SRMR (.71) met their respective thresholds but not RMSEA (.116, 90% CI (.093 -.140)) and TLI (.893). As such, the model demonstrated mixed results for invariance at this level. The delta ratings for the loading model, however, did not pass with Δ CFI (.006) and Δ RMSEA (.006). CFI was outside the accepted range for change. When constraining the intercepts there was an increase in the TLI (.904) to an acceptable level, CFI (.911) and SRMR (.074) remained at acceptable levels, but RMSEA did not reach its threshold (.110, 90% CI (.088-.132)). Thus, the model was categorized as mixed at the intercept level. The

delta ratings for the intercept model passed with Δ CFI (.003) and Δ RMSEA (.006) both within the accepted range for change. Lastly, the residual model was constrained and tested for invariance which, as per the previous models, resulted in mixed results. CFI (.915), TLI (.921), SRMR (.073) met criteria but RMSEA (.100, 90% CI (.079-.121)) did not. The delta ratings passed, with the residual Δ CFI (-.004) and Δ RMSEA (.010) indicating change was within acceptable range.

Lastly, invariance testing on the ESS-M scale was conducted to measure invariance between age groups (40-49 and 50-59). Invariance was measured using the fit indices, thresholds, and delta ratings for CFI and RMSEA (Table 4 & 8). At the configural level, the model demonstrated mixed results for invariance. CFI (.930) and SRMR (.051) were in the good range and the RMSEA (.117, 90% CI (.088-.156)) and the TLI (.891) were not. As such, the model was classified as mixed at the configural level. When checking for invariance among the loadings CFI (.906), TLI (.903), and SRMR (.075) met the threshold RMSEA(.110, 90% CI (.084 -.137)) did not. Thus, the model demonstrated mixed results for invariance at this level. The delta ratings for the loading model, however, did pass with Δ CFI (.005) and Δ RMSEA (.007) both within the accepted range for change. When constraining the intercepts CFI (.930), TLI (.922), and SRMR (.077) remained at acceptable levels but RMSEA did not reach its threshold (.99, 90% CI (.073-.125)) and thus the model was classified as mixed at the intercept level. The delta ratings for the intercept model failed with Δ CFI (-.005) and Δ RMSEA (.011) with RMSEA outside of the accepted range for change. Lastly, the residual model was constrained and tested for invariance which resulted in a mixed classification as per the previous models. CFI (.928), TLI (.930), SRMR (.078) were within range, but RMSEA (.093, 90% CI

(.069-.117)), although closer, did not meet the threshold. The delta ratings passed, with the residual Δ CFI (.002) and Δ RMSEA (.006) indicating change was within acceptable range.

Model	χ^2 (df)	CFI	TLI	RMSEA 95% [lower bound, upper bound]	p-value	SR MR	Accept?
ESS Configural Model	109.812 (38)	.927	.893	.116 [.091, .142]	p<.001	.050	Mixed
ESS Loadings Model	127.456 (45)	.917	.896	.115 [.091, .138]	p<.001	.077	Mixed
ESS Intercepts Model	134.487 (52)	.917	.910	.107 [.085, .129]	p<.001	.077	Mixed
ESS Residuals Model	145.051 (60)	.914	.920	.101 [.080, .122]	p<.001	.075	Mixed
ESS-M Configural Model	107.597 (36)	.915	.868	.130 [.102, .158]	p<.001	.054	Mixed
ESS-M Loadings Model	112.095 (43)	.918	.893	.116 [.090, .143]	p<.001	.061	Mixed
ESS-M Intercepts Model	117.804 (50)	.920	.910	.107 [.082, .132]	p<.001	.064	Mixed
ESS-M Residual Model	122.610 (58)	.923	.926	.097 [.073, .121]	p<.001	.066	Mixed

Table 3. Parents vs. Non-Parent. Note. Good model fit determined by: significant testing of Chi-square, CFI (>.90), TLI (>.90), RMSEA (between .05-.08), SRMR (below .08).

Model	χ^2 (df)	CFI	TLI	RMSEA 95% [lower bound, upper bound]	p-value	SR MR	Accept?
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ESS Configural Model	117.705 (38)	.920	.881	.122 [.098, .148]	p<.001	.050	Mixed
ESS Loadings Model	129.928 (45)	.914	.893	.116 [.093, .140]	p<.001	.071	Mixed
ESS Intercepts Model	139.905 (52)	.911	.904	.110 [.088, .132]	p<.001	.074	Mixed
ESS Residuals Model	144.052 (60)	.915	.921	.100 [.079, .121]	p<.001	.073	Mixed
ESS-M Configural Model	94.114 (36)	.930	.891	.117 [.088, .156]	p<.001	.052	Mixed
ESS-M Loadings Model	104.976 (43)	.925	.903	.110 [.084, .137]	p<.001	.075	Mixed
ESS-M Intercepts Model	108.091 (50)	.930	.922	.099 [.073, .125]	p<.001	.077	Mixed
ESS-M Residual Model	117.901 (58)	.928	.930	.093 [.069, .117]	p<.001	.078	Mixed

Table 4.
Age

ESS Model	Δ CFI	Δ RMSEA	$\Delta \chi^2$ (<i>p</i> -value)
Configural Model	-	-	-
Loadings Invariance Model	.01	.001	-17.644 (.000)
Intercepts Model	<.001	.008	-7.031 (.000)
Residuals Model	.003	.006	-4.147 (.000)

Table 5. ESS Children. Note. Cut-off limits: CFI < .005 and RMSEA < .01.

ESS-M Model	Δ CFI	Δ RMSEA	$\Delta \chi^2$ (<i>p</i> -value)	Pass/fail?
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Configural Model	-	-	-	-
Loadings Invariance Model	-.003	.014	-4.498 (.000)	Fail
Intercepts Model	-.002	.009	-5.709 (.000)	Pass
Residuals Model	-.003	.010	-4.806 (.000)	Pass

Table 6. ESS-M Children. Note. Cut-off limits: CFI < .005 and RMSEA < .01.

ESS Model	Δ CFI	Δ RMSEA	ΔX^2 (<i>p</i> -value)	Pass/fail?
Configural Model	-	-	-	-
Loadings Invariance Model	.006	.006	-12.223 (.000)	Fail
Intercepts Model	.003	.006	-9.977 (.000)	Pass
Residuals Model	-.004	.010	-4.147 (.000)	Pass

Table 7. ESS Age. Note. Cut-off limits: CFI < .005 and RMSEA < .01.

ESS-M Model	Δ CFI	Δ RMSEA	ΔX^2 (<i>p</i> -value)	Pass/fail?
Configural Model	-	-	-	-
Loadings Invariance Model	.005	.007	-10.862 (.000)	Pass
Intercepts Model	-.005	.011	-3.115 (.000)	Fail
Residuals Model	.002	.006	-9.810 (.000)	Pass

Table 8. ESS-M Age. Note. Cut-off limits: CFI < .005 and RMSEA < .01.

Test	Intercept Invariance
Women's Parenting Status	No
Men's Parenting Status	No
Women Age	No
Men Age	No

Table 9. Intercept Invariance

Intercept invariance was not achieved across age groups or parental status (Table 9) meaning the male and female scales cannot be used to make mean comparisons across groups. The inability to find invariance across intercepts indicates that we are not effectively making an “apples to apples” comparison and that using these scales across age groups and in parent vs. non-parents would be risking an “apples to sparks plug” type comparison (Vandenberg & Lance, 2000). To elaborate, that the scales may not be measuring ES equally across groups and that mean scores between parents and non-parents and between people in their 40’s vs. their 50’s are not comparable.

4 Discussion

The purpose of this study was to test the validity of the male and female Enjoyment of Sexualization scales (Liss et al., 2011; Visser et al., 2014) in a midlife sample. Confirmatory factor analysis and invariance testing were conducted, and a correlation matrix was used to analyze the validity of the ESS and ESS-M in a sample of midlife women and men. Confirmatory factor analysis supported the one-factor structure for both the male and female Enjoyment of Sexualization scales. The model demonstrated mixed results in terms of invariance across age groups and across parents vs. non-parents. The correlation matrix provided mixed results for construct validity. Whereas the factor structure was aligned with findings from prior studies, invariance was not demonstrated across groups. Further, that the male and female scales have different items and are scored using difference response choices pose additional problems for future use and testing for gender invariance.

4.1 Confirmatory Factor Analysis

A confirmatory factor analysis supported a one factor model; however, the fit indices produced some mixed results. Both the Male and Female ES Scale included modification indices to improve model fit (Beaujean, 2014). Modification indices are often requested to understand how the model can be improved and modifications can be made cautiously if they can be logically and theoretically supported. A total of three modifications were made to the two scales; each modification was a correlation between items residuals which described overlapping content. Though the female ES scale was in the good range for CFI and SRMR and TLI neared the desired cut-off, RMSEA and Chi square were not within the good range. Similarly, the male ES scale was within the good range for CFI, TLI, SRMR, but exceeded the cut-off for RMSEA and chi square. As such, even with the modifications made the models still failed to reach commonly used fit indexes cut-off thresholds. The models were classified as mixed indicating that the one-factor model fit well, but not perfectly (in particular, RMSEA for both the male and female scales did not reach acceptable fit cut-offs). Similarly, results of the invariance testing on age and parents vs. non-parents also produced mixed results with RMSEA failing to reach the good range across the male and female ESS. While sample size likely impacted the ability to find a non-significant chi-square (Chen, 2007) the factors that might lead to an RMSEA that conflicts CFI in particular are not well understood. There are many reasons why fit indices such as CFI and RMSEA can lead to inconsistent conclusions (e.g. they are measuring different things, the need to have, but often misused, cut-offs, and generally because fit indices are not well understood in the literature) about the same model and this further highlights the importance of interpreting cut-off ranges cautiously (Lai & Green, 2016). Interestingly, for both the male and female ESS, the TLI ratings got progressively better when testing for invariance with each level of added constraint, suggesting that the model fit better when constrained and as such that the

need for distinct scales may be less necessary in these sub-groups. Overall, the CFA and Invariance tests produced conflicting results that should be interpreted carefully.

4.2 Construct Validity

Construct validity was assessed by testing the association between the ES scales and other measures assessing hypothetically similar or related constructs. We hypothesized that ES would be significantly related to Object of Desire Self-Consciousness (ODSC), Self-Perceived Sexual Attractiveness (SPSA), Self-Surveillance (SS), Body Image Self-Consciousness (BISC) and Cognitive Distraction (CD). Both the male and female ES scales were significantly related to ODSC, SPSA and SS, but not to CD or BISC.

Strong positive relationships between ODSC and ES for both the male and female scale indicate that higher scores on ES were associated with higher scores on the ODSC scale (Bogaert et al., in process). The correlations of .65 for the female scale and .58 for the male scale are large correlations and represent that 44% of the variance in ES for women and 33% of the variance in men can be accounted for by ODSC. ODSC theory contends that perceiving oneself as an object of desire is important to a person's romantic and sociosexual functioning (Bogaert & Brotto, 2014), as such, the positive relationship between enjoying sexualization and ODSC provides evidence for the construct validity of the ES scales. To elaborate, if a person values being desired, and if being an object of desire is central to their romantic and sexual scripts then enjoying sexualization should be positively related. Notably, while both the male and female ES scales were strongly correlated with the ODSC measure, the female ES scale had a stronger relationship. This may suggest that the overlap between ES and ODSC is stronger for women than for men. This could be a result of the way women are socialized and a society that hypersexualizes women. Media often reduced women to body parts and poses them in a way that

suggests they are being looked at (Bogaert & Brotto, 2014). The societal standard for men has been becoming increasingly more unrealistic (Matsumoto & Rodgers, 2020; Ward et al., 2016), however, historically media has focused more on sexualizing women (Fredrickson & Roberts, 1997).

Additionally, the strong positive relationship between self-perceived sexual attractiveness (Amos & McCabe, 2015) and both the male and female ES scores indicate that as enjoyment of sexualization increases so does self-perceived sexual attractiveness. This relationship may imply that people who perceive themselves as more sexually attractive may enjoy sexualized attention, conversely, someone who enjoys sexualized attention may enjoy it because it makes them feel more sexually attractive. This relationship is well aligned with the connection between ODSC and ES, because self-perceived sexual attractiveness refers to a person's perception of themselves as sexually desirable and of their ability to elicit a sexual response from someone (Amos & McCabe, 2015). ODSC, SPSA, and ES have a shared element of feeling sexually desirable which may be important when understanding romantic and sociosexual functioning in and outside of romantic relationships.

Further the significant negative relationship between body surveillance (McKinley & Hyde, 1996) and both male and female ES scores emphasize that as enjoyment of sexualization goes up, body surveillance goes down. However, the correlation is the smallest significant correlation in the study ($r = -.25$ for women, $r = -.29$ for men) indicating about 6% shared variance. Further the Cronbach's alpha and Omega for the men's and women's body surveillance were low, suggesting that the scale may have issues related to internal consistency of the items. Nonetheless, this finding is contrary to the study's original hypothesis which predicted that the more a person enjoys sexualized attention, the more cognizant they would be of their body. The

notion of body surveillance decreasing with an increase in enjoyment of sexualized attention could be a product of the demographic, and support for the body image literature, that suggests that as people reach middle age their body image stabilizes and their preoccupation with their appearance levels out (Thomas et al., 2019). However, the mean scores for both the male and female ES scales were fairly neutral (3.74 (female) & 3.28 (male)) and thus this population was neither high nor low on enjoyment of sexualization, and the mean scores for body surveillance were higher than neutral (4.26). As such, a negative correlation, while not aligned with prior hypotheses, is not counterintuitive taking into account the age of participants. This finding could highlight complexities in ES, the stabilizing of body image that is often associated with midlife (Thomas et al., 2019), or a myriad of other complexities that often reside at the intersection of body image and sexuality.

Finally, neither Cognitive Distraction (Dove & Wiederman, 2000) or Body Image Self-Consciousness (Wiederman, 2000) were significantly related to ES. These findings may represent a disconnect between the social vs. intimate aspect of the scales. The sexualization items on the male and female ES scales refer to sexualization that often occurs in public settings as opposed to items on the CD and BISC scales which refer to thoughts and feelings that occur while someone is being intimate with a sexual partner. Non-significant findings in this instance draw a distinction between potential experiences in the social world and people's perceptions about themselves or their bodies in a sexual scenario. For example, a person may enjoy sexualized attention when they are out at a social gathering where they feel confident in their appearance and that could be different from how they feel when they are naked with a partner.

Overall, the correlations shed some light on the relationships between ES and other constructs supporting the construct validity of the male and female scales. The positive

correlations between ODSC and SPSA and ES demonstrate the interrelatedness of perceiving oneself as attractive, wanting to be an object of desire, and enjoying being sexualized. Additionally, the correlations clarified a distinction between awareness of one's body image (e.g. body surveillance and cognitive distraction) and ES. How someone feels about their physical appearance may be less related to whether or not someone enjoys sexualized attention, suggesting these are distinct constructs. Lastly, the correlations highlighted a separation between social and intimate scenarios (i.e., both cognitive distraction and body image self-consciousness refer specifically to body image in a sexual situation – enjoyment of sexualization, perceiving oneself as sexually attractive, and wanting to be an object of desire, do not occur specifically during sexual activity).

4.3 Invariance Testing

Latent variables can be particularly challenging to measure (Flake & Freid, 2020; Hussey & Hughes, 2020) and as such invariance testing was included to test if the same construct was being tested across heterogeneous groups. A common issue with measurement is ensuring that differences in responses are occurring based on differences across the variable being measured, true score difference, and not due to group differences (Chen, 2007; Hussey & Hughes, 2020). Ideally, when measuring a construct across groups, there should be an “apples to apples” type comparison otherwise we are left with the dilemma of an “apples to sparks plugs” comparison (Vandenberg & Lance, 2000). To elaborate, the ES scales are intended to measure enjoyment of sexualization, but without invariance testing the difference in responses could be more accurately describing group differences such as different conceptualizations of the items between people of different genders, age groups, sexual orientations, or other constructs. The ES scales are already separated by gender, and participants in the sample were largely heterosexual, and so invariance

testing was conducted to evaluate age differences and differences in parents vs. non-parents. To elaborate, invariance was tested between people who were 40-49 and people who were 50-59 as well as on people who had children and those who did not have children in married long-term relationships.

Invariance testing across age and parental status produced mixed results at each level. While the models seemed to fit better with added levels of stringency it is important to understand that the delta ratings also produced mixed results related to how much the models changed between each invariance test. As such, while the models appeared to fit better with each invariance test, the deltas were sometimes too large and failed to meet the criteria for the amount of allowable change between tests. The deltas highlight that neither the male or female ES scales were able to achieve intercept invariance across age groups or across parental status. The male scale did reach invariance across factor loadings. However, inconsistent deltas add further ambiguity when interpreting the results.

However, as previously stated, cut-off values for the fit indices were created as a guideline to help with interpretations and given the nuance of invariance testing, to simply state that the male and female ES scales are not invariant would be to over simplify the results. The study used conservative cut-off values for the deltas and as such, the range for pass and fail were set quite low (Chen, 2007) and for the study, the deltas in particular, were within .001 of the cut-off range for the male and female scales across age. Proximity aside, for the purpose of this study the results will be interpreted through the cut-of restrictions for the rates of change for clarity and consistency.

The deltas for RMSEA and CFI invariance tests exceeded the recommended amount of change indicating that scales were not invariant across parents vs. non-parents or women across

age groups. Only the male ES scale reached factor loading invariance across age. These findings suggest that there may be significant group differences in the conceptualization of ES in parents vs. non-parents and in women as they age. The inability to find intercept invariance across groups in both the male and female ES scales suggest that these scales should not be used to compare means across groups. These results are not surprising as the perception of sexualization may change as people's lives change and they have children (Schroder & Schmiedeberg, 2015). Parents may perceive sexualization differently or it may not be as central when people have children. This could be further impacted by age of the children/child, whether the children/child live at home and other confounding variables. As discussed by Schroder and Schmiedeberg (2015), sexual frequency tends to decline after people have had children and can be further impacted by living situations. Enjoyment of sexualization, could be impacted in a similar way as parenthood adds unique stressors to relationships and can conflict with people's perception of themselves as sexually desirable (Tavares et al., 2019). As such when an ES scale is given to two different groups the results could be impacted by the differences in parents vs. non-parents and not just the differences in enjoyment of sexualization. Similarly, as women age they might enjoy sexualization differently or perceive sexualized attention differently. To elaborate, a form of sexualization that might have once been considered complimentary, such as being whistled at, may change as women age. Being whistled at or wearing revealing clothing may lose its novelty and it turn, it becomes less enjoyable and potentially more uncomfortable. In sum, as women age they may still enjoy sexualization, but the type of sexualization they enjoy may not be accounted for in the original ESS (Liss et al., 2011).

4.4 Scale Limitations

The CFA and the two different tests of invariance provided mixed results for the ESS and ESS-M. These findings provide some support for the factor structure and minimal support for the scales versatility across different groups, however there were some additional limitations with the scales that could impact the interpretation of the results and should be considered before using the ESS and ESS-M in future studies. First, the ES scale (Liss et al., 2011) is a 6-point scale without a neutral response option and the ESS-M (Visser et al., 2014) is a 5-point scale with a neutral response option. The male scale was created with one less gradient and included a neutral response option, the differences in the scale types creates a barrier in interpreting the results and its comparability across genders. Further, the inclusion of a neutral response option has been heavily debated in the measurement literature (Dalal et al., 2014; Simms et al., 2019), and while arguments exist for both the inclusion and the exclusion of a neutral response option, it is important to note that its inclusion in one of the scales but not in the other creates complications when comparing scores between scales. Second, as noted by Visser et al., (2014) the wording on item 6 on the female scale (“I feel complimented when people whistle at me”) and the proposed equivalent on the male scale (“I feel complimented when people “check me out” as I walk past”) have distinctly different meanings. As previously discussed, being “checked out” often has a positive connotation whereas “being whistled at” is often considered a negative experience. Moreover, Riemer et al. (2020) described how sexualized attention that is perceived as critical is different than sexualized attention that is perceived as complimentary. The gendered differences in the wording creates a problem in the item equivalence and should likely be neutralized across the scales. For example, eliminating “being whistled at” all together and using “checked out” across the male and female scales could reduce issues with item valance and would serve as a gender-neutral item across scales. The perception of the sexualization could

impact how people respond to the items and alter the results. For example, someone may be high in ES but if the items come across as critical then they could artificially score lower than if the items were perceived as complimentary. Lastly, for the purpose of the current study, participants were removed from the study if they did not respond to all items on the scale. All the male participants who were removed for unanswered questions left item 7 blank. Item 7 on the male scale (“When I wear revealing clothing I feel sexy and in control”) was left unanswered by 8 participants and had the lowest mean score (2.73), which likely reflects that this item did not translate well between the original ES scale created for females and the ES scale created for males. While there is male clothing that could be considered revealing, male clothing is not advertised or created to be sexually revealing. The ESS and ESS-M were both created with a strong theoretical and empirical foundations, however, the differences between the scales, the combination of critical and complimentary items, and the potential issues with content translation between genders could pose challenges when using the measures across genders and should be taken into consideration when using the scales in future.

4.5 Implications

Much of the research on ES has been conducted on undergraduate samples limiting the understanding of ES and application of the scales to a specific age demographic. The inability to establish invariance between age groups in women, and between parents and non-parents in both genders, suggests a need to further understand how ES functions in midlife and how it may be different for parents vs. non-parents and for women as they age. Conversely, finding invariance across factor loadings for men between age groups indicates that ES may not change with age for men the same way it does for women. Women may perceive and/or enjoy sexualization differently as they age for numerous reasons. For example, there may be gender differences in

risks associated with enjoying sexualized attention whereby women are more vulnerable to sexual assault and may see sexual attention from strangers (e.g., men on the street) as a precursor to violence (Visser et al., 2014). Experiences of sexual attention may differ by age with older women finding this more distressing over time, or younger women experiencing this positively because of the novelty. In contrast, if older women have more concerns about body image (Erchull & Liss, 2013; Fredrickson & Roberts, 1997; Koch et al., 2005; Noll & Fredrickson, 1998; Liss et al., 2011), they may be more receptive to sexualized attention later in life, than younger women might be. Future research is needed to further understand how the experience of sexualization may change with age, particularly for women. The consistency of men's enjoyment of sexualization across age groups may be a result of different body standards for men (Koch et al., 2005). Men are often perceived to be more attractive (or at least to maintain their attractiveness) as they age, and the same is not often said for women (Koch et al., 2005; McKinley, 2006; Robbins & Reissing, 2018). These findings have important implications for conducting future ES research, the use of the male and female ES scales, and for understanding sexual desire, pleasure, and satisfaction among both men and women in midlife.

The relationships between ES and related constructs also have important theoretical implications. The relationship between ES and ODSC and self-perceived sexual attractiveness helps conceptualize ES within the sexual desire literature and how it relates more broadly to romantic and sociosexual functioning. Moreover, the relationship between ODSC and ES specifically support ES as a construct that can be understood through ODSC theory and contributes to the theoretical background. ODSC theory speculates that being an object of desire is important to one's romantic and sociosexual functioning and the idea that people endorse enjoying sexualized attention supports that theory. Sexualized attention places a person as an

object of desire to someone else and the enjoyment of it indicates there is an awareness that the person is being desired. That being said, not finding intercept invariance across age and parental status may suggest that the internalization of ODSC may change across age and when people have children. Prior research and the seminal article on Enjoyment of Sexualization (Liss et al., 2011) discussed ES from a feminist lens and as a part of objectification theory. While findings from this study do not contest that perspective, the wording of the items on the ES scales and the current literature may support that ES combines both the internalization of objectification and the need to feel sexually desirable. Moreover, the absence of a relationship between ES and body image self-consciousness, and the negative relationship with body surveillance, are noteworthy. These findings create a distinction between the way someone feels towards their body and their enjoyment of sexualized attention. This has implications for future body image and sexual desire research, but also for therapists and counsellors who work with couples and who specialize in sexual desire/sexual functioning. Specifically, understanding the importance of feeling desirable and enjoying sexualization could help inform the advice given to couples experiencing desire issues. To elaborate, understanding that people's ES is independent of their body image may change the focus of the advice given to couples; from different body image concerns to potentially working on behavioural changes that could more effectively play into a person's romantic and sociosexual functioning.

Finally, this study provides new information on the validity of the ES and ESS-M scales for women and men. While the evidence for validity was mixed, and therefore, do not support the use of the scales with midlife men and women without careful consideration of the limitations noted in the current study. It may be that the experience of sexualization is different among midlife or older adults than it is among university students, with whom the original scale

was developed. Further qualitative research is needed to explore the experiences of sexualization in women and men, in order to determine key features that may be appealing or aversive in this population, which might then be used to develop a new measure of ES. Moreover, the creation of new ES scale would also require further exploratory and confirmatory factor analyses.

Enjoyment of sexualization was proposed by Liss and colleagues (2011) as a construct that examined objectification of women from a feminist perspective, focused on the detriments, as compared to how it could be assessed from an ODSC perspective, and how it could function as an enhancer of sexual desire and positively impact sexual and relationship functioning. The inherent sexism that many women experience on a daily basis complicates their experience of sexualization, whereas men may be able to enjoy sexualized attention without fear of coercion or violence. Further, the items in the ES measures incorporate items from both a critical and complimentary sexual evaluation (Reimer et al., 2020). For example, whistling and catcalling may not be perceived as complimentary, particularly among women. If individuals perceive the sexual attention from a critical perspective, it will not be enjoyed. Relatedly, another significant limitation is that it is not clear who the person doing the sexualization is – it could be a stranger or a partner. With age, sexualization from a long-term partner may be particularly important for relationship and sexual satisfaction (Koch et al., 2005; Murray et al., 2017; Murray and Brotto, 2021). Thus, future measures of ES might wisely specify the nature of the relationship between the sexualizer and the sexualized.

Finally, the critical limitation of using the ES and ESS-M scales with difference response options. This means scale scores cannot be compared across male and female samples. In sum, scale validation is necessary to ensure proper measurement and even more important when working with latent variables (Hussey & Hughes, 2020), which is often the case in the social

sciences. Without valid ways to measure latent constructs, the results of different studies could be attributed to a variety of confounding variables and effectively eliminates the ability to make meaningful comparisons. However, findings from the current study suggest that, in their present form, the ES and the ESS-M measures may not be sufficiently supported by the present study analyses to support their use with midlife adults.

4.6 Limitations

Some limitations of the present study should be acknowledged. These include the use of secondary data, some methodological shortcomings, issues with the ODSC scale, and sample generalizability. The use of secondary data has been advantageous to the study overall, as a large dataset with multiple measures of body image and related constructs was provided, and the sample was comprised of an understudied demographic (midlife adults). Nonetheless, as with all secondary data, there were some drawbacks. Namely, this study was limited to scales used in the original study and as such, no additional scales could be added/assessed, and the existing scales were included as is, and could not be modified or changed. Additionally, holding back half of the sample and splitting for use with the CFA and invariance testing would have provided a more rigorous test of the models. Lastly, partial invariance could have been assessed in order to determine if there were specific items negating invariance.

In addition, the ODSC scale had some presentation issues which may have impacted participants ODSC ratings. The ODSC scale (Bogaert et al., in process) is 7-point Likert style that ranks responses from strongly disagree to strongly agree, however, there was an error with the scale presentation where ratings of 2 and 3 were out of order. Instead of “strongly disagree, disagree, slightly disagree” the scale read “strongly disagree, slightly disagree, disagree”. Issues with the ODSC scale (Bogaert et al., in process) introduced ambiguity in the relationship of ES

to ODSC, where participants may have read the scale titles and answered accordingly, answered the questions based on the response options position on the Likert scale (choosing responses closer to disagree, neutral or agree) or, most likely, a combination of both. While scores for ODSC resulted in an average that was higher than neutral, and may not have greatly impacted the outcome, it is important to note and understand as a limitation to the study and the interpretation of the ODSC data.

Lastly, the sample for this study was predominantly white, cisgender, and heterosexual which, while largely representative of the Canadian population, limits the ability to generalize our findings outside of this population. While there was a portion of our sample (10%) who identified as non-binary, agender, whose gender was not listed, or who chose not to respond, these individuals chose to complete either the male or female ES scale. Comparing and understanding ES in people who do not identify as male or female was not possible because these scales were pre-separated by gender and used of two different types of Likert scales with different response options (mentioned previously). Furthermore, a majority of participants identified as heterosexual which limits the understanding of ES to heterosexual people and ES may be perceived or experienced differently across the LGBTQ+ community. Overall, the study had many strengths but there were some notable limitations that can be further addressed in future research.

4.7 Future Directions

Attempting to validate the male and female ES scales has provided a lot of opportunities for future research in both measurement and theory. To begin, future researchers who wish to use the scales with young adults should consider re-evaluating the items on the male and female ES scales so that they are equivalent in terms of item content and response options. Future research

could potentially create a gender-neutral scale so that ES can be evaluated in males, females and in people who do not identify with the gender binary. Creating a scale which could be used across genders would also reduce issues with scale differences but would also lend itself to testing gender invariance; as noted this study was unable to assess gender invariance because the scales were not comparable. Furthermore, more theoretical research is needed to assess how ES might be functioning in the LGBTQ+ community, in parents vs. non-parents, in women as they age and ES in men more generally. Additionally, more research about experiences of critical and complimentary sexualization is needed and may further the understanding of experiences of ES more broadly. Lastly, the ES literature has yet to research the role attraction may play in the perception of sexualization or the desire to be sexualized. Specifically, whether or not sexualization is more enjoyable when the subject finds the person sexualizing them sexually attractive. Research by Reimer et al. (2020) found that people who had higher ratings of ES perceived themselves as closer to the person objectifying them if the objectification had a positive connotation. However, this study did not account for attraction which may be a uniquely important variable to the perception of objectification and ES in general. Lastly, research that examines how ES functions in long term relationships and how experiencing sexualization from a partner may have unique impacts on relationship and sexual satisfaction. Understanding how people may perceive ES differently in a relationship or whether the type of sexualization changes. This could help answer questions about how sexualization might change in the context of a relationship, whether it changes at all, and if there are elements that are more enjoyable when experiencing them from an intimate partner. Overall, ES is still a relatively new field and as such, there is a lot of room for future research. However, having a valid and reliable scale for use with participants across age, gender, sexual orientation, relationship status, and

parenting status, is a critical first step. It is also possible that different scales would be needed to be effective across the aforementioned groups. There may be no “one size fits all” measure of ES.

4.8 Conclusion

In conclusion, validation of the male and female ES scales in a midlife sample provided mixed results from confirmatory factor analysis and invariance testing, but the assessments of construct validity showed promise. While there was some support for the one-factor structure of the male and female ES scales and invariance was not supported across age groups or parents vs. non-parents. However, correlations among ES and ODSC and self-perceived sexual attractiveness highlighted a key element of feeling desirable. The study also established a distinction between ES and some of the body image measures and from cognitive distraction. These relationships highlighted that feeling sexually desirable in social vs. intimate scenarios may be conceptually quite different. Finally, this study has discussed some of the statistical and theoretical issues with the current ES scales that should be considered before proceeding with these scales in future research.

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Appendix A: Consent

CONSENT TO PARTICIPATE IN RESEARCH

Mindfulness in Relationships, Sexuality, and Body Image of Married Canadians

You are invited to take part in a research study conducted by Dr. Robin Milhausen and Christopher Quinn-Nilas of the Department of Family Relations and Applied Nutrition. If you have any questions or concerns about the research, please feel free to contact Chris Quinn-Nilas at cquinnni@uoguelph.ca

To participate in the study, you must: 1. Be Canadian 2. Be married currently 3. Be between the ages of 40 and 59.

PURPOSE OF THE STUDY

We are interested in learning more about how people feel about their bodies, and how this relates to mindfulness, and to relationship and sexual outcomes in the context of marital relationships.

PROCEDURES

If you volunteer to participate in this study, you will be asked to complete an online survey that consists of mostly closed ended questions. We expect the survey will take approximately 25 minutes to complete (this will vary by individual).

POTENTIAL RISKS AND DISCOMFORTS

Some participants may feel embarrassed answering questions related to intimacy, relationships, and sexuality. You do not have to answer any question that makes you uncomfortable and you may stop the questionnaire at any time. You may also choose to withdraw from the study at any time. Additionally, in order to decrease potential discomfort, we ask that you complete the survey in a private location. Participants may be worried that their partner will see their answers and there is the chance that if you discuss your answers with your partner that one or both of you may become upset. To decrease the chances of this occurring, we ask that you each complete the surveys in a private location. If you feel any distress or anxiety related to your relationship while participating in this study, there are a number of agencies that offer confidential services. A list of helplines by town and state/province can be found at <http://www.yourlifecounts.org/>. You can also find qualified sex, marriage, relationship and family therapists via the following links:

*College of Registered Psychotherapists Ontario <https://www.crpo.ca/>
Board of Examiners in Sex Therapy and Counseling Ontario
<http://www.bestco.info/index.html>*

*Canadian Counseling and Psychotherapy Association (CCPA):
<https://www.ccpa-accp.ca/find-a-canadian-certified-counsellor/>*

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

While there is no direct benefit to you, your participation is important and we value it immensely. Your participation is important, as it will contribute to the growing body of literature on the importance of mindfulness on relationship and sexuality outcomes.

RESULTS

The results of this study will be communicated, in aggregate form, through journal publications and conference presentations. We will not share any identifying information about you (e.g., your name, email, address). If you wish to see an aggregate summary of results, please contact Chris Quinn-Nilas at cquinni@uoguelph.ca and they will be shared when they are available.

CONFIDENTIALITY

Every effort will be made to maintain your confidentiality. Dr. Robin Milhausen will oversee the data. Results will only be published in aggregate (i.e., group) form. Individual results will not be published. All electronic data will be stored on a password-protected computer and all efforts will be made to ensure data is secure in compliance with university policies on data security.

Data will be kept indefinitely.

Confidentiality cannot be guaranteed when data are collected over the internet. You can help to ensure confidentiality by taking the following precautions to clear all private data from the computer you are using to respond to the survey:

1. Clear the browsing history 2. Clear the cache 3. Clear the cookies 4. Clear the authenticated session 5. LOG OFF

If you are using Internet Explorer, the first 4 steps can be accomplished by going to Tools and selecting Delete Browsing History. Your application may have a similar system.

PARTICIPATION AND WITHDRAWAL

*You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences. You may also refuse to answer any questions you don't want to answer and remain in the study by clicking "choose not to respond" to questions you do not wish to answer. To indicate your desire to withdraw from the study, you can simply exit the survey and not return. Once started, you may simply exit the survey and your data will not be retained. Once your data is submitted, we cannot delete it as we have no way of identifying your data. **Part way through the survey, you will have the opportunity to provide your partner's email address to opt them into the study. We will retain your data regardless if your partner participates or not, and we will retain the data if your partner chooses to withdraw theirs.***

RIGHTS OF RESEARCH PARTICIPANTS

This project has been reviewed by the University of Guelph Research Ethics Board for compliance with federal guidelines for research involving human participants. If you have any questions regarding your rights and welfare as a research participant in this study (REB # 18-07-015), please contact: Director, Research Ethics; University of Guelph; reb@uoguelph.ca;

519-824-4120 ext. 56606. You do not waive any legal rights by agreeing to take part in this study.

PRINT THIS PAGE FOR YOUR RECORDS

If the details on this consent form are agreeable to you, please continue to the next page to begin the survey.

Do you consent to participate in this study?

Appendix B: Demographics

married Are you currently married?

- Yes (1)
- No (3)
- Choose not to respond (5)

Skip To: End of Block If Are you currently married? = No

Skip To: End of Block If Are you currently married? = Choose not to respond

agescreen What is your current age?

▼ 18 (1) ... 65 (60)

province In which province or territory do you live?

- Newfoundland (1)
- Prince Edward Island (4)
- Nova Scotia (5)
- New Brunswick (6)
- Quebec (7)
- Ontario (8)
- Manitoba (9)
- Saskatchewan (10)
- Alberta (11)
- British Columbia (12)
- Nunavut (13)
- Northwest Territories (14)
- Yukon (15)
- I do not live in a Canadian province or territory currently (17)
- Choose not to respond (16)

End of Block: Screen

Start of Block: Initial Background Survey

ethni

The following questions will ask basic questions about you.

Sometimes people identify themselves by race and/or ethnicity. Please check the group(s) with which you most identify (check all that apply).

- Indigenous (Aboriginal/First Nations/Métis) (21)
 - White/European (22)
 - Black/African/Caribbean (23)
 - Southeast Asian (e.g., Chinese, Japanese, Korean, Vietnamese, Cambodian, Filipino, etc.) (24)
 - Arab (Saudi Arabian, Palestinian, Iraqi, etc.) (25)
 - South Asian (East Indian, Sri Lankan, etc.) (26)
 - Latin American (Costa Rican, Guatemalan, Brazilian, Columbian, etc.) (27)
 - West Asian (Iranian, Afghani, etc.) (28)
 - Other (please specify) (29) _____
 - Choose not to respond (30)
-

orient Which of these commonly used terms would you use to describe your sexual orientation?

- Heterosexual (1)
 - Gay (2)
 - Lesbian (3)
 - Bisexual (4)
 - Queer (5)
 - Pansexual (6)
 - Uncertain or questioning (7)
 - Asexual (8)
 - My sexual orientation is not listed above. If your sexual orientation is not listed here, please tell us how you identify: (9) _____
 - Choose not to respond (10)
-

sex What sex were you assigned at birth?

- Female (1)
- Male (2)
- Intersex (3)
- Choose not to respond (4)

gend What is your current gender identity?

Woman (cisgender, transgender) (1)

Man (cisgender, transgender) (2)

Gender queer (3)

Non-binary (8)

Agender (4)

My gender identity is not listed above (6)

Choose not to respond (5)

educ What is the highest level of education that you have completed?

- No schooling completed (1)
 - Elementary school (grades 1-8) (2)
 - Some high school (13)
 - High school graduate (3)
 - Some college/university (4)
 - College/university graduate (5)
 - Some trade/technical/vocational training (6)
 - Trade/technical/vocational training degree or diploma (7)
 - Some postgraduate work (8)
 - Master's degree (9)
 - Professional school degree (e.g., MD) (10)
 - Doctoral degree (11)
 - Choose not to respond (12)
-

child Do you have children?

- Yes (1)
- No (2)
- Choose not to respond (3)

Appendix C: Measures

Enjoyment of Sexualization Scale (Male)

	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (8)	Strongly agree (9)	Choose not to respond (10)
It is important to me that people are attracted to me. (eosm1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel proud when people compliment the way I look. (eosm2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want people to look at me. (eosm_11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I love to feel sexy. (eosm_12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like showing off my body (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel complimented when people “check me out” as I walk past. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I wear revealing clothing, I feel sexually attractive and in control. (eosm7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel empowered when I look good. (eosm8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Enjoyment of Sexualization (Female)

	Disagree strongly (1)	Somewhat disagree (2)	Disagree (3)	Agree (4)	Somewhat agree (5)	Agree strongly (6)	Choose not to respond (7)
It is important to me that people are attracted to me. (ess1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel proud when people compliment the way I look. (ess2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want people to look at me. (ess3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I love to feel sexy. (ess4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like showing off my body. (ess5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel complimented when people whistle at me. (ess6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I wear revealing clothing, I feel sexy and in control. (ess7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel empowered when I look beautiful. (ess8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ODSC

	Strongly disagree (1)	Somewhat disagree (2)	Disagree (3)	Neutral (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)	Choose not to respond (8)
I often fantasize about being so hot or irresistible, that another person (or people) can't keep their hands off me. (odsc1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel like my entire day goes better when I'm looking my best. (odsc2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would enjoy dating someone who is much more attractive than I am. (odsc3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It's important to me to know I look good, even if I'm just out running errands. (odsc4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I'm having or thinking about sex, I am much more focused on how my partner looks, rather than how I look. (odsc5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In my fantasies, I like imagining I am an irresistible object of desire for my partner(s). (odsc6)

If I know someone is attracted to me, I find myself trying to look more sexy around that person, even if I'm not going to pursue the relationship. (odsc7)

Knowing my body is a turn on for my partner(s) is more exciting than looking at my partner'(s) body. (odsc8)

I would love for my partner to lavish me with compliments about my appearance. (odsc9)

If I know I am looking really good, I am more likely to flirt. (odsc10)

Seeing someone's attractive body turns me on more than having someone view my body as attractive.
(odsc11)

When I go out on a romantic date, I am more focused on how I look than on how my partner looks.
(odsc12)

It makes me smile when I know someone is admiring my body.
(odsc13)

Feeling like I am physically attractive is often important in whether I can feel sexual.
(odsc14)

I'd like to tease a partner by slowly undressing for them.
(odsc15)

I am more likely to fantasize about being consumed with lust for another person than about them being consumed with lust for me. (odsc16)

When I'm feeling sexual, I like to show off my body as much as possible. (odsc17)

I don't need to look good myself in order for me to feel sexual. (odsc18)

I am usually aware if others are noticing me or checking me out. (odsc19)

I am often uninterested in sexual activity if I know I am not looking my best/attractive. (odsc20)

I would enjoy dancing provocatively to get attention.
(odsc21)

Apart from the way I look, I often try to behave in ways to get others' attention and to make them think I am attractive and sexy.
(odsc22)

Please select "disagree" for this item.
(odsc_25)

I like looking at attractive and fashionable people (of my gender) on TV or the internet, and sometimes wonder what I would look like in their clothes or with their hair style.
(odsc23)

Often I try to do things that make my partner(s) think I am attractive.
(odsc24)

Self-Perceived Sexual Attractiveness Scale

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)	Choose not to respond (8)
I believe I can attract sexual partners. (psas1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I can elicit sexual desire in other people. (psas2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel I am sexy. (psas3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel other people would want to be involved in a sexual relationship with me. (psas4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am sexually attractive. (psas5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that others may perceive that a sexual relationship with me would be sexually fulfilling. (psas6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Objectified Body Consciousness (OBC-Surveillance)

	Strongly Agree (1)	Agree (2)	Somewhat Agree (3)	Neither Agree nor Disagree (9)	Somewhat Disagree (4)	Disagree (5)	Strongly Disagree (6)	Choose not to respond (10)
I rarely think about how I look. (ss1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think it is more important that my clothes are comfortable than whether they look good on me. (ss2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think more about how my body feels than how my body looks. (ss3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I rarely compare how I look with how other people look. (ss4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During the day, I think about how I look many times. (ss5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often worry about whether the clothes I am wearing make me look good. (ss6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I rarely worry
about how I
look to other
people. (ss7)

I am more
concerned
with what my
body can do
than how it
looks. (ss8)

Body Image Self-Consciousness Scale

	Never (1)	Sometimes (2)	About half the time (3)	Most of the time (4)	Always (5)	Choose not to respond (6)
I would feel very nervous if a partner were to explore my body before or after having sex. (bisc1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The idea of having sex without any covers over my body causes me anxiety. (bisc2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During sexual activity, I am (would be) concerned about how my body looks to my partner. (bisc3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The worst part of having sex is being nude in front of another person. (bisc23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a partner were to put a hand on my buttocks I would think, "My partner can feel my fat." (bisc4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

During sex, I
(would) prefer
to be on the
bottom so that
my stomach
appears flat.
(bisc5)

The first time I
have sex with
a new partner,
I (would)
worry that my
partner will
get turned off
by seeing my
body without
clothes.
(bisc6)

I (could) only
feel
comfortable
enough to
have sex if it
were dark so
that my
partner could
not clearly see
my body.
(bisc7)

I (would) have
a difficult time
taking a
shower or bath
with a partner.
(bisc8)

I (would) feel
anxious
receiving a
full-body
massage from
a partner.
(bisc9)

During sexual activity it is difficult (would be difficult) not to think about how unattractive my body is. (bisc10)

While having sex I am (would be) concerned that my hips and thighs would flatten out and appear larger than they actually are. (bisc11)

I (would) feel very uncomfortable walking around the bedroom, in front of my partner, completely nude. (bisc12)

If a partner were to put an arm around my waist, I would think, "My partner can tell how fat I am." (bisc13)

I (would)
prefer having
sex with my
partner on top
so that my
partner is less
likely to see
my body.
(bisc14)

Cognitive Distraction Scale

	Always (1)	Usually (2)	Often (3)	Sometimes (4)	Rarely (5)	Never (6)	Choose not to respond (7)
During sexual activity, I am worried about how my body looks to my partner. (cds1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
While engaged in sexual activity, I worry that my partner is not enjoying the way I am touching their body. (cds2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During sexual activity, I worry the whole time that my partner will get turned off by seeing my body without clothes. (cds3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is difficult not to think about whether my movements during sexual activity are pleasing to my partner. (cds4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I can only
quit
worrying
about how
my body
looks to my
partner if it
is dark
during
sexual
activity.
(cds5)

I am usually
worried
about my
partner's
satisfaction
with my
actions while
engaged in
sexual
activity.
(cds6)

During
sexual
activity, it is
difficult not
to think
about how
unattractive
my body is.
(cds7)

I often worry
about the
way I am
behaving
toward my
partner
during
sexual
activity.
(cds8)

It is difficult to enjoy sex because of my concerns over how appealing my body is to my partner.
(cds9)

During sexual interactions, I am concerned that my level of activity is not satisfying my partner.
(cds10)

While nude in front of a partner, I can't help but think about how unattractive my body is.
(cds11)

While engaged in sexual activity with a partner, I think too much about the way I am moving.
(cds12)

During sexual activity, I am distracted by thoughts about how I look to my partner.
(cds13)

Thoughts about whether my actions are satisfying my partner distract me during sexual activity.
(cds14)

If the lights are on during sexual activity, I worry too much about how appealing my body is to my partner.
(cds15)

During sexual activity, I think too much about whether my partner is happy with the way I am touching my partner's body.
(cds16)

During sexual activity, I can focus on my pleasure much more if I am in a position such that my partner can not see my body.
(cds17)

While engaged in sexual activity, I am distracted by thoughts regarding what my partner thinks about my behavior.
(cds18)

I can only quit worrying about how my body looks to my partner if there are covers over my body during sexual activity.
(cds19)

Overall,
during
sexual
activity, I am
distracted by
thoughts
about my
sexual
performance.
(cds20)



Appendix D: Additional Measures

Sexual Satisfaction

Start of Block: GMSEX



gmsex Overall, how would you describe your sexual relationship with your partner? Select the number which best describes your **sexual** relationship.

	1	2	3	4	5	6	7	
	1 (1)	(2)	(3)	(4)	(5)	(6)	(7)	
Very bad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very good
Very unpleasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very pleasant
Very negative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very positive
Very unsatisfying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very satisfying
Worthless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very valuable

Appendix E: R Syntax

Invariance ESS Parent vs. Non-Parents

```
summary(essconfig.fit, fit.measures=TRUE, standardized=TRUE, rsquare=TRUE)
lavaan 0.6-5 ended normally after 63 iterations
```

Estimator	ML	
Optimization method	NLMINB	
Number of free parameters	50	
Number of observations per group:	Used	Total
1	229	415
2	50	101

Model Test User Model:

Test statistic	109.812
Degrees of freedom	38
P-value (Chi-square)	0.000
Test statistic for each group:	
1	77.963
2	31.850

Model Test Baseline Model:

Test statistic	1045.458
Degrees of freedom	56
P-value	0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI)	0.927
Tucker-Lewis Index (TLI)	0.893

Loglikelihood and Information Criteria:

Loglikelihood user model (H0)	-3373.598
Loglikelihood unrestricted model (H1)	NA
Akaike (AIC)	6847.195
Bayesian (BIC)	7028.756
Sample-size adjusted Bayesian (BIC)	6870.210

Root Mean Square Error of Approximation:

RMSEA	0.116
90 Percent confidence interval - lower	0.091
90 Percent confidence interval - upper	0.142
P-value RMSEA <= 0.05	0.000

Standardized Root Mean Square Residual:

SRMR 0.050

Parameter Estimates:

Information Expected
Information saturated (h1) model Structured
Standard errors Standard

Group 1 [1]:

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
ess =~						
ess1	1.000			0.854	0.676	
ess2	0.754	0.092	8.161	0.000	0.644	0.608
ess3	1.223	0.121	10.075	0.000	1.044	0.777
ess4	0.999	0.109	9.150	0.000	0.853	0.692
ess5	1.195	0.131	9.132	0.000	1.020	0.695
ess6	1.069	0.129	8.308	0.000	0.913	0.620
ess7	1.254	0.139	9.054	0.000	1.071	0.688
ess8	0.998	0.112	8.883	0.000	0.852	0.669

Covariances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess5 ~~						
.ess7	0.329	0.099	3.306	0.001	0.329	0.276

Intercepts:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess1	3.834	0.084	45.913	0.000	3.834	3.034
.ess2	4.594	0.070	65.592	0.000	4.594	4.334
.ess3	3.533	0.089	39.808	0.000	3.533	2.631
.ess4	4.166	0.081	51.162	0.000	4.166	3.381
.ess5	2.965	0.097	30.558	0.000	2.965	2.019
.ess6	3.428	0.097	35.245	0.000	3.428	2.329
.ess7	3.306	0.103	32.144	0.000	3.306	2.124
.ess8	4.371	0.084	51.938	0.000	4.371	3.432
ess	0.000			0.000	0.000	

Variances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess1	0.868	0.093	9.349	0.000	0.868	0.543
.ess2	0.708	0.073	9.762	0.000	0.708	0.631
.ess3	0.714	0.087	8.228	0.000	0.714	0.396
.ess4	0.791	0.086	9.220	0.000	0.791	0.521
.ess5	1.115	0.123	9.074	0.000	1.115	0.517
.ess6	1.333	0.137	9.699	0.000	1.333	0.616
.ess7	1.275	0.140	9.125	0.000	1.275	0.526
.ess8	0.896	0.095	9.399	0.000	0.896	0.553
ess	0.729	0.133	5.475	0.000	1.000	1.000

R-Square:

	Estimate
ess1	0.457
ess2	0.369

ess3	0.604
ess4	0.479
ess5	0.483
ess6	0.384
ess7	0.474
ess8	0.447

Group 2 [2]:

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
ess =~						
ess1	1.000			1.178	0.698	
ess2	0.788	0.153	5.138	0.000	0.928	0.766
ess3	1.063	0.200	5.303	0.000	1.252	0.791
ess4	0.958	0.173	5.546	0.000	1.129	0.830
ess5	0.784	0.170	4.618	0.000	0.924	0.685
ess6	0.734	0.200	3.676	0.000	0.865	0.542
ess7	0.798	0.198	4.038	0.000	0.941	0.597
ess8	1.283	0.208	6.170	0.000	1.511	0.938

Covariances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess5 ~						
.ess7	0.551	0.204	2.699	0.007	0.551	0.444

Intercepts:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess1	3.560	0.239	14.921	0.000	3.560	2.110
.ess2	4.640	0.171	27.057	0.000	4.640	3.826
.ess3	3.340	0.224	14.924	0.000	3.340	2.111
.ess4	4.220	0.192	21.929	0.000	4.220	3.101
.ess5	2.680	0.191	14.056	0.000	2.680	1.988
.ess6	3.120	0.226	13.828	0.000	3.120	1.956
.ess7	3.000	0.223	13.470	0.000	3.000	1.905
.ess8	4.080	0.228	17.914	0.000	4.080	2.533
ess	0.000			0.000	0.000	

Variances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess1	1.458	0.312	4.674	0.000	1.458	0.512
.ess2	0.609	0.135	4.507	0.000	0.609	0.414
.ess3	0.936	0.212	4.411	0.000	0.936	0.374
.ess4	0.577	0.137	4.208	0.000	0.577	0.312
.ess5	0.964	0.205	4.694	0.000	0.964	0.530
.ess6	1.797	0.370	4.860	0.000	1.797	0.706
.ess7	1.595	0.332	4.806	0.000	1.595	0.643
.ess8	0.310	0.125	2.477	0.013	0.310	0.119
ess	1.388	0.501	2.769	0.006	1.000	1.000

R-Square:

	Estimate
ess1	0.488
ess2	0.586
ess3	0.626

ess4	0.688
ess5	0.470
ess6	0.294
ess7	0.357
ess8	0.881

Invariance ESS-M Parents vs. Non-Parents

summary(eosmconfig.fit, fit.measures=TRUE, standardized=TRUE, rsquare=TRUE)
lavaan 0.6-5 ended normally after 47 iterations

Estimator	ML
Optimization method	NLMINB
Number of free parameters	52
Number of observations per group:	
1	Used Total
1	186 415
2	51 101

Model Test User Model:

Test statistic	107.597
Degrees of freedom	36
P-value (Chi-square)	0.000
Test statistic for each group:	
1	72.606
2	34.991

Model Test Baseline Model:

Test statistic	899.767
Degrees of freedom	56
P-value	0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI)	0.915
Tucker-Lewis Index (TLI)	0.868

Loglikelihood and Information Criteria:

Loglikelihood user model (H0)	-2118.162
Loglikelihood unrestricted model (H1)	NA
Akaike (AIC)	4340.323
Bayesian (BIC)	4520.663
Sample-size adjusted Bayesian (BIC)	4355.841

Root Mean Square Error of Approximation:

RMSEA	0.130
90 Percent confidence interval - lower	0.102
90 Percent confidence interval - upper	0.158
P-value RMSEA <= 0.05	0.000

Standardized Root Mean Square Residual:

SRMR 0.054

Parameter Estimates:

Information Expected
 Information saturated (h1) model Structured
 Standard errors Standard

Group 1 [1]:

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
cosm =~						
cosm1	1.000			0.566	0.591	
cosm2	0.846	0.124	6.818	0.000	0.479	0.633
cosm3	1.266	0.140	9.027	0.000	0.717	0.779
cosm4	1.217	0.156	7.809	0.000	0.689	0.782
cosm5	1.101	0.162	6.780	0.000	0.624	0.628
cosm6	1.284	0.170	7.549	0.000	0.727	0.738
cosm7	1.246	0.171	7.294	0.000	0.706	0.702
cosm8	0.886	0.133	6.652	0.000	0.502	0.616

Covariances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.cosm1 ~~						
.cosm3	0.118	0.042	2.842	0.004	0.118	0.265
.cosm7 ~~						
.cosm8	0.104	0.040	2.594	0.009	0.104	0.228

Intercepts:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.cosm1	3.398	0.070	48.393	0.000	3.398	3.548
.cosm2	3.844	0.055	69.291	0.000	3.844	5.081
.cosm3	3.237	0.067	47.955	0.000	3.237	3.516
.cosm4	3.489	0.065	53.994	0.000	3.489	3.959
.cosm5	2.699	0.073	37.095	0.000	2.699	2.720
.cosm6	3.500	0.072	48.455	0.000	3.500	3.553
.cosm7	2.780	0.074	37.710	0.000	2.780	2.765
.cosm8	3.667	0.060	61.411	0.000	3.667	4.503
cosm	0.000			0.000	0.000	

Variances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.cosm1	0.596	0.068	8.758	0.000	0.596	0.650
.cosm2	0.343	0.039	8.724	0.000	0.343	0.599
.cosm3	0.334	0.045	7.447	0.000	0.334	0.394
.cosm4	0.302	0.041	7.454	0.000	0.302	0.389
.cosm5	0.596	0.068	8.748	0.000	0.596	0.605
.cosm6	0.441	0.055	7.983	0.000	0.441	0.455
.cosm7	0.512	0.062	8.234	0.000	0.512	0.507
.cosm8	0.411	0.047	8.711	0.000	0.411	0.620
cosm	0.321	0.078	4.130	0.000	1.000	1.000

R-Square:

	Estimate
cosm1	0.350
cosm2	0.401
cosm3	0.606
cosm4	0.611
cosm5	0.395
cosm6	0.545
cosm7	0.493
cosm8	0.380

Group 2 [2]:

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
cosm =~						
cosm1	1.000			0.600	0.614	
cosm2	0.980	0.253	3.873	0.000	0.588	0.685
cosm3	1.261	0.222	5.674	0.000	0.757	0.826
cosm4	1.035	0.246	4.207	0.000	0.621	0.777
cosm5	0.976	0.264	3.694	0.000	0.586	0.641
cosm6	1.152	0.294	3.922	0.000	0.692	0.697
cosm7	0.870	0.273	3.182	0.001	0.522	0.531
cosm8	0.965	0.262	3.690	0.000	0.579	0.641

Covariances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.cosm1 ~						
.cosm3	0.182	0.081	2.239	0.025	0.182	0.457
.cosm7 ~						
.cosm8	0.187	0.094	1.991	0.047	0.187	0.324

Intercepts:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.cosm1	3.157	0.137	23.060	0.000	3.157	3.229
.cosm2	3.647	0.120	30.314	0.000	3.647	4.245
.cosm3	2.941	0.128	22.922	0.000	2.941	3.210
.cosm4	3.216	0.112	28.711	0.000	3.216	4.020
.cosm5	2.549	0.128	19.911	0.000	2.549	2.788
.cosm6	3.392	0.139	24.428	0.000	3.392	3.421
.cosm7	2.667	0.138	19.363	0.000	2.667	2.711
.cosm8	3.353	0.127	26.497	0.000	3.353	3.710
cosm	0.000			0.000	0.000	

Variances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.cosm1	0.595	0.133	4.485	0.000	0.595	0.623
.cosm2	0.392	0.089	4.405	0.000	0.392	0.531
.cosm3	0.266	0.077	3.459	0.001	0.266	0.317
.cosm4	0.254	0.065	3.926	0.000	0.254	0.397
.cosm5	0.492	0.108	4.543	0.000	0.492	0.589
.cosm6	0.505	0.116	4.357	0.000	0.505	0.514
.cosm7	0.694	0.146	4.746	0.000	0.694	0.718
.cosm8	0.481	0.106	4.531	0.000	0.481	0.589

cosm	0.360	0.160	2.251	0.024	1.000	1.000
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R-Square:

	Estimate
cosm1	0.377
cosm2	0.469
cosm3	0.683
cosm4	0.603
cosm5	0.411
cosm6	0.486
cosm7	0.282
cosm8	0.411

Invariance ESS Age

Estimator	ML	
Optimization method	NLMINB	
Number of free parameters	50	
Number of observations per group:	Used	Total
1	135	249
2	145	268

Model Test User Model:

Test statistic	117.705
Degrees of freedom	38
P-value (Chi-square)	0.000
Test statistic for each group:	
1	43.073
2	74.632

Model Test Baseline Model:

Test statistic	1046.933
Degrees of freedom	56
P-value	0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI)	0.920
Tucker-Lewis Index (TLI)	0.881

Loglikelihood and Information Criteria:

Loglikelihood user model (H0)	-3397.596
Loglikelihood unrestricted model (H1)	NA
Akaike (AIC)	6895.191
Bayesian (BIC)	7076.931
Sample-size adjusted Bayesian (BIC)	6918.384

Root Mean Square Error of Approximation:

RMSEA 0.122
 90 Percent confidence interval - lower 0.098
 90 Percent confidence interval - upper 0.148
 P-value RMSEA <= 0.05 0.000

Standardized Root Mean Square Residual:

SRMR 0.050

Parameter Estimates:

Information Expected
 Information saturated (h1) model Structured
 Standard errors Standard

Group 1 [1]:

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
ess =~						
ess1	1.000			0.867	0.655	
ess2	0.779	0.121	6.446	0.000	0.676	0.648
ess3	1.257	0.167	7.522	0.000	1.091	0.789
ess4	0.774	0.128	6.037	0.000	0.671	0.600
ess5	1.186	0.175	6.766	0.000	1.029	0.692
ess6	1.019	0.166	6.149	0.000	0.884	0.613
ess7	1.231	0.183	6.714	0.000	1.067	0.686
ess8	0.979	0.150	6.512	0.000	0.849	0.656

Covariances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess5 ~~						
.ess7	0.338	0.133	2.545	0.011	0.338	0.279

Intercepts:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess1	3.933	0.114	34.536	0.000	3.933	2.972
.ess2	4.593	0.090	51.208	0.000	4.593	4.407
.ess3	3.474	0.119	29.218	0.000	3.474	2.515
.ess4	4.311	0.096	44.778	0.000	4.311	3.854
.ess5	2.919	0.128	22.820	0.000	2.919	1.964
.ess6	3.407	0.124	27.461	0.000	3.407	2.363
.ess7	3.356	0.134	25.054	0.000	3.356	2.156
.ess8	4.393	0.111	39.429	0.000	4.393	3.394
ess	0.000			0.000	0.000	

Variances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess1	0.999	0.138	7.245	0.000	0.999	0.570
.ess2	0.630	0.086	7.283	0.000	0.630	0.580
.ess3	0.719	0.119	6.067	0.000	0.719	0.377
.ess4	0.801	0.107	7.493	0.000	0.801	0.640
.ess5	1.150	0.166	6.927	0.000	1.150	0.521
.ess6	1.297	0.174	7.442	0.000	1.297	0.624
.ess7	1.282	0.184	6.965	0.000	1.282	0.529

.ess8	0.954	0.132	7.241	0.000	0.954	0.569
ess	0.752	0.187	4.029	0.000	1.000	1.000

R-Square:

	Estimate
ess1	0.430
ess2	0.420
ess3	0.623
ess4	0.360
ess5	0.479
ess6	0.376
ess7	0.471
ess8	0.431

Group 2 [2]:

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
ess =~						
ess1	1.000			0.980	0.717	
ess2	0.748	0.101	7.391	0.000	0.733	0.650
ess3	1.126	0.126	8.927	0.000	1.104	0.788
ess4	1.113	0.123	9.035	0.000	1.091	0.798
ess5	0.973	0.128	7.606	0.000	0.953	0.670
ess6	0.940	0.140	6.712	0.000	0.921	0.590
ess7	0.995	0.141	7.080	0.000	0.975	0.624
ess8	1.121	0.125	8.989	0.000	1.098	0.794

Covariances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess5 ~~						
.ess7	0.506	0.129	3.926	0.000	0.506	0.393

Intercepts:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess1	3.655	0.113	32.210	0.000	3.655	2.675
.ess2	4.614	0.094	49.269	0.000	4.614	4.092
.ess3	3.510	0.116	30.191	0.000	3.510	2.507
.ess4	4.034	0.113	35.548	0.000	4.034	2.952
.ess5	2.897	0.118	24.518	0.000	2.897	2.036
.ess6	3.359	0.130	25.907	0.000	3.359	2.151
.ess7	3.145	0.130	24.238	0.000	3.145	2.013
.ess8	4.255	0.115	37.035	0.000	4.255	3.076
ess	0.000			0.000	0.000	

Variances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.ess1	0.907	0.122	7.437	0.000	0.907	0.486
.ess2	0.734	0.094	7.772	0.000	0.734	0.577
.ess3	0.742	0.109	6.834	0.000	0.742	0.379
.ess4	0.677	0.101	6.714	0.000	0.677	0.363
.ess5	1.115	0.145	7.663	0.000	1.115	0.551
.ess6	1.589	0.199	7.975	0.000	1.589	0.652
.ess7	1.490	0.190	7.835	0.000	1.490	0.610
.ess8	0.708	0.105	6.767	0.000	0.708	0.370

ess	0.960	0.201	4.785	0.000	1.000	1.000
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R-Square:

	Estimate
ess1	0.514
ess2	0.423
ess3	0.621
ess4	0.637
ess5	0.449
ess6	0.348
ess7	0.390
ess8	0.630

Invariance ESS-M Age

Estimator	ML		
Optimization method	NLMINB		
Number of free parameters	52		
Number of observations per group:		Used	Total
1	114	249	
2	123	268	

Model Test User Model:

Test statistic	94.114
Degrees of freedom	36
P-value (Chi-square)	0.000
Test statistic for each group:	
1	39.965
2	54.149

Model Test Baseline Model:

Test statistic	887.702
Degrees of freedom	56
P-value	0.000

User Model versus Baseline Model:

Comparative Fit Index (CFI)	0.930
Tucker-Lewis Index (TLI)	0.891

Loglikelihood and Information Criteria:

Loglikelihood user model (H0)	-2112.947
Loglikelihood unrestricted model (H1)	NA
Akaike (AIC)	4329.893

Bayesian (BIC) 4510.232
 Sample-size adjusted Bayesian (BIC) 4345.410

Root Mean Square Error of Approximation:

RMSEA 0.117
 90 Percent confidence interval - lower 0.088
 90 Percent confidence interval - upper 0.146
 P-value RMSEA <= 0.05 0.000

Standardized Root Mean Square Residual:

SRMR 0.052

Parameter Estimates:

Information Expected
 Information saturated (h1) model Structured
 Standard errors Standard

Group 1 [1]:

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
eosm =~						
eosm1	1.000			0.648	0.705	
eosm2	0.823	0.124	6.665	0.000	0.534	0.686
eosm3	1.205	0.128	9.396	0.000	0.781	0.828
eosm4	0.998	0.130	7.661	0.000	0.647	0.803
eosm5	1.086	0.162	6.720	0.000	0.704	0.692
eosm6	1.030	0.154	6.675	0.000	0.668	0.687
eosm7	0.969	0.156	6.208	0.000	0.628	0.636
eosm8	0.637	0.122	5.213	0.000	0.413	0.530

Covariances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.eosm1 ~~						
.eosm3	0.097	0.046	2.116	0.034	0.097	0.281
.eosm7 ~~						
.eosm8	0.109	0.053	2.069	0.039	0.109	0.216

Intercepts:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.eosm1	3.491	0.086	40.517	0.000	3.491	3.795
.eosm2	3.912	0.073	53.644	0.000	3.912	5.024
.eosm3	3.289	0.088	37.232	0.000	3.289	3.487
.eosm4	3.561	0.075	47.174	0.000	3.561	4.418
.eosm5	2.737	0.095	28.709	0.000	2.737	2.689
.eosm6	3.579	0.091	39.298	0.000	3.579	3.681
.eosm7	2.842	0.092	30.731	0.000	2.842	2.878

.eosm8	3.719	0.073	51.037	0.000	3.719	4.780
eosm	0.000			0.000	0.000	

Variances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.eosm1	0.426	0.067	6.360	0.000	0.426	0.504
.eosm2	0.321	0.048	6.691	0.000	0.321	0.530
.eosm3	0.280	0.053	5.309	0.000	0.280	0.314
.eosm4	0.231	0.040	5.761	0.000	0.231	0.356
.eosm5	0.540	0.081	6.661	0.000	0.540	0.522
.eosm6	0.500	0.075	6.686	0.000	0.500	0.529
.eosm7	0.580	0.084	6.876	0.000	0.580	0.595
.eosm8	0.435	0.061	7.149	0.000	0.435	0.719
eosm	0.420	0.103	4.065	0.000	1.000	1.000

R-Square:

	Estimate
eosm1	0.496
eosm2	0.470
eosm3	0.686
eosm4	0.644
eosm5	0.478
eosm6	0.471
eosm7	0.405
eosm8	0.281

Group 2 [2]:

Latent Variables:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
eosm =~						
eosm1	1.000				0.497	0.502
eosm2	0.957	0.204	4.699	0.000	0.475	0.613
eosm3	1.383	0.229	6.050	0.000	0.687	0.764
eosm4	1.401	0.268	5.221	0.000	0.696	0.763
eosm5	1.059	0.237	4.475	0.000	0.526	0.563
eosm6	1.492	0.288	5.176	0.000	0.741	0.747
eosm7	1.369	0.278	4.918	0.000	0.680	0.675
eosm8	1.245	0.249	5.000	0.000	0.618	0.697

Covariances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.eosm1 ~~						
.eosm3	0.149	0.056	2.668	0.008	0.149	0.300
.eosm7 ~~						
.eosm8	0.128	0.054	2.390	0.017	0.128	0.272

Intercepts:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.eosm1	3.211	0.089	35.983	0.000	3.211	3.244

.eosm2	3.699	0.070	52.939	0.000	3.699	4.773
.eosm3	3.065	0.081	37.798	0.000	3.065	3.408
.eosm4	3.309	0.082	40.248	0.000	3.309	3.629
.eosm5	2.602	0.084	30.866	0.000	2.602	2.783
.eosm6	3.382	0.089	37.812	0.000	3.382	3.409
.eosm7	2.675	0.091	29.428	0.000	2.675	2.653
.eosm8	3.488	0.080	43.619	0.000	3.488	3.933
eosm	0.000			0.000	0.000	

Variances:

	Estimate	Std.Err	z-value	P(> z)	Std.lv	Std.all
.eosm1	0.733	0.100	7.355	0.000	0.733	0.748
.eosm2	0.375	0.053	7.115	0.000	0.375	0.624
.eosm3	0.337	0.055	6.114	0.000	0.337	0.417
.eosm4	0.348	0.057	6.139	0.000	0.348	0.418
.eosm5	0.597	0.082	7.285	0.000	0.597	0.683
.eosm6	0.435	0.069	6.299	0.000	0.435	0.442
.eosm7	0.554	0.082	6.732	0.000	0.554	0.545
.eosm8	0.404	0.061	6.607	0.000	0.404	0.514
eosm	0.247	0.090	2.746	0.006	1.000	1.000

R-Square:

	Estimate
eosm1	0.252
eosm2	0.376
eosm3	0.583
eosm4	0.582
eosm5	0.317
eosm6	0.558
eosm7	0.455
eosm8	0.486

Appendix F: Correlation Matrix

Measure	ESS	ESS-M	ODSC	SPSA	SS	BISC	CD
ESS	1						
ESS-M	n/a	1					
ODSC	.65**	.58**	1				
SPSA	.54**	.49**	.40**	1			
SS	-.25**	-.29	-.26**	.08	1		
BISC	-.08	-.06	.04	-.41**	-.42**	1	
CD	-.003	.01	-.09	.45**	.36**	-.79**	1

Note. * correlation is significant at .05, ** correlation is significant at .001